ALS Environmental
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www.alsglobal.com

April 17, 2019

Analytical Report for Service Request No: K1810270
Revised Service Request No: K1810270.02

Janet Knox
Pacific Groundwater Group
2377 Eastlake Ave., East
Suite 200
Seattle, WA 98102

RE: DTNA Swan Island Sediment / 2006-00115

Dear Janet,

Enclosed is the revised report for the sample(s) submitted to our laboratory October 19, 2018
For your reference, these analyses have been assigned our service request number **K1810270.**

The OC Pesticides were revised on 4/16/2019.

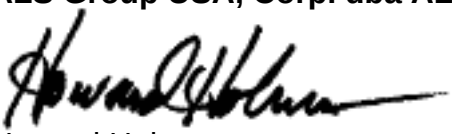
Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

We apologize for any inconvenience this may have created.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Howard Holmes
Project Manager

REVISED
12:36 pm, Apr 17, 2019

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:36 pm, Apr 17, 2019

ALS Environmental

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment
Sample Matrix: Sediment

Service Request: K1810270
Date Received: 10/19/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Forty three sediment samples were received for analysis at ALS Environmental on 10/19/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Semivolatiles by GC/MS:

Method 8270D, Polynuclear Aromatic Hydrocarbons 11/05/18: The results reported for the following compound in samples N1-0to30-101518 and T1-0to30-101518 may contain a slight bias: Acenaphthylene. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected samples. The results were flagged with “X” to indicate the issue.

Method 8270D, Polynuclear Aromatic Hydrocarbons 11/05/18: The recoveries of all analytes in Matrix Spikes (MS/DMS) KWG1805597-1/2 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Method ALS SOP, Organochlorine Pesticides by GC/MS/MS 11/26/2018: The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS42\112618F003.D: 2,4'-DDT. In accordance with the EPA Method, 80% or more of the CCV analytes must have passed within 20% of the true value. The remaining analytes are allowed a 40% difference as per the ALS SOP. The CCV met these criteria. No further corrective action was required.

Semivoa GC:

No significant anomalies were noted with this analysis.

Approved by  Date 04/17/2019

Chain of Custody

ALS Environmental—Kelso Laboratory
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CHAIN OF CUSTODY

SR# K1910270

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PAGE 1 OF ____ COC# ____

PROJECT NAME: DTNA Swan Island Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle WA 98102
E-MAIL ADDRESS: janet@pgwg.com
PHONE #: 206 329 0141 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☒	Volatile Organics 624☐ 8270L☒ 8260☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 1649M	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO2☐ Methane☐ Ethane☐ Ethene☐	Tr. butyltin (AIS Scan)			REMARKS
N3-0to26-101518	10/15/18	846				X				X											X				Archive
N6-0to27-101518	↑	927																							Archive
K1-0to30-101518		915																							Archive
L1-0to30-101518		1010				X				X											X				✓
M1-0to30-101518		1040																							Archive
N1-0to30-101518		1140				X				X											X				✓
O1-0to30-101518		1210																							Archive
Q1-0to30-101518		1400																							Archive
S1-0to30-101518		1445																							Archive
T1-0to30-101518	10/15/18	1535				X				X											X				✓

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- ___ II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- ___ V. EDD

INVOICE INFORMATION

P.O. # ____
Bill To: ____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
___ Standard (15 working days)
___ Provide FAX Results

Requested Report Date ____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Date/Time: 10/19/18 12:00	Date/Time: 10/19/18 1200	Date/Time: 10/19/18 1230	Date/Time: 10/19/18 1230
Printed Name: Matt Luxon	Printed Name: Brad Benjamin	Printed Name: Brad Benjamin	Printed Name: Brad Benjamin
Firm: Anchor Env	Firm: AW	Firm: AW	Firm: AW

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SR# K1810270

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PAGE 2 OF _____ COC#

PROJECT NAME: DTNA Swan Island Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Fenox
COMPANY NAME: PBG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle WA 98102
E-MAIL ADDRESS: janet@pbrg.com
PHONE #: 206 329 0141 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☒	Volatile Organics 624☐ 8260☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ 6640M	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO2☐ Methane☐ Ethane☐ Ethene☐	tot. S, Fe, Mn (ALS Scp)	REMARKS
R1-0to30-101518	10/15/18	1437		S	1	X					X									X		✓
P1-0to30-101518	10/15/18	1350		S	1	X					X									X		✓
T3-0to28-101618	10/16/18	1630		S	1	X					X									X		
T4-0to27-101618		~~1630~~ 1549		S	1																	Archive
T7-0to31-101618		1400		S	1	X					X									X		✓
T5-0to26-101618		1513		S	1	X					X									X		✓
P3-0to29-101618		1050		S	1	X					X									X		✓
R5-0to25-101618		1209		S	1	X					X									X		✓
S14-0to29-101618		1125		S	1	X					X									X		✓
P5-0to26-101618	10/16/18	0916		S	1	X					X									X		✓

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 day
_____ Standard (15 working days)
_____ Provide FAX Results
_____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
10/16/18 10:00	10/19/18 1000	10/19/18 1230	10/19/18 1230
Date/Time	Date/Time	Date/Time	Date/Time
Matthew Inrox	B Bowman	B Bowman	B Bowman
Printed Name	Printed Name	Printed Name	Printed Name
Acme Exv	HV	HV	HV
Firm	Firm	Firm	Firm

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PAGE ____ OF ____ COC# ____

PROJECT NAME: JTNA Swan Island Lagoon Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle WA 98102
E-MAIL ADDRESS: Janet@Pgwg.com
PHONE #: 206-329-9141 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO2☐ Methane☐ Ethane☐ Ethene☐	tributyltin (ALS SOP)			REMARKS
T6-0to29-101618	10/16/18	1438		S	1																				Archive
R4-0to28-101618	"	1323		S	1																				Archive
P4-0to29-101618	"	1008		S	1																				Archive
R6-0to29-101618 MS MSD	"	1125		S	1																				~~Archive~~ Archive
R6-0to29-101618	10/16/18	1125		S	1																				Archive
S2-0to10-101718	10/17/18	1637		S	1																				Archive
T2-0to22-101718	"	1548		S	1																				Archive
M3-0to27-101718	"	1201																							Archive
K2-0to20-101718	"	1440																							archive
R3-0to33-101718	10/17/18	0928				X		X	X	X											X				✓

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

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Bill To: ____

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Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Date/Time: 10/19/18 10:00	Date/Time: 10/19/18 1000	Date/Time: 10/19/18 1030	Date/Time: 10/19/18 1030
Printed Name: Matt Lyon	Printed Name: B Bauman	Printed Name: B Bauman	Printed Name: B Bauman
Firm: Anchor QEA	Firm: AW	Firm: AW	Firm: AW

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SR# K1810270

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PAGE _____ OF _____ COC# _____

PROJECT NAME: DTNA Swan Island Lagoon Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle, WA 98102
E-MAIL ADDRESS: Janet@Pgwg.com
PHONE # 206-329-0141 FAX #
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	REMARKS
03-0to27-101718	10/17/18	1122		S	1	Archive
S3-0to30-101718	10/17/18	1005		S	1	Archive
K3-0to19-101718	10/17/18	1317		S	1	Archive
Q3-0to26-101718	10/17/18	1048		S	1	Archive
I5-0to32-101818	10/17/18	1617		S	1	Archive
Q2-0to13-101818	10/18/18	0939		S	1	Archive
G5-0to28-101818	10/18/18	1150		S	1	Archive
G4-0to28-101818	"	1343		S	1	Archive
I6-0to30-101818	"	1648		S	1	Archive
G7-0to28-101818	10/18/18	1534		S	1	Archive

Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐
Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐
Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐
Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐
PCBs Aroclors☐ Congeners☐
Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐
Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐
Metals, Total or Dissolved (See List below)
Cyanide☐ Hex-Chrom☐
(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb
(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos
TOX 9020☐ AOX 1650☐ 506☐
Alkalinity ☐ CO_3☐ HCO_3☐
Dioxins/Furans 1613☐ 8290☐
Dissolved Gases RSK 175☐ Methane☐ Ethane☐ Ethene☐ CO_2☐

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
___ Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date/Time: 10/19/18 1000	Date/Time: 10/19/18 1000	Date/Time: 10/19/18 1230	Date/Time: 10/19/18 1230
Printed Name: Matthew Lucas	Printed Name: Brad Mau	Printed Name: Brad Mau	Printed Name: Brad Mau
Firm: Anne Env	Firm: HW	Firm: HW	Firm: HW

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CHAIN OF CUSTODY

SR# K1810270

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE _____ OF _____ COC# _____

PROJECT NAME: DTNA Swan Island Lagoon Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle WA 98102
E-MAIL ADDRESS: Janet@pgwg.com
PHONE #: 206-329-0141 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS																									REMARKS
G3-06032-101818	10/18/18	1111		S	1																									Archive
R2-06010-101818	10/18/18	0842		S	1																									
I3-06030-101818	10/18/18	1035		S	1																									
G6-06027-101818	10/18/18	1412		S	1																									Archive

Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐ 8270LL☐
Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐
Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐
Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐
PCBs Aroclors☐ Congeners☐
Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐
Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐
Metals, Total or Dissolved (See List below)
Cyanide☐ Hex-Chrom☐
(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb
(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos
TOX 9020☐ AOX 1650☐ 506☐
Alkalinity ☐ CO_3☐ HCO_3☐
Dioxins/Furans 1613☐ 8290☐
Dissolved Gases CO_2☐ RSK 175☐Methane☐Ethane☐Ethene☐

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
___ Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature	10/19/18 10:00	Signature	10/19/18 1000	Signature	10/19/18 1030	Signature	10/19/18 1030
Date/Time		Date/Time		Date/Time		Date/Time	
Printed Name	Firm	Printed Name	Firm	Printed Name	Firm	Printed Name	Firm

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PC HHL

Cooler Receipt and Preservation Form

Client PGG Service Request K18 10270

Received: 10119118 Opened: 10119118 By: BR Unloaded: 10119118 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y (N) If present, were they signed and dated? Y (N)

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
4.1	4.1	5.0	5.0	0.0	390			
5.7	5.8	6.0	6.1	+0.1	393			
5.7	5.6	5.9	5.8	+0.1	394			

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 - 10/17/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
N3-0to26-101518	K1810270-001	**74.3**	-	-	1	11/02/18 17:15	
L1-0to30-101518	K1810270-004	**90.3**	-	-	1	10/26/18 18:21	
N1-0to30-101518	K1810270-006	**75.8**	-	-	1	10/26/18 18:21	
T1-0to30-101518	K1810270-010	**63.0**	-	-	1	10/26/18 18:21	
R1-0to30-101518	K1810270-011	**83.9**	-	-	1	10/26/18 18:21	
P1-0to30-101518	K1810270-012	**76.7**	-	-	1	10/26/18 18:21	
T3-0to28-101618	K1810270-013	**43.8**	-	-	1	10/26/18 18:21	
T7-0to31-101618	K1810270-015	**39.3**	-	-	1	10/26/18 18:21	
T5-0to26-101618	K1810270-016	**47.8**	-	-	1	10/26/18 18:21	
P3-0to29-101618	K1810270-017	**48.7**	-	-	1	10/26/18 18:21	
R5-0to25-101618	K1810270-018	**45.9**	-	-	1	10/26/18 18:21	
514-0to29-101618	K1810270-019	**40.5**	-	-	1	10/26/18 18:21	
P5-0to26-101618	K1810270-020	**35.2**	-	-	1	10/26/18 18:21	
R3-0to33-101718	K1810270-029	**36.1**	-	-	1	10/26/18 18:21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	10/26/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	L1-0to30-101518	**Units:**	Percent
Lab Code:	K1810270-004	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1810270-004DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	90.3	90.2	90.3	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:37 pm, Apr 17, 2019

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 08:46
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.18**	0.067	0.063	1	11/26/18 21:39	11/7/18	
2,4'-DDE	ND U	0.079	0.079	1	11/26/18 21:39	11/7/18	
2,4'-DDT	ND U	0.094	0.094	1	11/26/18 21:39	11/7/18	*
4,4'-DDD	**0.73**	0.067	0.035	1	11/26/18 21:39	11/7/18	
4,4'-DDE	**1.1**	0.070	0.070	1	11/26/18 21:39	11/7/18	
4,4'-DDT	**0.23**	0.067	0.047	1	11/26/18 21:39	11/7/18	
Aldrin	ND U	0.079	0.079	1	11/26/18 21:39	11/7/18	
alpha-Chlordane	**0.081 J**	0.13	0.062	1	11/26/18 21:39	11/7/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/26/18 21:39	11/7/18	
Dieldrin	ND U	0.20	0.077	1	11/26/18 21:39	11/7/18	
gamma-BHC (Lindane)	ND U	0.067	0.031	1	11/26/18 21:39	11/7/18	
gamma-Chlordane	**0.11 J**	0.13	0.064	1	11/26/18 21:39	11/7/18	
Heptachlor	ND U	0.067	0.039	1	11/26/18 21:39	11/7/18	
Oxychlordane	ND U	0.20	0.13	1	11/26/18 21:39	11/7/18	
trans-Nonachlor	**0.093 J**	0.13	0.058	1	11/26/18 21:39	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	76	5 - 120	11/26/18 21:39	
S_4,4'-DDT-d4	93	13 - 200	11/26/18 21:39	
S_Aldrin-13C12	53	10 - 143	11/26/18 21:39	
S_Endrin-13C12	75	20 - 157	11/26/18 21:39	
S_GBHCD6	61	5 - 124	11/26/18 21:39	
S_Heptachlor-13C10	86	10 - 177	11/26/18 21:39	
S_Heptachlrepox13C10	62	8 - 146	11/26/18 21:39	
S_Oxychlordane-13C10	60	5 - 144	11/26/18 21:39	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 10:10
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.077**	0.063	0.063	1	11/07/18 15:52	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 15:52	10/29/18	
2,4'-DDT	**0.81**	0.094	0.094	1	11/07/18 15:52	10/29/18	
4,4'-DDD	**0.34**	0.055	0.035	1	11/07/18 15:52	10/29/18	
4,4'-DDE	**0.30**	0.070	0.070	1	11/07/18 15:52	10/29/18	
4,4'-DDT	**3.1**	0.055	0.047	1	11/07/18 15:52	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 15:52	10/29/18	
alpha-Chlordane	**0.063 J**	0.11	0.062	1	11/07/18 15:52	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 15:52	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 15:52	10/29/18	
gamma-BHC (Lindane)	ND U	0.055	0.031	1	11/07/18 15:52	10/29/18	
gamma-Chlordane	**0.090 J**	0.11	0.064	1	11/07/18 15:52	10/29/18	
Heptachlor	ND U	0.055	0.039	1	11/07/18 15:52	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 15:52	10/29/18	
trans-Nonachlor	**0.11**	0.11	0.058	1	11/07/18 15:52	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	68	5 - 120	11/07/18 15:52	
S_4,4'-DDT-d4	77	13 - 200	11/07/18 15:52	
S_Aldrin-13C12	54	10 - 143	11/07/18 15:52	
S_Endrin-13C12	77	20 - 157	11/07/18 15:52	
S_GBHCD6	50	5 - 124	11/07/18 15:52	
S_Heptachlor-13C10	58	10 - 177	11/07/18 15:52	
S_Heptachlrepox13C10	56	8 - 146	11/07/18 15:52	
S_Oxychlordane-13C10	55	5 - 144	11/07/18 15:52	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 11:40
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.065	0.063	1	11/07/18 16:09	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 16:09	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 16:09	10/29/18	
4,4'-DDD	ND U	0.065	0.035	1	11/07/18 16:09	10/29/18	
4,4'-DDE	ND U	0.070	0.070	1	11/07/18 16:09	10/29/18	
4,4'-DDT	ND U	0.065	0.047	1	11/07/18 16:09	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 16:09	10/29/18	
alpha-Chlordane	ND U	0.13	0.062	1	11/07/18 16:09	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 16:09	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 16:09	10/29/18	
gamma-BHC (Lindane)	ND U	0.065	0.031	1	11/07/18 16:09	10/29/18	
gamma-Chlordane	ND U	0.13	0.064	1	11/07/18 16:09	10/29/18	
Heptachlor	ND U	0.065	0.039	1	11/07/18 16:09	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 16:09	10/29/18	
trans-Nonachlor	ND U	0.13	0.058	1	11/07/18 16:09	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	71	5 - 120	11/07/18 16:09	
S_4,4'-DDT-d4	71	13 - 200	11/07/18 16:09	
S_Aldrin-13C12	46	10 - 143	11/07/18 16:09	
S_Endrin-13C12	66	20 - 157	11/07/18 16:09	
S_GBHCD6	40	5 - 124	11/07/18 16:09	
S_Heptachlor-13C10	53	10 - 177	11/07/18 16:09	
S_Heptachlrepox13C10	48	8 - 146	11/07/18 16:09	
S_Oxychlordane-13C10	48	5 - 144	11/07/18 16:09	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 15:35
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.079	0.063	1	11/07/18 16:50	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 16:50	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 16:50	10/29/18	
4,4'-DDD	**0.13**	0.079	0.035	1	11/07/18 16:50	10/29/18	
4,4'-DDE	ND U	0.079	0.070	1	11/07/18 16:50	10/29/18	
4,4'-DDT	ND U	0.079	0.047	1	11/07/18 16:50	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 16:50	10/29/18	
alpha-Chlordane	ND U	0.16	0.062	1	11/07/18 16:50	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 16:50	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 16:50	10/29/18	
gamma-BHC (Lindane)	ND U	0.079	0.031	1	11/07/18 16:50	10/29/18	
gamma-Chlordane	ND U	0.16	0.064	1	11/07/18 16:50	10/29/18	
Heptachlor	ND U	0.079	0.039	1	11/07/18 16:50	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 16:50	10/29/18	
trans-Nonachlor	ND U	0.16	0.058	1	11/07/18 16:50	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	73	5 - 120	11/07/18 16:50	
S_4,4'-DDT-d4	74	13 - 200	11/07/18 16:50	
S_Aldrin-13C12	48	10 - 143	11/07/18 16:50	
S_Endrin-13C12	72	20 - 157	11/07/18 16:50	
S_GBHCD6	45	5 - 124	11/07/18 16:50	
S_Heptachlor-13C10	55	10 - 177	11/07/18 16:50	
S_Heptachlrepox13C10	54	8 - 146	11/07/18 16:50	
S_Oxychlordane-13C10	53	5 - 144	11/07/18 16:50	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 14:37
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.078**	0.063	0.063	1	11/07/18 17:08	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 17:08	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 17:08	10/29/18	
4,4'-DDD	**0.36**	0.059	0.035	1	11/07/18 17:08	10/29/18	
4,4'-DDE	**0.090**	0.070	0.070	1	11/07/18 17:08	10/29/18	
4,4'-DDT	ND U	0.059	0.047	1	11/07/18 17:08	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 17:08	10/29/18	
alpha-Chlordane	ND U	0.12	0.062	1	11/07/18 17:08	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 17:08	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 17:08	10/29/18	
gamma-BHC (Lindane)	ND U	0.059	0.031	1	11/07/18 17:08	10/29/18	
gamma-Chlordane	ND U	0.12	0.064	1	11/07/18 17:08	10/29/18	
Heptachlor	ND U	0.059	0.039	1	11/07/18 17:08	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 17:08	10/29/18	
trans-Nonachlor	ND U	0.12	0.058	1	11/07/18 17:08	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	75	5 - 120	11/07/18 17:08	
S_4,4'-DDT-d4	75	13 - 200	11/07/18 17:08	
S_Aldrin-13C12	50	10 - 143	11/07/18 17:08	
S_Endrin-13C12	73	20 - 157	11/07/18 17:08	
S_GBHCD6	49	5 - 124	11/07/18 17:08	
S_Heptachlor-13C10	54	10 - 177	11/07/18 17:08	
S_Heptachlrepox13C10	53	8 - 146	11/07/18 17:08	
S_Oxychlordane-13C10	51	5 - 144	11/07/18 17:08	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 13:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.12**	0.064	0.063	1	11/07/18 17:26	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 17:26	10/29/18	
2,4'-DDT	**0.23**	0.094	0.094	1	11/07/18 17:26	10/29/18	
4,4'-DDD	**0.49**	0.064	0.035	1	11/07/18 17:26	10/29/18	
4,4'-DDE	**0.21**	0.070	0.070	1	11/07/18 17:26	10/29/18	
4,4'-DDT	**0.68**	0.064	0.047	1	11/07/18 17:26	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 17:26	10/29/18	
alpha-Chlordane	ND U	0.13	0.062	1	11/07/18 17:26	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 17:26	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 17:26	10/29/18	
gamma-BHC (Lindane)	ND U	0.064	0.031	1	11/07/18 17:26	10/29/18	
gamma-Chlordane	ND U	0.13	0.064	1	11/07/18 17:26	10/29/18	
Heptachlor	ND U	0.064	0.039	1	11/07/18 17:26	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 17:26	10/29/18	
trans-Nonachlor	ND U	0.13	0.058	1	11/07/18 17:26	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	60	5 - 120	11/07/18 17:26	
S_4,4'-DDT-d4	61	13 - 200	11/07/18 17:26	
S_Aldrin-13C12	52	10 - 143	11/07/18 17:26	
S_Endrin-13C12	70	20 - 157	11/07/18 17:26	
S_GBHCD6	54	5 - 124	11/07/18 17:26	
S_Heptachlor-13C10	63	10 - 177	11/07/18 17:26	
S_Heptachlrepox13C10	55	8 - 146	11/07/18 17:26	
S_Oxychlordane-13C10	56	5 - 144	11/07/18 17:26	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 16:30
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.11	0.072	1	11/07/18 17:43	10/29/18	
2,4'-DDE	**0.11 J**	0.11	0.090	1	11/07/18 17:43	10/29/18	
2,4'-DDT	ND U	0.11	0.11	1	11/07/18 17:43	10/29/18	
4,4'-DDD	**1.3**	0.11	0.040	1	11/07/18 17:43	10/29/18	
4,4'-DDE	**2.3**	0.11	0.079	1	11/07/18 17:43	10/29/18	
4,4'-DDT	ND U	0.11	0.054	1	11/07/18 17:43	10/29/18	
Aldrin	ND U	0.11	0.090	1	11/07/18 17:43	10/29/18	
alpha-Chlordane	**0.15 J**	0.23	0.070	1	11/07/18 17:43	10/29/18	
cis-Nonachlor	ND U	0.11	0.11	1	11/07/18 17:43	10/29/18	
Dieldrin	ND U	0.23	0.087	1	11/07/18 17:43	10/29/18	
gamma-BHC (Lindane)	ND U	0.11	0.035	1	11/07/18 17:43	10/29/18	
gamma-Chlordane	**0.21 J**	0.23	0.073	1	11/07/18 17:43	10/29/18	
Heptachlor	ND U	0.11	0.045	1	11/07/18 17:43	10/29/18	
Oxychlordane	ND U	0.23	0.15	1	11/07/18 17:43	10/29/18	
trans-Nonachlor	**0.19 J**	0.23	0.066	1	11/07/18 17:43	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	80	5 - 120	11/07/18 17:43	
S_4,4'-DDT-d4	87	13 - 200	11/07/18 17:43	
S_Aldrin-13C12	57	10 - 143	11/07/18 17:43	
S_Endrin-13C12	82	20 - 157	11/07/18 17:43	
S_GBHCD6	53	5 - 124	11/07/18 17:43	
S_Heptachlor-13C10	66	10 - 177	11/07/18 17:43	
S_Heptachlrepox13C10	60	8 - 146	11/07/18 17:43	
S_Oxychlordane-13C10	57	5 - 144	11/07/18 17:43	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 14:00
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.13	0.080	1	11/07/18 18:01	10/29/18	
2,4'-DDE	**0.21**	0.13	0.11	1	11/07/18 18:01	10/29/18	
2,4'-DDT	ND U	0.13	0.12	1	11/07/18 18:01	10/29/18	
4,4'-DDD	**1.6**	0.13	0.045	1	11/07/18 18:01	10/29/18	
4,4'-DDE	**2.7**	0.13	0.089	1	11/07/18 18:01	10/29/18	
4,4'-DDT	ND U	0.13	0.060	1	11/07/18 18:01	10/29/18	
Aldrin	ND U	0.13	0.11	1	11/07/18 18:01	10/29/18	
alpha-Chlordane	**0.14 J**	0.25	0.079	1	11/07/18 18:01	10/29/18	
cis-Nonachlor	ND U	0.13	0.13	1	11/07/18 18:01	10/29/18	
Dieldrin	ND U	0.25	0.098	1	11/07/18 18:01	10/29/18	
gamma-BHC (Lindane)	ND U	0.13	0.040	1	11/07/18 18:01	10/29/18	
gamma-Chlordane	**0.21 J**	0.25	0.082	1	11/07/18 18:01	10/29/18	
Heptachlor	ND U	0.13	0.050	1	11/07/18 18:01	10/29/18	
Oxychlordane	ND U	0.25	0.17	1	11/07/18 18:01	10/29/18	
trans-Nonachlor	**0.18 J**	0.25	0.074	1	11/07/18 18:01	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	77	5 - 120	11/07/18 18:01	
S_4,4'-DDT-d4	71	13 - 200	11/07/18 18:01	
S_Aldrin-13C12	56	10 - 143	11/07/18 18:01	
S_Endrin-13C12	77	20 - 157	11/07/18 18:01	
S_GBHCD6	52	5 - 124	11/07/18 18:01	
S_Heptachlor-13C10	72	10 - 177	11/07/18 18:01	
S_Heptachlrepox13C10	62	8 - 146	11/07/18 18:01	
S_Oxychlordane-13C10	58	5 - 144	11/07/18 18:01	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 15:13
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.10	0.066	1	11/07/18 18:19	10/29/18	
2,4'-DDE	**0.25**		0.10	0.082	1	11/07/18 18:19	10/29/18	
2,4'-DDT	ND	U	0.10	0.098	1	11/07/18 18:19	10/29/18	
4,4'-DDD	**2.4**		0.10	0.037	1	11/07/18 18:19	10/29/18	
4,4'-DDE	**3.6**		0.10	0.073	1	11/07/18 18:19	10/29/18	
4,4'-DDT	ND	U	0.10	0.049	1	11/07/18 18:19	10/29/18	
Aldrin	ND	U	0.10	0.082	1	11/07/18 18:19	10/29/18	
alpha-Chlordane	**0.19**	**J**	0.21	0.065	1	11/07/18 18:19	10/29/18	
cis-Nonachlor	**0.13**		0.11	0.11	1	11/07/18 18:19	10/29/18	
Dieldrin	**0.098**	**J**	0.21	0.080	1	11/07/18 18:19	10/29/18	
gamma-BHC (Lindane)	**0.065**	**J**	0.10	0.033	1	11/07/18 18:19	10/29/18	
gamma-Chlordane	**0.35**		0.21	0.067	1	11/07/18 18:19	10/29/18	
Heptachlor	ND	U	0.10	0.041	1	11/07/18 18:19	10/29/18	
Oxychlordane	ND	U	0.21	0.14	1	11/07/18 18:19	10/29/18	
trans-Nonachlor	**0.22**		0.21	0.061	1	11/07/18 18:19	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	62	5 - 120	11/07/18 18:19	
S_4,4'-DDT-d4	60	13 - 200	11/07/18 18:19	
S_Aldrin-13C12	50	10 - 143	11/07/18 18:19	
S_Endrin-13C12	64	20 - 157	11/07/18 18:19	
S_GBHCD6	47	5 - 124	11/07/18 18:19	
S_Heptachlor-13C10	61	10 - 177	11/07/18 18:19	
S_Heptachlrepox13C10	50	8 - 146	11/07/18 18:19	
S_Oxychlordane-13C10	47	5 - 144	11/07/18 18:19	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 10:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.10	0.064	1	11/07/18 18:36	10/29/18	
2,4'-DDE	**0.12**		0.10	0.081	1	11/07/18 18:36	10/29/18	
2,4'-DDT	ND	U	0.10	0.096	1	11/07/18 18:36	10/29/18	
4,4'-DDD	**1.4**		0.10	0.036	1	11/07/18 18:36	10/29/18	
4,4'-DDE	**2.3**		0.10	0.072	1	11/07/18 18:36	10/29/18	
4,4'-DDT	ND	U	0.10	0.048	1	11/07/18 18:36	10/29/18	
Aldrin	ND	U	0.10	0.081	1	11/07/18 18:36	10/29/18	
alpha-Chlordane	**0.14**	**J**	0.20	0.063	1	11/07/18 18:36	10/29/18	
cis-Nonachlor	ND	U	0.10	0.099	1	11/07/18 18:36	10/29/18	
Dieldrin	ND	U	0.20	0.079	1	11/07/18 18:36	10/29/18	
gamma-BHC (Lindane)	ND	U	0.10	0.032	1	11/07/18 18:36	10/29/18	
gamma-Chlordane	**0.19**	**J**	0.20	0.065	1	11/07/18 18:36	10/29/18	
Heptachlor	ND	U	0.10	0.040	1	11/07/18 18:36	10/29/18	
Oxychlordane	ND	U	0.20	0.14	1	11/07/18 18:36	10/29/18	
trans-Nonachlor	**0.18**	**J**	0.20	0.059	1	11/07/18 18:36	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	62	5 - 120	11/07/18 18:36	
S_4,4'-DDT-d4	62	13 - 200	11/07/18 18:36	
S_Aldrin-13C12	49	10 - 143	11/07/18 18:36	
S_Endrin-13C12	67	20 - 157	11/07/18 18:36	
S_GBHCD6	50	5 - 124	11/07/18 18:36	
S_Heptachlor-13C10	62	10 - 177	11/07/18 18:36	
S_Heptachlrepox13C10	51	8 - 146	11/07/18 18:36	
S_Oxychlordane-13C10	50	5 - 144	11/07/18 18:36	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 12:09
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.11	0.068	1	11/07/18 18:54	10/29/18	
2,4'-DDE	**0.19**	0.11	0.085	1	11/07/18 18:54	10/29/18	
2,4'-DDT	ND U	0.11	0.11	1	11/07/18 18:54	10/29/18	
4,4'-DDD	**1.8**	0.11	0.038	1	11/07/18 18:54	10/29/18	
4,4'-DDE	**3.4**	0.11	0.076	1	11/07/18 18:54	10/29/18	
4,4'-DDT	**0.73**	0.11	0.051	1	11/07/18 18:54	10/29/18	
Aldrin	ND U	0.11	0.085	1	11/07/18 18:54	10/29/18	
alpha-Chlordane	**0.17 J**	0.21	0.067	1	11/07/18 18:54	10/29/18	
cis-Nonachlor	ND U	0.11	0.11	1	11/07/18 18:54	10/29/18	
Dieldrin	**0.084 J**	0.21	0.083	1	11/07/18 18:54	10/29/18	
gamma-BHC (Lindane)	ND U	0.11	0.034	1	11/07/18 18:54	10/29/18	
gamma-Chlordane	**0.29**	0.21	0.069	1	11/07/18 18:54	10/29/18	
Heptachlor	ND U	0.11	0.042	1	11/07/18 18:54	10/29/18	
Oxychlordane	ND U	0.21	0.14	1	11/07/18 18:54	10/29/18	
trans-Nonachlor	**0.20 J**	0.21	0.063	1	11/07/18 18:54	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	34	5 - 120	11/07/18 18:54	
S_4,4'-DDT-d4	34	13 - 200	11/07/18 18:54	
S_Aldrin-13C12	30	10 - 143	11/07/18 18:54	
S_Endrin-13C12	37	20 - 157	11/07/18 18:54	
S_GBHCD6	33	5 - 124	11/07/18 18:54	
S_Heptachlor-13C10	40	10 - 177	11/07/18 18:54	
S_Heptachlrepox13C10	33	8 - 146	11/07/18 18:54	
S_Oxychlordane-13C10	30	5 - 144	11/07/18 18:54	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 11:25
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.12	0.078	1	11/07/18 19:11	10/29/18	
2,4'-DDE	**0.16**	0.12	0.098	1	11/07/18 19:11	10/29/18	
2,4'-DDT	ND U	0.12	0.12	1	11/07/18 19:11	10/29/18	
4,4'-DDD	**1.6**	0.12	0.044	1	11/07/18 19:11	10/29/18	
4,4'-DDE	**2.8**	0.12	0.087	1	11/07/18 19:11	10/29/18	
4,4'-DDT	**0.50**	0.12	0.058	1	11/07/18 19:11	10/29/18	
Aldrin	ND U	0.12	0.098	1	11/07/18 19:11	10/29/18	
alpha-Chlordane	**0.16 J**	0.25	0.077	1	11/07/18 19:11	10/29/18	
cis-Nonachlor	ND U	0.12	0.12	1	11/07/18 19:11	10/29/18	
Dieldrin	ND U	0.25	0.095	1	11/07/18 19:11	10/29/18	
gamma-BHC (Lindane)	ND U	0.12	0.039	1	11/07/18 19:11	10/29/18	
gamma-Chlordane	**0.24 J**	0.25	0.079	1	11/07/18 19:11	10/29/18	
Heptachlor	ND U	0.12	0.049	1	11/07/18 19:11	10/29/18	
Oxychlordane	ND U	0.25	0.17	1	11/07/18 19:11	10/29/18	
trans-Nonachlor	**0.19 J**	0.25	0.072	1	11/07/18 19:11	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	69	5 - 120	11/07/18 19:11	
S_4,4'-DDT-d4	69	13 - 200	11/07/18 19:11	
S_Aldrin-13C12	54	10 - 143	11/07/18 19:11	
S_Endrin-13C12	75	20 - 157	11/07/18 19:11	
S_GBHCD6	52	5 - 124	11/07/18 19:11	
S_Heptachlor-13C10	69	10 - 177	11/07/18 19:11	
S_Heptachlrepox13C10	56	8 - 146	11/07/18 19:11	
S_Oxychlordane-13C10	52	5 - 144	11/07/18 19:11	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 09:16
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.14	0.089	1	11/07/18 19:29	10/29/18	
2,4'-DDE	**0.19**	0.14	0.12	1	11/07/18 19:29	10/29/18	
2,4'-DDT	ND U	0.14	0.14	1	11/07/18 19:29	10/29/18	
4,4'-DDD	**1.7**	0.14	0.050	1	11/07/18 19:29	10/29/18	
4,4'-DDE	**3.3**	0.14	0.099	1	11/07/18 19:29	10/29/18	
4,4'-DDT	ND U	0.14	0.066	1	11/07/18 19:29	10/29/18	
Aldrin	ND U	0.14	0.12	1	11/07/18 19:29	10/29/18	
alpha-Chlordane	**0.20 J**	0.28	0.087	1	11/07/18 19:29	10/29/18	
cis-Nonachlor	ND U	0.14	0.14	1	11/07/18 19:29	10/29/18	
Dieldrin	ND U	0.28	0.11	1	11/07/18 19:29	10/29/18	
gamma-BHC (Lindane)	ND U	0.14	0.044	1	11/07/18 19:29	10/29/18	
gamma-Chlordane	**0.32**	0.28	0.090	1	11/07/18 19:29	10/29/18	
Heptachlor	ND U	0.14	0.055	1	11/07/18 19:29	10/29/18	
Oxychlordane	ND U	0.28	0.19	1	11/07/18 19:29	10/29/18	
trans-Nonachlor	**0.24 J**	0.28	0.082	1	11/07/18 19:29	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	84	5 - 120	11/07/18 19:29	
S_4,4'-DDT-d4	94	13 - 200	11/07/18 19:29	
S_Aldrin-13C12	65	10 - 143	11/07/18 19:29	
S_Endrin-13C12	82	20 - 157	11/07/18 19:29	
S_GBHCD6	63	5 - 124	11/07/18 19:29	
S_Heptachlor-13C10	75	10 - 177	11/07/18 19:29	
S_Heptachlrepox13C10	63	8 - 146	11/07/18 19:29	
S_Oxychlordane-13C10	59	5 - 144	11/07/18 19:29	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/18 09:28
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.14	0.086	1	11/07/18 19:47	10/29/18	
2,4'-DDE	**0.18**		0.14	0.11	1	11/07/18 19:47	10/29/18	
2,4'-DDT	ND	U	0.14	0.13	1	11/07/18 19:47	10/29/18	
4,4'-DDD	**1.9**		0.14	0.048	1	11/07/18 19:47	10/29/18	
4,4'-DDE	**2.4**		0.14	0.096	1	11/07/18 19:47	10/29/18	
4,4'-DDT	ND	U	0.14	0.064	1	11/07/18 19:47	10/29/18	
Aldrin	ND	U	0.14	0.11	1	11/07/18 19:47	10/29/18	
alpha-Chlordane	**0.14**	**J**	0.27	0.085	1	11/07/18 19:47	10/29/18	
cis-Nonachlor	ND	U	0.14	0.14	1	11/07/18 19:47	10/29/18	
Dieldrin	ND	U	0.27	0.11	1	11/07/18 19:47	10/29/18	
gamma-BHC (Lindane)	ND	U	0.14	0.043	1	11/07/18 19:47	10/29/18	
gamma-Chlordane	**0.24**	**J**	0.27	0.088	1	11/07/18 19:47	10/29/18	
Heptachlor	ND	U	0.14	0.054	1	11/07/18 19:47	10/29/18	
Oxychlordane	ND	U	0.27	0.18	1	11/07/18 19:47	10/29/18	
trans-Nonachlor	**0.17**	**J**	0.27	0.079	1	11/07/18 19:47	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	72	5 - 120	11/07/18 19:47	
S_4,4'-DDT-d4	69	13 - 200	11/07/18 19:47	
S_Aldrin-13C12	49	10 - 143	11/07/18 19:47	
S_Endrin-13C12	71	20 - 157	11/07/18 19:47	
S_GBHCD6	50	5 - 124	11/07/18 19:47	
S_Heptachlor-13C10	62	10 - 177	11/07/18 19:47	
S_Heptachlrepox13C10	50	8 - 146	11/07/18 19:47	
S_Oxychlordane-13C10	50	5 - 144	11/07/18 19:47	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1815624-04	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.063	0.063	1	11/07/18 14:41	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 14:41	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 14:41	10/29/18	
4,4'-DDD	ND U	0.049	0.035	1	11/07/18 14:41	10/29/18	
4,4'-DDE	ND U	0.070	0.070	1	11/07/18 14:41	10/29/18	
4,4'-DDT	ND U	0.049	0.047	1	11/07/18 14:41	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 14:41	10/29/18	
alpha-Chlordane	ND U	0.098	0.062	1	11/07/18 14:41	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 14:41	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 14:41	10/29/18	
gamma-BHC (Lindane)	ND U	0.049	0.031	1	11/07/18 14:41	10/29/18	
gamma-Chlordane	ND U	0.098	0.064	1	11/07/18 14:41	10/29/18	
Heptachlor	ND U	0.049	0.039	1	11/07/18 14:41	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 14:41	10/29/18	
trans-Nonachlor	ND U	0.098	0.058	1	11/07/18 14:41	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	83	5 - 120	11/07/18 14:41	
S_4,4'-DDT-d4	74	13 - 200	11/07/18 14:41	
S_Aldrin-13C12	66	10 - 143	11/07/18 14:41	
S_Endrin-13C12	86	20 - 157	11/07/18 14:41	
S_GBHCD6	63	5 - 124	11/07/18 14:41	
S_Heptachlor-13C10	69	10 - 177	11/07/18 14:41	
S_Heptachlrepox13C10	66	8 - 146	11/07/18 14:41	
S_Oxychlordane-13C10	68	5 - 144	11/07/18 14:41	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1816244-04	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.063	0.063	1	11/26/18 20:29	11/7/18	
2,4'-DDE	ND U	0.079	0.079	1	11/26/18 20:29	11/7/18	
2,4'-DDT	ND U	0.094	0.094	1	11/26/18 20:29	11/7/18	
4,4'-DDD	ND U	0.050	0.035	1	11/26/18 20:29	11/7/18	
4,4'-DDE	ND U	0.070	0.070	1	11/26/18 20:29	11/7/18	
4,4'-DDT	ND U	0.050	0.047	1	11/26/18 20:29	11/7/18	
Aldrin	ND U	0.079	0.079	1	11/26/18 20:29	11/7/18	
alpha-Chlordane	ND U	0.099	0.062	1	11/26/18 20:29	11/7/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/26/18 20:29	11/7/18	
Dieldrin	ND U	0.20	0.077	1	11/26/18 20:29	11/7/18	
gamma-BHC (Lindane)	ND U	0.050	0.031	1	11/26/18 20:29	11/7/18	
gamma-Chlordane	ND U	0.099	0.064	1	11/26/18 20:29	11/7/18	
Heptachlor	ND U	0.050	0.039	1	11/26/18 20:29	11/7/18	
Oxychlordane	ND U	0.20	0.13	1	11/26/18 20:29	11/7/18	
trans-Nonachlor	ND U	0.099	0.058	1	11/26/18 20:29	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	88	5 - 120	11/26/18 20:29	
S_4,4'-DDT-d4	107	13 - 200	11/26/18 20:29	
S_Aldrin-13C12	61	10 - 143	11/26/18 20:29	
S_Endrin-13C12	86	20 - 157	11/26/18 20:29	
S_GBHCD6	65	5 - 124	11/26/18 20:29	
S_Heptachlor-13C10	86	10 - 177	11/26/18 20:29	
S_Heptachlrepox13C10	70	8 - 146	11/26/18 20:29	
S_Oxychlordane-13C10	69	5 - 144	11/26/18 20:29	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_4,4'DDD-d4 5-120	S_4,4'-DDT-d4 13-200	S_Aldrin-13C12 10-143
N3-0to26-101518	K1810270-001	76	93	53
L1-0to30-101518	K1810270-004	68	77	54
N1-0to30-101518	K1810270-006	71	71	46
T1-0to30-101518	K1810270-010	73	74	48
R1-0to30-101518	K1810270-011	75	75	50
P1-0to30-101518	K1810270-012	60	61	52
T3-0to28-101618	K1810270-013	80	87	57
T7-0to31-101618	K1810270-015	77	71	56
T5-0to26-101618	K1810270-016	62	60	50
P3-0to29-101618	K1810270-017	62	62	49
R5-0to25-101618	K1810270-018	34	34	30
514-0to29-101618	K1810270-019	69	69	54
P5-0to26-101618	K1810270-020	84	94	65
R3-0to33-101718	K1810270-029	72	69	49
Method Blank	KQ1815624-04	83	74	66
Method Blank	KQ1816244-04	88	107	61
Lab Control Sample	KQ1815624-03	71	76	59
Lab Control Sample	KQ1816244-03	89	102	67
N1-0to30-101518	KQ1815624-01	78	73	63
N1-0to30-101518	KQ1815624-02	67	60	48

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_Endrin-13C12 20-157	S_GBHCD6 5-124	S_Heptachlor-13C10 10-177
N3-0to26-101518	K1810270-001	75	61	86
L1-0to30-101518	K1810270-004	77	50	58
N1-0to30-101518	K1810270-006	66	40	53
T1-0to30-101518	K1810270-010	72	45	55
R1-0to30-101518	K1810270-011	73	49	54
P1-0to30-101518	K1810270-012	70	54	63
T3-0to28-101618	K1810270-013	82	53	66
T7-0to31-101618	K1810270-015	77	52	72
T5-0to26-101618	K1810270-016	64	47	61
P3-0to29-101618	K1810270-017	67	50	62
R5-0to25-101618	K1810270-018	37	33	40
514-0to29-101618	K1810270-019	75	52	69
P5-0to26-101618	K1810270-020	82	63	75
R3-0to33-101718	K1810270-029	71	50	62
Method Blank	KQ1815624-04	86	63	69
Method Blank	KQ1816244-04	86	65	86
Lab Control Sample	KQ1815624-03	66	59	64
Lab Control Sample	KQ1816244-03	92	75	91
N1-0to30-101518	KQ1815624-01	79	56	66
N1-0to30-101518	KQ1815624-02	65	45	52

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_Heptachlrepox13C10 8-146	S_Oxychlordane-13C10 5-144
N3-0to26-101518	K1810270-001	62	60
L1-0to30-101518	K1810270-004	56	55
N1-0to30-101518	K1810270-006	48	48
T1-0to30-101518	K1810270-010	54	53
R1-0to30-101518	K1810270-011	53	51
P1-0to30-101518	K1810270-012	55	56
T3-0to28-101618	K1810270-013	60	57
T7-0to31-101618	K1810270-015	62	58
T5-0to26-101618	K1810270-016	50	47
P3-0to29-101618	K1810270-017	51	50
R5-0to25-101618	K1810270-018	33	30
514-0to29-101618	K1810270-019	56	52
P5-0to26-101618	K1810270-020	63	59
R3-0to33-101718	K1810270-029	50	50
Method Blank	KQ1815624-04	66	68
Method Blank	KQ1816244-04	70	69
Lab Control Sample	KQ1815624-03	62	60
Lab Control Sample	KQ1816244-03	76	72
N1-0to30-101518	KQ1815624-01	60	59
N1-0to30-101518	KQ1815624-02	49	48

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/07/18 13:23

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\110718\110718F002.D **Lab Code:** KQ1816317-01
Instrument ID: K-MS-42 **Analysis Lot:** 614289
Analysis Method: ALS SOP **Signal ID:** 1

		Pyrene-d10	
		Area	**RT**
	Result ==>	41,734,619	9.725
	Upper Limit ==>	83,469,237	10.23
	Lower Limit ==>	20,867,309	9.23
Associated Analyses			
Method Blank	KQ1815624-04	32483782.84	9.739
N1-0to30-101518MS	KQ1815624-01	36857555.16	9.719
N1-0to30-101518DMS	KQ1815624-02	45655542.64	9.718
L1-0to30-101518	K1810270-004	48192201.37	9.712
N1-0to30-101518	K1810270-006	50344448.91	9.725
T1-0to30-101518	K1810270-010	49228948.69	9.732
R1-0to30-101518	K1810270-011	46717233.25	9.719
P1-0to30-101518	K1810270-012	44614314.37	9.719
T3-0to28-101618	K1810270-013	53276617.46	9.719
T7-0to31-101618	K1810270-015	51200386.53	9.732
T5-0to26-101618	K1810270-016	49370237.62	9.725
P3-0to29-101618	K1810270-017	47285141.82	9.725
R5-0to25-101618	K1810270-018	81539582.05	9.727
514-0to29-101618	K1810270-019	47450273.8	9.725
P5-0to26-101618	K1810270-020	46269783.49	9.725
R3-0to33-101718	K1810270-029	51354701.27	9.725

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18 12:19

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID:	Y:\MS42\data\112118\112118F001.D	**Lab Code:**	KQ1817797-02
Instrument ID:	K-MS-42	**Analysis Lot:**	617359
Analysis Method:	ALS SOP	**Signal ID:**	1

		Pyrene-d10	
		Area	**RT**
	Result ==>	7,265,537	9.764
	Upper Limit ==>	14,531,074	10.26
	Lower Limit ==>	3,632,768	9.26
Associated Analyses			
Lab Control Sample	KQ1815624-03	7186837.776	9.749

ALS Group USA, Corp.
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QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/26/18 11:48

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS42\Data\112618\112618F003.D **Lab Code:**KQ1817669-01
Instrument ID: K-MS-42 **Analysis Lot:**617367
Analysis Method: ALS SOP **Signal ID:**1

		Pyrene-d10	
		Area	**RT**
	Result ==>	7,371,425	9.764
	Upper Limit ==>	14,742,849	10.26
	Lower Limit ==>	3,685,712	9.26
Associated Analyses			
Method Blank	KQ1816244-04	10437348.58	9.752
Lab Control Sample	KQ1816244-03	8282225.553	9.750
N3-0to26-101518	K1810270-001	9587360.824	9.763

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	11/7/18
		Date Extracted:	10/29/18

Duplicate Matrix Spike Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry
Analysis Method:	ALS SOP		
Prep Method:	EPA 3541		

		Matrix Spike KQ1815624-01			Duplicate Matrix Spike KQ1815624-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4'-DDD	ND U	1.26	1.30	96	1.13	1.31	86	32-169	11	40
2,4'-DDE	ND U	1.30	1.30	100	1.19	1.31	91	43-155	9	40
2,4'-DDT	ND U	1.49	1.30	114	1.24	1.31	95	55-161	18	40
4,4'-DDD	ND U	1.41	1.30	108	1.21	1.31	92	10-190	15	40
4,4'-DDE	ND U	1.13	1.30	86	1.14	1.31	87	35-162	1	40
4,4'-DDT	ND U	1.31	1.30	100	1.33	1.31	101	24-183	1	40
Aldrin	ND U	1.37	1.30	105	1.32	1.31	100	52-151	4	40
alpha-Chlordane	ND U	1.55	1.30	119	1.43	1.31	109	31-156	8	40
cis-Nonachlor	ND U	1.39	1.30	107	1.33	1.31	101	27-144	5	40
Dieldrin	ND U	1.15	1.30	88	1.05	1.31	80	28-150	9	40
gamma-BHC (Lindane)	ND U	1.36	1.30	104	1.26	1.31	96	64-135	8	40
gamma-Chlordane	ND U	1.53	1.30	118	1.40	1.31	107	31-158	9	40
Heptachlor	ND U	1.44	1.30	110	1.44	1.31	110	76-117	<1	40
Oxychlordane	ND U	1.39	1.30	107	1.32	1.31	101	53-144	5	40
trans-Nonachlor	ND U	1.42	1.30	109	1.29	1.31	98	35-153	9	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	617359

Lab Control Sample
KQ1815624-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4'-DDD	1.89	2.00	95	73-122
2,4'-DDE	1.83	2.00	92	54-145
2,4'-DDT	1.82	2.00	91	77-118
4,4'-DDD	2.14	2.00	107	74-117
4,4'-DDE	1.62	2.00	81	66-132
4,4'-DDT	1.95	2.00	97	78-116
Aldrin	2.14	2.00	107	74-122
alpha-Chlordane	2.11	2.00	106	74-130
cis-Nonachlor	2.22	2.00	111	69-134
Dieldrin	1.91	2.00	96	62-131
gamma-BHC (Lindane)	1.99	2.00	99	79-116
gamma-Chlordane	2.15	2.00	108	76-128
Heptachlor	2.11	2.00	106	81-114
Oxychlordane	2.07	2.00	103	59-141
trans-Nonachlor	2.06	2.00	103	76-124

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	617367

Lab Control Sample
KQ1816244-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4'-DDD	1.91	2.00	95	73-122
2,4'-DDE	1.76	2.00	88	54-145
2,4'-DDT	1.72	2.00	86	77-118
4,4'-DDD	2.21	2.00	111	74-117
4,4'-DDE	1.53	2.00	76	66-132
4,4'-DDT	1.97	2.00	99	78-116
Aldrin	2.11	2.00	106	74-122
alpha-Chlordane	2.23	2.00	111	74-130
cis-Nonachlor	2.15	2.00	107	69-134
Dieldrin	1.56	2.00	78	62-131
gamma-BHC (Lindane)	2.00	2.00	100	79-116
gamma-Chlordane	2.12	2.00	106	76-128
Heptachlor	2.09	2.00	105	81-114
Oxychlordane	2.04	2.00	102	59-141
trans-Nonachlor	1.65	2.00	83	76-124

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/07/18 14:41
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Method Blank Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-42
Lab Code:	KQ1815624-04	**File ID:**	Y:\MS42\data\110718\110718F003.D
Analysis Method:	ALS SOP	**Analysis Lot:**	614289,617359
Prep Method:	EPA 3541	**Extraction Lot:**	325137

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N1-0to30-101518MS	KQ1815624-01	Y:\MS42\data\110718\110718F005.D	11/07/18 15:16
N1-0to30-101518DMS	KQ1815624-02	Y:\MS42\data\110718\110718F006.D	11/07/18 15:34
L1-0to30-101518	K1810270-004	Y:\MS42\data\110718\110718F007.D	11/07/18 15:52
N1-0to30-101518	K1810270-006	Y:\MS42\data\110718\110718F008.D	11/07/18 16:09
T1-0to30-101518	K1810270-010	Y:\MS42\data\110718\110718F009.D	11/07/18 16:50
R1-0to30-101518	K1810270-011	Y:\MS42\data\110718\110718F010.D	11/07/18 17:08
P1-0to30-101518	K1810270-012	Y:\MS42\data\110718\110718F011.D	11/07/18 17:26
T3-0to28-101618	K1810270-013	Y:\MS42\data\110718\110718F012.D	11/07/18 17:43
T7-0to31-101618	K1810270-015	Y:\MS42\data\110718\110718F013.D	11/07/18 18:01
T5-0to26-101618	K1810270-016	Y:\MS42\data\110718\110718F014.D	11/07/18 18:19
P3-0to29-101618	K1810270-017	Y:\MS42\data\110718\110718F015.D	11/07/18 18:36
R5-0to25-101618	K1810270-018	Y:\MS42\data\110718\110718F016.D	11/07/18 18:54
514-0to29-101618	K1810270-019	Y:\MS42\data\110718\110718F017.D	11/07/18 19:11
P5-0to26-101618	K1810270-020	Y:\MS42\data\110718\110718F018.D	11/07/18 19:29
R3-0to33-101718	K1810270-029	Y:\MS42\data\110718\110718F019.D	11/07/18 19:47
Lab Control Sample	KQ1815624-03	Y:\MS42\data\112118\112118F005.D	11/21/18 13:33

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18 20:29
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Method Blank Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-42
Lab Code:	KQ1816244-04	**File ID:**	J:\MS42\Data\112618\112618F031.D
Analysis Method:	ALS SOP	**Analysis Lot:**	617367
Prep Method:	EPA 3541	**Extraction Lot:**	325840

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1816244-03	J:\MS42\Data\112618\112618F032.D	11/26/18 20:46
N3-0to26-101518	K1810270-001	J:\MS42\Data\112618\112618F035.D	11/26/18 21:39

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18 13:33
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-42
Lab Code:	KQ1815624-03	**File ID:**	Y:\MS42\data\112118\112118F005.D
Analysis Method:	ALS SOP	**Analysis Lot:**	614289,617359
Prep Method:	EPA 3541	**Extraction Lot:**	325137

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1815624-04	Y:\MS42\data\110718\110718F003.D	11/07/18 14:41
N1-0to30-101518MS	KQ1815624-01	Y:\MS42\data\110718\110718F005.D	11/07/18 15:16
N1-0to30-101518DMS	KQ1815624-02	Y:\MS42\data\110718\110718F006.D	11/07/18 15:34
L1-0to30-101518	K1810270-004	Y:\MS42\data\110718\110718F007.D	11/07/18 15:52
N1-0to30-101518	K1810270-006	Y:\MS42\data\110718\110718F008.D	11/07/18 16:09
T1-0to30-101518	K1810270-010	Y:\MS42\data\110718\110718F009.D	11/07/18 16:50
R1-0to30-101518	K1810270-011	Y:\MS42\data\110718\110718F010.D	11/07/18 17:08
P1-0to30-101518	K1810270-012	Y:\MS42\data\110718\110718F011.D	11/07/18 17:26
T3-0to28-101618	K1810270-013	Y:\MS42\data\110718\110718F012.D	11/07/18 17:43
T7-0to31-101618	K1810270-015	Y:\MS42\data\110718\110718F013.D	11/07/18 18:01
T5-0to26-101618	K1810270-016	Y:\MS42\data\110718\110718F014.D	11/07/18 18:19
P3-0to29-101618	K1810270-017	Y:\MS42\data\110718\110718F015.D	11/07/18 18:36
R5-0to25-101618	K1810270-018	Y:\MS42\data\110718\110718F016.D	11/07/18 18:54
514-0to29-101618	K1810270-019	Y:\MS42\data\110718\110718F017.D	11/07/18 19:11
P5-0to26-101618	K1810270-020	Y:\MS42\data\110718\110718F018.D	11/07/18 19:29
R3-0to33-101718	K1810270-029	Y:\MS42\data\110718\110718F019.D	11/07/18 19:47

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18 20:46
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-42
Lab Code:	KQ1816244-03	**File ID:**	J:\MS42\Data\112618\112618F032.D
Analysis Method:	ALS SOP	**Analysis Lot:**	617367
Prep Method:	EPA 3541	**Extraction Lot:**	325840

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1816244-04	J:\MS42\Data\112618\112618F031.D	11/26/18 20:29
N3-0to26-101518	K1810270-001	J:\MS42\Data\112618\112618F035.D	11/26/18 21:39

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/07/18 13:23

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\110718\110718F002.D **Analytical Method:** ALS SOP
Instrument ID: K-MS-42 **Analysis Lot:** 614289

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1816317-01	Y:\MS42\data\110718\110718F002.D	11/07/18 13:23	
Method Blank	KQ1815624-04	Y:\MS42\data\110718\110718F003.D	11/07/18 14:41	
N1-0to30-101518	KQ1815624-01	Y:\MS42\data\110718\110718F005.D	11/07/18 15:16	
N1-0to30-101518	KQ1815624-02	Y:\MS42\data\110718\110718F006.D	11/07/18 15:34	
L1-0to30-101518	K1810270-004	Y:\MS42\data\110718\110718F007.D	11/07/18 15:52	
N1-0to30-101518	K1810270-006	Y:\MS42\data\110718\110718F008.D	11/07/18 16:09	
T1-0to30-101518	K1810270-010	Y:\MS42\data\110718\110718F009.D	11/07/18 16:50	
R1-0to30-101518	K1810270-011	Y:\MS42\data\110718\110718F010.D	11/07/18 17:08	
P1-0to30-101518	K1810270-012	Y:\MS42\data\110718\110718F011.D	11/07/18 17:26	
T3-0to28-101618	K1810270-013	Y:\MS42\data\110718\110718F012.D	11/07/18 17:43	
T7-0to31-101618	K1810270-015	Y:\MS42\data\110718\110718F013.D	11/07/18 18:01	
T5-0to26-101618	K1810270-016	Y:\MS42\data\110718\110718F014.D	11/07/18 18:19	
P3-0to29-101618	K1810270-017	Y:\MS42\data\110718\110718F015.D	11/07/18 18:36	
R5-0to25-101618	K1810270-018	Y:\MS42\data\110718\110718F016.D	11/07/18 18:54	
514-0to29-101618	K1810270-019	Y:\MS42\data\110718\110718F017.D	11/07/18 19:11	
P5-0to26-101618	K1810270-020	Y:\MS42\data\110718\110718F018.D	11/07/18 19:29	
R3-0to33-101718	K1810270-029	Y:\MS42\data\110718\110718F019.D	11/07/18 19:47	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/21/18 12:19

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\112118\112118F001.D **Analytical Method:** ALS SOP
Instrument ID: K-MS-42 **Analysis Lot:** 617359

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1817797-02	Y:\MS42\data\112118\112118F001.D	11/21/18 12:19	
Lab Control Sample	KQ1815624-03	Y:\MS42\data\112118\112118F005.D	11/21/18 13:33	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/26/18 11:48

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS42\Data\112618\112618F003.D **Analytical Method:** ALS SOP
Instrument ID: K-MS-42 **Analysis Lot:** 617367

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1817669-01	J:\MS42\Data\112618\112618F003.D	11/26/18 11:48	
Method Blank	KQ1816244-04	J:\MS42\Data\112618\112618F031.D	11/26/18 20:29	
Lab Control Sample	KQ1816244-03	J:\MS42\Data\112618\112618F032.D	11/26/18 20:46	
N3-0to26-101518	K1810270-001	J:\MS42\Data\112618\112618F035.D	11/26/18 21:39	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900105-01	OC PEST ICAL 0.5ng/mL SVM59-48A	Y:\MS42\data\111618\111618F007.D	11/16/2018 13:04
02	KC1900105-02	OC PEST ICAL 1ng/mL SVM59-48B	Y:\MS42\data\111618\111618F008.D	11/16/2018 13:22
03	KC1900105-03	OC PEST ICAL 2ng/mL SVM59-48C	Y:\MS42\data\111618\111618F009.D	11/16/2018 13:40
04	KC1900105-04	OC PEST ICAL5ng/mL SVM59-48D	Y:\MS42\data\111618\111618F010.D	11/16/2018 13:57
05	KC1900105-05	OC PEST ICAL 10ng/mL SVM59-48E	Y:\MS42\data\111618\111618F011.D	11/16/2018 14:15
06	KC1900105-06	OC PEST ICAL 20ng/mL SVM59-48F	Y:\MS42\data\111618\111618F012.D	11/16/2018 14:32
07	KC1900105-07	OC PEST ICAL 40ng/mL SVM59-48G	Y:\MS42\data\111618\111618F013.D	11/16/2018 14:50
08	KC1900105-08	OC PEST ICAL 60ng/mL SVM59-48H	Y:\MS42\data\111618\111618F014.D	11/16/2018 15:08
09	KC1900105-09	OC PEST ICAL 80ng/mL SVM59-48I	Y:\MS42\data\111618\111618F015.D	11/16/2018 15:25
10	KC1900105-10	OC PEST ICAL 100ng/mL SVM59-48J	Y:\MS42\data\111618\111618F016.D	11/16/2018 15:43

Analyte

2,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.261	02	1	1.224	03	2	1.178	04	5	1.079
05	10	0.9427	06	20	1.017	07	40	1.047	08	60	1.03
09	80	1.021	10	100	0.9601						

2,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.112	02	1	1.066	03	2	0.9964	04	5	0.9684
05	10	0.9857	06	20	0.9682	07	40	0.8315	08	60	0.868
09	80	0.8943	10	100	0.8158						

2,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.569	02	1	2.415	03	2	2.223	04	5	2.091
05	10	2.002	06	20	2.313	07	40	2.153	08	60	2.109
09	80	2.217	10	100	2.327						

4,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.962	02	1	1.748	03	2	1.715	04	5	1.582
05	10	1.611	06	20	1.612	07	40	1.491	08	60	1.499
09	80	1.442	10	100	1.485						

4,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.062	02	1	1.011	03	2	0.9602	04	5	0.8859
05	10	0.7818	06	20	0.8616	07	40	0.8292	08	60	0.8033
09	80	0.8039	10	100	0.7151						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

4,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.262	02	1	1.153	03	2	1.199	04	5	1.117
05	10	1.136	06	20	1.174	07	40	1.085	08	60	1.118
09	80	1.161	10	100	1.165						

Aldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	4.305	02	1	2.563	03	2	1.61	04	5	0.9942
05	10	0.8166	06	20	0.7263	07	40	0.632	08	60	0.6534
09	80	0.6433	10	100	0.6223						

Dieldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.619	02	1	1.579	03	2	1.599	04	5	1.513
05	10	1.404	06	20	1.488	07	40	1.434	08	60	1.533
09	80	1.582	10	100	1.503						

Heptachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.394	02	1	1.262	03	2	1.253	04	5	1.114
05	10	1.096	06	20	1.124	07	40	1.092	08	60	1.097
09	80	1.103	10	100	1.057						

Oxychlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	3.238	02	1	2.791	03	2	2.867	04	5	2.599
05	10	2.71	06	20	2.603	07	40	2.523	08	60	2.543
09	80	2.605	10	100	2.563						

S_4,4'-DDT-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.492	02	5	1.453	03	5	1.504	04	5	1.524
05	5	1.622	06	5	1.576	07	5	1.658	08	5	1.721
09	5	1.688	10	5	1.631						

S_4,4'DDD-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	3.157	02	5	3.283	03	5	3.287	04	5	3.32
05	5	3.165	06	5	3.478	07	5	3.703	08	5	3.817
09	5	4.136	10	5	4.17						

S_Aldrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.5193	02	20	0.5077	03	20	0.4804	04	20	0.5141
05	20	0.5112	06	20	0.5702	07	20	0.5257	08	20	0.5312
09	20	0.5958	10	20	0.5126						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

S_Endrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.177	02	20	0.183	03	20	0.1731	04	20	0.176
05	20	0.1718	06	20	0.1917	07	20	0.1865	08	20	0.1858
09	20	0.1969	10	20	0.1858						

S_GBHCD6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	1.328	02	20	1.305	03	20	1.255	04	20	1.351
05	20	1.443	06	20	1.563	07	20	1.356	08	20	1.409
09	20	1.596	10	20	1.343						

S_Heptachlor-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.543	02	20	0.5492	03	20	0.5195	04	20	0.5578
05	20	0.591	06	20	0.6313	07	20	0.5827	08	20	0.5948
09	20	0.6094	10	20	0.5895						

S_Heptachlrepox13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.168	02	20	0.1782	03	20	0.1684	04	20	0.1782
05	20	0.1798	06	20	0.2042	07	20	0.1783	08	20	0.1871
09	20	0.2101	10	20	0.1857						

S_Oxychlordane-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.3485	02	20	0.363	03	20	0.3367	04	20	0.363
05	20	0.3664	06	20	0.413	07	20	0.3629	08	20	0.3782
09	20	0.4199	10	20	0.3833						

alpha-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.866	02	1	2.479	03	2	2.573	04	5	2.305
05	10	2.332	06	20	2.321	07	40	2.261	08	60	2.338
09	80	2.314	10	100	2.286						

cis-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.6615	02	1	0.5948	03	2	0.6225	04	5	0.5659
05	10	0.5567	06	20	0.5674	07	40	0.5856	08	60	0.5834
09	80	0.5695	10	100	0.5621						

gamma-BHC (Lindane)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.362	02	1	2.223	03	2	2.138	04	5	2.023
05	10	2.017	06	20	2.066	07	40	1.951	08	60	2.021
09	80	2.032	10	100	2.087						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

gamma-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.111	02	1	0.9846	03	2	1.046	04	5	0.9322
05	10	0.9264	06	20	0.9043	07	40	0.9128	08	60	0.9219
09	80	0.9581	10	100	0.9388						

trans-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.73	02	1	1.64	03	2	1.592	04	5	1.404
05	10	1.556	06	20	1.449	07	40	1.55	08	60	1.461
09	80	1.584	10	100	1.529						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4'-DDD	TRG	Average RF	% RSD	10.1	≤20	1.076	0.01
2,4'-DDE	TRG	Average RF	% RSD	10.3	≤20	0.9506	0.01
2,4'-DDT	TRG	Average RF	% RSD	7.5	≤20	2.242	0.01
4,4'-DDD	TRG	Average RF	% RSD	9.8	≤20	1.615	0.01
4,4'-DDE	TRG	Average RF	% RSD	12.5	≤20	0.8714	0.01
4,4'-DDT	TRG	Average RF	% RSD	4.3	≤20	1.157	0.01
Aldrin	TRG	Quadratic	COD	0.9993	≥	1.357	0.01
Dieldrin	TRG	Average RF	% RSD	4.7	≤20	1.526	0.01
Heptachlor	TRG	Average RF	% RSD	9.3	≤20	1.159	0.01
Oxychlordane	TRG	Average RF	% RSD	8.1	≤20	2.704	0.01
S_4,4'-DDT-d4	SURR	Average RF	% RSD	5.7	≤	1.587	0.01
S_4,4'DDD-d4	SURR	Average RF	% RSD	10.8	≤	3.552	0.01
S_Aldrin-13C12	SURR	Average RF	% RSD	6.3	≤	0.5268	0.01
S_Endrin-13C12	SURR	Average RF	% RSD	4.5	≤	0.1828	0.01
S_GBHCD6	SURR	Average RF	% RSD	7.9	≤	1.395	0.01
S_Heptachlor-13C10	SURR	Average RF	% RSD	5.9	≤	0.5768	0.01
S_Heptachlrepox13C10	SURR	Average RF	% RSD	7.5	≤	0.1838	0.01
S_Oxychlordane-13C10	SURR	Average RF	% RSD	7.0	≤	0.3735	0.01
alpha-Chlordane	TRG	Average RF	% RSD	7.8	≤20	2.408	0.01
cis-Nonachlor	TRG	Average RF	% RSD	5.6	≤20	0.5869	0.01
gamma-BHC (Lindane)	TRG	Average RF	% RSD	5.8	≤20	2.092	0.01
gamma-Chlordane	TRG	Average RF	% RSD	6.9	≤20	0.9637	0.01
trans-Nonachlor	TRG	Average RF	% RSD	6.2	≤20	1.549	0.01

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900099-01	OC PEST ICAL 0.5ng/mL SVM59-48A	Y:\MS42\data\110618\110618F012.D	11/06/2018 17:23
02	KC1900099-02	OC PEST ICAL 1ng/mL SVM59-48B	Y:\MS42\data\110618\110618F013.D	11/06/2018 17:40
03	KC1900099-03	OC PEST ICAL 2ng/mL SVM59-48C	Y:\MS42\data\110618\110618F014.D	11/06/2018 17:58
04	KC1900099-04	OC PEST ICAL5ng/mL SVM59-48D	Y:\MS42\data\110618\110618F015.D	11/06/2018 18:15
05	KC1900099-05	OC PEST ICAL 10ng/mL SVM59-48E	Y:\MS42\data\110618\110618F016.D	11/06/2018 18:33
06	KC1900099-06	OC PEST ICAL 20ng/mL SVM59-48F	Y:\MS42\data\110618\110618F017.D	11/06/2018 18:51
07	KC1900099-07	OC PEST ICAL 40ng/mL SVM59-48G	Y:\MS42\data\110618\110618F018.D	11/06/2018 19:08
08	KC1900099-08	OC PEST ICAL 60ng/mL SVM59-48H	Y:\MS42\data\110618\110618F019.D	11/06/2018 19:26
09	KC1900099-09	OC PEST ICAL 80ng/mL SVM59-48I	Y:\MS42\data\110618\110618F020.D	11/06/2018 19:44
10	KC1900099-10	OC PEST ICAL 100ng/mL SVM59-48J	Y:\MS42\data\110618\110618F021.D	11/06/2018 20:01

Analyte

2,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.252	02	1	1.181	03	2	1.198	04	5	1.085
05	10	0.9599	06	20	0.8947	07	40	0.9002	08	60	1.127
09	80	1.001	10	100	0.9482						

2,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.9802	02	1	0.8092	03	2	0.8185	04	5	0.7787
05	10	0.8799	06	20	0.8045	07	40	0.807	08	60	0.8129
09	80	0.7312	10	100	0.6882						

2,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.488	02	1	2.051	03	2	1.933	04	5	1.83
05	10	2.009	06	20	2.074	07	40	2.201	08	60	2.008
09	80	1.84	10	100	1.915						

4,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.848	02	1	1.732	03	2	1.721	04	5	1.604
05	10	1.508	06	20	1.484	07	40	1.418	08	60	1.578
09	80	1.503	10	100	1.473						

4,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.861	02	1	0.8026	03	2	0.783	04	5	0.7288
05	10	0.6869	06	20	0.6637	07	40	0.6344	08	60	0.7903
09	80	0.7061	10	100	0.6413						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

4,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.136	02	1	1.19	03	2	1.133	04	5	1.114
05	10	1.07	06	20	1.021	07	40	1.113	08	60	1.065
09	80	1.076	10	100	1.117						

Aldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	4.077	02	1	2.192	03	2	1.589	04	5	0.9482
05	10	0.8013	06	20	0.7412	07	40	0.6799	08	60	0.6189
09	80	0.6066	10	100	0.6072						

Dieldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.733	02	1	1.373	03	2	1.439	04	5	1.247
05	10	1.284	06	20	1.348	07	40	1.244	08	60	1.472
09	80	1.491	10	100	1.479						

Heptachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.303	02	1	1.16	03	2	1.119	04	5	1.057
05	10	1.104	06	20	1.124	07	40	1.096	08	60	1.07
09	80	1.072	10	100	1.065						

Oxychlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	3.284	02	1	2.976	03	2	2.863	04	5	2.693
05	10	2.7	06	20	2.736	07	40	2.548	08	60	2.673
09	80	2.807	10	100	2.519						

S_4,4'-DDT-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.985	02	5	2.148	03	5	2.451	04	5	2.304
05	5	2.318	06	5	2.312	07	5	2.214	08	5	2.329
09	5	2.624	10	5	2.558						

S_4,4'DDD-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	3.638	02	5	3.954	03	5	3.957	04	5	3.9
05	5	3.799	06	5	3.909	07	5	4.012	08	5	4.111
09	5	4.701	10	5	4.762						

S_Aldrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.5291	02	20	0.4875	03	20	0.4578	04	20	0.4638
05	20	0.5536	06	20	0.5074	07	20	0.5531	08	20	0.5727
09	20	0.5662	10	20	0.5358						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

S_Endrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.187	02	20	0.1956	03	20	0.1886	04	20	0.1975
05	20	0.1924	06	20	0.1903	07	20	0.2061	08	20	0.201
09	20	0.2109	10	20	0.2044						

S_GBHCD6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	1.473	02	20	1.284	03	20	1.303	04	20	1.252
05	20	1.67	06	20	1.425	07	20	1.729	08	20	1.525
09	20	1.557	10	20	1.412						

S_Heptachlor-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.6995	02	20	0.6937	03	20	0.7068	04	20	0.696
05	20	0.7781	06	20	0.776	07	20	0.78	08	20	0.7609
09	20	0.77	10	20	0.7044						

S_Heptachlrepox13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.1895	02	20	0.1812	03	20	0.1769	04	20	0.1724
05	20	0.1905	06	20	0.1882	07	20	0.2122	08	20	0.194
09	20	0.2079	10	20	0.1889						

S_Oxychlordane-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.3895	02	20	0.3361	03	20	0.3702	04	20	0.3718
05	20	0.4287	06	20	0.3925	07	20	0.4523	08	20	0.4371
09	20	0.4172	10	20	0.4224						

alpha-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.373	02	1	2.371	03	2	2.274	04	5	2.15
05	10	2.234	06	20	2.254	07	40	2.029	08	60	2.178
09	80	2.302	10	100	2.162						

cis-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.5997	02	1	0.6293	03	2	0.5825	04	5	0.5663
05	10	0.542	06	20	0.6008	07	40	0.5321	08	60	0.5851
09	80	0.6213	10	100	0.5971						

gamma-BHC (Lindane)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.273	02	1	2.225	03	2	2.392	04	5	2.257
05	10	2.059	06	20	2.36	07	40	2.026	08	60	2.198
09	80	2.253	10	100	2.223						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

gamma-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.9604	02	1	0.9971	03	2	0.9052	04	5	0.8828
05	10	0.9	06	20	0.887	07	40	0.8667	08	60	0.9044
09	80	0.975	10	100	0.9154						

trans-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.545	02	1	1.591	03	2	1.466	04	5	1.33
05	10	1.557	06	20	1.608	07	40	1.514	08	60	1.518
09	80	1.609	10	100	1.464						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4'-DDD	TRG	Average RF	% RSD	12.4	≤20	1.055	0.01
2,4'-DDE	TRG	Average RF	% RSD	9.7	≤20	0.811	0.01
2,4'-DDT	TRG	Average RF	% RSD	9.6	≤20	2.035	0.01
4,4'-DDD	TRG	Average RF	% RSD	8.7	≤20	1.587	0.01
4,4'-DDE	TRG	Average RF	% RSD	10.5	≤20	0.7298	0.01
4,4'-DDT	TRG	Average RF	% RSD	4.3	≤20	1.104	0.01
Aldrin	TRG	Quadratic	COD	0.9991	≥	1.286	0.01
Dieldrin	TRG	Average RF	% RSD	10.4	≤20	1.411	0.01
Heptachlor	TRG	Average RF	% RSD	6.5	≤20	1.117	0.01
Oxychlordane	TRG	Average RF	% RSD	8.0	≤20	2.78	0.01
S_4,4'-DDT-d4	SURR	Average RF	% RSD	8.1	≤	2.324	0.01
S_4,4'DDD-d4	SURR	Average RF	% RSD	9.0	≤	4.074	0.01
S_Aldrin-13C12	SURR	Average RF	% RSD	8.0	≤	0.5227	0.01
S_Endrin-13C12	SURR	Average RF	% RSD	4.1	≤	0.1974	0.01
S_GBHCD6	SURR	Average RF	% RSD	11.0	≤	1.463	0.01
S_Heptachlor-13C10	SURR	Average RF	% RSD	5.3	≤	0.7365	0.01
S_Heptachlrepox13C10	SURR	Average RF	% RSD	6.5	≤	0.1902	0.01
S_Oxychlordane-13C10	SURR	Average RF	% RSD	8.9	≤	0.4018	0.01
alpha-Chlordane	TRG	Average RF	% RSD	4.8	≤20	2.233	0.01
cis-Nonachlor	TRG	Average RF	% RSD	5.4	≤20	0.5856	0.01
gamma-BHC (Lindane)	TRG	Average RF	% RSD	5.1	≤20	2.227	0.01
gamma-Chlordane	TRG	Average RF	% RSD	4.7	≤20	0.9194	0.01
trans-Nonachlor	TRG	Average RF	% RSD	5.6	≤20	1.52	0.01

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Verification Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1900105-11	OC PEST ICV 20ng/mL SVM59-48K	Y:\MS42\data\111618\111618F018.D	11/16/2018 16:18

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4'-DDD	20.0	20.6	1.076E0	1.11E0	3.16	±25	Average RF
2,4'-DDE	20.0	20.5	9.506E-1	9.742E-1	2.48	±25	Average RF
2,4'-DDT	20.0	17.8	2.242E0	2.0E0	-10.783	±25	Average RF
4,4'-DDD	20.0	20.1	1.615E0	1.62E0	0.320	±25	Average RF
4,4'-DDE	20.0	20.7	8.714E-1	9.034E-1	3.68	±25	Average RF
4,4'-DDT	20.0	19.1	1.157E0	1.104E0	-4.551	±25	Average RF
Aldrin	20.0	19.4	1.357E0	6.941E-1	-2.945	±25	Quadratic
alpha-Chlordane	20.0	18.6	2.408E0	2.243E0	-6.832	±25	Average RF
cis-Nonachlor	20.0	16.9	5.869E-1	4.95E-1	-15.672	±25	Average RF
Dieldrin	20.0	19.2	1.526E0	1.462E0	-4.168	±25	Average RF
gamma-BHC (Lindane)	20.0	19.3	2.092E0	2.019E0	-3.491	±25	Average RF
gamma-Chlordane	20.0	19.0	9.637E-1	9.15E-1	-5.056	±25	Average RF
Heptachlor	20.0	19.1	1.159E0	1.106E0	-4.610	±25	Average RF
Oxychlordane	20.0	19.6	2.704E0	2.65E0	-1.998	±25	Average RF
trans-Nonachlor	20.0	17.7	1.549E0	1.367E0	-11.742	±25	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	4.73	3.552E0	3.363E0	94.6	50-200	Average RF
S_4,4'-DDT-d4	5.00	4.71	1.587E0	1.494E0	94.2	50-200	Average RF
S_Aldrin-13C12	20.0	19.7	5.268E-1	5.179E-1	98.5	50-200	Average RF
S_Endrin-13C12	20.0	19.4	1.828E-1	1.772E-1	97.0	50-200	Average RF
S_GBHCD6	20.0	20.0	1.395E0	1.391E0	100	50-200	Average RF
S_Heptachlor-13C10	20.0	19.2	5.768E-1	5.534E-1	96.0	50-200	Average RF
S_Heptachlrepox13C10	20.0	20.6	1.838E-1	1.894E-1	103	50-200	Average RF
S_Oxychlordane-13C10	20.0	20.8	3.735E-1	3.892E-1	104	50-200	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Verification Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1900099-11	OC PEST ICV 20ng/mL SVM59-48K	Y:\MS42\data\110618\110618F022.D	11/06/2018 20:19

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4'-DDD	20.0	21.4	1.055E0	1.13E0	7.14	±25	Average RF
2,4'-DDE	20.0	20.6	8.11E-1	8.357E-1	3.04	±25	Average RF
2,4'-DDT	20.0	16.7	2.035E0	1.699E0	-16.493	±25	Average RF
4,4'-DDD	20.0	19.5	1.587E0	1.546E0	-2.568	±25	Average RF
4,4'-DDE	20.0	22.4	7.298E-1	8.169E-1	11.93	±25	Average RF
4,4'-DDT	20.0	20.3	1.104E0	1.118E0	1.28	±25	Average RF
Aldrin	20.0	18.7	1.286E0	6.784E-1	-6.621	±25	Quadratic
alpha-Chlordane	20.0	21.0	2.233E0	2.34E0	4.80	±25	Average RF
cis-Nonachlor	20.0	19.9	5.856E-1	5.831E-1	-0.424	±25	Average RF
Dieldrin	20.0	19.5	1.411E0	1.379E0	-2.269	±25	Average RF
gamma-BHC (Lindane)	20.0	19.1	2.227E0	2.123E0	-4.650	±25	Average RF
gamma-Chlordane	20.0	20.2	9.194E-1	9.291E-1	1.05	±25	Average RF
Heptachlor	20.0	20.4	1.117E0	1.141E0	2.17	±25	Average RF
Oxychlordane	20.0	21.2	2.78E0	2.942E0	5.82	±25	Average RF
trans-Nonachlor	20.0	20.0	1.52E0	1.518E0	-0.124	±25	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	4.86	4.074E0	3.959E0	97.2	50-200	Average RF
S_4,4'-DDT-d4	5.00	5.07	2.324E0	2.356E0	101	50-200	Average RF
S_Aldrin-13C12	20.0	18.5	5.227E-1	4.844E-1	92.5	50-200	Average RF
S_Endrin-13C12	20.0	19.2	1.974E-1	1.897E-1	96.0	50-200	Average RF
S_GBHCD6	20.0	18.3	1.463E0	1.339E0	91.5	50-200	Average RF
S_Heptachlor-13C10	20.0	17.8	7.365E-1	6.57E-1	89.0	50-200	Average RF
S_Heptachlrepox13C10	20.0	19.4	1.902E-1	1.846E-1	97.0	50-200	Average RF
S_Oxychlordane-13C10	20.0	18.7	4.018E-1	3.766E-1	93.5	50-200	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/07/18 13:23

Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Calibration Date:**	11/6/2018
File ID:	Y:\MS42\data\110718\110718F002.D	**Calibration ID:**	KC1900099
Signal ID:	1	**Analysis Lot:**	614289
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4'-DDD	20.0	16.4	1.0547	0.8665	-17.8	NA	±25	Average RF
2,4'-DDE	20.0	17.6	0.811	0.712	-12.2	NA	±25	Average RF
2,4'-DDT	20.0	23.3	2.0349	2.3707	16.5	NA	±25	Average RF
4,4'-DDD	20.0	19.9	1.5869	1.5807	-0.4	NA	±25	Average RF
4,4'-DDE	20.0	15.8	0.7298	0.5753	-21.2	NA	±25	Average RF
4,4'-DDT	20.0	18.2	1.1035	1.0065	-8.8	NA	±25	Average RF
Aldrin	20.0	19.9	1.2861	0.7164	NA	-0.5	±25	Quadratic
alpha-Chlordane	20.0	19.6	2.2326	2.1831	-2.2	NA	±25	Average RF
cis-Nonachlor	20.0	17.7	0.5856	0.5175	-11.6	NA	±25	Average RF
Dieldrin	20.0	16.8	1.4111	1.1834	-16.1	NA	±25	Average RF
gamma-BHC (Lindane)	20.0	18.8	2.2266	2.0914	-6.1	NA	±25	Average RF
gamma-Chlordane	20.0	20.3	0.9194	0.9328	1.5	NA	±25	Average RF
Heptachlor	20.0	20.0	1.1169	1.1173	0.0	NA	±25	Average RF
Oxychlordane	20.0	19.5	2.7799	2.7122	-2.4	NA	±25	Average RF
trans-Nonachlor	20.0	19.6	1.5201	1.488	-2.1	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	5.44	4.0744	4.4362	109	NA	50-200	Average RF
S_4,4'-DDT-d4	5.00	4.65	2.3243	2.1603	92.9	NA	50-200	Average RF
S_Aldrin-13C12	20.0	17.1	0.5227	0.4473	85.6	NA	50-200	Average RF
S_Endrin-13C12	20.0	20.3	0.1974	0.2008	102	NA	50-200	Average RF
S_GBHCD6	20.0	16.4	1.4629	1.2025	82.2	NA	50-200	Average RF
S_Heptachlor-13C10	20.0	18.2	0.7365	0.6696	90.9	NA	50-200	Average RF
S_Heptachlrepox13C10	20.0	16.9	0.1902	0.1606	84.5	NA	50-200	Average RF
S_Oxychlordane-13C10	20.0	17.3	0.4018	0.3478	86.6	NA	50-200	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18 11:48

Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Calibration Date:**	11/16/2018
File ID:	J:\MS42\Data\112618\112618F003.D	**Calibration ID:**	KC1900105
Signal ID:	1	**Analysis Lot:**	617367
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4'-DDD	20.0	16.5	1.0759	0.8879	-17.5	NA	±25	Average RF
2,4'-DDE	20.0	19.0	0.9506	0.9044	-4.9	NA	±25	Average RF
2,4'-DDT	20.0	14.0	2.242	1.5668	-30.1*	NA	±25	Average RF
4,4'-DDD	20.0	19.0	1.6147	1.5314	-5.2	NA	±25	Average RF
4,4'-DDE	20.0	16.1	0.8714	0.7	-19.7	NA	±25	Average RF
4,4'-DDT	20.0	18.2	1.157	1.0522	-9.1	NA	±25	Average RF
Aldrin	20.0	19.7	1.3566	0.7042	NA	-1.3	±25	Quadratic
alpha-Chlordane	20.0	18.0	2.4076	2.1668	-10.0	NA	±25	Average RF
cis-Nonachlor	20.0	17.4	0.5869	0.5096	-13.2	NA	±25	Average RF
Dieldrin	20.0	16.8	1.5255	1.2783	-16.2	NA	±25	Average RF
gamma-BHC (Lindane)	20.0	18.3	2.092	1.9159	-8.4	NA	±25	Average RF
gamma-Chlordane	20.0	18.6	0.9637	0.8945	-7.2	NA	±25	Average RF
Heptachlor	20.0	19.0	1.1592	1.1041	-4.8	NA	±25	Average RF
Oxychlordane	20.0	18.7	2.7041	2.5231	-6.7	NA	±25	Average RF
trans-Nonachlor	20.0	16.0	1.5494	1.2428	-19.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	5.12	3.5517	3.6338	102	NA	50-200	Average RF
S_4,4'-DDT-d4	5.00	5.60	1.5869	1.7761	112	NA	50-200	Average RF
S_Aldrin-13C12	20.0	22.0	0.5268	0.58	110	NA	50-200	Average RF
S_Endrin-13C12	20.0	22.2	0.1828	0.2026	111	NA	50-200	Average RF
S_GBHCD6	20.0	23.7	1.3949	1.6496	118	NA	50-200	Average RF
S_Heptachlor-13C10	20.0	24.3	0.5768	0.6999	121	NA	50-200	Average RF
S_Heptachlrepox13C10	20.0	22.3	0.1838	0.2046	111	NA	50-200	Average RF
S_Oxychlordane-13C10	20.0	22.1	0.3735	0.4129	111	NA	50-200	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18 12:19

Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Calibration Date:**	11/16/2018
File ID:	Y:\MS42\data\112118\112118F001.D	**Calibration ID:**	KC1900105
Signal ID:	1	**Analysis Lot:**	617359
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4'-DDD	20.0	16.8	1.0759	0.9061	-15.8	NA	±25	Average RF
2,4'-DDE	20.0	18.3	0.9506	0.8703	-8.4	NA	±25	Average RF
2,4'-DDT	20.0	13.2	2.242	1.4801	-34.0*	NA	±25	Average RF
4,4'-DDD	20.0	19.4	1.6147	1.5682	-2.9	NA	±25	Average RF
4,4'-DDE	20.0	16.1	0.8714	0.7029	-19.3	NA	±25	Average RF
4,4'-DDT	20.0	17.9	1.157	1.038	-10.3	NA	±25	Average RF
Aldrin	20.0	19.8	1.3566	0.7054	NA	-1.1	±25	Quadratic
alpha-Chlordane	20.0	18.2	2.4076	2.1901	-9.0	NA	±25	Average RF
cis-Nonachlor	20.0	18.4	0.5869	0.5404	-7.9	NA	±25	Average RF
Dieldrin	20.0	19.9	1.5255	1.5197	-0.4	NA	±25	Average RF
gamma-BHC (Lindane)	20.0	17.8	2.092	1.8615	-11.0	NA	±25	Average RF
gamma-Chlordane	20.0	18.8	0.9637	0.9076	-5.8	NA	±25	Average RF
Heptachlor	20.0	18.9	1.1592	1.0952	-5.5	NA	±25	Average RF
Oxychlordane	20.0	19.1	2.7041	2.5853	-4.4	NA	±25	Average RF
trans-Nonachlor	20.0	16.3	1.5494	1.2618	-18.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	5.03	3.5517	3.5721	101	NA	50-200	Average RF
S_4,4'-DDT-d4	5.00	5.40	1.5869	1.7126	108	NA	50-200	Average RF
S_Aldrin-13C12	20.0	20.8	0.5268	0.5488	104	NA	50-200	Average RF
S_Endrin-13C12	20.0	19.0	0.1828	0.1737	95.1	NA	50-200	Average RF
S_GBHCD6	20.0	20.9	1.3949	1.46	105	NA	50-200	Average RF
S_Heptachlor-13C10	20.0	23.3	0.5768	0.6732	117	NA	50-200	Average RF
S_Heptachlrepox13C10	20.0	21.2	0.1838	0.1951	106	NA	50-200	Average RF
S_Oxychlordane-13C10	20.0	20.9	0.3735	0.3909	105	NA	50-200	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP **Analysis Lot:**614289
Instrument ID:K-MS-42

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
Y:\MS42\data\110718\110718F002.D	Continuing Calibration Verification	KQ1816317-01	11/7/2018	13:23	
Y:\MS42\data\110718\110718F003.D	Method Blank	KQ1815624-04	11/7/2018	14:41	
Y:\MS42\data\110718\110718F005.D	N1-0to30-101518 MS	KQ1815624-01	11/7/2018	15:16	
Y:\MS42\data\110718\110718F006.D	N1-0to30-101518 DMS	KQ1815624-02	11/7/2018	15:34	
Y:\MS42\data\110718\110718F007.D	L1-0to30-101518	K1810270-004	11/7/2018	15:52	
Y:\MS42\data\110718\110718F008.D	N1-0to30-101518	K1810270-006	11/7/2018	16:09	
Y:\MS42\data\110718\110718F009.D	T1-0to30-101518	K1810270-010	11/7/2018	16:50	
Y:\MS42\data\110718\110718F010.D	R1-0to30-101518	K1810270-011	11/7/2018	17:08	
Y:\MS42\data\110718\110718F011.D	P1-0to30-101518	K1810270-012	11/7/2018	17:26	
Y:\MS42\data\110718\110718F012.D	T3-0to28-101618	K1810270-013	11/7/2018	17:43	
Y:\MS42\data\110718\110718F013.D	T7-0to31-101618	K1810270-015	11/7/2018	18:01	
Y:\MS42\data\110718\110718F014.D	T5-0to26-101618	K1810270-016	11/7/2018	18:19	
Y:\MS42\data\110718\110718F015.D	P3-0to29-101618	K1810270-017	11/7/2018	18:36	
Y:\MS42\data\110718\110718F016.D	R5-0to25-101618	K1810270-018	11/7/2018	18:54	
Y:\MS42\data\110718\110718F017.D	514-0to29-101618	K1810270-019	11/7/2018	19:11	
Y:\MS42\data\110718\110718F018.D	P5-0to26-101618	K1810270-020	11/7/2018	19:29	
Y:\MS42\data\110718\110718F019.D	R3-0to33-101718	K1810270-029	11/7/2018	19:47	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP **Analysis Lot:**617359
Instrument ID:K-MS-42

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
Y:\MS42\data\112118\112118F001.D	Continuing Calibration Verification	KQ1817797-02	11/21/2018	12:19	
Y:\MS42\data\112118\112118F001.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	12:19	
Y:\MS42\data\112118\112118F002.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	12:40	
Y:\MS42\data\112118\112118F003.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	12:58	
Y:\MS42\data\112118\112118F004.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	13:15	
Y:\MS42\data\112118\112118F005.D	Lab Control Sample	KQ1815624-03	11/21/2018	13:33	
Y:\MS42\data\112118\112118F006.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	13:51	
Y:\MS42\data\112118\112118F007.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	14:08	
Y:\MS42\data\112118\112118F008.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	14:26	
Y:\MS42\data\112118\112118F009.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	14:44	
Y:\MS42\data\112118\112118F010.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:01	
Y:\MS42\data\112118\112118F011.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:19	
Y:\MS42\data\112118\112118F012.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:36	
Y:\MS42\data\112118\112118F013.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:54	
Y:\MS42\data\112118\112118F014.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	16:12	
Y:\MS42\data\112118\112118F015.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	16:29	
Y:\MS42\data\112118\112118F016.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	16:47	
Y:\MS42\data\112118\112118F017.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:05	
Y:\MS42\data\112118\112118F018.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:22	
Y:\MS42\data\112118\112118F019.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:40	
Y:\MS42\data\112118\112118F020.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:57	
Y:\MS42\data\112118\112118F021.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	18:15	
Y:\MS42\data\112118\112118F022.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	18:33	
Y:\MS42\data\112118\112118F023.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	18:50	
Y:\MS42\data\112118\112118F024.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	19:08	
Y:\MS42\data\112118\112118F025.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	19:26	
Y:\MS42\data\112118\112118F026.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	19:43	
Y:\MS42\data\112118\112118F027.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:01	
Y:\MS42\data\112118\112118F028.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:18	
Y:\MS42\data\112118\112118F029.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:36	
Y:\MS42\data\112118\112118F030.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:54	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP **Analysis Lot:**617367
Instrument ID:K-MS-42

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS42\Data\112618\112618F003.D	Continuing Calibration Verification	KQ1817669-01	11/26/2018	11:48	
J:\MS42\Data\112618\112618F003.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	11:48	
J:\MS42\Data\112618\112618F004.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	12:33	
J:\MS42\Data\112618\112618F005.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	12:51	
J:\MS42\Data\112618\112618F006.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	13:08	
J:\MS42\Data\112618\112618F007.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	13:26	
J:\MS42\Data\112618\112618F008.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	13:44	
J:\MS42\Data\112618\112618F009.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:01	
J:\MS42\Data\112618\112618F010.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:19	
J:\MS42\Data\112618\112618F011.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:36	
J:\MS42\Data\112618\112618F012.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:54	
J:\MS42\Data\112618\112618F013.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	15:12	
J:\MS42\Data\112618\112618F014.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	15:29	
J:\MS42\Data\112618\112618F015.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	15:47	
J:\MS42\Data\112618\112618F016.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:05	
J:\MS42\Data\112618\112618F017.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:22	
J:\MS42\Data\112618\112618F018.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:40	
J:\MS42\Data\112618\112618F019.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:57	
J:\MS42\Data\112618\112618F020.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	17:15	
J:\MS42\Data\112618\112618F021.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	17:33	
J:\MS42\Data\112618\112618F022.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	17:50	
J:\MS42\Data\112618\112618F023.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	18:08	
J:\MS42\Data\112618\112618F024.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	18:25	
J:\MS42\Data\112618\112618F025.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	18:43	
J:\MS42\Data\112618\112618F026.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:01	
J:\MS42\Data\112618\112618F027.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:18	
J:\MS42\Data\112618\112618F028.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:36	
J:\MS42\Data\112618\112618F029.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:54	
J:\MS42\Data\112618\112618F030.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	20:11	
J:\MS42\Data\112618\112618F031.D	Method Blank	KQ1816244-04	11/26/2018	20:29	
J:\MS42\Data\112618\112618F032.D	Lab Control Sample	KQ1816244-03	11/26/2018	20:46	
J:\MS42\Data\112618\112618F033.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	21:04	
J:\MS42\Data\112618\112618F034.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	21:22	
J:\MS42\Data\112618\112618F035.D	N3-0to26-101518	K1810270-001	11/26/2018	21:39	
J:\MS42\Data\112618\112618F036.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	21:57	
J:\MS42\Data\112618\112618F037.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	22:15	
J:\MS42\Data\112618\112618F039.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	22:50	
J:\MS42\Data\112618\112618F039.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	22:50	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Organochlorine Pesticides by GC/MS/MS

Prep Method: EPA 3541 **Extraction Lot:** 325840
Analytical Method: ALS SOP **Extraction Date:** 11/07/18 11:10

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	20.166 g	1 mL	74.3
Lab Control Sample	KQ1816244-03LCS	NA	NA	10 g	1 mL	
Method Blank	KQ1816244-04MB	NA	NA	20.1660 g	1 mL	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Organochlorine Pesticides by GC/MS/MS

Prep Method: EPA 3541 **Extraction Lot:** 325137
Analytical Method: ALS SOP **Extraction Date:** 10/29/18 16:09

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	20.126 g	1 mL	90.3
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	20.439 g	1 mL	75.8
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	20.217 g	1 mL	63.0
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	20.344 g	1 mL	83.9
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	20.315 g	1 mL	76.7
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	20.236 g	1 mL	43.8
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	20.101 g	1 mL	39.3
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	20.157 g	1 mL	47.8
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	20.225 g	1 mL	48.7
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	20.273 g	1 mL	45.9
514-0to29-101618	K1810270-019	10/16/18	10/19/18	20.041 g	1 mL	40.5
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	20.276 g	1 mL	35.2
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	20.353 g	1 mL	36.1
Matrix Spike	KQ1815624-01MS	10/15/18	10/19/18	20.243 g	1 mL	75.8
Duplicate Matrix Spike	KQ1815624-02DMS	10/15/18	10/19/18	20.097 g	1 mL	75.8
Lab Control Sample	KQ1815624-03LCS	NA	NA	10 g	1 mL	
Method Blank	KQ1815624-04MB	NA	NA	20.4390 g	1 mL	

Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 08:46
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**53**	1.3	0.58	1	12/02/18 12:28	11/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	60	10 - 120	12/02/18 12:28	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 10:10
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**6.5**	1.1	0.48	1	11/23/18 17:20	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	71	10 - 120	11/23/18 17:20	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 11:40
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**0.64 JP**	1.3	0.57	1	11/22/18 17:44	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	65	10 - 120	11/22/18 17:44	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 15:35
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	ND U	1.6	0.68	1	11/22/18 18:02	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	62	10 - 120	11/22/18 18:02	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 14:37
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**0.82 J**	1.2	0.51	1	11/23/18 17:39	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	58	10 - 120	11/23/18 17:39	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 13:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**4.3**	1.3	0.56	1	11/23/18 17:57	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	59	10 - 120	11/23/18 17:57	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 16:30
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**100**	2.3	0.98	1	11/23/18 18:16	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	64	10 - 120	11/23/18 18:16	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 14:00
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**170**	2.5	1.1	1	11/23/18 18:35	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	77	10 - 120	11/23/18 18:35	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 15:13
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**450**	21	8.9	10	11/23/18 18:53	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	82	10 - 120	11/23/18 18:53	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 10:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**100**	2.0	0.88	1	11/23/18 19:11	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	78	10 - 120	11/23/18 19:11	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 12:09
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**700**	22	9.3	10	11/23/18 19:30	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	66	10 - 120	11/23/18 19:30	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 11:25
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**180**	2.4	1.1	1	11/22/18 21:06	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	64	10 - 120	11/22/18 21:06	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 09:16
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**580**	28	12	10	11/23/18 20:26	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	64	10 - 120	11/23/18 20:26	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/18 09:28
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**450**	27	12	10	11/23/18 20:44	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	73	10 - 120	11/23/18 20:44	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1815623-04	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	ND U	0.98	0.43	1	11/22/18 22:57	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	54	10 - 120	11/22/18 22:57	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1816241-04	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	ND U	0.98	0.43	1	12/01/18 17:34	11/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	76	10 - 120	12/01/18 17:34	

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 08:46
Date Received: 10/19/18

Sample Name: N3-0to26-101518
Lab Code: K1810270-001

Units: ug/Kg
Basis: Dry
Percent Solids: 74.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.58	53	53	<1		1	12/02/18 12:28

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 10:10
Date Received: 10/19/18

Sample Name: L1-0to30-101518
Lab Code: K1810270-004

Units: ug/Kg
Basis: Dry
Percent Solids: 90.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.48	6.5	6.5	<1		1	11/23/18 17:20

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 11:40
Date Received: 10/19/18

Sample Name: N1-0to30-101518
Lab Code: K1810270-006

Units: ug/Kg
Basis: Dry
Percent Solids: 75.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.57	0.64	0.57	12	JP	1	11/22/18 17:44

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 14:37
Date Received: 10/19/18

Sample Name: R1-0to30-101518
Lab Code: K1810270-011

Units: ug/Kg
Basis: Dry
Percent Solids: 83.9

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.51	0.82	1.1	29	J	1	11/23/18 17:39

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 13:50
Date Received: 10/19/18

Sample Name: P1-0to30-101518
Lab Code: K1810270-012

Units: ug/Kg
Basis: Dry
Percent Solids: 76.7

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.56	4.3	4.4	2		1	11/23/18 17:57

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 16:30
Date Received: 10/19/18

Sample Name: T3-0to28-101618
Lab Code: K1810270-013

Units: ug/Kg
Basis: Dry
Percent Solids: 43.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.98	100	110	10		1	11/23/18 18:16

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 14:00
Date Received: 10/19/18

Sample Name: T7-0to31-101618
Lab Code: K1810270-015

Units: ug/Kg
Basis: Dry
Percent Solids: 39.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	1.1	170	180	6		1	11/23/18 18:35

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 15:13
Date Received: 10/19/18

Sample Name: T5-0to26-101618
Lab Code: K1810270-016

Units: ug/Kg
Basis: Dry
Percent Solids: 47.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	8.9	450	450	<1		10	11/23/18 18:53

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 10:50
Date Received: 10/19/18

Sample Name: P3-0to29-101618
Lab Code: K1810270-017

Units: ug/Kg
Basis: Dry
Percent Solids: 48.7

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.88	100	110	10		1	11/23/18 19:11

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 12:09
Date Received: 10/19/18

Sample Name: R5-0to25-101618
Lab Code: K1810270-018

Units: ug/Kg
Basis: Dry
Percent Solids: 45.9

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	9.3	700	710	1		10	11/23/18 19:30

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 11:25
Date Received: 10/19/18

Sample Name: 514-0to29-101618
Lab Code: K1810270-019

Units: ug/Kg
Basis: Dry
Percent Solids: 40.5

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	1.1	180	190	5		1	11/22/18 21:06

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 09:16
Date Received: 10/19/18

Sample Name: P5-0to26-101618
Lab Code: K1810270-020

Units: ug/Kg
Basis: Dry
Percent Solids: 35.2

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	12	580	590	2		10	11/23/18 20:26

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/17/18 09:28
Date Received: 10/19/18

Sample Name: R3-0to33-101718
Lab Code: K1810270-029

Units: ug/Kg
Basis: Dry
Percent Solids: 36.1

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	12	450	470	4		10	11/23/18 20:44

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 10:10
Date Received: 10/19/18

Sample Name: L1-0to30-101518
Lab Code: KQ1815623-01

Units: ug/Kg
Basis: Dry
Percent Solids: 90.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.47	19.8	20.3	2		1	11/22/18 22:01

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 10:10
Date Received: 10/19/18

Sample Name: L1-0to30-101518
Lab Code: KQ1815623-02

Units: ug/Kg
Basis: Dry
Percent Solids: 90.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.48	18.8	19.7	5		1	11/22/18 22:20

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Confirmation Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
SRM Matrix:	Sediment	**Date Received:**	
Sample Name:	Lab Control Sample		
Lab Code:	KQ1815623-03	**Units:**	ug/Kg
		Basis:	Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.43	17.4	17.6	1		1	11/22/18 22:38

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 08:46
Date Received: 10/19/18

Sample Name: N3-0to26-101518
Lab Code: KQ1816241-01

Units: ug/Kg
Basis: Dry
Percent Solids: 74.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.58	85.3	74.2	14		1	12/01/18 16:38

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 08:46
Date Received: 10/19/18

Sample Name: N3-0to26-101518
Lab Code: KQ1816241-02

Units: ug/Kg
Basis: Dry
Percent Solids: 74.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.58	63.9	60.9	5		1	12/01/18 16:57

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ1816241-03

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.43	15.6	15.0	4		1	12/01/18 17:16

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin 10-120
N3-0to26-101518	K1810270-001	60
L1-0to30-101518	K1810270-004	71
N1-0to30-101518	K1810270-006	65
T1-0to30-101518	K1810270-010	62
R1-0to30-101518	K1810270-011	58
P1-0to30-101518	K1810270-012	59
T3-0to28-101618	K1810270-013	64
T7-0to31-101618	K1810270-015	77
T5-0to26-101618	K1810270-016	82
P3-0to29-101618	K1810270-017	78
R5-0to25-101618	K1810270-018	66
514-0to29-101618	K1810270-019	64
P5-0to26-101618	K1810270-020	64
R3-0to33-101718	K1810270-029	73
Method Blank	KQ1815623-04	54
Method Blank	KQ1816241-04	76
Lab Control Sample	KQ1815623-03	68
Lab Control Sample	KQ1816241-03	69
L1-0to30-101518	KQ1815623-01	54
L1-0to30-101518	KQ1815623-02	60
N3-0to26-101518	KQ1816241-01	62
N3-0to26-101518	KQ1816241-02	53

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	11/22/18
		Date Extracted:	10/29/18

Duplicate Matrix Spike Summary
Butyltins

Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry
Analysis Method:	ALS SOP		
Prep Method:	Method		

		Matrix Spike KQ1815623-01			Duplicate Matrix Spike KQ1815623-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	6.5	19.8	24.3	55	18.8	24.4	50	10-115	5	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	12/1/18
		Date Extracted:	11/19/18

Duplicate Matrix Spike Summary
Butyltins

Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry
Analysis Method:	ALS SOP		
Prep Method:	Method		

		Matrix Spike KQ1816241-01			**Duplicate Matrix Spike** KQ1816241-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	53	85.3	29.8	109	63.9	30.0	37	10-115	29	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Butyltins

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	616177

Lab Control Sample
KQ1815623-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Tri-n-butyltin Cation	17.4	22.3	78	10-122

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18
Sample Matrix:	Sediment	**Date Extracted:**	11/19/18

Lab Control Sample Summary
Butyltins

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	617147

Lab Control Sample
KQ1816241-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Tri-n-butyltin Cation	15.6	22.3	70	10-122

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 22:57
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Method Blank Summary
Butyltins

Sample Name:	Method Blank	**Instrument ID:**	K-GC-26
Lab Code:	KQ1815623-04	**File ID:**	J:\GC26\DATA\112218\1122F023.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	616177,616178
Prep Method:	Method	**Extraction Lot:**	325136

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N1-0to30-101518	K1810270-006	J:\GC26\DATA\112218\1122F006.D\	11/22/18 17:44
T1-0to30-101518	K1810270-010	J:\GC26\DATA\112218\1122F007.D\	11/22/18 18:02
514-0to29-101618	K1810270-019	J:\GC26\DATA\112218\1122F017.D\	11/22/18 21:06
L1-0to30-101518MS	KQ1815623-01	J:\GC26\DATA\112218\1122F020.D\	11/22/18 22:01
L1-0to30-101518DMS	KQ1815623-02	J:\GC26\DATA\112218\1122F021.D\	11/22/18 22:20
Lab Control Sample	KQ1815623-03	J:\GC26\DATA\112218\1122F022.D\	11/22/18 22:38
L1-0to30-101518	K1810270-004	J:\GC26\DATA\112318\1123F005.D\	11/23/18 17:20
R1-0to30-101518	K1810270-011	J:\GC26\DATA\112318\1123F006.D\	11/23/18 17:39
P1-0to30-101518	K1810270-012	J:\GC26\DATA\112318\1123F007.D\	11/23/18 17:57
T3-0to28-101618	K1810270-013	J:\GC26\DATA\112318\1123F008.D\	11/23/18 18:16
T7-0to31-101618	K1810270-015	J:\GC26\DATA\112318\1123F009.D\	11/23/18 18:35
T5-0to26-101618	K1810270-016	J:\GC26\DATA\112318\1123F010.D\	11/23/18 18:53
P3-0to29-101618	K1810270-017	J:\GC26\DATA\112318\1123F011.D\	11/23/18 19:11
R5-0to25-101618	K1810270-018	J:\GC26\DATA\112318\1123F012.D\	11/23/18 19:30
P5-0to26-101618	K1810270-020	J:\GC26\DATA\112318\1123F015.D\	11/23/18 20:26
R3-0to33-101718	K1810270-029	J:\GC26\DATA\112318\1123F016.D\	11/23/18 20:44

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:34
Sample Matrix:	Sediment	**Date Extracted:**	11/19/18

Method Blank Summary
Butyltins

Sample Name:	Method Blank	**Instrument ID:**	K-GC-26
Lab Code:	KQ1816241-04	**File ID:**	J:\GC26\DATA\120118\1201F023.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	617147,617148
Prep Method:	Method	**Extraction Lot:**	325830

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N3-0to26-101518MS	KQ1816241-01	J:\GC26\DATA\120118\1201F020.D\	12/01/18 16:38
N3-0to26-101518DMS	KQ1816241-02	J:\GC26\DATA\120118\1201F021.D\	12/01/18 16:57
Lab Control Sample	KQ1816241-03	J:\GC26\DATA\120118\1201F022.D\	12/01/18 17:16
N3-0to26-101518	K1810270-001	J:\GC26\DATA\120218\1202F007.D\	12/02/18 12:28

ALS Group USA, Corp.
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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 22:38
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Butyltins

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-26
Lab Code:	KQ1815623-03	**File ID:**	J:\GC26\DATA\112218\1122F022.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	616177,616178
Prep Method:	Method	**Extraction Lot:**	325136

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N1-0to30-101518	K1810270-006	J:\GC26\DATA\112218\1122F006.D\	11/22/18 17:44
T1-0to30-101518	K1810270-010	J:\GC26\DATA\112218\1122F007.D\	11/22/18 18:02
514-0to29-101618	K1810270-019	J:\GC26\DATA\112218\1122F017.D\	11/22/18 21:06
L1-0to30-101518MS	KQ1815623-01	J:\GC26\DATA\112218\1122F020.D\	11/22/18 22:01
L1-0to30-101518DMS	KQ1815623-02	J:\GC26\DATA\112218\1122F021.D\	11/22/18 22:20
Method Blank	KQ1815623-04	J:\GC26\DATA\112218\1122F023.D\	11/22/18 22:57
L1-0to30-101518	K1810270-004	J:\GC26\DATA\112318\1123F005.D\	11/23/18 17:20
R1-0to30-101518	K1810270-011	J:\GC26\DATA\112318\1123F006.D\	11/23/18 17:39
P1-0to30-101518	K1810270-012	J:\GC26\DATA\112318\1123F007.D\	11/23/18 17:57
T3-0to28-101618	K1810270-013	J:\GC26\DATA\112318\1123F008.D\	11/23/18 18:16
T7-0to31-101618	K1810270-015	J:\GC26\DATA\112318\1123F009.D\	11/23/18 18:35
T5-0to26-101618	K1810270-016	J:\GC26\DATA\112318\1123F010.D\	11/23/18 18:53
P3-0to29-101618	K1810270-017	J:\GC26\DATA\112318\1123F011.D\	11/23/18 19:11
R5-0to25-101618	K1810270-018	J:\GC26\DATA\112318\1123F012.D\	11/23/18 19:30
P5-0to26-101618	K1810270-020	J:\GC26\DATA\112318\1123F015.D\	11/23/18 20:26
R3-0to33-101718	K1810270-029	J:\GC26\DATA\112318\1123F016.D\	11/23/18 20:44

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:16
Sample Matrix:	Sediment	**Date Extracted:**	11/19/18

Lab Control Sample Summary
Butyltins

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-26
Lab Code:	KQ1816241-03	**File ID:**	J:\GC26\DATA\120118\1201F022.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	617147,617148
Prep Method:	Method	**Extraction Lot:**	325830

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N3-0to26-101518MS	KQ1816241-01	J:\GC26\DATA\120118\1201F020.D\	12/01/18 16:38
N3-0to26-101518DMS	KQ1816241-02	J:\GC26\DATA\120118\1201F021.D\	12/01/18 16:57
Method Blank	KQ1816241-04	J:\GC26\DATA\120118\1201F023.D\	12/01/18 17:34
N3-0to26-101518	K1810270-001	J:\GC26\DATA\120218\1202F007.D\	12/02/18 12:28

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-1
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800436-01	OT5-010A @ 2PPB	J:\GC26\DATA\091718\0917F004.D	09/17/2018 14:55
02	KC1800436-02	OT5-010B @ 5PPB	J:\GC26\DATA\091718\0917F005.D	09/17/2018 15:13
03	KC1800436-03	OT5-010C @ 10PPB	J:\GC26\DATA\091718\0917F006.D	09/17/2018 15:32
04	KC1800436-04	OT5-010D @ 20PPB	J:\GC26\DATA\091718\0917F007.D	09/17/2018 15:50
05	KC1800436-05	OT5-010K@50 PPB	J:\GC26\DATA\091718\0917F008.D	09/17/2018 16:08
06	KC1800436-06	OT5-010E @ 200 PPB	J:\GC26\DATA\091718\0917F009.D	09/17/2018 16:27
07	KC1800436-07	OT5-010F @ 500 PPB	J:\GC26\DATA\091718\0917F010.D	09/17/2018 16:45

Analyte

Tri-n-butyltin Cation

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.782	7.605E4	02	4.455	7.24E4	03	8.910	6.65E4	04	17.820	6.585E4
05	44.550	6.93E4	06	178.200	6.9E4	07	445.500	6.747E4			

Tri-n-propyltin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	6.839E4	02	5.000	5.283E4	03	10.000	4.594E4	04	20.000	5.002E4
05	50.000	5.595E4	06	200.000	5.459E4	07	500.000	5.511E4			

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-1
Instrument ID: K-GC-26

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Tri-n-butyltin Cation	TRG	Average RF	% RSD	5.2	≤20	6.951E4	
Tri-n-propyltin	SURR	Average RF	% RSD	12.7	≤20	5.469E4	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-35
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800436-01	OT5-010A @ 2PPB	J:\GC26\DATA\091718\0917F004.D	09/17/2018 14:55
02	KC1800436-02	OT5-010B @ 5PPB	J:\GC26\DATA\091718\0917F005.D	09/17/2018 15:13
03	KC1800436-03	OT5-010C @ 10PPB	J:\GC26\DATA\091718\0917F006.D	09/17/2018 15:32
04	KC1800436-04	OT5-010D @ 20PPB	J:\GC26\DATA\091718\0917F007.D	09/17/2018 15:50
05	KC1800436-05	OT5-010K@50 PPB	J:\GC26\DATA\091718\0917F008.D	09/17/2018 16:08
06	KC1800436-06	OT5-010E @ 200 PPB	J:\GC26\DATA\091718\0917F009.D	09/17/2018 16:27
07	KC1800436-07	OT5-010F @ 500 PPB	J:\GC26\DATA\091718\0917F010.D	09/17/2018 16:45

Analyte

Tri-n-butyltin Cation

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.782	1.246E5	02	4.455	9.429E4	03	8.910	1.125E5	04	17.820	9.717E4
05	44.550	1.058E5	06	178.200	9.935E4	07	445.500	9.552E4			

Tri-n-propyltin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	7.47E4	02	5.000	7.544E4	03	10.000	7.709E4	04	20.000	7.852E4
05	50.000	8.615E4	06	200.000	7.943E4	07	500.000	7.633E4			

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-35
Instrument ID: K-GC-26

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Tri-n-butyltin Cation	TRG	Average RF	% RSD	10.6	≤20	1.042E5	
Tri-n-propyltin	SURR	Average RF	% RSD	4.9	≤20	7.824E4	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Verification Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-1
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1800436-08	OT5-09P @ 50PPB ICV	J:\GC26\DATA\091718\0917F012.D	09/17/2018 17:22

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	52.9	6.951E4	8.251E4	18.71	±25	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Verification Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-35
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1800436-08	OT5-09P @ 50PPB ICV	J:\GC26\DATA\091718\0917F012.D	09/17/2018 17:22

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	50.1	1.042E5	1.172E5	12.50	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 16:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	30.7	6.951E4	4.792E4	-31.1*	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	37.9	5.469E4	4.149E4	-24.1	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 16:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.8	1.042E5	8.615E4	-17.3	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	45.5	7.824E4	7.123E4	-9.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 20:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F015.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.0	6.951E4	5.3E4	-23.7	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	42.4	5.469E4	4.64E4	-15.2	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 20:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F015.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	1.042E5	8.48E4	-18.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	43.4	7.824E4	6.793E4	-13.2	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 23:16

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.5	6.951E4	5.699E4	-18.0	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	37.4	5.469E4	4.095E4	-25.1	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 23:16

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.8	1.042E5	9.073E4	-12.9	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	39.1	7.824E4	6.112E4	-21.9	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 16:42

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.0	6.951E4	6.237E4	-10.3	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	49.3	5.469E4	5.397E4	-1.3	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 16:42

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	42.0	1.042E5	9.822E4	-5.7	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	45.2	7.824E4	7.065E4	-9.7	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 19:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.0	1.042E5	9.357E4	-10.2	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	66.3	7.824E4	1.038E5	32.7*	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 19:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.7	6.951E4	6.351E4	-8.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	49.3	5.469E4	5.389E4	-1.5	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 21:40

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F019.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.6	1.042E5	8.796E4	-15.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	46.5	7.824E4	7.272E4	-7.1	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 21:40

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F019.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	42.0	6.951E4	6.549E4	-5.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	56.8	5.469E4	6.212E4	13.6	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 14:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	33.0	1.042E5	7.727E4	-25.8*	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	41.0	7.824E4	6.423E4	-17.9	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 14:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.6	6.951E4	5.397E4	-22.4	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	39.6	5.469E4	4.337E4	-20.7	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:53

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.1	6.951E4	5.482E4	-21.1	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	38.0	5.469E4	4.156E4	-24.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:53

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.7	1.042E5	8.348E4	-19.9	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	40.5	7.824E4	6.339E4	-19.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 11:09

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	6.951E4	5.668E4	-18.5	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	39.2	5.469E4	4.287E4	-21.6	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 11:09

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	39.4	1.042E5	9.219E4	-11.5	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	44.3	7.824E4	6.933E4	-11.4	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 13:08

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F009.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.1	6.951E4	5.781E4	-16.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	40.5	5.469E4	4.429E4	-19.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 13:08

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F009.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.1	1.042E5	8.671E4	-16.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	41.8	7.824E4	6.548E4	-16.3	NA	±25	Average RF

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QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: ALS SOP **Analysis Lot:**616177
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\112218\1122F003.D\	Continuing Calibration Verification	KQ1817164-01	11/22/2018	16:48:00	
J:\GC26\DATA\112218\1122F004.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	17:06:00	
J:\GC26\DATA\112218\1122F006.D\	N1-0to30-101518	K1810270-006	11/22/2018	17:44:00	
J:\GC26\DATA\112218\1122F007.D\	T1-0to30-101518	K1810270-010	11/22/2018	18:02:00	
J:\GC26\DATA\112218\1122F015.D\	Continuing Calibration Verification	KQ1817164-02	11/22/2018	20:29:00	
J:\GC26\DATA\112218\1122F016.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	20:48:00	
J:\GC26\DATA\112218\1122F017.D\	514-0to29-101618	K1810270-019	11/22/2018	21:06:00	
J:\GC26\DATA\112218\1122F020.D\	L1-0to30-101518 MS	KQ1815623-01	11/22/2018	22:01:00	
J:\GC26\DATA\112218\1122F021.D\	L1-0to30-101518 DMS	KQ1815623-02	11/22/2018	22:20:00	
J:\GC26\DATA\112218\1122F022.D\	Lab Control Sample	KQ1815623-03	11/22/2018	22:38:00	
J:\GC26\DATA\112218\1122F023.D\	Method Blank	KQ1815623-04	11/22/2018	22:57:00	
J:\GC26\DATA\112218\1122F024.D\	Continuing Calibration Verification	KQ1817164-03	11/22/2018	23:16:00	
J:\GC26\DATA\112218\1122F025.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	23:34:00	
J:\GC26\DATA\112218\1122F026.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	23:53:00	
J:\GC26\DATA\112218\1122F028.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	00:30:00	
J:\GC26\DATA\112218\1122F029.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	00:48:00	
J:\GC26\DATA\112218\1122F030.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	01:07:00	
J:\GC26\DATA\112218\1122F031.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	01:25:00	
J:\GC26\DATA\112218\1122F032.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	01:44:00	
J:\GC26\DATA\112218\1122F033.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:02:00	
J:\GC26\DATA\112218\1122F034.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:21:00	
J:\GC26\DATA\112218\1122F035.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:39:00	
J:\GC26\DATA\112218\1122F036.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:58:00	
J:\GC26\DATA\112218\1122F037.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	03:16:00	
J:\GC26\DATA\112218\1122F038.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	03:35:00	
J:\GC26\DATA\112218\1122F039.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	03:54:00	
J:\GC26\DATA\112218\1122F041.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	04:31:00	
J:\GC26\DATA\112218\1122F043.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	04:49:00	
J:\GC26\DATA\112218\1122F044.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	05:07:00	
J:\GC26\DATA\112218\1122F045.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	05:26:00	
J:\GC26\DATA\112218\1122F046.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	05:44:00	
J:\GC26\DATA\112218\1122F047.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:03:00	
J:\GC26\DATA\112218\1122F048.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:21:00	
J:\GC26\DATA\112218\1122F049.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:40:00	
J:\GC26\DATA\112218\1122F050.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:58:00	
J:\GC26\DATA\112218\1122F051.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	07:17:00	
J:\GC26\DATA\112218\1122F052.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	07:35:00	
J:\GC26\DATA\112218\1122F053.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	07:54:00	
J:\GC26\DATA\112218\1122F054.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	08:13:00	
J:\GC26\DATA\112218\1122F055.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	08:31:00	
J:\GC26\DATA\112218\1122F056.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	08:50:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: ALS SOP **Analysis Lot:**616178
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\112318\1123F003.D\	Continuing Calibration Verification	KQ1817165-01	11/23/2018	16:42:00	
J:\GC26\DATA\112318\1123F004.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	17:01:00	
J:\GC26\DATA\112318\1123F005.D\	L1-0to30-101518	K1810270-004	11/23/2018	17:20:00	
J:\GC26\DATA\112318\1123F006.D\	R1-0to30-101518	K1810270-011	11/23/2018	17:39:00	
J:\GC26\DATA\112318\1123F007.D\	P1-0to30-101518	K1810270-012	11/23/2018	17:57:00	
J:\GC26\DATA\112318\1123F008.D\	T3-0to28-101618	K1810270-013	11/23/2018	18:16:00	
J:\GC26\DATA\112318\1123F009.D\	T7-0to31-101618	K1810270-015	11/23/2018	18:35:00	
J:\GC26\DATA\112318\1123F010.D\	T5-0to26-101618	K1810270-016	11/23/2018	18:53:00	
J:\GC26\DATA\112318\1123F011.D\	P3-0to29-101618	K1810270-017	11/23/2018	19:11:00	
J:\GC26\DATA\112318\1123F012.D\	R5-0to25-101618	K1810270-018	11/23/2018	19:30:00	
J:\GC26\DATA\112318\1123F013.D\	Continuing Calibration Verification	KQ1817165-02	11/23/2018	19:48:00	
J:\GC26\DATA\112318\1123F014.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	20:07:00	
J:\GC26\DATA\112318\1123F015.D\	P5-0to26-101618	K1810270-020	11/23/2018	20:26:00	
J:\GC26\DATA\112318\1123F016.D\	R3-0to33-101718	K1810270-029	11/23/2018	20:44:00	
J:\GC26\DATA\112318\1123F019.D\	Continuing Calibration Verification	KQ1817165-03	11/23/2018	21:40:00	
J:\GC26\DATA\112318\1123F020.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	21:58:00	

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QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: **Analysis Lot:**617147
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\120118\1201F003.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	11:23:00	
J:\GC26\DATA\120118\1201F004.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	11:41:00	
J:\GC26\DATA\120118\1201F006.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	12:18:00	
J:\GC26\DATA\120118\1201F007.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	12:37:00	
J:\GC26\DATA\120118\1201F009.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	13:14:00	
J:\GC26\DATA\120118\1201F010.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	13:33:00	
J:\GC26\DATA\120118\1201F011.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	13:51:00	
J:\GC26\DATA\120118\1201F012.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	14:10:00	
J:\GC26\DATA\120118\1201F013.D\	Continuing Calibration Verification	KQ1817582-02	12/1/2018	14:29:00	
J:\GC26\DATA\120118\1201F014.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	14:47:00	
J:\GC26\DATA\120118\1201F016.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	15:25:00	
J:\GC26\DATA\120118\1201F017.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	15:43:00	
J:\GC26\DATA\120118\1201F019.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	16:20:00	
J:\GC26\DATA\120118\1201F020.D\	N3-0to26-101518 MS	KQ1816241-01	12/1/2018	16:38:00	
J:\GC26\DATA\120118\1201F021.D\	N3-0to26-101518 DMS	KQ1816241-02	12/1/2018	16:57:00	
J:\GC26\DATA\120118\1201F022.D\	Lab Control Sample	KQ1816241-03	12/1/2018	17:16:00	
J:\GC26\DATA\120118\1201F023.D\	Method Blank	KQ1816241-04	12/1/2018	17:34:00	
J:\GC26\DATA\120118\1201F024.D\	Continuing Calibration Verification	KQ1817582-03	12/1/2018	17:53:00	
J:\GC26\DATA\120118\1201F025.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	18:12:00	
J:\GC26\DATA\120118\1201F027.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	18:50:00	
J:\GC26\DATA\120118\1201F028.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	19:09:00	
J:\GC26\DATA\120118\1201F029.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	19:28:00	
J:\GC26\DATA\120118\1201F030.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	19:47:00	
J:\GC26\DATA\120118\1201F031.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	20:06:00	
J:\GC26\DATA\120118\1201F032.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	20:25:00	
J:\GC26\DATA\120118\1201F033.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	20:44:00	
J:\GC26\DATA\120118\1201F034.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	21:03:00	
J:\GC26\DATA\120118\1201F035.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	21:23:00	
J:\GC26\DATA\120118\1201F036.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	21:42:00	
J:\GC26\DATA\120118\1201F037.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:01:00	
J:\GC26\DATA\120118\1201F038.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:20:00	
J:\GC26\DATA\120118\1201F039.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:40:00	
J:\GC26\DATA\120118\1201F040.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:59:00	
J:\GC26\DATA\120118\1201F041.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	23:19:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: ALS SOP **Analysis Lot:**617148
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\120218\1202F003.D\	Continuing Calibration Verification	KQ1817583-01	12/2/2018	11:09:00	
J:\GC26\DATA\120218\1202F004.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	11:29:00	
J:\GC26\DATA\120218\1202F005.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	11:48:00	
J:\GC26\DATA\120218\1202F006.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	12:08:00	
J:\GC26\DATA\120218\1202F007.D\	N3-0to26-101518	K1810270-001	12/2/2018	12:28:00	
J:\GC26\DATA\120218\1202F009.D\	Continuing Calibration Verification	KQ1817583-02	12/2/2018	13:08:00	
J:\GC26\DATA\120218\1202F010.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	13:28:00	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Butyltins

Prep Method: Method **Extraction Lot:** 325830
Analytical Method: ALS SOP **Extraction Date:** 11/19/18 18:38

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	20.148 g	4 mL	74.3
Matrix Spike	KQ1816241-01MS	10/15/18	10/19/18	20.096 g	4 mL	74.3
Duplicate Matrix Spike	KQ1816241-02DMS	10/15/18	10/19/18	20.009 g	4 mL	74.3
Lab Control Sample	KQ1816241-03LCS	NA	NA	20.00 g	4 mL	
Method Blank	KQ1816241-04MB	NA	NA	20.3210 g	4 mL	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Butyltins

Prep Method: Method **Extraction Lot:** 325136
Analytical Method: ALS SOP **Extraction Date:** 10/29/18 19:51

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	20.072 g	4 mL	90.3
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	20.111 g	4 mL	75.8
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	20.306 g	4 mL	63.0
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	20.127 g	4 mL	83.9
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	20.136 g	4 mL	76.7
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	20.204 g	4 mL	43.8
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	20.152 g	4 mL	39.3
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	20.299 g	4 mL	47.8
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	20.238 g	4 mL	48.7
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	20.256 g	4 mL	45.9
514-0to29-101618	K1810270-019	10/16/18	10/19/18	20.388 g	4 mL	40.5
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	20.451 g	4 mL	35.2
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	20.249 g	4 mL	36.1
Matrix Spike	KQ1815623-01MS	10/15/18	10/19/18	20.322 g	4 mL	90.3
Duplicate Matrix Spike	KQ1815623-02DMS	10/15/18	10/19/18	20.208 g	4 mL	90.3
Lab Control Sample	KQ1815623-03LCS	NA	NA	20.00 g	4 mL	
Method Blank	KQ1815623-04MB	NA	NA	20.4510 g	4 mL	

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
N3-0to26-101518	K1810270-001	10/15/2018	10/19/2018
L1-0to30-101518	K1810270-004	10/15/2018	10/19/2018
N1-0to30-101518	K1810270-006	10/15/2018	10/19/2018
T1-0to30-101518	K1810270-010	10/15/2018	10/19/2018
R1-0to30-101518	K1810270-011	10/15/2018	10/19/2018
P1-0to30-101518	K1810270-012	10/15/2018	10/19/2018
T3-0to28-101618	K1810270-013	10/16/2018	10/19/2018
T7-0to31-101618	K1810270-015	10/16/2018	10/19/2018
T5-0to26-101618	K1810270-016	10/16/2018	10/19/2018
P3-0to29-101618	K1810270-017	10/16/2018	10/19/2018
R5-0to25-101618	K1810270-018	10/16/2018	10/19/2018
514-0to29-101618	K1810270-019	10/16/2018	10/19/2018
P5-0to26-101618	K1810270-020	10/16/2018	10/19/2018
R3-0to33-101718	K1810270-029	10/17/2018	10/19/2018
T1-0to30-101518MS	KWG1805597-1	10/15/2018	10/19/2018
T1-0to30-101518DMS	KWG1805597-2	10/15/2018	10/19/2018

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**6.7**	D	3.4	0.45	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**4.0**	D	3.4	0.24	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**7.0**	D	1.7	0.15	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**8.9**	D	1.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**7.6**	D	1.7	0.11	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**12**	D	1.7	0.20	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**110**	D	1.7	0.17	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**15**	D	1.7	0.13	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**230**	D	1.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**220**	D	1.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**81**	D	1.7	0.17	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**140**	D	1.7	0.14	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**150**	D	1.7	0.29	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**58**	D	1.7	0.23	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**89**	D	1.7	0.18	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**69**	D	1.7	0.32	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**15**	D	1.7	0.29	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**70**	D	1.7	0.30	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	26-102	11/14/18	Acceptable
Fluoranthene-d10	67	23-110	11/14/18	Acceptable
Terphenyl-d14	77	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.65**	JD	2.2	0.36	4	10/29/18	11/07/18	KWG1805597	
2-Methylnaphthalene	**0.53**	JD	2.2	0.19	4	10/29/18	11/07/18	KWG1805597	
Acenaphthylene	**1.6**	D	1.1	0.12	4	10/29/18	11/07/18	KWG1805597	
Acenaphthene	**1.1**	D	1.1	0.13	4	10/29/18	11/07/18	KWG1805597	
Dibenzofuran	**0.48**	JD	1.1	0.088	4	10/29/18	11/07/18	KWG1805597	
Fluorene	**1.1**	JD	1.1	0.16	4	10/29/18	11/07/18	KWG1805597	
Phenanthrene	**15**	D	1.1	0.14	4	10/29/18	11/07/18	KWG1805597	
Anthracene	**2.8**	D	1.1	0.11	4	10/29/18	11/07/18	KWG1805597	
Fluoranthene	**20**	D	1.1	0.13	4	10/29/18	11/07/18	KWG1805597	
Pyrene	**21**	D	1.1	0.13	4	10/29/18	11/07/18	KWG1805597	
Benz(a)anthracene	**10**	D	1.1	0.14	4	10/29/18	11/07/18	KWG1805597	
Chrysene	**15**	D	1.1	0.11	4	10/29/18	11/07/18	KWG1805597	
Benzo(b)fluoranthene†	**18**	D	1.1	0.23	4	10/29/18	11/07/18	KWG1805597	
Benzo(k)fluoranthene	**5.8**	D	1.1	0.18	4	10/29/18	11/07/18	KWG1805597	
Benzo(a)pyrene	**13**	D	1.1	0.15	4	10/29/18	11/07/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**12**	D	1.1	0.26	4	10/29/18	11/07/18	KWG1805597	
Dibenz(a,h)anthracene	**3.2**	D	1.1	0.24	4	10/29/18	11/07/18	KWG1805597	
Benzo(g,h,i)perylene	**13**	D	1.1	0.24	4	10/29/18	11/07/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	70	26-102	11/07/18	Acceptable
Fluoranthene-d10	72	23-110	11/07/18	Acceptable
Terphenyl-d14	80	27-115	11/07/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.33**	J	0.66	0.089	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**0.16**	J	0.66	0.047	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**0.35**	X	0.33	0.029	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**0.12**	J	0.33	0.032	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**0.18**	J	0.33	0.022	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**0.11**	J	0.33	0.039	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**1.3**		0.33	0.033	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**0.34**		0.33	0.026	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**2.8**		0.33	0.032	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**3.4**		0.33	0.032	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**1.4**		0.33	0.033	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**2.1**		0.33	0.027	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**2.9**		0.33	0.057	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**0.93**		0.33	0.045	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**2.4**		0.33	0.036	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**2.4**		0.33	0.064	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**0.39**		0.33	0.058	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**2.6**		0.33	0.059	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	26-102	11/05/18	Acceptable
Fluoranthene-d10	69	23-110	11/05/18	Acceptable
Terphenyl-d14	74	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.18**	J	0.80	0.089	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**0.088**	J	0.80	0.047	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**0.14**	JX	0.40	0.029	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**0.052**	J	0.40	0.032	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**0.075**	J	0.40	0.022	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**0.067**	J	0.40	0.039	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**0.28**	J	0.40	0.033	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**0.11**	J	0.40	0.026	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**0.43**		0.40	0.032	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**0.47**		0.40	0.032	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**0.33**	J	0.40	0.033	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**0.56**		0.40	0.027	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**1.2**		0.40	0.057	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**0.34**	J	0.40	0.045	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**0.43**		0.40	0.036	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**0.70**		0.40	0.064	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**0.16**	J	0.40	0.058	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**0.64**		0.40	0.059	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	26-102	11/05/18	Acceptable
Fluoranthene-d10	61	23-110	11/05/18	Acceptable
Terphenyl-d14	62	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**5.4**	D	2.4	0.36	4	10/29/18	11/07/18	KWG1805597	
2-Methylnaphthalene	**3.5**	D	2.4	0.19	4	10/29/18	11/07/18	KWG1805597	
Acenaphthylene	**2.2**	D	1.2	0.12	4	10/29/18	11/07/18	KWG1805597	
Acenaphthene	**4.7**	D	1.2	0.13	4	10/29/18	11/07/18	KWG1805597	
Dibenzofuran	**5.6**	D	1.2	0.088	4	10/29/18	11/07/18	KWG1805597	
Fluorene	**8.0**	D	1.2	0.16	4	10/29/18	11/07/18	KWG1805597	
Phenanthrene	**67**	D	1.2	0.14	4	10/29/18	11/07/18	KWG1805597	
Anthracene	**16**	D	1.2	0.11	4	10/29/18	11/07/18	KWG1805597	
Fluoranthene	**82**	D	1.2	0.13	4	10/29/18	11/07/18	KWG1805597	
Pyrene	**78**	D	1.2	0.13	4	10/29/18	11/07/18	KWG1805597	
Benz(a)anthracene	**36**	D	1.2	0.14	4	10/29/18	11/07/18	KWG1805597	
Chrysene	**42**	D	1.2	0.11	4	10/29/18	11/07/18	KWG1805597	
Benzo(b)fluoranthene†	**41**	D	1.2	0.23	4	10/29/18	11/07/18	KWG1805597	
Benzo(k)fluoranthene	**16**	D	1.2	0.18	4	10/29/18	11/07/18	KWG1805597	
Benzo(a)pyrene	**32**	D	1.2	0.15	4	10/29/18	11/07/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**22**	D	1.2	0.26	4	10/29/18	11/07/18	KWG1805597	
Dibenz(a,h)anthracene	**6.0**	D	1.2	0.24	4	10/29/18	11/07/18	KWG1805597	
Benzo(g,h,i)perylene	**19**	D	1.2	0.24	4	10/29/18	11/07/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/07/18	Acceptable
Fluoranthene-d10	69	23-110	11/07/18	Acceptable
Terphenyl-d14	73	27-115	11/07/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**1.1**	JD	2.6	0.36	4	10/29/18	11/07/18	KWG1805597	
2-Methylnaphthalene	**0.59**	JD	2.6	0.19	4	10/29/18	11/07/18	KWG1805597	
Acenaphthylene	**2.3**	D	1.3	0.12	4	10/29/18	11/07/18	KWG1805597	
Acenaphthene	**3.9**	D	1.3	0.13	4	10/29/18	11/07/18	KWG1805597	
Dibenzofuran	**3.8**	D	1.3	0.088	4	10/29/18	11/07/18	KWG1805597	
Fluorene	**4.1**	D	1.3	0.16	4	10/29/18	11/07/18	KWG1805597	
Phenanthrene	**170**	D	1.3	0.14	4	10/29/18	11/07/18	KWG1805597	
Anthracene	**15**	D	1.3	0.11	4	10/29/18	11/07/18	KWG1805597	
Fluoranthene	**280**	D	1.3	0.13	4	10/29/18	11/07/18	KWG1805597	
Pyrene	**210**	D	1.3	0.13	4	10/29/18	11/07/18	KWG1805597	
Benz(a)anthracene	**110**	D	1.3	0.14	4	10/29/18	11/07/18	KWG1805597	
Chrysene	**160**	D	1.3	0.11	4	10/29/18	11/07/18	KWG1805597	
Benzo(b)fluoranthene†	**170**	D	1.3	0.23	4	10/29/18	11/07/18	KWG1805597	
Benzo(k)fluoranthene	**60**	D	1.3	0.18	4	10/29/18	11/07/18	KWG1805597	
Benzo(a)pyrene	**89**	D	1.3	0.15	4	10/29/18	11/07/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**76**	D	1.3	0.26	4	10/29/18	11/07/18	KWG1805597	
Dibenz(a,h)anthracene	**20**	D	1.3	0.24	4	10/29/18	11/07/18	KWG1805597	
Benzo(g,h,i)perylene	**63**	D	1.3	0.24	4	10/29/18	11/07/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	26-102	11/07/18	Acceptable
Fluoranthene-d10	64	23-110	11/07/18	Acceptable
Terphenyl-d14	70	27-115	11/07/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**	D	5.7	0.51	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**8.5**	D	5.7	0.27	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**7.0**	D	2.9	0.17	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**7.0**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**5.1**	D	2.9	0.13	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**9.3**	D	2.9	0.23	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**70**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**15**	D	2.9	0.15	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**160**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**150**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**58**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**110**	D	2.9	0.16	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**120**	D	2.9	0.33	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**43**	D	2.9	0.26	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**71**	D	2.9	0.21	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**65**	D	2.9	0.37	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**15**	D	2.9	0.33	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**68**	D	2.9	0.34	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	61	26-102	11/06/18	Acceptable
Fluoranthene-d10	63	23-110	11/06/18	Acceptable
Terphenyl-d14	65	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**7.7**	D	6.4	0.57	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**4.1**	JD	6.4	0.30	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**9.5**	D	3.2	0.19	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**8.1**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**6.4**	D	3.2	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**12**	D	3.2	0.25	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**98**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**22**	D	3.2	0.17	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**260**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**220**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**99**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**160**	D	3.2	0.18	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**170**	D	3.2	0.37	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**61**	D	3.2	0.29	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**110**	D	3.2	0.23	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**89**	D	3.2	0.41	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**21**	D	3.2	0.37	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**90**	D	3.2	0.38	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	67	26-102	11/06/18	Acceptable
Fluoranthene-d10	69	23-110	11/06/18	Acceptable
Terphenyl-d14	72	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**13**	D	5.2	0.47	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**6.0**	D	5.2	0.25	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**9.8**	D	2.6	0.16	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**8.7**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**6.5**	D	2.6	0.12	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**11**	D	2.6	0.21	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**85**	D	2.6	0.18	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**22**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**210**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**200**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**81**	D	2.6	0.18	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**140**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**170**	D	2.6	0.30	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**51**	D	2.6	0.24	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**110**	D	2.6	0.19	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**96**	D	2.6	0.34	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**21**	D	2.6	0.31	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**100**	D	2.6	0.31	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	26-102	11/06/18	Acceptable
Fluoranthene-d10	67	23-110	11/06/18	Acceptable
Terphenyl-d14	66	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**9.9**	D	5.1	0.46	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**4.7**	JD	5.1	0.24	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**8.1**	D	2.6	0.15	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**13**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**12**	D	2.6	0.12	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**13**	D	2.6	0.20	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**220**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**22**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**360**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**280**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**110**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**190**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**200**	D	2.6	0.30	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**74**	D	2.6	0.23	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**120**	D	2.6	0.19	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**110**	D	2.6	0.33	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**25**	D	2.6	0.30	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**100**	D	2.6	0.31	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	26-102	11/06/18	Acceptable
Fluoranthene-d10	70	23-110	11/06/18	Acceptable
Terphenyl-d14	72	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**12**	D	5.5	0.49	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**5.9**	D	5.5	0.26	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**11**	D	2.8	0.16	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**9.8**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**7.4**	D	2.8	0.12	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**13**	D	2.8	0.22	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**110**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**29**	D	2.8	0.15	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**260**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**240**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**120**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**190**	D	2.8	0.15	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**210**	D	2.8	0.31	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**76**	D	2.8	0.25	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**140**	D	2.8	0.20	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**120**	D	2.8	0.35	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**27**	D	2.8	0.32	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**120**	D	2.8	0.32	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/06/18	Acceptable
Fluoranthene-d10	74	23-110	11/06/18	Acceptable
Terphenyl-d14	73	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**8.3**	D	6.2	0.55	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**4.7**	JD	6.2	0.29	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**9.6**	D	3.1	0.18	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**6.8**	D	3.1	0.20	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**5.7**	D	3.1	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**9.9**	D	3.1	0.24	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**75**	D	3.1	0.21	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**19**	D	3.1	0.16	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**200**	D	3.1	0.20	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**180**	D	3.1	0.20	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**80**	D	3.1	0.21	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**130**	D	3.1	0.17	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**150**	D	3.1	0.36	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**56**	D	3.1	0.28	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**98**	D	3.1	0.23	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**85**	D	3.1	0.40	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**20**	D	3.1	0.36	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**88**	D	3.1	0.37	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	26-102	11/06/18	Acceptable
Fluoranthene-d10	69	23-110	11/06/18	Acceptable
Terphenyl-d14	70	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**5.0**		1.5	0.13	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**2.7**		1.5	0.067	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**5.8**		0.71	0.041	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**6.0**		0.71	0.046	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**3.5**		0.71	0.032	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**6.0**		0.71	0.055	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**68**		0.71	0.047	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**15**		0.71	0.037	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**140**		0.71	0.046	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**130**		0.71	0.046	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**66**		0.71	0.047	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**100**		0.71	0.039	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**110**		0.71	0.081	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**42**		0.71	0.064	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**79**		0.71	0.051	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**64**		0.71	0.091	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**15**		0.71	0.082	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**61**		0.71	0.084	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	58	26-102	11/05/18	Acceptable
Fluoranthene-d10	61	23-110	11/05/18	Acceptable
Terphenyl-d14	65	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**9.8**		1.4	0.13	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**4.1**		1.4	0.065	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**11**		0.69	0.040	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**8.4**		0.69	0.044	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**4.5**		0.69	0.031	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**9.0**		0.69	0.054	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**95**		0.69	0.046	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**28**		0.69	0.036	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**210**		0.69	0.044	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**200**		0.69	0.044	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**110**		0.69	0.046	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**140**		0.69	0.037	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**160**		0.69	0.078	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**54**		0.69	0.062	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**120**		0.69	0.050	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**90**		0.69	0.088	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**21**		0.69	0.080	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**85**		0.69	0.081	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/05/18	Acceptable
Fluoranthene-d10	73	23-110	11/05/18	Acceptable
Terphenyl-d14	74	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1805597-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.50	0.089	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	ND	U	0.50	0.047	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	ND	U	0.25	0.029	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	ND	U	0.25	0.032	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**0.034**	J	0.25	0.022	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**0.039**	J	0.25	0.039	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**0.066**	J	0.25	0.033	1	10/29/18	11/05/18	KWG1805597	
Anthracene	ND	U	0.25	0.026	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	ND	U	0.25	0.032	1	10/29/18	11/05/18	KWG1805597	
Pyrene	ND	U	0.25	0.032	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	ND	U	0.25	0.033	1	10/29/18	11/05/18	KWG1805597	
Chrysene	ND	U	0.25	0.027	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	ND	U	0.25	0.057	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	ND	U	0.25	0.045	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	ND	U	0.25	0.036	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	ND	U	0.25	0.064	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	ND	U	0.25	0.058	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	ND	U	0.25	0.059	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/05/18	Acceptable
Fluoranthene-d10	66	23-110	11/05/18	Acceptable
Terphenyl-d14	71	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1805796-6	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.50	0.089	1	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	ND	U	0.50	0.047	1	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	ND	U	0.25	0.029	1	11/07/18	11/14/18	KWG1805796	
Acenaphthene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	ND	U	0.25	0.022	1	11/07/18	11/14/18	KWG1805796	
Fluorene	ND	U	0.25	0.039	1	11/07/18	11/14/18	KWG1805796	
Phenanthrene	ND	U	0.25	0.033	1	11/07/18	11/14/18	KWG1805796	
Anthracene	ND	U	0.25	0.026	1	11/07/18	11/14/18	KWG1805796	
Fluoranthene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Pyrene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**0.035**	J	0.25	0.033	1	11/07/18	11/14/18	KWG1805796	
Chrysene	ND	U	0.25	0.027	1	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	ND	U	0.25	0.057	1	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	ND	U	0.25	0.045	1	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	ND	U	0.25	0.036	1	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	ND	U	0.25	0.064	1	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	ND	U	0.25	0.058	1	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	ND	U	0.25	0.059	1	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	26-102	11/14/18	Acceptable
Fluoranthene-d10	67	23-110	11/14/18	Acceptable
Terphenyl-d14	75	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
N3-0to26-101518	K1810270-001	72 D	67 D	77 D
L1-0to30-101518	K1810270-004	70 D	72 D	80 D
N1-0to30-101518	K1810270-006	62	69	74
T1-0to30-101518	K1810270-010	62	61	62
R1-0to30-101518	K1810270-011	66 D	69 D	73 D
P1-0to30-101518	K1810270-012	65 D	64 D	70 D
T3-0to28-101618	K1810270-013	61 D	63 D	65 D
T7-0to31-101618	K1810270-015	67 D	69 D	72 D
T5-0to26-101618	K1810270-016	64 D	67 D	66 D
P3-0to29-101618	K1810270-017	65 D	70 D	72 D
R5-0to25-101618	K1810270-018	66 D	74 D	73 D
514-0to29-101618	K1810270-019	64 D	69 D	70 D
P5-0to26-101618	K1810270-020	58	61	65
R3-0to33-101718	K1810270-029	66	73	74
Method Blank	KWG1805597-4	66	66	71
Method Blank	KWG1805796-6	72	67	75
T1-0to30-101518MS	KWG1805597-1	58	58	58
T1-0to30-101518DMS	KWG1805597-2	53	54	56
Lab Control Sample	KWG1805597-3	69	71	79
Lab Control Sample	KWG1805796-5	78	79	87

Surrogate Recovery Control Limits (%)

Sur1	=	Fluorene-d10	26-102
Sur2	=	Fluoranthene-d10	23-110
Sur3	=	Terphenyl-d14	27-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/05/2018
Time Analyzed: 09:41

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110518\1105F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806019-2
Analysis Lot: KWG1806019

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	68,045	4.76	28,083	6.32	57,938	7.56
	Upper Limit ==>	136,090	5.26	56,166	6.82	115,876	8.06
	Lower Limit ==>	34,023	4.26	14,042	5.82	28,969	7.06
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Method Blank	KWG1805597-4	76,096	4.77	33,148	6.32	70,658	7.56
T1-0to30-101518MS	KWG1805597-1	76,303	4.77	30,184	6.32	58,895	7.56
T1-0to30-101518DMS	KWG1805597-2	76,240	4.77	29,904	6.32	58,072	7.56
T1-0to30-101518	K1810270-010	73,964	4.77	31,751	6.32	59,620	7.56
N1-0to30-101518	K1810270-006	73,202	4.77	32,934	6.32	65,954	7.56
P5-0to26-101618	K1810270-020	71,357	4.77	32,606	6.32	65,476	7.56
R3-0to33-101718	K1810270-029	73,213	4.77	32,512	6.32	66,609	7.56

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/05/2018
Time Analyzed: 09:41

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110518\1105F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806019-2
Analysis Lot: KWG1806019

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	79,003	10.10	92,808	13.26
	Upper Limit ==>	158,006	10.60	185,616	13.76
	Lower Limit ==>	39,502	9.60	46,404	12.76
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Method Blank	KWG1805597-4	84,189	10.11	91,029	13.29
T1-0to30-101518MS	KWG1805597-1	77,686	10.11	89,245	13.29
T1-0to30-101518DMS	KWG1805597-2	74,436	10.11	88,810	13.28
T1-0to30-101518	K1810270-010	76,034	10.11	91,548	13.27
N1-0to30-101518	K1810270-006	78,844	10.11	90,255	13.28
P5-0to26-101618	K1810270-020	81,376	10.12	94,405	13.35
R3-0to33-101718	K1810270-029	84,062	10.13	93,566	13.38

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/06/2018
Time Analyzed: 05:35

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110618\1106F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806026-2
Analysis Lot: KWG1806026

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	65,709	4.76	29,101	6.32	61,986	7.56
	Upper Limit ==>	131,418	5.26	58,202	6.82	123,972	8.06
	Lower Limit ==>	32,855	4.26	14,551	5.82	30,993	7.06
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Lab Control Sample	KWG1805597-3	66,672	4.75	29,220	6.32	61,419	7.56
T3-0to28-101618	K1810270-013	65,459	4.76	31,384	6.32	63,553	7.56
T7-0to31-101618	K1810270-015	65,576	4.76	31,057	6.32	62,927	7.56
T5-0to26-101618	K1810270-016	62,762	4.76	30,408	6.32	61,730	7.56
P3-0to29-101618	K1810270-017	66,277	4.76	31,500	6.32	64,204	7.56
R5-0to25-101618	K1810270-018	66,491	4.76	30,903	6.32	62,644	7.56
514-0to29-101618	K1810270-019	66,644	4.76	31,032	6.32	62,836	7.56

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/06/2018
Time Analyzed: 05:35

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110618\1106F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806026-2
Analysis Lot: KWG1806026

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	76,116	10.11	89,350	13.27
	Upper Limit ==>	152,232	10.61	178,700	13.77
	Lower Limit ==>	38,058	9.61	44,675	12.77
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Lab Control Sample	KWG1805597-3	68,916	10.11	78,051	13.27
T3-0to28-101618	K1810270-013	80,827	10.11	95,678	13.30
T7-0to31-101618	K1810270-015	81,131	10.12	94,792	13.31
T5-0to26-101618	K1810270-016	83,344	10.12	94,949	13.35
P3-0to29-101618	K1810270-017	82,493	10.12	95,626	13.32
R5-0to25-101618	K1810270-018	82,257	10.12	95,692	13.34
514-0to29-101618	K1810270-019	82,262	10.12	94,884	13.32

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/07/2018
Time Analyzed: 05:26

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110718\1107F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806028-2
Analysis Lot: KWG1806028

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	68,316	4.76	31,023	6.32	63,263	7.56
	Upper Limit ==>	136,632	5.26	62,046	6.82	126,526	8.06
	Lower Limit ==>	34,158	4.26	15,512	5.82	31,632	7.06
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
L1-0to30-101518	K1810270-004	64,297	4.75	31,463	6.32	65,645	7.56
R1-0to30-101518	K1810270-011	64,050	4.75	31,363	6.32	64,105	7.56
P1-0to30-101518	K1810270-012	63,426	4.75	30,950	6.32	64,665	7.56

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/07/2018
		Time Analyzed:	05:26

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS14\DATA\110718\1107F002.D	**Lab Code:**	KWG1806028-2
Instrument ID:	MS14	**Analysis Lot:**	KWG1806028
Analysis Method:	8270D SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	75,807	10.11	86,791	13.28
	Upper Limit ==>	151,614	10.61	173,582	13.78
	Lower Limit ==>	37,904	9.61	43,396	12.78
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
L1-0to30-101518	K1810270-004	78,079	10.11	88,139	13.30
R1-0to30-101518	K1810270-011	77,988	10.11	88,655	13.29
P1-0to30-101518	K1810270-012	75,545	10.11	87,616	13.32

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/14/2018
Time Analyzed: 06:17

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806235-2
Analysis Lot: KWG1806235

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	58,386	4.75	27,245	6.31	66,920	7.55
	Upper Limit ==>	116,772	5.25	54,490	6.81	133,840	8.05
	Lower Limit ==>	29,193	4.25	13,623	5.81	33,460	7.05
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Method Blank	KWG1805796-6	59,123	4.74	31,330	6.31	73,826	7.55
Lab Control Sample	KWG1805796-5	60,453	4.75	29,887	6.31	65,739	7.55
N3-0to26-101518	K1810270-001	54,405	4.74	28,102	6.31	69,438	7.55

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/2018
		Time Analyzed:	06:17

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS14\DATA\111418\1114F002.D	**Lab Code:**	KWG1806235-2
Instrument ID:	MS14	**Analysis Lot:**	KWG1806235
Analysis Method:	8270D SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	75,302	10.10	83,299	13.29
	Upper Limit ==>	150,604	10.60	166,598	13.79
	Lower Limit ==>	37,651	9.60	41,650	12.79
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Method Blank	KWG1805796-6	83,472	10.10	90,973	13.28
Lab Control Sample	KWG1805796-5	75,453	10.10	83,033	13.29
N3-0to26-101518	K1810270-001	76,819	10.11	83,953	13.32

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/05/2018

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805597

		T1-0to30-101518MS KWG1805597-1 Matrix Spike			T1-0to30-101518DMS KWG1805597-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	0.18	41.1	79.3	52 *	37.6	79.3	47 *	70-130	9	40
2-Methylnaphthalene	0.088	38.2	79.3	48 *	35.2	79.3	44 *	70-130	8	40
Acenaphthylene	0.14	45.9	79.3	58 *	42.3	79.3	53 *	70-130	8	40
Acenaphthene	0.052	44.5	79.3	56 *	41.1	79.3	52 *	70-130	8	40
Dibenzofuran	0.075	44.2	79.3	56 *	40.8	79.3	51 *	70-130	8	40
Fluorene	0.067	44.9	79.3	57 *	41.5	79.3	52 *	70-130	8	40
Phenanthrene	0.28	45.3	79.3	57 *	42.3	79.3	53 *	70-130	7	40
Anthracene	0.11	48.2	79.3	61 *	45.1	79.3	57 *	70-130	7	40
Fluoranthene	0.43	44.5	79.3	56 *	41.2	79.3	51 *	70-130	8	40
Pyrene	0.47	42.0	79.3	52 *	39.8	79.3	50 *	70-130	5	40
Benz(a)anthracene	0.33	53.2	79.3	67 *	50.0	79.3	63 *	70-130	6	40
Chrysene	0.56	51.4	79.3	64 *	48.3	79.3	60 *	70-130	6	40
Benzo(b)fluoranthene	1.2	52.9	79.3	65 *	50.0	79.3	62 *	70-130	6	40
Benzo(k)fluoranthene	0.34	50.8	79.3	64 *	47.8	79.3	60 *	70-130	6	40
Benzo(a)pyrene	0.43	53.1	79.3	66 *	49.8	79.3	62 *	70-130	6	40
Indeno(1,2,3-cd)pyrene	0.70	55.2	79.3	69 *	52.3	79.3	65 *	70-130	5	40
Dibenz(a,h)anthracene	0.16	54.5	79.3	69 *	49.9	79.3	63 *	70-130	9	40
Benzo(g,h,i)perylene	0.64	49.8	79.3	62 *	47.7	79.3	59 *	70-130	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/06/2018

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270D SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1805597

Lab Control Sample
KWG1805597-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Naphthalene	61.1	100	61	48-77
2-Methylnaphthalene	60.8	100	61	52-85
Acenaphthylene	68.7	100	69	51-80
Acenaphthene	67.3	100	67	51-82
Dibenzofuran	69.3	100	69	14-125
Fluorene	68.2	100	68	52-83
Phenanthrene	67.2	100	67	48-85
Anthracene	71.9	100	72	56-87
Fluoranthene	66.9	100	67	45-96
Pyrene	72.1	100	72	59-98
Benz(a)anthracene	80.7	100	81	65-97
Chrysene	77.1	100	77	63-100
Benzo(b)fluoranthene	83.5	100	84	63-99
Benzo(k)fluoranthene	78.6	100	79	62-99
Benzo(a)pyrene	82.4	100	82	64-103
Indeno(1,2,3-cd)pyrene	87.6	100	88	61-105
Dibenz(a,h)anthracene	82.9	100	83	56-104
Benzo(g,h,i)perylene	80.3	100	80	56-101

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270D SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1805796

Lab Control Sample
KWG1805796-5
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Naphthalene	63.7	100	64	48-77
2-Methylnaphthalene	67.3	100	67	52-85
Acenaphthylene	68.6	100	69	51-80
Acenaphthene	68.4	100	68	51-82
Dibenzofuran	67.8	100	68	14-125
Fluorene	72.0	100	72	52-83
Phenanthrene	68.9	100	69	48-85
Anthracene	74.2	100	74	56-87
Fluoranthene	68.9	100	69	45-96
Pyrene	73.4	100	73	59-98
Benz(a)anthracene	82.2	100	82	65-97
Chrysene	79.0	100	79	63-100
Benzo(b)fluoranthene	84.4	100	84	63-99
Benzo(k)fluoranthene	81.1	100	81	62-99
Benzo(a)pyrene	85.3	100	85	64-103
Indeno(1,2,3-cd)pyrene	85.9	100	86	61-105
Dibenz(a,h)anthracene	82.2	100	82	56-104
Benzo(g,h,i)perylene	73.4	100	73	56-101

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/05/2018
		Time Analyzed:	16:12

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Instrument ID:**	MS14
Lab Code:	KWG1805597-4	**File ID:**	J:\MS14\DATA\110518\1105F015.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805597

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
T1-0to30-101518MS	KWG1805597-1	J:\MS14\DATA\110518\1105F017.D	11/05/18	17:12
T1-0to30-101518DMS	KWG1805597-2	J:\MS14\DATA\110518\1105F018.D	11/05/18	17:42
T1-0to30-101518	K1810270-010	J:\MS14\DATA\110518\1105F019.D	11/05/18	18:11
N1-0to30-101518	K1810270-006	J:\MS14\DATA\110518\1105F020.D	11/05/18	18:41
P5-0to26-101618	K1810270-020	J:\MS14\DATA\110518\1105F021.D	11/05/18	19:10
R3-0to33-101718	K1810270-029	J:\MS14\DATA\110518\1105F022.D	11/05/18	19:40
Lab Control Sample	KWG1805597-3	J:\MS14\DATA\110618\1106F005.D	11/06/18	07:01
T3-0to28-101618	K1810270-013	J:\MS14\DATA\110618\1106F016.D	11/06/18	12:18
T7-0to31-101618	K1810270-015	J:\MS14\DATA\110618\1106F017.D	11/06/18	12:46
T5-0to26-101618	K1810270-016	J:\MS14\DATA\110618\1106F018.D	11/06/18	13:15
P3-0to29-101618	K1810270-017	J:\MS14\DATA\110618\1106F019.D	11/06/18	13:44
R5-0to25-101618	K1810270-018	J:\MS14\DATA\110618\1106F020.D	11/06/18	14:13
514-0to29-101618	K1810270-019	J:\MS14\DATA\110618\1106F021.D	11/06/18	14:42
L1-0to30-101518	K1810270-004	J:\MS14\DATA\110718\1107F009.D	11/07/18	08:58
R1-0to30-101518	K1810270-011	J:\MS14\DATA\110718\1107F010.D	11/07/18	09:28
P1-0to30-101518	K1810270-012	J:\MS14\DATA\110718\1107F011.D	11/07/18	09:59

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018
		Time Analyzed:	06:42

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Instrument ID:**	MS14
Lab Code:	KWG1805796-6	**File ID:**	J:\MS14\DATA\111418\1114F003.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1805796-5	J:\MS14\DATA\111418\1114F004.D	11/14/18	07:08
N3-0to26-101518	K1810270-001	J:\MS14\DATA\111418\1114F013.D	11/14/18	10:56

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/06/2018
		Time Analyzed:	07:01

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Instrument ID:**	MS14
Lab Code:	KWG1805597-3	**File ID:**	J:\MS14\DATA\110618\1106F005.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805597

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805597-4	J:\MS14\DATA\110518\1105F015.D	11/05/18	16:12
T1-0to30-101518MS	KWG1805597-1	J:\MS14\DATA\110518\1105F017.D	11/05/18	17:12
T1-0to30-101518DMS	KWG1805597-2	J:\MS14\DATA\110518\1105F018.D	11/05/18	17:42
T1-0to30-101518	K1810270-010	J:\MS14\DATA\110518\1105F019.D	11/05/18	18:11
N1-0to30-101518	K1810270-006	J:\MS14\DATA\110518\1105F020.D	11/05/18	18:41
P5-0to26-101618	K1810270-020	J:\MS14\DATA\110518\1105F021.D	11/05/18	19:10
R3-0to33-101718	K1810270-029	J:\MS14\DATA\110518\1105F022.D	11/05/18	19:40
T3-0to28-101618	K1810270-013	J:\MS14\DATA\110618\1106F016.D	11/06/18	12:18
T7-0to31-101618	K1810270-015	J:\MS14\DATA\110618\1106F017.D	11/06/18	12:46
T5-0to26-101618	K1810270-016	J:\MS14\DATA\110618\1106F018.D	11/06/18	13:15
P3-0to29-101618	K1810270-017	J:\MS14\DATA\110618\1106F019.D	11/06/18	13:44
R5-0to25-101618	K1810270-018	J:\MS14\DATA\110618\1106F020.D	11/06/18	14:13
514-0to29-101618	K1810270-019	J:\MS14\DATA\110618\1106F021.D	11/06/18	14:42
L1-0to30-101518	K1810270-004	J:\MS14\DATA\110718\1107F009.D	11/07/18	08:58
R1-0to30-101518	K1810270-011	J:\MS14\DATA\110718\1107F010.D	11/07/18	09:28
P1-0to30-101518	K1810270-012	J:\MS14\DATA\110718\1107F011.D	11/07/18	09:59

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018
		Time Analyzed:	07:08

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Instrument ID:**	MS14
Lab Code:	KWG1805796-5	**File ID:**	J:\MS14\DATA\111418\1114F004.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805796-6	J:\MS14\DATA\111418\1114F003.D	11/14/18	06:42
N3-0to26-101518	K1810270-001	J:\MS14\DATA\111418\1114F013.D	11/14/18	10:56

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/05/2018
Time Analyzed: 09:12

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110518\1105F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806019

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
275	198	10	60	34.5	77008	PASS
365	442	1	50	2.8	12239	PASS
441	443	0	100	72.4	62621	PASS
442	442	100	100	100.0	431914	PASS
443	442	15	24	20.0	86541	PASS
51	198	10	80	44.2	98624	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	46.3	103352	PASS
70	69	0	2	0.8	806	PASS
127	198	10	80	51.3	114608	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	51.7	223210	PASS
199	198	5	9	6.8	15105	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806019-2	J:\MS14\DATA\110518\1105F002.D	11/05/2018	09:41	
Method Blank	KWG1805597-4	J:\MS14\DATA\110518\1105F015.D	11/05/2018	16:12	
T1-0to30-101518MS	KWG1805597-1	J:\MS14\DATA\110518\1105F017.D	11/05/2018	17:12	
T1-0to30-101518DMS	KWG1805597-2	J:\MS14\DATA\110518\1105F018.D	11/05/2018	17:42	
T1-0to30-101518	K1810270-010	J:\MS14\DATA\110518\1105F019.D	11/05/2018	18:11	
N1-0to30-101518	K1810270-006	J:\MS14\DATA\110518\1105F020.D	11/05/2018	18:41	
P5-0to26-101618	K1810270-020	J:\MS14\DATA\110518\1105F021.D	11/05/2018	19:10	
R3-0to33-101718	K1810270-029	J:\MS14\DATA\110518\1105F022.D	11/05/2018	19:40	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/06/2018
Time Analyzed: 05:06

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110618\1106F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806026

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.1	96829	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	42.3	99561	PASS
70	69	0	2	0.8	792	PASS
127	198	10	80	48.1	113298	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	43.7	235477	PASS
199	198	5	9	6.7	15817	PASS
275	198	10	60	36.8	86610	PASS
365	442	1	50	2.7	14505	PASS
441	443	0	100	73.5	78210	PASS
442	442	100	100	100.0	539029	PASS
443	442	15	24	19.7	106368	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806026-2	J:\MS14\DATA\110618\1106F002.D	11/06/2018	05:35	
Lab Control Sample	KWG1805597-3	J:\MS14\DATA\110618\1106F005.D	11/06/2018	07:01	
T3-0to28-101618	K1810270-013	J:\MS14\DATA\110618\1106F016.D	11/06/2018	12:18	
T7-0to31-101618	K1810270-015	J:\MS14\DATA\110618\1106F017.D	11/06/2018	12:46	
T5-0to26-101618	K1810270-016	J:\MS14\DATA\110618\1106F018.D	11/06/2018	13:15	
P3-0to29-101618	K1810270-017	J:\MS14\DATA\110618\1106F019.D	11/06/2018	13:44	
R5-0to25-101618	K1810270-018	J:\MS14\DATA\110618\1106F020.D	11/06/2018	14:13	
514-0to29-101618	K1810270-019	J:\MS14\DATA\110618\1106F021.D	11/06/2018	14:42	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/07/2018
Time Analyzed: 04:55

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110718\1107F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806028

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	40.7	98834	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	42.4	103141	PASS
70	69	0	2	0.8	832	PASS
127	198	10	80	47.9	116466	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	44.4	243029	PASS
199	198	5	9	7.1	17181	PASS
275	198	10	60	37.9	92040	PASS
365	442	1	50	2.8	15565	PASS
441	443	0	100	75.3	79482	PASS
442	442	100	100	100.0	547541	PASS
443	442	15	24	19.3	105498	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806028-2	J:\MS14\DATA\110718\1107F002.D	11/07/2018	05:26	
L1-0to30-101518	K1810270-004	J:\MS14\DATA\110718\1107F009.D	11/07/2018	08:58	
R1-0to30-101518	K1810270-011	J:\MS14\DATA\110718\1107F010.D	11/07/2018	09:28	
P1-0to30-101518	K1810270-012	J:\MS14\DATA\110718\1107F011.D	11/07/2018	09:59	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/14/2018
Time Analyzed: 05:51

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806235

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.5	157589	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	46.9	158868	PASS
70	69	0	2	0.7	1054	PASS
127	198	10	80	51.6	174890	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	48.5	339050	PASS
199	198	5	9	6.8	22890	PASS
275	198	10	60	35.0	118562	PASS
365	442	1	50	3.4	24040	PASS
441	443	0	100	75.3	101050	PASS
442	442	100	100	100.0	698368	PASS
443	442	15	24	19.2	134280	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806235-2	J:\MS14\DATA\111418\1114F002.D	11/14/2018	06:17	
Method Blank	KWG1805796-6	J:\MS14\DATA\111418\1114F003.D	11/14/2018	06:42	
Lab Control Sample	KWG1805796-5	J:\MS14\DATA\111418\1114F004.D	11/14/2018	07:08	
N3-0to26-101518	K1810270-001	J:\MS14\DATA\111418\1114F013.D	11/14/2018	10:56	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Level ID	File ID	Level ID	File ID
A	J:\MS14\DATA\071118\0711F003.D	G	J:\MS14\DATA\071118\0711F009.D
B	J:\MS14\DATA\071118\0711F004.D	H	J:\MS14\DATA\071118\0711F010.D
C	J:\MS14\DATA\071118\0711F005.D	I	J:\MS14\DATA\071118\0711F011.D
D	J:\MS14\DATA\071118\0711F006.D	J	J:\MS14\DATA\071118\0711F012.D
E	J:\MS14\DATA\071118\0711F007.D		
F	J:\MS14\DATA\071118\0711F008.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.42	B	4.0	1.31	C	8.0	1.19	D	20	1.15	E	100	1.13
	F	200	1.11	G	400	1.09	H	1000	1.06	I	1600	1.03	J	2000	1.07
2-Methylnaphthalene	A	2.0	0.789	B	4.0	0.741	C	8.0	0.734	D	20	0.715	E	100	0.718
	F	200	0.692	G	400	0.662	H	1000	0.650	I	1600	0.627	J	2000	0.635
Acenaphthylene	A	2.0	2.52	B	4.0	2.35	C	8.0	2.29	D	20	2.33	E	100	2.37
	F	200	2.41	G	400	2.42	H	1000	2.41	I	1600	2.43	J	2000	2.34
Acenaphthene	A	2.0	1.44	B	4.0	1.38	C	8.0	1.33	D	20	1.38	E	100	1.38
	F	200	1.39	G	400	1.38	H	1000	1.35	I	1600	1.38	J	2000	1.32
Dibenzofuran	A	2.0	2.25	B	4.0	2.12	C	8.0	2.21	D	20	2.09	E	100	2.22
	F	200	2.29	G	400	2.24	H	1000	2.22	I	1600	2.24	J	2000	2.11
Fluorene	A	2.0	1.81	B	4.0	1.68	C	8.0	1.62	D	20	1.64	E	100	1.70
	F	200	1.68	G	400	1.67	H	1000	1.60	I	1600	1.63	J	2000	1.56
Phenanthrene	A	2.0	1.33	B	4.0	1.33	C	8.0	1.25	D	20	1.23	E	100	1.25
	F	200	1.25	G	400	1.22	H	1000	1.23	I	1600	1.22	J	2000	1.16
Anthracene	A	2.0	1.20	B	4.0	1.17	C	8.0	1.17	D	20	1.14	E	100	1.21
	F	200	1.22	G	400	1.22	H	1000	1.22	I	1600	1.21	J	2000	1.17
Fluoranthene	A	2.0	1.50	B	4.0	1.44	C	8.0	1.44	D	20	1.41	E	100	1.54
	F	200	1.60	G	400	1.58	H	1000	1.63	I	1600	1.65	J	2000	1.62
Pyrene	A	2.0	1.49	B	4.0	1.46	C	8.0	1.38	D	20	1.37	E	100	1.34
	F	200	1.29	G	400	1.32	H	1000	1.33	I	1600	1.39	J	2000	1.36
Benz(a)anthracene	A	2.0	1.50	B	4.0	1.32	C	8.0	1.26	D	20	1.19	E	100	1.20
	F	200	1.23	G	400	1.27	H	1000	1.32	I	1600	1.34	J	2000	1.31
Chrysene	A	2.0	1.23	B	4.0	1.21	C	8.0	1.23	D	20	1.20	E	100	1.24
	F	200	1.25	G	400	1.25	H	1000	1.26	I	1600	1.28	J	2000	1.24
Benzo(b)fluoranthene	A	2.0	1.19	B	4.0	1.16	C	8.0	1.15	D	20	1.16	E	100	1.20
	F	200	1.26	G	400	1.30	H	1000	1.34	I	1600	1.32	J	2000	1.27
Benzo(k)fluoranthene	A	2.0	1.16	B	4.0	1.17	C	8.0	1.13	D	20	1.19	E	100	1.23
	F	200	1.26	G	400	1.29	H	1000	1.29	I	1600	1.29	J	2000	1.25

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.09	B	4.0	1.01	C	8.0	1.03	D	20	1.04	E	100	1.05
	F	200	1.07	G	400	1.11	H	1000	1.15	I	1600	1.16	J	2000	1.12
Indeno(1,2,3-cd)pyrene	A	2.0	1.23	B	4.0	1.10	C	8.0	1.06	D	20	1.06	E	100	1.07
	F	200	1.08	G	400	1.05	H	1000	1.01	I	1600	0.996	J	2000	0.959
Dibenz(a,h)anthracene	A	2.0	1.12	B	4.0	1.10	C	8.0	1.09	D	20	1.17	E	100	1.12
	F	200	1.10	G	400	1.07	H	1000	1.02	I	1600	1.00	J	2000	0.971
Benzo(g,h,i)perylene	A	2.0	1.44	B	4.0	1.37	C	8.0	1.31	D	20	1.34	E	100	1.28
	F	200	1.27	G	400	1.21	H	1000	1.12	I	1600	1.07	J	2000	1.04
Fluorene-d10				B	4.0	1.49	C	8.0	1.33	D	20	1.28	E	100	1.25
	F	200	1.24	G	400	1.25	H	1000	1.21	I	1600	1.24	J	2000	1.20
Fluoranthene-d10	A	2.0	1.18	B	4.0	1.19	C	8.0	1.15	D	20	1.11	E	100	1.20
	F	200	1.26	G	400	1.31	H	1000	1.40	I	1600	1.42	J	2000	1.39
Terphenyl-d14				B	4.0	1.05	C	8.0	0.934	D	20	0.867	E	100	0.832
	F	200	0.823	G	400	0.835	H	1000	0.837	I	1600	0.830	J	2000	0.801

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Naphthalene	MS	AverageRF	% RSD	10.7		≤ 20	1.15		0.70
2-Methylnaphthalene	MS	AverageRF	% RSD	7.5		≤ 20	0.696		0.40
Acenaphthylene	MS	AverageRF	% RSD	2.7		≤ 20	2.39		0.90
Acenaphthene	MS	AverageRF	% RSD	2.3		≤ 20	1.37		0.90
Dibenzofuran	MS	AverageRF	% RSD	3.1		≤ 20	2.20		0.80
Fluorene	MS	AverageRF	% RSD	4.1		≤ 20	1.66		0.90
Phenanthrene	MS	AverageRF	% RSD	4.1		≤ 20	1.25		0.70
Anthracene	MS	AverageRF	% RSD	2.4		≤ 20	1.19		0.70
Fluoranthene	MS	AverageRF	% RSD	5.8		≤ 20	1.54		0.60
Pyrene	MS	AverageRF	% RSD	4.5		≤ 20	1.37		0.60
Benz(a)anthracene	MS	AverageRF	% RSD	6.8		≤ 20	1.29		0.80
Chrysene	MS	AverageRF	% RSD	1.9		≤ 20	1.24		0.70
Benzo(b)fluoranthene	MS	AverageRF	% RSD	5.7		≤ 20	1.24		0.70
Benzo(k)fluoranthene	MS	AverageRF	% RSD	4.7		≤ 20	1.23		0.70
Benzo(a)pyrene	MS	AverageRF	% RSD	4.7		≤ 20	1.08		0.70
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	6.9		≤ 20	1.06		0.50
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	5.7		≤ 20	1.08		0.40
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	10.7		≤ 20	1.24		0.50
Fluorene-d10	SURR	AverageRF	% RSD	6.9		≤ 20	1.28		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	9.0		≤ 20	1.26		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	8.9		≤ 20	0.867		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Calibration Date: 07/11/2018
Date Analyzed: 07/11/2018

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270D SIM

Calibration ID: CAL15779
Units: ng/ml

File ID: J:\MS14\DATA\071118\0711F013.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	370	1.15	1.06	-8	NA	± 30 %	AverageRF
2-Methylnaphthalene	400	390	0.696	0.683	-2	NA	± 30 %	AverageRF
Acenaphthylene	400	390	2.39	2.33	-2	NA	± 30 %	AverageRF
Acenaphthene	400	380	1.37	1.32	-4	NA	± 30 %	AverageRF
Dibenzofuran	400	370	2.20	2.05	-7	NA	± 30 %	AverageRF
Fluorene	400	390	1.66	1.60	-4	NA	± 30 %	AverageRF
Phenanthrene	400	380	1.25	1.19	-4	NA	± 30 %	AverageRF
Anthracene	400	400	1.19	1.18	-1	NA	± 30 %	AverageRF
Fluoranthene	400	410	1.54	1.60	4	NA	± 30 %	AverageRF
Pyrene	400	350	1.37	1.21	-12	NA	± 30 %	AverageRF
Benz(a)anthracene	400	380	1.29	1.22	-6	NA	± 30 %	AverageRF
Chrysene	400	390	1.24	1.20	-3	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	400	410	1.24	1.27	2	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	400	420	1.23	1.28	4	NA	± 30 %	AverageRF
Benzo(a)pyrene	400	400	1.08	1.08	0	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	370	1.06	0.993	-7	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	400	380	1.08	1.03	-4	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	400	370	1.24	1.14	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/05/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806019
Units: ng/ml

File ID: J:\MS14\DATA\110518\1105F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.70	1.15	1.12	-3	NA	± 20	AverageRF
2-Methylnaphthalene	400	380	0.40	0.696	0.655	-6	NA	± 20	AverageRF
Acenaphthylene	400	420	0.90	2.39	2.49	4	NA	± 20	AverageRF
Acenaphthene	400	410	0.90	1.37	1.39	1	NA	± 20	AverageRF
Dibenzofuran	400	390	0.80	2.20	2.17	-1	NA	± 20	AverageRF
Fluorene	400	400	0.90	1.66	1.67	1	NA	± 20	AverageRF
Phenanthrene	400	400	0.70	1.25	1.26	1	NA	± 20	AverageRF
Anthracene	400	370	0.70	1.19	1.09	-8	NA	± 20	AverageRF
Fluoranthene	400	430	0.60	1.54	1.66	8	NA	± 20	AverageRF
Pyrene	400	380	0.60	1.37	1.31	-5	NA	± 20	AverageRF
Benz(a)anthracene	400	420	0.80	1.29	1.35	5	NA	± 20	AverageRF
Chrysene	400	400	0.70	1.24	1.25	1	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	420	0.70	1.24	1.29	4	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	400	0.70	1.23	1.23	0	NA	± 20	AverageRF
Benzo(a)pyrene	400	440	0.70	1.08	1.18	9	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	460	0.50	1.06	1.23	16	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	450	0.40	1.08	1.22	14	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	420	0.50	1.24	1.32	6	NA	± 20	AverageRF
Fluorene-d10	400	370	0.01	1.28	1.17	-8	NA	± 20	AverageRF
Fluoranthene-d10	400	410	0.01	1.26	1.30	3	NA	± 20	AverageRF
Terphenyl-d14	400	380	0.01	0.867	0.815	-6	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/06/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806026
Units: ng/ml

File ID: J:\MS14\DATA\110618\1106F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.70	1.15	1.11	-4	NA	± 20	AverageRF
2-Methylnaphthalene	400	390	0.40	0.696	0.672	-3	NA	± 20	AverageRF
Acenaphthylene	400	420	0.90	2.39	2.50	5	NA	± 20	AverageRF
Acenaphthene	400	410	0.90	1.37	1.40	2	NA	± 20	AverageRF
Dibenzofuran	400	420	0.80	2.20	2.32	6	NA	± 20	AverageRF
Fluorene	400	420	0.90	1.66	1.73	5	NA	± 20	AverageRF
Phenanthrene	400	400	0.70	1.25	1.23	-1	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.09	-9	NA	± 20	AverageRF
Fluoranthene	400	390	0.60	1.54	1.51	-2	NA	± 20	AverageRF
Pyrene	400	380	0.60	1.37	1.31	-5	NA	± 20	AverageRF
Benz(a)anthracene	400	410	0.80	1.29	1.34	4	NA	± 20	AverageRF
Chrysene	400	400	0.70	1.24	1.24	0	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	410	0.70	1.24	1.28	4	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	400	0.70	1.23	1.22	-1	NA	± 20	AverageRF
Benzo(a)pyrene	400	440	0.70	1.08	1.19	10	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	460	0.50	1.06	1.23	16	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	440	0.40	1.08	1.18	10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	420	0.50	1.24	1.32	6	NA	± 20	AverageRF
Fluorene-d10	400	380	0.01	1.28	1.23	-4	NA	± 20	AverageRF
Fluoranthene-d10	400	380	0.01	1.26	1.19	-6	NA	± 20	AverageRF
Terphenyl-d14	400	380	0.01	0.867	0.826	-5	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/07/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806028
Units: ng/ml

File ID: J:\MS14\DATA\110718\1107F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.70	1.15	1.10	-5	NA	± 20	AverageRF
2-Methylnaphthalene	400	390	0.40	0.696	0.682	-2	NA	± 20	AverageRF
Acenaphthylene	400	410	0.90	2.39	2.46	3	NA	± 20	AverageRF
Acenaphthene	400	400	0.90	1.37	1.38	1	NA	± 20	AverageRF
Dibenzofuran	400	410	0.80	2.20	2.25	2	NA	± 20	AverageRF
Fluorene	400	400	0.90	1.66	1.66	0	NA	± 20	AverageRF
Phenanthrene	400	390	0.70	1.25	1.23	-2	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.06	-11	NA	± 20	AverageRF
Fluoranthene	400	380	0.60	1.54	1.46	-5	NA	± 20	AverageRF
Pyrene	400	380	0.60	1.37	1.29	-6	NA	± 20	AverageRF
Benz(a)anthracene	400	410	0.80	1.29	1.33	2	NA	± 20	AverageRF
Chrysene	400	400	0.70	1.24	1.24	0	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	420	0.70	1.24	1.29	4	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	400	0.70	1.23	1.21	-1	NA	± 20	AverageRF
Benzo(a)pyrene	400	440	0.70	1.08	1.20	11	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	460	0.50	1.06	1.22	15	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	440	0.40	1.08	1.18	10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	430	0.50	1.24	1.32	6	NA	± 20	AverageRF
Fluorene-d10	400	370	0.01	1.28	1.19	-7	NA	± 20	AverageRF
Fluoranthene-d10	400	370	0.01	1.26	1.15	-9	NA	± 20	AverageRF
Terphenyl-d14	400	380	0.01	0.867	0.815	-6	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/14/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806235
Units: ng/ml

File ID: J:\MS14\DATA\111418\1114F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	350	0.70	1.15	0.996	-14	NA	± 20	AverageRF
2-Methylnaphthalene	400	350	0.40	0.696	0.609	-13	NA	± 20	AverageRF
Acenaphthylene	400	360	0.90	2.39	2.13	-11	NA	± 20	AverageRF
Acenaphthene	400	360	0.90	1.37	1.22	-11	NA	± 20	AverageRF
Dibenzofuran	400	360	0.80	2.20	1.96	-11	NA	± 20	AverageRF
Fluorene	400	390	0.90	1.66	1.63	-2	NA	± 20	AverageRF
Phenanthrene	400	340	0.70	1.25	1.07	-14	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.07	-11	NA	± 20	AverageRF
Fluoranthene	400	330	0.60	1.54	1.27	-17	NA	± 20	AverageRF
Pyrene	400	350	0.60	1.37	1.19	-13	NA	± 20	AverageRF
Benz(a)anthracene	400	360	0.80	1.29	1.17	-10	NA	± 20	AverageRF
Chrysene	400	350	0.70	1.24	1.10	-11	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	380	0.70	1.24	1.18	-5	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	370	0.70	1.23	1.12	-8	NA	± 20	AverageRF
Benzo(a)pyrene	400	380	0.70	1.08	1.04	-4	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	360	0.50	1.06	0.966	-9	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	360	0.40	1.08	0.969	-10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	320	0.50	1.24	1.01	-19	NA	± 20	AverageRF
Fluorene-d10	400	440	0.01	1.28	1.41	10	NA	± 20	AverageRF
Fluoranthene-d10	400	390	0.01	1.26	1.21	-4	NA	± 20	AverageRF
Terphenyl-d14	400	400	0.01	0.867	0.868	0	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806019
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1105F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806019-1	11/5/2018	09:12		11/5/2018	09:32
1105F002.D	Continuing Calibration Verification	KWG1806019-2	11/5/2018	09:41		11/5/2018	10:00
1105F005.D	ZZZZZZ	ZZZZZZ	11/5/2018	11:10		11/5/2018	11:29
1105F006.D	ZZZZZZ	ZZZZZZ	11/5/2018	11:39		11/5/2018	11:58
1105F007.D	ZZZZZZ	ZZZZZZ	11/5/2018	12:08		11/5/2018	12:27
1105F008.D	ZZZZZZ	ZZZZZZ	11/5/2018	12:40		11/5/2018	12:59
1105F009.D	ZZZZZZ	ZZZZZZ	11/5/2018	13:11		11/5/2018	13:30
1105F010.D	ZZZZZZ	ZZZZZZ	11/5/2018	13:41		11/5/2018	14:00
1105F011.D	ZZZZZZ	ZZZZZZ	11/5/2018	14:12		11/5/2018	14:31
1105F012.D	ZZZZZZ	ZZZZZZ	11/5/2018	14:42		11/5/2018	15:01
1105F013.D	ZZZZZZ	ZZZZZZ	11/5/2018	15:12		11/5/2018	15:31
1105F014.D	ZZZZZZ	ZZZZZZ	11/5/2018	15:42		11/5/2018	16:01
1105F015.D	Method Blank	KWG1805597-4	11/5/2018	16:12		11/5/2018	16:31
1105F017.D	T1-0to30-101518MS	KWG1805597-1	11/5/2018	17:12		11/5/2018	17:31
1105F018.D	T1-0to30-101518DMS	KWG1805597-2	11/5/2018	17:42		11/5/2018	18:01
1105F019.D	T1-0to30-101518	K1810270-010	11/5/2018	18:11		11/5/2018	18:30
1105F020.D	N1-0to30-101518	K1810270-006	11/5/2018	18:41		11/5/2018	19:00
1105F021.D	P5-0to26-101618	K1810270-020	11/5/2018	19:10		11/5/2018	19:29
1105F022.D	R3-0to33-101718	K1810270-029	11/5/2018	19:40		11/5/2018	19:59

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806026
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1106F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806026-1	11/6/2018	05:06		11/6/2018	05:26
1106F002.D	Continuing Calibration Verification	KWG1806026-2	11/6/2018	05:35		11/6/2018	05:54
1106F003.D	ZZZZZZ	ZZZZZZ	11/6/2018	06:04		11/6/2018	06:23
1106F004.D	ZZZZZZ	ZZZZZZ	11/6/2018	06:33		11/6/2018	06:52
1106F005.D	Lab Control Sample	KWG1805597-3	11/6/2018	07:01		11/6/2018	07:20
1106F006.D	ZZZZZZ	ZZZZZZ	11/6/2018	07:30		11/6/2018	07:49
1106F007.D	ZZZZZZ	ZZZZZZ	11/6/2018	07:59		11/6/2018	08:18
1106F008.D	ZZZZZZ	ZZZZZZ	11/6/2018	08:27		11/6/2018	08:46
1106F009.D	ZZZZZZ	ZZZZZZ	11/6/2018	08:56		11/6/2018	09:15
1106F010.D	ZZZZZZ	ZZZZZZ	11/6/2018	09:25		11/6/2018	09:44
1106F011.D	ZZZZZZ	ZZZZZZ	11/6/2018	09:53		11/6/2018	10:12
1106F012.D	ZZZZZZ	ZZZZZZ	11/6/2018	10:22		11/6/2018	10:41
1106F013.D	ZZZZZZ	ZZZZZZ	11/6/2018	10:51		11/6/2018	11:10
1106F014.D	ZZZZZZ	ZZZZZZ	11/6/2018	11:20		11/6/2018	11:39
1106F015.D	ZZZZZZ	ZZZZZZ	11/6/2018	11:49		11/6/2018	12:08
1106F016.D	T3-0to28-101618	K1810270-013	11/6/2018	12:18		11/6/2018	12:37
1106F017.D	T7-0to31-101618	K1810270-015	11/6/2018	12:46		11/6/2018	13:05
1106F018.D	T5-0to26-101618	K1810270-016	11/6/2018	13:15		11/6/2018	13:34
1106F019.D	P3-0to29-101618	K1810270-017	11/6/2018	13:44		11/6/2018	14:03
1106F020.D	R5-0to25-101618	K1810270-018	11/6/2018	14:13		11/6/2018	14:32
1106F021.D	514-0to29-101618	K1810270-019	11/6/2018	14:42		11/6/2018	15:01
1106F022.D	ZZZZZZ	ZZZZZZ	11/6/2018	15:10		11/6/2018	15:29
1106F023.D	ZZZZZZ	ZZZZZZ	11/6/2018	15:39		11/6/2018	15:58
1106F024.D	ZZZZZZ	ZZZZZZ	11/6/2018	16:08		11/6/2018	16:27
1106F025.D	ZZZZZZ	ZZZZZZ	11/6/2018	16:37		11/6/2018	16:56

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806028
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1107F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806028-1	11/7/2018	04:55		11/7/2018	05:15
1107F002.D	Continuing Calibration Verification	KWG1806028-2	11/7/2018	05:26		11/7/2018	05:45
1107F003.D	ZZZZZZ	ZZZZZZ	11/7/2018	05:56		11/7/2018	06:15
1107F004.D	ZZZZZZ	ZZZZZZ	11/7/2018	06:26		11/7/2018	06:45
1107F005.D	ZZZZZZ	ZZZZZZ	11/7/2018	06:56		11/7/2018	07:15
1107F006.D	ZZZZZZ	ZZZZZZ	11/7/2018	07:26		11/7/2018	07:45
1107F007.D	ZZZZZZ	ZZZZZZ	11/7/2018	07:56		11/7/2018	08:15
1107F008.D	ZZZZZZ	ZZZZZZ	11/7/2018	08:27		11/7/2018	08:46
1107F009.D	L1-0to30-101518	K1810270-004	11/7/2018	08:58		11/7/2018	09:17
1107F010.D	R1-0to30-101518	K1810270-011	11/7/2018	09:28		11/7/2018	09:47
1107F011.D	P1-0to30-101518	K1810270-012	11/7/2018	09:59		11/7/2018	10:18
1107F012.D	ZZZZZZ	ZZZZZZ	11/7/2018	10:29		11/7/2018	10:48
1107F013.D	ZZZZZZ	ZZZZZZ	11/7/2018	10:59		11/7/2018	11:18
1107F014.D	ZZZZZZ	ZZZZZZ	11/7/2018	11:30		11/7/2018	11:49
1107F015.D	ZZZZZZ	ZZZZZZ	11/7/2018	12:00		11/7/2018	12:19
1107F016.D	ZZZZZZ	ZZZZZZ	11/7/2018	12:31		11/7/2018	12:50
1107F017.D	ZZZZZZ	ZZZZZZ	11/7/2018	13:01		11/7/2018	13:20
1107F018.D	ZZZZZZ	ZZZZZZ	11/7/2018	13:32		11/7/2018	13:51
1107F019.D	ZZZZZZ	ZZZZZZ	11/7/2018	14:02		11/7/2018	14:21
1107F020.D	ZZZZZZ	ZZZZZZ	11/7/2018	14:32		11/7/2018	14:51
1107F021.D	ZZZZZZ	ZZZZZZ	11/7/2018	15:03		11/7/2018	15:22
1107F022.D	ZZZZZZ	ZZZZZZ	11/7/2018	15:33		11/7/2018	15:52
1107F023.D	ZZZZZZ	ZZZZZZ	11/7/2018	16:03		11/7/2018	16:22
1107F024.D	ZZZZZZ	ZZZZZZ	11/7/2018	16:33		11/7/2018	16:52

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

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QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806235
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1114F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806235-1	11/14/2018	05:51		11/14/2018	06:11
1114F002.D	Continuing Calibration Verification	KWG1806235-2	11/14/2018	06:17		11/14/2018	06:36
1114F003.D	Method Blank	KWG1805796-6	11/14/2018	06:42		11/14/2018	07:01
1114F004.D	Lab Control Sample	KWG1805796-5	11/14/2018	07:08		11/14/2018	07:27
1114F005.D	ZZZZZZ	ZZZZZZ	11/14/2018	07:33		11/14/2018	07:52
1114F006.D	ZZZZZZ	ZZZZZZ	11/14/2018	07:58		11/14/2018	08:17
1114F007.D	ZZZZZZ	ZZZZZZ	11/14/2018	08:23		11/14/2018	08:42
1114F008.D	ZZZZZZ	ZZZZZZ	11/14/2018	08:48		11/14/2018	09:07
1114F009.D	ZZZZZZ	ZZZZZZ	11/14/2018	09:14		11/14/2018	09:33
1114F010.D	ZZZZZZ	ZZZZZZ	11/14/2018	09:40		11/14/2018	09:59
1114F011.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:05		11/14/2018	10:24
1114F012.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:30		11/14/2018	10:49
1114F013.D	N3-0to26-101518	K1810270-001	11/14/2018	10:56		11/14/2018	11:15
1114F014.D	ZZZZZZ	ZZZZZZ	11/14/2018	11:21		11/14/2018	11:40
1114F015.D	ZZZZZZ	ZZZZZZ	11/14/2018	11:46		11/14/2018	12:05
1114F016.D	ZZZZZZ	ZZZZZZ	11/14/2018	12:12		11/14/2018	12:31
1114F017.D	ZZZZZZ	ZZZZZZ	11/14/2018	12:39		11/14/2018	12:58
1114F018.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:05		11/14/2018	13:24
1114F019.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:31		11/14/2018	13:50
1114F020.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:57		11/14/2018	14:16
1114F021.D	ZZZZZZ	ZZZZZZ	11/14/2018	14:25		11/14/2018	14:44
1114F022.D	ZZZZZZ	ZZZZZZ	11/14/2018	14:51		11/14/2018	15:10
1114F023.D	ZZZZZZ	ZZZZZZ	11/14/2018	15:17		11/14/2018	15:36
1114F024.D	ZZZZZZ	ZZZZZZ	11/14/2018	15:43		11/14/2018	16:02
1114F025.D	ZZZZZZ	ZZZZZZ	11/14/2018	16:09		11/14/2018	16:28
1114F026.D	ZZZZZZ	ZZZZZZ	11/14/2018	16:35		11/14/2018	16:54
1114F027.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:01		11/14/2018	17:20
1114F028.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:27		11/14/2018	17:46

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Extracted:** 10/29/2018
Sample Matrix: Sediment

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Extraction Lot:** KWG1805597
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	40.410g	2mL	90.3	
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	40.031g	2mL	75.8	
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	40.087g	2mL	63	
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	40.247g	2mL	83.9	
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	40.385g	2mL	76.7	
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	40.290g	2mL	43.8	
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	40.183g	2mL	39.3	
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	40.416g	2mL	47.8	
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	40.290g	2mL	48.7	
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	40.319g	2mL	45.9	
514-0to29-101618	K1810270-019	10/16/18	10/19/18	40.149g	2mL	40.5	
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	40.302g	2mL	35.2	
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	40.487g	2mL	36.1	
Method Blank	KWG1805597-4	NA	NA	40.487g	2mL	NA	
T1-0to30-101518MS	KWG1805597-1	10/15/18	10/19/18	40.044g	2mL	63	
T1-0to30-101518DMS	KWG1805597-2	10/15/18	10/19/18	40.056g	2mL	63	
Lab Control Sample	KWG1805597-3	NA	NA	20.000g	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Extracted:** 11/07/2018
Sample Matrix: Sediment

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Extraction Lot:** KWG1805796
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	40.062g	2mL	74.3	
Method Blank	KWG1805796-6	NA	NA	40.332g	2mL	NA	
Lab Control Sample	KWG1805796-5	NA	NA	20.000g	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 08:46
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**220**	67	8.9	1	11/14/18 15:50	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	65	30 - 102	11/14/18 15:50	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 10:10
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**30 J**	55	8.9	1	11/08/18 05:35	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	62	30 - 102	11/08/18 05:35	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 11:40
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**13 J**	65	8.9	1	11/08/18 06:04	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	59	30 - 102	11/08/18 06:04	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 15:35
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	ND U	79	8.9	1	11/08/18 06:32	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	70	30 - 102	11/08/18 06:32	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 14:37
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**27 J**	59	8.9	1	11/08/18 05:07	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	61	30 - 102	11/08/18 05:07	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 13:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**19 J**	65	8.9	1	11/08/18 07:00	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	64	30 - 102	11/08/18 07:00	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 16:30
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**340**	110	11	1	11/08/18 07:29	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	63	30 - 102	11/08/18 07:29	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 14:00
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**340**	130	12	1	11/08/18 07:57	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	59	30 - 102	11/08/18 07:57	

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Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 15:13
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**690**	100	9.3	1	11/08/18 08:25	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	61	30 - 102	11/08/18 08:25	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 10:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**390**	100	9.1	1	11/08/18 08:54	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	65	30 - 102	11/08/18 08:54	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 12:09
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**620**	110	9.7	1	11/08/18 09:22	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	66	30 - 102	11/08/18 09:22	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 11:25
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**470**	120	11	1	11/08/18 09:50	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	62	30 - 102	11/08/18 09:50	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 09:16
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**800**	140	13	1	11/08/18 10:19	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	68	30 - 102	11/08/18 10:19	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/18 09:28
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**380**	140	13	1	11/08/18 10:47	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	66	30 - 102	11/08/18 10:47	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1815626-04	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	ND U	49	8.9	1	11/08/18 03:13	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	62	30 - 102	11/08/18 03:13	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1816032-04	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	ND U	50	8.9	1	11/14/18 12:03	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	67	30 - 102	11/14/18 12:03	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	p-Terphenyl-d14 30-102
N3-0to26-101518	K1810270-001	65
L1-0to30-101518	K1810270-004	62
N1-0to30-101518	K1810270-006	59
T1-0to30-101518	K1810270-010	70
R1-0to30-101518	K1810270-011	61
P1-0to30-101518	K1810270-012	64
T3-0to28-101618	K1810270-013	63
T7-0to31-101618	K1810270-015	59
T5-0to26-101618	K1810270-016	61
P3-0to29-101618	K1810270-017	65
R5-0to25-101618	K1810270-018	66
514-0to29-101618	K1810270-019	62
P5-0to26-101618	K1810270-020	68
R3-0to33-101718	K1810270-029	66
Method Blank	KQ1815626-04	62
Method Blank	KQ1816032-04	67
Lab Control Sample	KQ1815626-03	62
Lab Control Sample	KQ1816032-03	66
R1-0to30-101518	KQ1815626-01	62
R1-0to30-101518	KQ1815626-02	59

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QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/08/18 02:45

Internal Standard Area and RT SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\110718\1107F042.D\ **Lab Code:**KQ1816400-02
Instrument ID: K-MS-29 **Analysis Lot:**614446
Analysis Method: 8270D **Signal ID:**1

		Chrysene-d12	
		Area	**RT**
	Result ==>	241,645	15.61
	Upper Limit ==>	483,290	16.11
	Lower Limit ==>	120,823	15.11
Associated Analyses			
Method Blank	KQ1815626-04	195878	15.61
Lab Control Sample	KQ1815626-03	209866	15.61
R1-0to30-101518MS	KQ1815626-01	253859	15.62
R1-0to30-101518DMS	KQ1815626-02	246213	15.61
R1-0to30-101518	K1810270-011	244534	15.61
L1-0to30-101518	K1810270-004	244176	15.61
N1-0to30-101518	K1810270-006	233221	15.61
T1-0to30-101518	K1810270-010	192237	15.61
P1-0to30-101518	K1810270-012	250135	15.61
T3-0to28-101618	K1810270-013	242976	15.62
T7-0to31-101618	K1810270-015	270723	15.62
T5-0to26-101618	K1810270-016	251836	15.64
P3-0to29-101618	K1810270-017	255467	15.63
R5-0to25-101618	K1810270-018	252474	15.63
514-0to29-101618	K1810270-019	252533	15.62
P5-0to26-101618	K1810270-020	248066	15.62
R3-0to33-101718	K1810270-029	250928	15.62

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QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/14/18 09:22

Internal Standard Area and RT SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\111418\1114F002.D\ **Lab Code:**KQ1816925-02
Instrument ID: K-MS-29 **Analysis Lot:**615539
Analysis Method: 8270D **Signal ID:**1

		Chrysene-d12	
		Area	**RT**
	Result ==>	182,932	15.64
	Upper Limit ==>	365,864	16.14
	Lower Limit ==>	91,466	15.14
Associated Analyses			
Method Blank	KQ1816032-04	206934	15.65
Lab Control Sample	KQ1816032-03	200343	15.64
N3-0to26-101518	K1810270-001	267978	15.65

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	11/8/18
		Date Extracted:	10/29/18

Duplicate Matrix Spike Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry
Analysis Method:	8270D		
Prep Method:	EPA 3541		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1815626-01			KQ1815626-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bis(2-ethylhexyl) Phthalate	27 J	132	148	71	112	148	57	23-123	16	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	614446

Lab Control Sample
KQ1815626-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Bis(2-ethylhexyl) Phthalate	165	250	66	39-113

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	615539

Lab Control Sample
KQ1816032-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Bis(2-ethylhexyl) Phthalate	183	250	73	39-113

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18 03:13
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Method Blank Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-29
Lab Code:	KQ1815626-04	**File ID:**	J:\MS29\DATA\110718\1107F043.D\
Analysis Method:	8270D	**Analysis Lot:**	614446
Prep Method:	EPA 3541	**Extraction Lot:**	325139

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1815626-03	J:\MS29\DATA\110718\1107F044.D\	11/08/18 03:42
R1-0to30-101518MS	KQ1815626-01	J:\MS29\DATA\110718\1107F045.D\	11/08/18 04:10
R1-0to30-101518DMS	KQ1815626-02	J:\MS29\DATA\110718\1107F046.D\	11/08/18 04:38
R1-0to30-101518	K1810270-011	J:\MS29\DATA\110718\1107F047.D\	11/08/18 05:07
L1-0to30-101518	K1810270-004	J:\MS29\DATA\110718\1107F048.D\	11/08/18 05:35
N1-0to30-101518	K1810270-006	J:\MS29\DATA\110718\1107F049.D\	11/08/18 06:04
T1-0to30-101518	K1810270-010	J:\MS29\DATA\110718\1107F050.D\	11/08/18 06:32
P1-0to30-101518	K1810270-012	J:\MS29\DATA\110718\1107F051.D\	11/08/18 07:00
T3-0to28-101618	K1810270-013	J:\MS29\DATA\110718\1107F052.D\	11/08/18 07:29
T7-0to31-101618	K1810270-015	J:\MS29\DATA\110718\1107F053.D\	11/08/18 07:57
T5-0to26-101618	K1810270-016	J:\MS29\DATA\110718\1107F054.D\	11/08/18 08:25
P3-0to29-101618	K1810270-017	J:\MS29\DATA\110718\1107F055.D\	11/08/18 08:54
R5-0to25-101618	K1810270-018	J:\MS29\DATA\110718\1107F056.D\	11/08/18 09:22
514-0to29-101618	K1810270-019	J:\MS29\DATA\110718\1107F057.D\	11/08/18 09:50
P5-0to26-101618	K1810270-020	J:\MS29\DATA\110718\1107F058.D\	11/08/18 10:19
R3-0to33-101718	K1810270-029	J:\MS29\DATA\110718\1107F059.D\	11/08/18 10:47

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18 12:03
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Method Blank Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-29
Lab Code:	KQ1816032-04	**File ID:**	J:\MS29\DATA\111418\1114F004.D\
Analysis Method:	8270D	**Analysis Lot:**	615539
Prep Method:	EPA 3541	**Extraction Lot:**	325584

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1816032-03	J:\MS29\DATA\111418\1114F005.D\	11/14/18 12:31
N3-0to26-101518	K1810270-001	J:\MS29\DATA\111418\1114F012.D\	11/14/18 15:50

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18 03:42
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-29
Lab Code:	KQ1815626-03	**File ID:**	J:\MS29\DATA\110718\1107F044.D\
Analysis Method:	8270D	**Analysis Lot:**	614446
Prep Method:	EPA 3541	**Extraction Lot:**	325139

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1815626-04	J:\MS29\DATA\110718\1107F043.D\	11/08/18 03:13
R1-0to30-101518MS	KQ1815626-01	J:\MS29\DATA\110718\1107F045.D\	11/08/18 04:10
R1-0to30-101518DMS	KQ1815626-02	J:\MS29\DATA\110718\1107F046.D\	11/08/18 04:38
R1-0to30-101518	K1810270-011	J:\MS29\DATA\110718\1107F047.D\	11/08/18 05:07
L1-0to30-101518	K1810270-004	J:\MS29\DATA\110718\1107F048.D\	11/08/18 05:35
N1-0to30-101518	K1810270-006	J:\MS29\DATA\110718\1107F049.D\	11/08/18 06:04
T1-0to30-101518	K1810270-010	J:\MS29\DATA\110718\1107F050.D\	11/08/18 06:32
P1-0to30-101518	K1810270-012	J:\MS29\DATA\110718\1107F051.D\	11/08/18 07:00
T3-0to28-101618	K1810270-013	J:\MS29\DATA\110718\1107F052.D\	11/08/18 07:29
T7-0to31-101618	K1810270-015	J:\MS29\DATA\110718\1107F053.D\	11/08/18 07:57
T5-0to26-101618	K1810270-016	J:\MS29\DATA\110718\1107F054.D\	11/08/18 08:25
P3-0to29-101618	K1810270-017	J:\MS29\DATA\110718\1107F055.D\	11/08/18 08:54
R5-0to25-101618	K1810270-018	J:\MS29\DATA\110718\1107F056.D\	11/08/18 09:22
514-0to29-101618	K1810270-019	J:\MS29\DATA\110718\1107F057.D\	11/08/18 09:50
P5-0to26-101618	K1810270-020	J:\MS29\DATA\110718\1107F058.D\	11/08/18 10:19
R3-0to33-101718	K1810270-029	J:\MS29\DATA\110718\1107F059.D\	11/08/18 10:47

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QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18 12:31
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-29
Lab Code:	KQ1816032-03	**File ID:**	J:\MS29\DATA\111418\1114F005.D\
Analysis Method:	8270D	**Analysis Lot:**	615539
Prep Method:	EPA 3541	**Extraction Lot:**	325584

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1816032-04	J:\MS29\DATA\111418\1114F004.D\	11/14/18 12:03
N3-0to26-101518	K1810270-001	J:\MS29\DATA\111418\1114F012.D\	11/14/18 15:50

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/08/18 02:17

Tune Summary
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\110718\1107F041.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-29 **Analysis Lot:** 614446

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	32.98	334362	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	38.18	387058	Pass
70	69	0	2	0.54	2093	Pass
127	198	10	80	45.02	456405	Pass
197	198	0	2	0.00	0	Pass
198	442	30	100	62.13	1013738	Pass
199	198	5	9	6.63	67216	Pass
275	198	10	60	30.64	310570	Pass
365	442	1	50	1.89	30877	Pass
441	443	0.01	100	81.19	251605	Pass
442	442	30	100	100.00	1631573	Pass
443	442	15	24	18.99	309888	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1816400-02	J:\MS29\DATA\110718\1107F042.D\	11/08/18 02:45	
Method Blank	KQ1815626-04	J:\MS29\DATA\110718\1107F043.D\	11/08/18 03:13	
Lab Control Sample	KQ1815626-03	J:\MS29\DATA\110718\1107F044.D\	11/08/18 03:42	
R1-0to30-101518	KQ1815626-01	J:\MS29\DATA\110718\1107F045.D\	11/08/18 04:10	
R1-0to30-101518	KQ1815626-02	J:\MS29\DATA\110718\1107F046.D\	11/08/18 04:38	
R1-0to30-101518	K1810270-011	J:\MS29\DATA\110718\1107F047.D\	11/08/18 05:07	
L1-0to30-101518	K1810270-004	J:\MS29\DATA\110718\1107F048.D\	11/08/18 05:35	
N1-0to30-101518	K1810270-006	J:\MS29\DATA\110718\1107F049.D\	11/08/18 06:04	
T1-0to30-101518	K1810270-010	J:\MS29\DATA\110718\1107F050.D\	11/08/18 06:32	
P1-0to30-101518	K1810270-012	J:\MS29\DATA\110718\1107F051.D\	11/08/18 07:00	
T3-0to28-101618	K1810270-013	J:\MS29\DATA\110718\1107F052.D\	11/08/18 07:29	
T7-0to31-101618	K1810270-015	J:\MS29\DATA\110718\1107F053.D\	11/08/18 07:57	
T5-0to26-101618	K1810270-016	J:\MS29\DATA\110718\1107F054.D\	11/08/18 08:25	
P3-0to29-101618	K1810270-017	J:\MS29\DATA\110718\1107F055.D\	11/08/18 08:54	
R5-0to25-101618	K1810270-018	J:\MS29\DATA\110718\1107F056.D\	11/08/18 09:22	
514-0to29-101618	K1810270-019	J:\MS29\DATA\110718\1107F057.D\	11/08/18 09:50	
P5-0to26-101618	K1810270-020	J:\MS29\DATA\110718\1107F058.D\	11/08/18 10:19	
R3-0to33-101718	K1810270-029	J:\MS29\DATA\110718\1107F059.D\	11/08/18 10:47	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/14/18 08:54

Tune Summary
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\111418\1114F001.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-29 **Analysis Lot:** 615539

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	36.61	422677	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	41.39	477923	Pass
70	69	0	2	0.45	2172	Pass
127	198	10	80	47.02	542890	Pass
197	198	0	2	0.00	0	Pass
198	442	30	100	74.35	1154560	Pass
199	198	5	9	6.67	77037	Pass
275	198	10	60	28.74	331776	Pass
365	442	1	50	2.00	31008	Pass
441	443	0.01	100	79.59	239752	Pass
442	442	30	100	100.00	1552917	Pass
443	442	15	24	19.40	301248	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1816925-02	J:\MS29\DATA\111418\1114F002.D\	11/14/18 09:22	
Method Blank	KQ1816032-04	J:\MS29\DATA\111418\1114F004.D\	11/14/18 12:03	
Lab Control Sample	KQ1816032-03	J:\MS29\DATA\111418\1114F005.D\	11/14/18 12:31	
N3-0to26-101518	K1810270-001	J:\MS29\DATA\111418\1114F012.D\	11/14/18 15:50	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Low Level Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800516 **Signal ID:** 1
Instrument ID: K-MS-29

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800516-01	SVO_LL ICAL @ 0.05ppm | SVM59-69C	J:\MS29\DATA\110618A\1106A003.D	11/06/2018 14:33
02	KC1800516-02	SVO_LL ICAL @ 0.10ppm | SVM59-69D	J:\MS29\DATA\110618A\1106A004.D	11/06/2018 15:01
03	KC1800516-03	SVO_LL ICAL @ 0.20ppm | SVM59-69E	J:\MS29\DATA\110618A\1106A005.D	11/06/2018 15:30
04	KC1800516-04	SVO_LL ICAL @ 0.50ppm | SVM59-69F	J:\MS29\DATA\110618A\1106A006.D	11/06/2018 15:58
05	KC1800516-05	SVO_LL ICAL @ 1.0ppm | SVM59-69G	J:\MS29\DATA\110618A\1106A007.D	11/06/2018 16:27
06	KC1800516-06	SVO_LL ICAL @ 2.0ppm | SVM59-69H	J:\MS29\DATA\110618A\1106A008.D	11/06/2018 16:55
07	KC1800516-07	SVO_LL ICAL @ 3.0ppm | SVM59-69I	J:\MS29\DATA\110618A\1106A009.D	11/06/2018 17:23
08	KC1800516-08	SVO_LL ICAL @ 5.0ppm | SVM59-69J	J:\MS29\DATA\110618A\1106A010.D	11/06/2018 17:52
09	KC1800516-09	SVO_LL ICAL @ 7.0ppm | SVM59-69K	J:\MS29\DATA\110618A\1106A011.D	11/06/2018 18:20
10	KC1800516-10	SVO_LL ICAL @ 10ppm | SVM59-69L	J:\MS29\DATA\110618A\1106A012.D	11/06/2018 18:48

Analyte

Bis(2-ethylhexyl) Phthalate

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	50.000	0.7365	02	100.000	0.7638	03	200.000	0.7799	04	500.000	0.7432
05	1000.000	0.8336	06	2000.000	0.8704	07	3000.000	0.9469	08	5000.000	0.9807
09	7000.000	0.9593	10	10000.000	0.8905						

p-Terphenyl-d14

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	200.000	1.093	04	500.000	0.9527	05	1000.000	0.9712	06	2000.000	0.9746
07	3000.000	1.037	08	5000.000	1.066	09	7000.000	1.024	10	10000.000	0.9392

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Low Level Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800516 **Signal ID:** 1
Instrument ID: K-MS-29

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Bis(2-ethylhexyl) Phthalate	TRG	Average RF	% RSD	10.9	≤20	0.8505	0.010
p-Terphenyl-d14	SURR	Average RF	% RSD	5.6	≤20	1.007	0.010

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Verification Summary
Low Level Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800516 **Signal ID:** 1
Instrument ID: K-MS-29

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800516-11	SVO_LL ICV @ 3.0ppm | SVM59-63B	J:\MS29\DATA\110618A\1106A013.D	11/06/2018 19:17

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Bis(2-ethylhexyl) Phthalate	3000	2930	8.505E-1	8.32E-1	-2.173	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
p-Terphenyl-d14	3000	2810	1.007E0	9.447E-1	-6.195	±30	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18 02:45

Continuing Calibration Verification (CCV) Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	11/6/2018
File ID:	J:\MS29\DATA\110718\1107F042.D\	**Calibration ID:**	KC1800516
Signal ID:	1	**Analysis Lot:**	614446
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Bis(2-ethylhexyl) Phthalate	3000	2640	0.8505	0.7482	-12.0	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
p-Terphenyl-d14	3000	2540	1.0071	0.8512	-15.5	NA	±20	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18 09:22

Continuing Calibration Verification (CCV) Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	11/6/2018
File ID:	J:\MS29\DATA\111418\1114F002.D\	**Calibration ID:**	KC1800516
Signal ID:	1	**Analysis Lot:**	615539
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Bis(2-ethylhexyl) Phthalate	3000	3140	0.8505	0.8904	4.7	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
p-Terphenyl-d14	3000	2680	1.0071	0.9002	-10.6	NA	±20	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**614446
Instrument ID:K-MS-29

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS29\DATA\110718\1107F041.D\	ZZZZZZZ	ZZZZZZZ	11/8/2018	02:17:00	
J:\MS29\DATA\110718\1107F042.D\	Continuing Calibration Verification	KQ1816400-02	11/8/2018	02:45:00	
J:\MS29\DATA\110718\1107F043.D\	Method Blank	KQ1815626-04	11/8/2018	03:13:00	
J:\MS29\DATA\110718\1107F044.D\	Lab Control Sample	KQ1815626-03	11/8/2018	03:42:00	
J:\MS29\DATA\110718\1107F045.D\	R1-0to30-101518 MS	KQ1815626-01	11/8/2018	04:10:00	
J:\MS29\DATA\110718\1107F046.D\	R1-0to30-101518 DMS	KQ1815626-02	11/8/2018	04:38:00	
J:\MS29\DATA\110718\1107F047.D\	R1-0to30-101518	K1810270-011	11/8/2018	05:07:00	
J:\MS29\DATA\110718\1107F048.D\	L1-0to30-101518	K1810270-004	11/8/2018	05:35:00	
J:\MS29\DATA\110718\1107F049.D\	N1-0to30-101518	K1810270-006	11/8/2018	06:04:00	
J:\MS29\DATA\110718\1107F050.D\	T1-0to30-101518	K1810270-010	11/8/2018	06:32:00	
J:\MS29\DATA\110718\1107F051.D\	P1-0to30-101518	K1810270-012	11/8/2018	07:00:00	
J:\MS29\DATA\110718\1107F052.D\	T3-0to28-101618	K1810270-013	11/8/2018	07:29:00	
J:\MS29\DATA\110718\1107F053.D\	T7-0to31-101618	K1810270-015	11/8/2018	07:57:00	
J:\MS29\DATA\110718\1107F054.D\	T5-0to26-101618	K1810270-016	11/8/2018	08:25:00	
J:\MS29\DATA\110718\1107F055.D\	P3-0to29-101618	K1810270-017	11/8/2018	08:54:00	
J:\MS29\DATA\110718\1107F056.D\	R5-0to25-101618	K1810270-018	11/8/2018	09:22:00	
J:\MS29\DATA\110718\1107F057.D\	514-0to29-101618	K1810270-019	11/8/2018	09:50:00	
J:\MS29\DATA\110718\1107F058.D\	P5-0to26-101618	K1810270-020	11/8/2018	10:19:00	
J:\MS29\DATA\110718\1107F059.D\	R3-0to33-101718	K1810270-029	11/8/2018	10:47:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**615539
Instrument ID:K-MS-29

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS29\DATA\111418\1114F001.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	08:54:00	
J:\MS29\DATA\111418\1114F001.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	08:54:00	
J:\MS29\DATA\111418\1114F002.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	09:22:00	
J:\MS29\DATA\111418\1114F002.D\	Continuing Calibration Verification	KQ1816925-02	11/14/2018	09:22:00	
J:\MS29\DATA\111418\1114F004.D\	Method Blank	KQ1816032-04	11/14/2018	12:03:00	
J:\MS29\DATA\111418\1114F005.D\	Lab Control Sample	KQ1816032-03	11/14/2018	12:31:00	
J:\MS29\DATA\111418\1114F006.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	13:00:00	
J:\MS29\DATA\111418\1114F007.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	13:28:00	
J:\MS29\DATA\111418\1114F008.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	13:56:00	
J:\MS29\DATA\111418\1114F009.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	14:25:00	
J:\MS29\DATA\111418\1114F010.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	14:53:00	
J:\MS29\DATA\111418\1114F011.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	15:21:00	
J:\MS29\DATA\111418\1114F012.D\	N3-0to26-101518	K1810270-001	11/14/2018	15:50:00	
J:\MS29\DATA\111418\1114F013.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	16:18:00	
J:\MS29\DATA\111418\1114F014.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	17:31:00	
J:\MS29\DATA\111418\1114F015.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	17:59:00	
J:\MS29\DATA\111418\1114F016.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	18:27:00	
J:\MS29\DATA\111418\1114F017.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	18:55:00	
J:\MS29\DATA\111418\1114F018.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	19:23:00	
J:\MS29\DATA\111418\1114F019.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	19:52:00	
J:\MS29\DATA\111418\1114F020.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	20:20:00	
J:\MS29\DATA\111418\1114F021.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	20:48:00	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Low Level Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3541 **Extraction Lot:** 325584
Analytical Method: 8270D **Extraction Date:** 11/07/18 11:19

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	40.093 g	2 mL	74.3
Lab Control Sample	KQ1816032-03LCS	NA	NA	20.00 g	2 mL	
Method Blank	KQ1816032-04MB	NA	NA	40.3880 g	2 mL	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Low Level Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3541 **Extraction Lot:** 325139
Analytical Method: 8270D **Extraction Date:** 10/29/18 20:00

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	40.176 g	2 mL	90.3
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	40.423 g	2 mL	75.8
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	40.144 g	2 mL	63.0
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	40.194 g	2 mL	83.9
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	40.264 g	2 mL	76.7
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	40.377 g	2 mL	43.8
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	40.154 g	2 mL	39.3
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	40.385 g	2 mL	47.8
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	40.271 g	2 mL	48.7
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	40.183 g	2 mL	45.9
514-0to29-101618	K1810270-019	10/16/18	10/19/18	40.301 g	2 mL	40.5
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	40.412 g	2 mL	35.2
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	40.425 g	2 mL	36.1
Matrix Spike	KQ1815626-01MS	10/15/18	10/19/18	40.352 g	2 mL	83.9
Duplicate Matrix Spike	KQ1815626-02DMS	10/15/18	10/19/18	40.213 g	2 mL	83.9
Lab Control Sample	KQ1815626-03LCS	NA	NA	20.00 g	2 mL	
Method Blank	KQ1815626-04MB	NA	NA	40.4250 g	2 mL	

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K1810693, KQ1816071, K1810270
Run #: 613712
Test: TS
Balance ID: K-BALANCE-48
Method: 160.3 Modified

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Soil	K1810693-001	1.291	12.923	11.959	10.7	82.6	
Soil	K1810693-001DUP	1.298	12.663	11.960	10.7	84.2	2
Soil	K1810693-002	1.283	12.012	11.044	9.76	81.3	
Soil	K1810693-003	1.292	11.056	10.920	9.63	87.1	
Soil	K1810693-004	1.288	11.453	11.376	10.1	88.1	
Soil	K1810693-005	1.291	13.267	12.961	11.7	88.0	
Soil	K1810693-006	1.299	11.147	10.827	9.53	85.5	
Sediment	K1810270-001	1.279	13.394	11.234	9.96	74.3	

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	K-OVEN-07	105	105	11/2/2018	17:15	11/5/2018	08:37	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-BALANCE-48	1.000, 100.000	1.000, 100.000	11/2/2018	15:32	11/2/2018	17:05
Calibration2	K-BALANCE-48	0.999, 99.999	1.000, 100.000	11/5/2018	08:58	11/5/2018	09:05

Comments: APosey SN#42868 Reviewed by SC 11/6/18

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:38 pm, Apr 17, 2019

Preparation Information Benchsheet

4

Prep Run#: 325840
Team: Semivoa GCMS/KPRESCOTT
Number of Copies to make: 3

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Prepped
Prep Date/Time: 11/7/18 11:10 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810270-001	N3-0to26-101518	.02	ALS SOP/OC_Pest		Sediment	20.166g	1.00mL	APOSEY K-BALANCE-48 11062018 / Samples
2	K1810302-016	A1-0to30-102018	.02	ALS SOP/OC_Pest		Sediment	20.021g	1.00mL	APOSEY K-BALANCE-48 11062018 / Samples
3	K1810644-019	Pesticides	.01	ALS SOP/OC_Pest		Soil	~~0.0000g~~ 0.532g	1.00mL	
4	KQ1816244-05	K1810644-019 DUP	.01	ALS SOP/OC_Pest		Solid	~~0.0000g~~ 1.043g	1.00mL	
5	KQ1816244-01	K1810302-016 MS	.02	ALS SOP/OC_Pest		Solid	20.054g	1.00mL	APOSEY K-BALANCE-48 11062018
6	KQ1816244-02	K1810302-016 DMS	.02	ALS SOP/OC_Pest		Solid	20.057g	1.00mL	APOSEY K-BALANCE-48 11062018
7	KQ1816244-03	LCS		ALS SOP/OC_Pest		Solid	10g	1.00mL	
8	KQ1816244-04	MB		ALS SOP/OC_Pest		Solid	20.1660g	1.00mL	

Spiking Solutions

Name: Pesticide/OC_Pest Surrogate Inventory ID 193176 Logbook Ref: SVM59-85A Expires On: 04/03/2019

K1810270-001 50.00µL K1810302-016 50.00µL K1810644-019 50.00µL KQ1816244-01 50.00µL KQ1816244-02 50.00µL KQ1816244-03 50.00µL
KQ1816244-04 50.00µL KQ1816244-05 50.00µL

Name: Pesticide/OC_Pest Spike Inventory ID 194507 Logbook Ref: SVM59-78F Expires On: 02/28/2019

K1810270-001 50.00µL KQ1816244-01 50.00µL KQ1816244-02 50.00µL KQ1816244-03 50.00µL

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	11/7/18 11:10	Started:	11/7/18 11:10	Started:	11/13/18 16:18
Finished:	11/7/18 19:05	Finished:	11/7/18 19:05	Finished:	11/13/18 16:18
By:	~~KPRESCOTT~~	By:	KPRESCOTT	By:	TPOTTSCHMIDT
Comments	APOSEY 8w 11/15/18	Comments		Comments	

Comments: IS = SVM59-45C 1542

Reviewed By: [signature] Date: 11/15/18

Chain of Custody

Relinquished By: TP Date: 11/13/18

Received By: eb Date: 11-26-18

~~Extracts Examined~~ Yes No

Preparation Information Benchsheet

Prep Run#: 325840
Team: Semivoa GCMS/KPRESCOTT
Number of Copies to make: 3

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Draft
Prep Date/Time: 11/7/18 07:40 AM

#	Lab Code	Client ID		B#	√	Method /Test	Matrix	Amt. Ext. g	pH	Int. Vol mL	Final Vol mL	Surr Amt µl	Spike Amt µl
1	**K1810270-001**	N3-0to26-101518	9A	.02	✓	ALS SOP / OC_Pest	Sediment	20.166	N/A	10	1	100	–
2	**K1810302-016**	A1-0to30-102018	9B	.02	✓	ALS SOP / OC_Pest	Sediment	20.021		10	1		–
3	**K1810644-019**	Pesticides	7D	.01	✓	ALS SOP / OC_Pest	Soil	0.532		10	1		–
4	**KQ1816244-05**	K1810644-019 DUP	7E	.01	✓	ALS SOP / OC_Pest	Solid	1.043		10	1		–
5	**KQ1816244-01**	K1810302-016 MS	9C	.02	✓	ALS SOP / OC_Pest	Solid	20.054		10	1		100
6	**KQ1816244-02**	K1810302-016 DMS	9D	.02	✓	ALS SOP / OC_Pest	Solid	20.057		10	1		
7	**KQ1816244-03**	LCS	9E	–	–	ALS SOP / OC_Pest	Solid	10.000		10	1		
8	**KQ1816244-04**	MB	9F	–	–	ALS SOP / OC_Pest	Solid	20.166		10	1		–

Comments:

Surrogate ID: SVM459-85A 0.5/2.0ug/mL XP:04/03/19 100ul spp-2B

Spike ID: SVM459-78F 200ng/mL XP:02/28/19 100ul spp-2B

Witnessed By: 11/7/18

Analyst: Kat Rae Prescott

Assisted By: KV

Preparation Information Benchsheet

Prep Run#: 313977
Team: Semivoa GCMS/KPRESCOTT
Number of Copies to make: 1

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Prepped
Prep Date/Time: 5/16/18 ~~10:21 AM~~ 05:10P.M (PSTM)

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1803855-019	Pesticides	.02	ALS SOP/OC_Pest		Soil	0.5440g	1.00mL	
2	KQ1806425-01	K1803855-019 DUP	.02	ALS SOP/OC_Pest		Solid	1.0260g	1.00mL	
3	KQ1806425-02	LCS		ALS SOP/OC_Pest		Solid	10g	1.00mL	
4	KQ1806425-03	DLCS		ALS SOP/OC_Pest		Solid	10g	1.00mL	
5	KQ1806425-04	MB		ALS SOP/OC_Pest		Solid	10g	1.00mL	

Spiking Solutions

Name: Pesticide/OC_Pest Spike Inventory ID 189497 Logbook Ref: SVM58-73D Expires On: 08/31/2018

KQ1806425-02 100.00µL KQ1806425-03 100.00µL

Name: Pesticide/OC_Pest Surrogate Inventory ID 190026 Logbook Ref: SVM58-84B Expires On: 11/07/2018

K1803855-019 100.00µL KQ1806425-01 100.00µL KQ1806425-02 100.00µL KQ1806425-03 100.00µL KQ1806425-04 100.00µL

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	5/16/18 10:21	Started:	5/17/18 07:55	Started:	5/24/18 18:04
Finished:	5/16/18 13:56	Finished:	5/17/18 07:55	Finished:	5/24/18 18:04
By:	KPRESCOTT	By:	KPRESCOTT	By:	SANDREWS
Comments		Comments		Comments	

Comments: _____

Reviewed By: [signature] Date: 5-25-18

Chain of Custody

Relinquished By: [signature] Date: 05/24/18

Received By: _____ Date: _____

Extracts Examined: Yes No

Pre-Prep Information Benchsheet

Prep Run #: 325840 **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	OC_Pest	20.166g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	OC_Pest	20.021g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018
3	K1810302-016 MS KQ1816244-01	.02	OC_Pest	20.054g		PrepComments:APOSEY K-BALANCE-48 11062018
4	K1810302-016 DMS KQ1816244-02	.02	OC_Pest	20.057g		PrepComments:APOSEY K-BALANCE-48 11062018

Relinquished By: APy	Date/Time: 11-6-18 16:28	Received By: KLP	Date/Time: 11/07/18

GPC RUNLOG

Run Date: 11/8/2018 **Calibration Date:** 11/7/2018

GPC #: 5 **Program Number:** BNA & PEST

Lab I.D.	Position	Test	Dilution	Comments
BLANK	1	PEST	NA	N/A
BLANK	2	PEST	NA	N/A
KQ1816244-04 MB	3	PEST	NA	N/A
KQ1816244-03 LCS	4	PEST	NA	N/A
K1810270-01	5	PEST	NA	N/A
K1810302-16	6	PEST	NA	N/A
K1810644-19	7	PEST	NA	N/A
K1810644-19 DUP	8	PEST	NA	N/A
K1810302-16 MS	9	PEST	NA	N/A
K1810302-16 DMS	10	PEST	NA	N/A
BLANK	11	PEST	NA	N/A
BLANK	12	PEST	NA	N/A
KQ1815728-04 MB	13	PEST	NA	N/A
KQ1815728-03 LCS	14	PEST	NA	N/A
K1810417-22	15	PEST	NA	N/A
K1810417-23	16	PEST	NA	N/A
K1810417-24	17	PEST	NA	N/A
K1810417-25	18	PEST	NA	N/A
K1810417-26	19	PEST	NA	N/A
K1810417-23 MS	20	PEST	NA	N/A
K1810417-23 DMS	21	PEST	NA	N/A
BLANK	22	8270	NA	N/A
BLANK	23	8270	NA	N/A
KQ1816005-04 MB	24	8270	NA	N/A
KQ1816005-03 LCS	25	8270	NA	N/A
K1810426-01	26	8270	NA	N/A
K1810548-01	27	8270	NA	N/A
K1810548-02	28	8270	NA	N/A
K1810669-01	29	8270	NA	N/A
K1810669-02	30	8270	NA	N/A
K1810669-02 MS	31	8270	NA	N/A
K1810669-02 DMS	32	8270	NA	N/A
KQ1816005-05 SRM	33	8270	NA	N/A

Final Volume Calculation

Intermediate Volume before GPC: 10 mL

Aliquot taken from intermediate volume:	**10**	mL
Aliquot diluted up to....	**10**	mL
Volume Injected onto column:	**5**	mL
GPC'd Extract brought to the Final Volume of:	**0.5**	mL
Calculated True Final Volume:	**1**	mL

Filter Lot # FC8051

Operator Date and Initial: TP 11/8/18

Additional Prep Information for EPA 3541
OC Pesticides by GCMS

Service Request K1810270/K1810302/0644 **Workgroup** KQ1816244

Sulfate Lot # 182085209 DCM (GC^2) Lot # DU301 Glass Wool Lot # 213179999

Date/Time/Initials Weighed: — Balance ID: — Calibration Verified —

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-09/07

Soxtherm Start (Time/Date/Initial): 1110 11/7/18 KP

Soxtherm Stop (Time/Date/Initial): 1905 11/7/18 KV

N-Evap (Time/Date/Initial): 07:47 11/8/18 TP N-Evap Therm. ID: X-SVM-010

Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

GPC Clean-up (3640): Start 14:09 11/8/18 TP (Time/Date/Initial)

S-Evap (Time/Date/Initial): 0902 11/12/18 BG S-Evap Therm. ID: DWB-46

Temp as measured: 74 °C Correction factor: 0.0 °C Adjusted temp: 74.0 °C

Hexane Exchange for Carbon (Time/Date/Initial): 0912 11/12/18 BG

Hexane Lot # 196293

N-Evap (Time/Date/Initial): 10:23 11/12/18 TP N-Evap Therm. ID: X-SVM-010

Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Carbon Clean-up (Time/Date/Initial): 1435 11/12/18 BG

Carbon Column Lot # 10384005 4:1 Hexane/DCM Lot # EX1002-324

N-Evap (Time/Date/Initial): 10:19 11/13/18 TP ~~N-Evap~~ turbovap Therm. ID: K-Turbovap-005

Temp as measured: 27.0 °C Correction factor: 0.0 °C Adjusted temp: 27.0 °C

Pipet Lots: Intermediate Volume 149/8647 Final Volume 30408617

Extract Storage: J.T.T

Completed (Time/Date/Initial): 11:40 11/13/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason: Prev Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Preparation Information Benchsheet

Prep Run#: 325137 **Prep WorkFlow:** OrgExtS(14) **Status:** Prepped
Team: Semivoa GCMS/KPRESCOTT **Prep Method:** EPA 3541 **Prep Date/Time:** 10/29/18 04:09 PM
Number of Copies to make: 1

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810270-004	L1-0to30-101518	.01	ALS SOP/OC_Pest		Sediment	20.126g	1.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	N1-0to30-101518	.01	ALS SOP/OC_Pest		Sediment	20.439g	1.00mL	DMADDEN K-Balance-50 / Big chunks of rock within
3	K1810270-010	T1-0to30-101518	.01	ALS SOP/OC_Pest		Sediment	20.217g	1.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47
4	K1810270-011	R1-0to30-101518	.01	ALS SOP/OC_Pest		Sediment	20.344g	1.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 /
5	K1810270-012	P1-0to30-101518	.01	ALS SOP/OC_Pest		Sediment	20.315g	1.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 /
6	K1810270-013	T3-0to28-101618	.01	ALS SOP/OC_Pest		Sediment	20.236g	1.00mL	LAGUILAR K-Balance-47
7	K1810270-015	T7-0to31-101618	.01	ALS SOP/OC_Pest		Sediment	20.101g	1.00mL	LAGUILAR K-Balance-47
8	K1810270-016	T5-0to26-101618	.01	ALS SOP/OC_Pest		Sediment	20.157g	1.00mL	LAGUILAR K-Balance-47
9	K1810270-017	P3-0to29-101618	.01	ALS SOP/OC_Pest		Sediment	20.225g	1.00mL	LAGUILAR K-Balance-47
10	K1810270-018	R5-0to25-101618	.01	ALS SOP/OC_Pest		Sediment	20.273g	1.00mL	LAGUILAR K-Balance-47
11	K1810270-019	514-0to29-101618	.01	ALS SOP/OC_Pest		Sediment	20.041g	1.00mL	LAGUILAR K-Balance-47
12	K1810270-020	P5-0to26-101618	.01	ALS SOP/OC_Pest		Sediment	20.276g	1.00mL	LAGUILAR K-Balance-47 / Homogenized sample is more
13	K1810270-029	R3-0to33-101718	.01	ALS SOP/OC_Pest		Sediment	20.353g	1.00mL	LAGUILAR K-Balance-47 / Homogenized sample is more
14	KQ1815624-01	K1810270-006 MS	.01	ALS SOP/OC_Pest		Solid	20.243g	1.00mL	LAGUILAR K-Balance-47
15	KQ1815624-02	K1810270-006 DMS	.01	ALS SOP/OC_Pest		Solid	20.097g	1.00mL	LAGUILAR K-Balance-47
16	KQ1815624-03	LCS		ALS SOP/OC_Pest		Solid	10g	1.00mL	
17	KQ1815624-04	MB		ALS SOP/OC_Pest		Solid	20.4390g	1.00mL	

Spiking Solutions

Name: Pesticide/OC_Pest Surrogate Inventory ID 193176 Logbook Ref: SVM59-78E Expires On: 04/03/2019

K1810270-004	100.00µL	K1810270-006	100.00µL	K1810270-010	100.00µL	K1810270-011	100.00µL	K1810270-012	100.00µL	K1810270-013	100.00µL
K1810270-015	100.00µL	K1810270-016	100.00µL	K1810270-017	100.00µL	K1810270-018	100.00µL	K1810270-019	100.00µL	K1810270-020	100.00µL
K1810270-029	100.00µL	KQ1815624-01	100.00µL	KQ1815624-02	100.00µL	KQ1815624-03	100.00µL	KQ1815624-04	100.00µL		

Name: Pesticide/OC_Pest Spike Inventory ID 194507 Logbook Ref: SVM59-78F Expires On: 02/28/2019

KQ1815624-01	100.00µL	KQ1815624-02	100.00µL	KQ1815624-03	100.00µL

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	10/29/18 16:09	Started:	10/29/18 16:09	Started:	11/1/18 16:04
Finished:	10/29/18 19:08	Finished:	10/29/18 19:06	Finished:	11/1/18 16:04
By:	~~KPRESCOTT~~	By:	KPRESCOTT	By:	TPOTTSCHMIDT
Comments	DMADDEN JW 11/2/18	Comments		Comments	

Preparation Information Benchsheet

Prep Run#: 325137
Team: Semivoa GCMS/KPRESCOTT

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Prepped
Prep Date/Time: 10/29/18 04:09 PM

Comments: IS=SVM59-45C MS42 K1810270-018 received 2x IS.

Reviewed By: [signature] Date: 11/2/18

Chain of Custody

Relinquished By: [signature] Date: 11/1/18

Received By: [signature] Date: 11-7-18

Extracts Examined: Yes / No

11/16

Preparation Information Benchsheet

Prep Run#: 325137 **Prep WorkFlow:** OrgExtS(14) **Status:** Draft
Team: Semivoa GCMS/KPRESCOTT **Prep Method:** EPA 3541 **Prep Date/Time:** 10/26/18 18:39 PM
Number of Copies to make: 1

#	Lab Code	Client ID		B#	√	Method /Test	Matrix	Amt. Ext. g	pH	Int. Vol mL	Final Vol mL	Surr Amt µL	Spike Amt µL
1	**K1810270-004**	L1-0to30-101518	3F	.01	✓	ALS SOP / OC_Pest	Sediment	*	N/A	10	1	100	-
2	**K1810270-006**	N1-0to30-101518	9A	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
3	**K1810270-010**	T1-0to30-101518	9B	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
4	**K1810270-011**	R1-0to30-101518	9C	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
5	**K1810270-012**	P1-0to30-101518	9D	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
6	**K1810270-013**	T3-0to28-101618	9E	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
7	**K1810270-015**	T7-0to31-101618	9F	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
8	**K1810270-016**	T5-0to26-101618	7B	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
9	**K1810270-017**	P3-0to29-101618	7C	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
10	**K1810270-018**	R5-0to25-101618	7D	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
11	**K1810270-019**	514-0to29-101618	7E	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
12	**K1810270-020**	P5-0to26-101618	7F	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
13	**K1810270-029**	R3-0to33-101718	8A	.01	✓	ALS SOP / OC_Pest	Sediment	*		10	1		-
14	**KQ1815624-01**	K1810270-006 MS	8B	.01	✓	ALS SOP / OC_Pest	Solid	*		10	1		100
15	**KQ1815624-02**	K1810270-006 DMS	8C	.01	✓	ALS SOP / OC_Pest	Solid	*		10	1		
16	**KQ1815624-03**	LCS	8E	-	-	ALS SOP / OC_Pest	Solid	10.000		10	1		-
17	**KQ1815624-04**	MB	8F	-	-	ALS SOP / OC_Pest	Solid	20.439		10	1		-

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Comments: *See Pre-Prep Information Benchsheet. KRP 10/29/18.

Surrogate ID: SVM59-78E 50/200ng/mL XP:04/03/19 100uL spp.2B

Spike ID: SVM59-78F 200ng/mL XP:02/28/19 100uL spp.2B

Witnessed By: Kami Pullen 10/29/18

Analyst: Lab. Kai Prescott

Assisted By: —

GPC RUNLOG

Run Date: 10/30/2018 **Calibration Date:** 10/30/2018

GPC #: 6 **Program Number:** PEST

Lab I.D.	Position	Test	Dilution	Comments
BLANK	1	PEST	NA	N/A
BLANK	2	PEST	NA	N/A
KQ1815624-04 MB	3	PEST	NA	N/A
KQ1815624-03 LCS	4	PEST	NA	N/A
K1810270-004	5	PEST	NA	N/A
K1810270-006	6	PEST	NA	N/A
K1810270-010	7	PEST	NA	N/A
K1810270-011	8	PEST	NA	N/A
K1810270-012	9	PEST	NA	N/A
K1810270-013	10	PEST	NA	N/A
K1810270-015	11	PEST	NA	N/A
K1810270-016	12	PEST	NA	N/A
K1810270-017	13	PEST	NA	N/A
K1810270-018	14	PEST	NA	N/A
K1810270-019	15	PEST	NA	N/A
K1810270-020	16	PEST	NA	N/A
K1810270-029	17	PEST	NA	N/A
K1810270-006 MS	18	PEST	NA	N/A
K1810270-006 DMS	19	PEST	NA	N/A

Final Volume Calculation

Intermediate Volume before GPC:	10	mL
Aliquot taken from intermediate volume:	10	mL
Aliquot diluted up to....	10	mL
Volume Injected onto column:	5	mL
GPC'd Extract brought to the Final Volume of:	0.5	mL
Calculated True Final Volume:	1	mL

Filter Lot # FC 8051

Operator Date and Initial: TP 10/30/18

Additional Prep Information for EPA 3541
OC Pesticides by GCMS

Service Request K1810270 **Workgroup** KQ1815624

Sulfate Lot # 178434 DCM (GC^2) Lot # DV301 Glass Wool Lot # 213/7999

Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-03/07/08/09

Soxtherm Start (Time/Date/Initial): 1609 10/29/18 KP

Soxtherm Stop (Time/Date/Initial): 1906 10/29/18 KP

N-Evap (Time/Date/Initial): 08:23 10130118 TP N-Evap Therm. ID: X-SVM-010

Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

GPC Clean-up (3640): Start 11:30 10130118 TP (Time/Date/Initial)

S-Evap (Time/Date/Initial): 09:18 10/31/18 BG S-Evap Therm. ID: DWB 46

Temp as measured: 76 °C Correction factor: 0.0 °C Adjusted temp: 76 °C

Hexane Exchange for Carbon (Time/Date/Initial): 09:29 10/31/18 BG

Hexane Lot # 194989

N-Evap (Time/Date/Initial): 11:02 10131118 TP N-Evap Therm. ID: X-SVM-010

Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Carbon Clean-up (Time/Date/Initial): 14:00 10/31/18 BG

Carbon Column Lot # 10384005 4:1 Hexane/DCM Lot # Ext002-32X

~~N-Evap~~ turbovap (Time/Date/Initial): 07:39 11/01/18 TP ~~N-Evap~~ turbovap Therm. ID: X-Turbovap-005

Temp as measured: 31.0 °C Correction factor: 0.0 °C Adjusted temp: 31.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 30408617

Extract Storage: Jeremy

Completed (Time/Date/Initial): 11:00 111118 TP/BG

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325137 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	OC_Pest	20.126g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	.01	OC_Pest	20.439g	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50
3	K1810270-006 MS KQ1815624-01	.01	OC_Pest	20.243g		PrepComments:LAGUILAR K-Balance-47
4	K1810270-006 DMS KQ1815624-02	.01	OC_Pest	20.097g		PrepComments:LAGUILAR K-Balance-47
5	K1810270-010	.01	OC_Pest	20.217g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
6	K1810270-011	.01	OC_Pest	20.344g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
7	K1810270-012	.01	OC_Pest	20.315g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	OC_Pest	20.236g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	OC_Pest	20.101g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	OC_Pest	20.157g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	OC_Pest	20.225g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	OC_Pest	20.273g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	OC_Pest	20.041g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	OC_Pest	20.276g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	OC_Pest	20.353g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

Relinquished By:	Date/Time:	Received By:	Date/Time:
DM	10.29.18 09:14		10/29/18 0800

Pre-Prep Information Benchsheet

Prep Run #: 325137 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	OC_Pest	20.126g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	.01	OC_Pest	~~20.074g~~ 20.439g ①	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50
3	K1810270-006 MS KQ1815624-01	.01	OC_Pest	20.243g		PrepComments:LAGUILAR K-Balance-47
4	K1810270-006 DMS KQ1815624-02	.01	OC_Pest	20.097g		PrepComments:LAGUILAR K-Balance-47
5	K1810270-010	.01	OC_Pest	20.217g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
6	K1810270-011	.01	OC_Pest	20.344g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
7	K1810270-012	.01	OC_Pest	20.315g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	OC_Pest	20.236g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	OC_Pest	20.101g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	OC_Pest	20.157g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	OC_Pest	20.225g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	OC_Pest	20.273g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	OC_Pest	20.041g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	OC_Pest	20.276g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	OC_Pest	20.353g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

① Original sample could not be found. Sample re-weighed to 20.439g. KKP 10/29/18.

Relinquished By:	10/26/18 18:47 Date/Time:	Received By: KKP	Date/Time: 10/29/18

Validation Report

Data File: J:\MS42\Data\112618\112618F035.D
Lab ID: K1810270-001
RunType: N/A
Matrix: Sediment

Date Acquired: 11/26/18 21:39
Batch ID: 617367
Analysis Method: ALS SOP/OC_Pest

Validations

Validation Categories	Pass	Fail
Preparation Hold Time		X
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Sample Exceptions

Exception Categories	Result	Corrective Action
Preparation Hold Time	Prep Date/Time: 11/07/2018 1110 Hold Date/Time: 10/29/2018 2359	Frozen Sample Used

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4'-DDT	-30		25	<40, ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\MS42\Data\112618\112618F035.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 21:39	**Vial:**	34
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-001	**Raw Units:**	ng/mL

Bottle ID:	K1810270-001.02	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	617367	**Prep Lot:**	325840	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	11/7/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.763	0.00	9587360.824	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.696	-0.01	1297438.014	3.810260098	76	5 - 120	Y
S_4,4'-DDT-d4	12.886	+0.00	710880.2739	4.672532363	93	13 - 200	Y
S_Aldrin-13C12	7.979	0.00	535167.7334	10.59581887	53	10 - 143	Y
S_Endrin-13C12	11.283	-0.01	262358.1415	14.97313711	75	20 - 157	Y
S_GBHCD6	6.000	-0.01	1640800.296	12.26908233	61	5 - 124	Y
S_Heptachlor-13C10	7.247	0.00	948550.8323	17.15289102	86	10 - 177	Y
S_Heptachlrepox13C10	8.841	-0.01	218873.7042	12.42188933	62	8 - 146	Y
S_Oxychlordane-13C10	8.845	-0.01	431142.4536	12.04022104	60	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.611	+0.00	771738.1383	2.76425224	0.18		Y
2,4'-DDE	9.466	-0.01	199313.6466	0.808026364	0.054	U	Y
2,4'-DDT	11.861		0	0	0	U	Y
4,4'-DDD	11.773	-0.01	4553263.766	10.8669529	0.73		Y
4,4'-DDE	10.401	+0.00	3606162.306	15.94876731	1.1		Y
4,4'-DDT	12.949	+0.00	562695.0955	3.420727145	0.23		Y
Aldrin	7.969	-0.03	0	0	0	U	Y
alpha-Chlordane	9.815	-0.01	62601.00369	1.206166296	0.081	J	Y
cis-Nonachlor	11.790	0.00	8933.085167	0.706014779	0.047	U	Y
Dieldrin	10.621	-0.01	0	0	0	U	Y
gamma-BHC (Lindane)	6.064	+0.01	44897.12534	0.261598198	0.017	U	Y
gamma-Chlordane	9.456	-0.01	35587.405	1.71306703	0.11	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	J:\MS42\Data\112618\112618F035.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 21:39	**Vial:**	34
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-001	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.244	-0.01	0	0	0	U	Y
Oxychlordane	8.893	+0.03	0	0	0	U	Y
trans-Nonachlor	9.893	+0.00	46369.50677	1.388255379	0.093	J	Y

Prep Amount:	20.166 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	74.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F007.D
Lab ID: K1810270-004
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 15:52
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F007.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 15:52	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-004	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.712	-0.01	48192201.37	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.639	-0.03	6704300.493	3.414385242	68	5 - 120	Y
S_4,4'-DDT-d4	12.844	-0.01	4303010.649	3.841496311	77	13 - 200	Y
S_Aldrin-13C12	7.941	-0.02	2717997.724	10.79021914	54	10 - 143	Y
S_Endrin-13C12	11.240	-0.01	1471799.494	15.474047	77	20 - 157	Y
S_GBHCD6	5.977	-0.01	6985298.338	9.908098994	50	5 - 124	Y
S_Heptachlor-13C10	7.213	-0.01	4122069.951	11.61278686	58	10 - 177	Y
S_Heptachlrepox13C10	8.798	-0.02	1017317.142	11.10004186	56	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	2139749.519	11.05102628	55	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.561	-0.01	1989820.265	1.407047585	0.077		Y
2,4'-DDE	9.423	-0.02	820629.3177	0.75462339	0.042	U	Y
2,4'-DDT	11.814	-0.02	25826615.28	14.74741686	0.81		Y
4,4'-DDD	11.727	-0.02	13119156.69	6.165624507	0.34		Y
4,4'-DDE	10.351	-0.02	5323528.745	5.44005288	0.30		Y
4,4'-DDT	12.908	-0.01	54316277.76	57.19211775	3.1		Y
Aldrin	7.930	-0.03	0	0	0	U	Y
alpha-Chlordane	9.775	-0.01	273649.2457	1.145634557	0.063	J	Y
cis-Nonachlor	11.743	-0.01	35594.58232	0.568128243	0.031	U	Y
Dieldrin	10.583	-0.02	0	0	0	U	Y
gamma-BHC (Lindane)	6.034	-0.01	0	0	0	U	Y
gamma-Chlordane	9.419	-0.01	160275.2674	1.629401231	0.090	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F007.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 15:52	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-004	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.216	-0.02	0	0	0	U	Y
Oxychlordane	0		0	0	0	U	Y
trans-Nonachlor	9.848	-0.01	326633.4952	2.008473298	0.11		Y

Prep Amount:	20.126 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F008.D
Lab ID: K1810270-006
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 16:09
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F008.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 16:09	**Vial:**	6
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-006	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		50344448.91	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.652	-0.02	7331524.209	3.574197079	71	5 - 120	Y
S_4,4'-DDT-d4	12.851	-0.01	4177576.101	3.570076671	71	13 - 200	Y
S_Aldrin-13C12	7.949	-0.01	2430909.551	9.23794027	46	10 - 143	Y
S_Endrin-13C12	11.240	-0.01	1312677.545	13.21108516	66	20 - 157	Y
S_GBHCD6	5.976	-0.01	5926991.471	8.04757168	40	5 - 124	Y
S_Heptachlor-13C10	7.216	-0.01	3912085.187	10.55005138	53	10 - 177	Y
S_Heptachlrepox13C10	8.805	-0.01	909631.276	9.500770165	48	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	1959582.127	9.687870341	48	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.561	-0.01	0	0	0	U	Y
2,4'-DDE	9.429	-0.01	0	0	0	U	Y
2,4'-DDT	11.727	-0.11	0	0	0	U	Y
4,4'-DDD	11.827	+0.08	0	0	0	U	Y
4,4'-DDE	10.358	-0.01	261902.6093	0.24473864	0.016	U	Y
4,4'-DDT	12.914	0.00	0	0	0	U	Y
Aldrin	7.944	-0.02	0	0	0	U	Y
alpha-Chlordane	9.768	-0.02	0	0	0	U	Y
cis-Nonachlor	11.749	-0.01	0	0	0	U	Y
Dieldrin	0		0	0	0	U	Y
gamma-BHC (Lindane)	6.033	-0.01	0	0	0	U	Y
gamma-Chlordane	9.413	-0.02	0	0	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F008.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 16:09	**Vial:**	6
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-006	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.212	-0.02	0	0	0	U	Y
Oxychlordane	8.757	-0.07	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	0	0	0	U	Y

Prep Amount:	20.439 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F009.D
Lab ID: K1810270-010
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 16:50
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F009.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 16:50	**Vial:**	7
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-010	**Raw Units:**	ng/mL

Bottle ID:	K1810270-010.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.732	+0.01	49228948.69	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.659	-0.01	7287473.474	3.633224545	73	5 - 120	Y
S_4,4'-DDT-d4	12.858		4247279.122	3.711889216	74	13 - 200	Y
S_Aldrin-13C12	7.959		2461863.13	9.567561973	48	10 - 143	Y
S_Endrin-13C12	11.254		1408325.404	14.49487516	72	20 - 157	Y
S_GBHCD6	5.990		6453110.732	8.960468114	45	5 - 124	Y
S_Heptachlor-13C10	7.226		4015343.507	11.07388492	55	10 - 177	Y
S_Heptachlrepox13C10	8.818		1012600.667	10.81590009	54	8 - 146	Y
S_Oxychlordane-13C10	8.816	-0.01	2089777.282	10.56564177	53	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.588	+0.01	710824.6674	0.462417126	0.036	U	Y
2,4'-DDE	9.436	-0.01	75526.37432	0.063893747	0.0050	U	Y
2,4'-DDT	11.747	-0.09	0	0	0	U	Y
4,4'-DDD	11.747	+0.00	3899785.485	1.68611952	0.13		Y
4,4'-DDE	10.371		375632.7781	0.353137213	0.028	U	Y
4,4'-DDT	12.915		0	0	0	U	Y
Aldrin	7.955	-0.01	0	0	0	U	Y
alpha-Chlordane	9.788		80158.17241	0.343607465	0.027	U	Y
cis-Nonachlor	11.763	+0.01	0	0	0	U	Y
Dieldrin	10.590	-0.01	0	0	0	U	Y
gamma-BHC (Lindane)	6.047	+0.01	0	0	0	U	Y
gamma-Chlordane	9.439	+0.01	42524.41201	0.442652357	0.035	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F009.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 16:50	**Vial:**	7
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-010	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.229	-0.01	0	0	0	U	Y
Oxychlordane	8.817	-0.01	0	0	0	U	Y
trans-Nonachlor	9.862		51132.80159	0.321934757	0.025	U	Y

Prep Amount:	20.217 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	63.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F010.D
Lab ID: K1810270-011
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 17:08
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F010.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 17:08	**Vial:**	8
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-011	**Raw Units:**	ng/mL

Bottle ID:	K1810270-011.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.719	-0.01	46717233.25	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.659	-0.01	7183030.312	3.773691543	75	5 - 120	Y
S_4,4'-DDT-d4	12.851	-0.01	4082592.375	3.759790706	75	13 - 200	Y
S_Aldrin-13C12	7.949	-0.01	2452425.45	10.04330475	50	10 - 143	Y
S_Endrin-13C12	11.240	-0.01	1348508.07	14.6254239	73	20 - 157	Y
S_GBHCD6	5.983	-0.01	6694536.108	9.795475358	49	5 - 124	Y
S_Heptachlor-13C10	7.216	-0.01	3685523.078	10.71075002	54	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	946901.2161	10.65792301	53	8 - 146	Y
S_Oxychlordane-13C10	8.802	-0.02	1933091.454	10.29892098	51	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.561	-0.01	2004826.467	1.323175635	0.078		Y
2,4'-DDE	9.429	-0.01	272307.7479	0.233716301	0.014	U	Y
2,4'-DDT	11.727	-0.11	0	0	0	U	Y
4,4'-DDD	11.727	-0.02	13945561.52	6.117203542	0.36		Y
4,4'-DDE	10.358	-0.01	1607663.615	1.533361212	0.090		Y
4,4'-DDT	12.908	-0.01	0	0	0	U	Y
Aldrin	7.944	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	43568.00062	0.20189707	0.012	U	Y
cis-Nonachlor	11.763	+0.01	0	0	0	U	Y
Dieldrin	10.736	+0.13	0	0	0	U	Y
gamma-BHC (Lindane)	6.047	+0.01	0	0	0	U	Y
gamma-Chlordane	9.419	-0.01	25963.67468	0.292171752	0.017	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F010.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 17:08	**Vial:**	8
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-011	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.219	-0.02	0	0	0	U	Y
Oxychlordane	8.851	+0.02	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	35149.0451	0.239237586	0.014	U	Y

Prep Amount:	20.344 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	83.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F011.D
Lab ID: K1810270-012
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 17:26
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F011.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 17:26	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-012	**Raw Units:**	ng/mL

Bottle ID:	K1810270-012.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.719	-0.01	44614314.37	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.646	-0.02	5463300.298	3.005499524	60	5 - 120	Y
S_4,4'-DDT-d4	12.844	-0.01	3186133.774	3.07251879	61	13 - 200	Y
S_Aldrin-13C12	7.948	-0.01	2432816.897	10.43261406	52	10 - 143	Y
S_Endrin-13C12	11.240	-0.01	1241420.831	14.09862738	70	20 - 157	Y
S_GBHCD6	5.983	-0.01	7037979.341	10.78340476	54	5 - 124	Y
S_Heptachlor-13C10	7.213	-0.01	4151948.799	12.63501113	63	10 - 177	Y
S_Heptachlrepox13C10	8.805	-0.01	933435.6066	11.00158248	55	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	2001328.325	11.16504706	56	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.561	-0.01	2081174.227	1.805933579	0.12		Y
2,4'-DDE	9.423	-0.02	418642.2232	0.472416068	0.030	U	Y
2,4'-DDT	11.820	-0.01	4718020.139	3.638452154	0.23		Y
4,4'-DDD	11.720	-0.02	13218293.66	7.623334001	0.49		Y
4,4'-DDE	10.351	-0.02	2560870.64	3.211364171	0.21		Y
4,4'-DDT	12.908	-0.01	7489742.296	10.6507813	0.68		Y
Aldrin	7.937	-0.02	0	0	0	U	Y
alpha-Chlordane	9.775	-0.01	95370.59003	0.42688502	0.027	U	Y
cis-Nonachlor	11.756		0	0	0	U	Y
Dieldrin	10.590	-0.01	0	0	0	U	Y
gamma-BHC (Lindane)	6.206	+0.17	0	0	0	U	Y
gamma-Chlordane	9.419	-0.01	53265.94488	0.5789696	0.037	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F011.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 17:26	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-012	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.216	-0.02	0	0	0	U	Y
Oxychlordane	8.844	+0.01	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	83597.54473	0.549595872	0.035	U	Y

Prep Amount:	20.315 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	76.70

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F012.D
Lab ID: K1810270-013
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 17:43
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F012.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 17:43	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-013	**Raw Units:**	ng/mL

Bottle ID:	K1810270-013.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.719	-0.01	53276617.46	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.666	0.00	8647889.572	3.983908044	80	5 - 120	Y
S_4,4'-DDT-d4	12.858		5357042.379	4.326066617	87	13 - 200	Y
S_Aldrin-13C12	7.949	-0.01	3159659.057	11.34648962	57	10 - 143	Y
S_Endrin-13C12	11.247	-0.01	1719983.141	16.3575996	82	20 - 157	Y
S_GBHCD6	5.983	-0.01	8276852.903	10.61966302	53	5 - 124	Y
S_Heptachlor-13C10	7.216	-0.01	5167303.383	13.16816257	66	10 - 177	Y
S_Heptachlrepox13C10	8.805	-0.01	1206490.556	11.90782112	60	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	2429247.931	11.34884428	57	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.574		0	0	0	U	Y
2,4'-DDE	9.429	-0.01	1366047.977	0.973851018	0.11	J	Y
2,4'-DDT	11.740	-0.09	0	0	0	U	Y
4,4'-DDD	11.740	0.00	31844347.03	11.60237338	1.3		Y
4,4'-DDE	10.358	-0.01	25876810.11	20.50017615	2.3		Y
4,4'-DDT	12.915		0	0	0	U	Y
Aldrin	7.937	-0.02	0	0	0	U	Y
alpha-Chlordane	9.775	-0.01	350783.7158	1.293547467	0.15	J	Y
cis-Nonachlor	11.749	-0.01	49818.51967	0.700397186	0.079	U	Y
Dieldrin	10.730	+0.13	0	0	0	U	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.426	-0.01	203607.2435	1.823248438	0.21	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F012.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 17:43	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-013	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.219	-0.02	0	0	0	U	Y
Oxychlordane	8.837	+0.01	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	313937.8688	1.700357125	0.19	J	Y

Prep Amount:	20.236 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	43.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F013.D
Lab ID: K1810270-015
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 18:01
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F013.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:01	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-015	**Raw Units:**	ng/mL

Bottle ID:	K1810270-015.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.732	+0.01	51200386.53	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.646	-0.02	8014773.395	3.841968698	77	5 - 120	Y
S_4,4'-DDT-d4	12.851	-0.01	4224327.264	3.549678997	71	13 - 200	Y
S_Aldrin-13C12	7.948	-0.01	3023843.416	11.29910384	56	10 - 143	Y
S_Endrin-13C12	11.247	-0.01	1562521.998	15.46268567	77	20 - 157	Y
S_GBHCD6	5.983	-0.01	7849113.076	10.4792328	52	5 - 124	Y
S_Heptachlor-13C10	7.213	-0.01	5398923.097	14.3163321	72	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	1204233.464	12.36751572	62	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	2394518.94	11.64022771	58	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.568	-0.01	0	0	0	U	Y
2,4'-DDE	9.436	-0.01	2161900.127	1.66295725	0.21		Y
2,4'-DDT	11.814	-0.02	0	0	0	U	Y
4,4'-DDD	11.733	-0.01	31627577.95	12.43366928	1.6		Y
4,4'-DDE	10.362	-0.01	24716428.85	21.12766312	2.7		Y
4,4'-DDT	12.915		0	0	0	U	Y
Aldrin	7.937	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	287779.4377	1.076604697	0.14	J	Y
cis-Nonachlor	11.756		40848.84603	0.582622069	0.074	U	Y
Dieldrin	10.736	+0.13	64892.93641	0.588647041	0.075	U	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.426	-0.01	180406.7542	1.638924637	0.21	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F013.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:01	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-015	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.223	-0.01	0	0	0	U	Y
Oxychlordane	8.851	+0.02	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	260637.1266	1.432142669	0.18	J	Y

Prep Amount:	20.101 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	39.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F014.D
Lab ID: K1810270-016
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 18:19
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F014.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:19	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-016	**Raw Units:**	ng/mL

Bottle ID:	K1810270-016.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		49370237.62	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.670		6223678.352	3.093981667	62	5 - 120	Y
S_4,4'-DDT-d4	12.851	-0.01	3463062.609	3.017865569	60	13 - 200	Y
S_Aldrin-13C12	7.952	-0.01	2596447.761	10.06172198	50	10 - 143	Y
S_Endrin-13C12	11.247	-0.01	1240562.549	12.73167301	64	20 - 157	Y
S_GBHCD6	5.983	-0.01	6819384.449	9.441958776	47	5 - 124	Y
S_Heptachlor-13C10	7.216	-0.01	4444338.279	12.2219289	61	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	937664.9534	9.986826051	50	8 - 146	Y
S_Oxychlordane-13C10	8.816	-0.01	1848247.062	9.317754127	47	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.581	+0.01	0	0	0	U	Y
2,4'-DDE	9.443		2434210.09	2.41127989	0.25		Y
2,4'-DDT	11.827	-0.01	0	0	0	U	Y
4,4'-DDD	11.740	0.00	46077392.51	23.32734861	2.4		Y
4,4'-DDE	10.371		31889234.99	35.10378536	3.6		Y
4,4'-DDT	12.928	+0.01	0	0	0	U	Y
Aldrin	7.944	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	379393.3008	1.838842025	0.19	J	Y
cis-Nonachlor	11.756		67133.11698	1.240515523	0.13		Y
Dieldrin	10.710	+0.11	83002.50308	0.948322821	0.098	J	Y
gamma-BHC (Lindane)	6.047	+0.01	473885.6193	0.624201515	0.065	J	Y
gamma-Chlordane	9.426	-0.01	288941.7925	3.400750773	0.35		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F014.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:19	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-016	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.219	-0.02	0	0	0	U	Y
Oxychlordane	8.797	-0.03	0	0	0	U	Y
trans-Nonachlor	9.862		297843.7396	2.120297167	0.22		Y

Prep Amount:	20.157 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	47.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F015.D
Lab ID: K1810270-017
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 18:36
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F015.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:36	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-017	**Raw Units:**	ng/mL

Bottle ID:	K1810270-017.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		47285141.82	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.652	-0.02	5950117.923	3.08842238	62	5 - 120	Y
S_4,4'-DDT-d4	12.858		3398473.343	3.092174086	62	13 - 200	Y
S_Aldrin-13C12	7.948	-0.01	2433218.671	9.844969738	49	10 - 143	Y
S_Endrin-13C12	11.254		1256566.792	13.46458305	67	20 - 157	Y
S_GBHCD6	5.983	-0.01	6889200.451	9.9592416	50	5 - 124	Y
S_Heptachlor-13C10	7.219	-0.01	4346134.346	12.47890026	62	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	921880.6232	10.25167925	51	8 - 146	Y
S_Oxychlordane-13C10	8.816	-0.01	1890557.886	9.951343623	50	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.574		0	0	0	U	Y
2,4'-DDE	9.429	-0.01	1096088.105	1.135681621	0.12		Y
2,4'-DDT	11.827	-0.01	0	0	0	U	Y
4,4'-DDD	11.733	-0.01	25305837.21	13.40046169	1.4		Y
4,4'-DDE	10.365	-0.01	20086992.92	23.12844011	2.3		Y
4,4'-DDT	12.921	+0.01	0	0	0	U	Y
Aldrin	7.944	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	289509.3165	1.371789112	0.14	J	Y
cis-Nonachlor	11.749	-0.01	32614.22435	0.589172531	0.060	U	Y
Dieldrin	0		0	0	0	U	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.426	-0.01	166717.2699	1.918293599	0.19	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F015.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:36	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-017	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.223	-0.01	0	0	0	U	Y
Oxychlordane	8.857	+0.03	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	257365.2834	1.791134774	0.18	J	Y

Prep Amount:	20.225 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	48.70

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F016.D
Lab ID: K1810270-018
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 18:54
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F016.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:54	**Vial:**	14
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-018	**Raw Units:**	ng/mL

Bottle ID:	K1810270-018.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.727	+0.00	81539582.05	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.659	-0.01	5583941.953	1.680769768	34	5 - 120	Y
S_4,4'-DDT-d4	12.851	-0.01	3231955.76	1.705303529	34	13 - 200	Y
S_Aldrin-13C12	7.949	-0.01	2590516.952	6.07821277	30	10 - 143	Y
S_Endrin-13C12	11.240	-0.01	1186510.792	7.372847291	37	20 - 157	Y
S_GBHCD6	5.983	-0.01	7823081.251	6.558303374	33	5 - 124	Y
S_Heptachlor-13C10	7.222	0.00	4842634.501	8.063267604	40	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	1027995.138	6.629298867	33	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	1969710.199	6.012433583	30	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.567	-0.01	0	0	0	U	Y
2,4'-DDE	9.429	-0.01	1628482.102	1.797954928	0.19		Y
2,4'-DDT	11.820	-0.01	0	0	0	U	Y
4,4'-DDD	11.733	-0.01	30019831.4	16.93916422	1.8		Y
4,4'-DDE	10.365	-0.01	25672843.82	31.49851455	3.4		Y
4,4'-DDT	12.914	0.00	4814532.017	6.749432685	0.73		Y
Aldrin	7.944	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	353547.3957	1.607903927	0.17	J	Y
cis-Nonachlor	11.756		51112.41183	0.88623614	0.095	U	Y
Dieldrin	10.723	+0.12	65640.66088	0.784124333	0.084	J	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.426	-0.01	248430.1361	2.743635483	0.29		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F016.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 18:54	**Vial:**	14
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-018	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.219	-0.02	0	0	0	U	Y
Oxychlordane	0		0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	276909.0054	1.849707372	0.20	J	Y

Prep Amount:	20.273 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	45.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F017.D
Lab ID: K1810270-019
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 19:11
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F017.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 19:11	**Vial:**	15
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-019	**Raw Units:**	ng/mL

Bottle ID:	K1810270-019.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		47450273.8	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.652	-0.02	6717096.993	3.474391154	69	5 - 120	Y
S_4,4'-DDT-d4	12.858		3810853.591	3.455320252	69	13 - 200	Y
S_Aldrin-13C12	7.952	-0.01	2675894.266	10.78917326	54	10 - 143	Y
S_Endrin-13C12	11.234	-0.02	1397771.928	14.92552508	75	20 - 157	Y
S_GBHCD6	5.983	-0.01	7232036.753	10.41847237	52	5 - 124	Y
S_Heptachlor-13C10	7.219	-0.01	4803242.511	13.74338315	69	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	1014338.184	11.24058906	56	8 - 146	Y
S_Oxychlordane-13C10	8.816	-0.01	1988004.606	10.42785786	52	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.574		0	0	0	U	Y
2,4'-DDE	9.429	-0.01	1400312.174	1.285227325	0.16		Y
2,4'-DDT	11.854	+0.02	0	0	0	U	Y
4,4'-DDD	11.733	-0.01	28098427.95	13.18029188	1.6		Y
4,4'-DDE	10.365	-0.01	22414749.02	22.86173836	2.8		Y
4,4'-DDT	12.915		3385872.802	4.025566204	0.50		Y
Aldrin	7.944	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	294031.0375	1.32492281	0.16	J	Y
cis-Nonachlor	11.756		38670.30102	0.664332627	0.082	U	Y
Dieldrin	10.616	+0.01	0	0	0	U	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.419	-0.01	179821.6937	1.967655958	0.24	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F017.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 19:11	**Vial:**	15
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-019	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.223	-0.01	0	0	0	U	Y
Oxychlordane	8.958	+0.13	0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	239082.7482	1.582337551	0.19	J	Y

Prep Amount:	20.041 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	40.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F018.D
Lab ID: K1810270-020
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 19:29
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F018.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 19:29	**Vial:**	16
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-020	**Raw Units:**	ng/mL

Bottle ID:	K1810270-020.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		46269783.49	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.659	-0.01	7921681.329	4.201996771	84	5 - 120	Y
S_4,4'-DDT-d4	12.851	-0.01	5030070.76	4.677151004	94	13 - 200	Y
S_Aldrin-13C12	7.949	-0.01	3159112.155	13.06247639	65	10 - 143	Y
S_Endrin-13C12	11.254		1506506.836	16.49702629	82	20 - 157	Y
S_GBHCD6	5.983	-0.01	8492637.283	12.54663463	63	5 - 124	Y
S_Heptachlor-13C10	7.216	-0.01	5078563.92	14.9018888	75	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	1110572.063	12.62101539	63	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	2199066.113	11.82925131	59	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.574		0	0	0	U	Y
2,4'-DDE	9.429	-0.01	1780849.141	1.385946509	0.19		Y
2,4'-DDT	11.827	-0.01	0	0	0	U	Y
4,4'-DDD	11.733	-0.01	29647752.95	11.79231414	1.7		Y
4,4'-DDE	10.365	-0.01	27442546.41	23.73362243	3.3		Y
4,4'-DDT	12.915		0	0	0	U	Y
Aldrin	7.937	-0.02	0	0	0	U	Y
alpha-Chlordane	9.782	-0.01	345846.2882	1.408833337	0.20	J	Y
cis-Nonachlor	11.763	+0.01	54208.8278	0.841893479	0.12	U	Y
Dieldrin	10.803	+0.20	0	0	0	U	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.433		232890.8333	2.303767121	0.32		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F018.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 19:29	**Vial:**	16
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-020	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.219	-0.02	0	0	0	U	Y
Oxychlordane	8.824	-0.01	0	0	0	U	Y
trans-Nonachlor	9.862		286837.0115	1.716189278	0.24	J	Y

Prep Amount:	20.276 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	35.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F019.D
Lab ID: K1810270-029
RunType: N/A
Matrix: Sediment

Date Acquired: 11/7/18 19:47
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F019.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 19:47	**Vial:**	17
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-029	**Raw Units:**	ng/mL

Bottle ID:	K1810270-029.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		51354701.27	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.666	0.00	7571856.323	3.618744918	72	5 - 120	Y
S_4,4'-DDT-d4	12.858		4118812.208	3.450615339	69	13 - 200	Y
S_Aldrin-13C12	7.948	-0.01	2606246.62	9.709418997	49	10 - 143	Y
S_Endrin-13C12	11.240	-0.01	1437748.001	14.18517155	71	20 - 157	Y
S_GBHCD6	5.977	-0.01	7560904.452	10.06411719	50	5 - 124	Y
S_Heptachlor-13C10	7.219	-0.01	4719314.15	12.47660838	62	10 - 177	Y
S_Heptachlrepox13C10	8.812	-0.01	981528.8088	10.05004168	50	8 - 146	Y
S_Oxychlordane-13C10	8.809	-0.01	2058429.211	9.976361285	50	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.574		0	0	0	U	Y
2,4'-DDE	9.436	-0.01	1583289.589	1.289124009	0.18		Y
2,4'-DDT	11.733	-0.10	0	0	0	U	Y
4,4'-DDD	11.733	-0.01	33237154.16	13.83076147	1.9		Y
4,4'-DDE	10.365	-0.01	19523940.28	17.66534386	2.4		Y
4,4'-DDT	12.921	+0.01	0	0	0	U	Y
Aldrin	7.937	-0.02	0	0	0	U	Y
alpha-Chlordane	9.775	-0.01	241023.0331	1.048908001	0.14	J	Y
cis-Nonachlor	11.756		44187.315	0.733140299	0.10	U	Y
Dieldrin	10.716	+0.11	0	0	0	U	Y
gamma-BHC (Lindane)	6.040		0	0	0	U	Y
gamma-Chlordane	9.426	-0.01	168139.5718	1.77688151	0.24	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F019.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 19:47	**Vial:**	17
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-029	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.216	-0.02	0	0	0	U	Y
Oxychlordane	0		0	0	0	U	Y
trans-Nonachlor	9.855	-0.01	197038.0522	1.259454408	0.17	J	Y

Prep Amount:	20.353 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	36.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F003.D
Lab ID: KQ1815624-04
RunType: MB
Matrix: Sediment

Date Acquired: 11/7/18 14:41
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F003.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 14:41	**Vial:**	2
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815624-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	KQ1815624
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.739	+0.01	32483782.84	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.666	0.00	5474106.424	4.136018301	83	5 - 120	Y
S_4,4'-DDT-d4	12.858		2808561.735	3.719821845	74	13 - 200	Y
S_Aldrin-13C12	7.959		2244044.896	13.21669549	66	10 - 143	Y
S_Endrin-13C12	11.254		1101450.889	17.180293	86	20 - 157	Y
S_GBHCD6	5.990		5951342.296	12.52363708	63	5 - 124	Y
S_Heptachlor-13C10	7.226		3278802.894	13.70397551	69	10 - 177	Y
S_Heptachlrepox13C10	8.818		811662.5005	13.13874555	66	8 - 146	Y
S_Oxychlordane-13C10	8.822		1779308.941	13.6333066	68	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.581	+0.01	0	0	0	U	Y
2,4'-DDE	9.450	+0.01	29933.92807	0.033712207	0.0016	U	Y
2,4'-DDT	11.747	-0.09	0	0	0	U	Y
4,4'-DDD	11.834	+0.09	0	0	0	U	Y
4,4'-DDE	10.365	-0.01	28421.40025	0.035570439	0.0017	U	Y
4,4'-DDT	13.122	+0.21	0	0	0	U	Y
Aldrin	7.955	-0.01	0	0	0	U	Y
alpha-Chlordane	9.869	+0.08	0	0	0	U	Y
cis-Nonachlor	11.796	+0.04	0	0	0	U	Y
Dieldrin	10.610	+0.01	0	0	0	U	Y
gamma-BHC (Lindane)	6.047	+0.01	0	0	0	U	Y
gamma-Chlordane	0		0	0	0	U	Y

Data File:	Y:\MS42\data\110718\110718F003.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 14:41	**Vial:**	2
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815624-04	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.229	-0.01	0	0	0	U	Y
Oxychlordane	0		0	0	0	U	Y
trans-Nonachlor	9.869	+0.01	0	0	0	U	Y

Prep Amount:	20.4390 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: J:\MS42\Data\112618\112618F031.D
Lab ID: KQ1816244-04
RunType: MB
Matrix: Soil

Date Acquired: 11/26/18 20:29
Batch ID: 617367
Analysis Method: ALS SOP/OC_Pest

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4'-DDT	-30		25	<40, ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\MS42\Data\112618\112618F031.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 20:29	**Vial:**	30
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1816244-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	OC_Pest	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	617367	**Prep Lot:**	325840	**Report Group:**	KQ1816244
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	11/7/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.752	-0.01	10437348.58	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.690	-0.01	1631495.343	4.40111511	88	5 - 120	Y
S_4,4'-DDT-d4	12.879	-0.01	887921.8364	5.360921848	107	13 - 200	Y
S_Aldrin-13C12	7.979	0.00	668092.0236	12.15037763	61	10 - 143	Y
S_Endrin-13C12	11.270	-0.02	329522.6957	17.27477789	86	20 - 157	Y
S_GBHCD6	6.000	-0.01	1886546.293	12.95784278	65	5 - 124	Y
S_Heptachlor-13C10	7.240	-0.01	1037539.48	17.23416453	86	10 - 177	Y
S_Heptachlrepox13C10	8.834	-0.01	269277.4577	14.03792606	70	8 - 146	Y
S_Oxychlordane-13C10	8.838	-0.01	534127.3911	13.70147762	69	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.611	+0.00	0	0	0	U	Y
2,4'-DDE	9.466	-0.01	0	0	0	U	Y
2,4'-DDT	11.753	-0.11	0	0	0	U	Y
4,4'-DDD	11.613	-0.17	0	0	0	U	Y
4,4'-DDE	10.387	-0.01	0	0	0	U	Y
4,4'-DDT	12.936	-0.01	0	0	0	U	Y
Aldrin	7.975	-0.02	0	0	0	U	Y
alpha-Chlordane	9.815	-0.01	0	0	0	U	Y
cis-Nonachlor	11.756	-0.04	0	0	0	U	Y
Dieldrin	10.681	+0.05	0	0	0	U	Y
gamma-BHC (Lindane)	6.051	-0.01	0	0	0	U	Y
gamma-Chlordane	0		0	0	0	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	J:\MS42\Data\112618\112618F031.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 20:29	**Vial:**	30
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1816244-04	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.237	-0.02	0	0	0	U	Y
Oxychlordane	8.866	+0.01	0	0	0	U	Y
trans-Nonachlor	9.879	-0.01	0	0	0	U	Y

Prep Amount:	20.1660 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\112118\112118F005.D
Lab ID: KQ1815624-03
RunType: LCS
Matrix: Sediment

Date Acquired: 11/21/18 13:33
Batch ID: 617359
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4'-DDT	-34		25	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\112118\112118F005.D	**Instrument:**	K-MS-42
Acqu Date:	11/21/18 13:33	**Vial:**	6
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815624-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	617359	**Prep Lot:**	325137	**Report Group:**	KQ1815624
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.749	-0.01	7186837.776	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.677	-0.02	902598.1408	3.536092927	71	5 - 120	Y
S_4,4'-DDT-d4	12.871	-0.01	431975.2367	3.787703164	76	13 - 200	Y
S_Aldrin-13C12	7.973	-0.01	442993.615	11.70046985	59	10 - 143	Y
S_Endrin-13C12	11.270	-0.02	173509.975	13.21003395	66	20 - 157	Y
S_GBHCD6	6.000	-0.01	1173876.903	11.70954832	59	5 - 124	Y
S_Heptachlor-13C10	7.239	-0.01	530324.1351	12.7932045	64	10 - 177	Y
S_Heptachlrepox13C10	8.834	-0.01	162632.556	12.312969	62	8 - 146	Y
S_Oxychlordane-13C10	8.838	-0.01	319565.7468	11.90515692	60	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.598	-0.02	3672298.881	18.90766553	1.89		Y
2,4'-DDE	9.459	-0.02	3145762.538	18.33186355	1.83		Y
2,4'-DDT	11.854	-0.01	3520174.677	18.17379235	1.82		Y
4,4'-DDD	11.760	-0.02	6231928.615	21.37960264	2.14		Y
4,4'-DDE	10.388	-0.02	2552844.181	16.229246	1.62		Y
4,4'-DDT	12.935	-0.01	1948022.919	19.4884356	1.95		Y
Aldrin	7.976	-0.02	334037.5004	21.35677954	2.14		Y
alpha-Chlordane	9.808	-0.01	813223.4552	21.13958002	2.11		Y
cis-Nonachlor	11.776	-0.02	208532.6359	22.23550088	2.22		Y
Dieldrin	10.621	-0.01	252870.3573	19.10668742	1.91		Y
gamma-BHC (Lindane)	6.057	-0.01	2438620.242	19.86065451	1.99		Y
gamma-Chlordane	9.449	-0.02	331774.0023	21.54670939	2.15		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\112118\112118F005.D	**Instrument:**	K-MS-42
Acqu Date:	11/21/18 13:33	**Vial:**	6
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815624-03	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.242	-0.01	649873.8268	21.14182615	2.11		Y
Oxychlordane	8.846	-0.01	893185.0061	20.67250469	2.07		Y
trans-Nonachlor	9.880	-0.02	509344.6505	20.57354847	2.06		Y

Prep Amount:	10 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: J:\MS42\Data\112618\112618F032.D
Lab ID: KQ1816244-03
RunType: LCS
Matrix: Soil

Date Acquired: 11/26/18 20:46
Batch ID: 617367
Analysis Method: ALS SOP/OC_Pest

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2,4'-DDT	-30		25	<40, ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\MS42\Data\112618\112618F032.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 20:46	**Vial:**	31
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1816244-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	I	**Matrix:**	Soil
Prod Code:	OC_Pest	**Collect Date:**		**Receive Date:**	11/1/18

Analysis Lot:	617367	**Prep Lot:**	325840	**Report Group:**	KQ1816244
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	11/7/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.750	-0.01	8282225.553	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.683	-0.02	1309806.792	4.452739224	89	5 - 120	Y
S_4,4'-DDT-d4	12.878	-0.01	668564.7481	5.086878296	102	13 - 200	Y
S_Aldrin-13C12	7.973	-0.01	586169.4088	13.43444634	67	10 - 143	Y
S_Endrin-13C12	11.277	-0.01	277803.6524	18.35304908	92	20 - 157	Y
S_GBHCD6	6.000	-0.01	1724449.094	14.92652637	75	5 - 124	Y
S_Heptachlor-13C10	7.239	-0.01	872010.9599	18.25369045	91	10 - 177	Y
S_Heptachlrepox13C10	8.834	-0.01	229889.7602	15.10308664	76	8 - 146	Y
S_Oxychlordane-13C10	8.838	-0.01	448312.0122	14.49259199	72	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.604	-0.01	5370633.146	19.05515893	1.91		Y
2,4'-DDE	9.459	-0.01	4375204.104	17.56977476	1.76		Y
2,4'-DDT	11.861		5154651.948	17.19475813	1.72		Y
4,4'-DDD	11.767	-0.01	9368439.163	22.14785118	2.21		Y
4,4'-DDE	10.387	-0.01	3481746.653	15.2531099	1.53		Y
4,4'-DDT	12.941	-0.01	3055090.217	19.7479643	1.97		Y
Aldrin	7.983	-0.01	438377.3015	21.11698543	2.11		Y
alpha-Chlordane	9.809	-0.01	1201424.007	22.26191968	2.23		Y
cis-Nonachlor	11.783	-0.01	282857.6047	21.49911537	2.15		Y
Dieldrin	10.621	-0.01	330015.2557	15.57428038	1.56		Y
gamma-BHC (Lindane)	6.057		3600754.98	19.96250929	2.00		Y
gamma-Chlordane	9.449	-0.01	458470.682	21.22413591	2.12		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	J:\MS42\Data\112618\112618F032.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 20:46	**Vial:**	31
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1816244-03	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.249	-0.01	1058311.55	20.93854191	2.09		Y
Oxychlordane	8.846	-0.01	1236749.248	20.40389957	2.04		Y
trans-Nonachlor	9.886	-0.01	574116.8381	16.53018013	1.65		Y

Prep Amount:	10 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\110718\110718F005.D
Lab ID: KQ1815624-01
RunType: MS
Matrix: Sediment

Date Acquired: 11/7/18 15:16
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F005.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 15:16	**Vial:**	3
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815624-01	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	KQ1815624
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.719	-0.01	36857555.16	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.652	-0.02	5869699.999	3.908635702	78	5 - 120	Y
S_4,4'-DDT-d4	12.844	-0.01	3111368.005	3.63186437	73	13 - 200	Y
S_Aldrin-13C12	7.948	-0.01	2420573.403	12.56462913	63	10 - 143	Y
S_Endrin-13C12	11.234	-0.02	1149580.422	15.80319365	79	20 - 157	Y
S_GBHCD6	5.977	-0.01	6035662.928	11.19387869	56	5 - 124	Y
S_Heptachlor-13C10	7.214	-0.01	3589620.131	13.22269044	66	10 - 177	Y
S_Heptachlrepox13C10	8.805	-0.01	843591.426	12.03512629	60	8 - 146	Y
S_Oxychlordane-13C10	8.802	-0.02	1747965.469	11.80382505	59	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.568	-0.01	23887484.01	19.29313981	1.26		Y
2,4'-DDE	9.429	-0.01	19051116.45	20.00973017	1.30		Y
2,4'-DDT	11.814	-0.02	28919874.31	22.83841203	1.49		Y
4,4'-DDD	11.720	-0.02	40270734.79	21.61714191	1.41		Y
4,4'-DDE	10.358	-0.01	14799328.92	17.27360988	1.13		Y
4,4'-DDT	12.908	-0.01	13791588.12	20.08359689	1.31		Y
Aldrin	7.955	-0.01	1816056.541	20.98636291	1.37		Y
alpha-Chlordane	9.775	-0.01	4652300.016	23.84238254	1.55		Y
cis-Nonachlor	11.743	-0.01	1093516.496	21.36573836	1.39		Y
Dieldrin	10.590	-0.01	1430808.019	17.64110095	1.15		Y
gamma-BHC (Lindane)	6.034	-0.01	14002786.35	20.83943539	1.36		Y
gamma-Chlordane	9.413	-0.02	1890474.124	23.52677265	1.53		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F005.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 15:16	**Vial:**	3
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815624-01	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.223	-0.01	4429829.77	22.09802561	1.44		Y
Oxychlordane	8.817	-0.01	5187562.445	21.35171638	1.39		Y
trans-Nonachlor	9.855	-0.01	2885011.642	21.7161585	1.42		Y

Prep Amount:	20.243 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F006.D
Lab ID: KQ1815624-02
RunType: DMS
Matrix: Sediment

Date Acquired: 11/7/18 15:34
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F006.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 15:34	**Vial:**	4
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815624-02	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**	325137	**Report Group:**	KQ1815624
Analysis	ALS SOP	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.718	-0.01	45655542.64	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
S_4,4'DDD-d4	11.646	-0.02	6217977.259	3.342654072	67	5 - 120	Y
S_4,4'-DDT-d4	12.844	-0.01	3170458.533	2.987674861	60	13 - 200	Y
S_Aldrin-13C12	7.949	-0.01	2301350.962	9.643779834	48	10 - 143	Y
S_Endrin-13C12	11.233	-0.02	1180002.329	13.09547883	65	20 - 157	Y
S_GBHCD6	5.976	-0.01	6051290.381	9.060175857	45	5 - 124	Y
S_Heptachlor-13C10	7.209	-0.02	3523121.967	10.4768815	52	10 - 177	Y
S_Heptachlrepox13C10	8.805	-0.01	845256.0529	9.735086159	49	8 - 146	Y
S_Oxychlordane-13C10	8.802	-0.02	1772402.289	9.662404903	48	5 - 144	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
2,4'-DDD	10.563	-0.01	22496034.39	17.1516239	1.13		Y
2,4'-DDE	9.429	-0.01	18340672.33	18.1845613	1.19		Y
2,4'-DDT	11.820	-0.01	24470155.16	18.9642438	1.24		Y
4,4'-DDD	11.720	-0.02	36289782.81	18.38907416	1.21		Y
4,4'-DDE	10.358	-0.01	15729069.78	17.33049228	1.14		Y
4,4'-DDT	12.908	-0.01	14149529.25	20.22080832	1.33		Y
Aldrin	7.956	-0.01	1661481.024	20.07526241	1.32		Y
alpha-Chlordane	9.768	-0.02	4318555.55	21.82684655	1.43		Y
cis-Nonachlor	11.743	-0.01	1048931.245	20.21203936	1.33		Y
Dieldrin	10.576	-0.03	1330665.935	15.9834252	1.05		Y
gamma-BHC (Lindane)	6.033	-0.01	12919812.57	19.17806045	1.26		Y
gamma-Chlordane	9.419	-0.01	1743300.731	21.39609302	1.40		Y

Data File:	Y:\MS42\data\110718\110718F006.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 15:34	**Vial:**	4
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815624-02	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Heptachlor	7.219	-0.02	4329867.144	22.00704947	1.44		Y
Oxychlordane	8.810	-0.02	4960129.245	20.13413583	1.32		Y
trans-Nonachlor	9.848	-0.01	2653539.761	19.69842843	1.29		Y

Prep Amount:	20.097 g	**Dilution:**	1
Prep Final Amount:	1.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: Y:\MS42\data\110718\110718F002.D
Lab ID: KQ1816317-01
RunType: CCV
Matrix: Sediment

Date Acquired: 11/7/18 13:23
Batch ID: 614289
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\110718\110718F002.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 13:23	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816317-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest_MS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614289	**Prep Lot:**		**Report Group:**	KQ1816317
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		41734618.59	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
S_4,4'DDD-d4	11.670		9257182.699	5.444001046	Y
S_4,4'-DDT-d4	12.858		4508051.404	4.647262187	Y
S_Aldrin-13C12	7.959		3733750.918	17.11617959	Y
S_Endrin-13C12	11.254		1675875.22	20.34591649	Y
S_GBHCD6	5.990		10036762.42	16.43914923	Y
S_Heptachlor-13C10	7.226		5589068.842	18.18196732	Y
S_Heptachlrepox13C10	8.818		1340568.653	16.89031037	Y
S_Oxychlordane-13C10	8.822		2903317.503	17.31468212	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDD	10.574		32084640.98	16.43110443	Y
2,4'-DDE	9.443		26365732.41	17.55891638	Y
2,4'-DDT	11.834		42748186.47	23.29966731	Y
4,4'-DDD	11.743		58530824.87	19.92188525	Y
4,4'-DDE	10.371		21302609.78	15.7656168	Y
4,4'-DDT	12.915		18149200.38	18.24094083	Y
Aldrin	7.962		2674881.019	19.89669358	Y
alpha-Chlordane	9.788		6338181.06	19.55621918	Y
cis-Nonachlor	11.756		1502409.785	17.67336662	Y
Dieldrin	10.603		1983150.536	16.77249538	Y
gamma-BHC (Lindane)	6.040		20991367.95	18.78639982	Y
gamma-Chlordane	9.433		2708265.884	20.29183087	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\110718\110718F002.D	**Instrument:**	K-MS-42
Acqu Date:	11/7/18 13:23	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816317-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Heptachlor	7.236		6244621.452	20.00698216	Y
Oxychlordane	8.830		7874262.219	19.51271243	Y
trans-Nonachlor	9.862		4320001.701	19.57751958	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: J:\MS42\Data\112618\112618F003.D
Lab ID: KQ1817669-02
RunType: CCV
Matrix: Plant Tissue

Date Acquired: 11/26/18 11:48
Batch ID: 617367
Analysis Method: ALS SOP/OC_Pest

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\MS42\Data\112618\112618F003.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 11:48	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817669-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Plant Tissue
Prod Code:	OC_Pest	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	617367	**Prep Lot:**		**Report Group:**	KQ1817669
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18469

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDT	11.861		4102655.721	13.97699025	Y
4,4'-DDD	11.781		8204033.629	18.96770969	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report

Data File:	J:\MS42\Data\112618\112618F003.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 11:48	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817669-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	OC_Pest	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	617367	**Prep Lot:**		**Report Group:**	KQ1817669
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.764		7371424.664	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
S_4,4'DDD-d4	11.703		1339319.314	5.115637678	Y
S_4,4'-DDT-d4	12.884		654623.5283	5.596224217	Y
S_Aldrin-13C12	7.980		855113.7134	22.01993927	Y
S_Endrin-13C12	11.290		298724.3886	22.17361885	Y
S_GBHCD6	6.007		2432017.948	23.65215802	Y
S_Heptachlor-13C10	7.252		1031915.284	24.26992337	Y
S_Heptachlrepox13C10	8.847		301574.5624	22.26057689	Y
S_Oxychlordane-13C10	8.851		608780.1474	22.1116827	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDD	10.610		4756511.534	16.50436227	Y
2,4'-DDE	9.473		4845250.334	19.02861602	Y
2,4'-DDT	11.861		4102655.721	13.97699025	Y
4,4'-DDD	11.781		8204033.629	18.96770969	Y
4,4'-DDE	10.400		3750312.871	16.06763062	Y
4,4'-DDT	12.948		2755061.797	18.18785577	Y
Aldrin	7.996		602166.5174	19.73759826	Y
alpha-Chlordane	9.822		1319134.581	18.00011606	Y
cis-Nonachlor	11.791		310210.2888	17.36316223	Y
Dieldrin	10.634		381856.9693	16.75876319	Y
gamma-BHC (Lindane)	6.057		4659436.665	18.31633495	Y
gamma-Chlordane	9.463		544532.289	18.56359053	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	J:\MS42\Data\112618\112618F003.D	**Instrument:**	K-MS-42
Acqu Date:	11/26/18 11:48	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817669-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Heptachlor	7.255		1139382.935	19.04936524	Y
Oxychlordane	8.859		1536018.653	18.66155831	Y
trans-Nonachlor	9.892		756607.5713	16.042346	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Validation Report

Data File: Y:\MS42\data\112118\112118F001.D
Lab ID: KQ1817797-02
RunType: CCV
Matrix: Soil

Date Acquired: 11/21/18 12:19
Batch ID: 617359
Analysis Method: ALS SOP/OC_Pest_MS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	Y:\MS42\data\112118\112118F001.D	**Instrument:**	K-MS-42
Acqu Date:	11/21/18 12:19	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817797-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	OC_Pest_MS	**Collect Date:**	10/31/18	**Receive Date:**	11/1/18

Analysis Lot:	617359	**Prep Lot:**		**Report Group:**	KQ1817797
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18852

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.764		7265536.929	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
S_4,4'DDD-d4	11.697		1297648.725	5.028709023	Y
S_4,4'-DDT-d4	12.884		622138.6959	5.396030893	Y
S_Aldrin-13C12	7.986		797486.6129	20.8352811	Y
S_Endrin-13C12	11.290		252473.34	19.01363441	Y
S_GBHCD6	6.007		2121518.512	20.93314775	Y
S_Heptachlor-13C10	7.252		978212.6242	23.34217605	Y
S_Heptachlrepox13C10	8.847		283451.3667	21.22775082	Y
S_Oxychlordane-13C10	8.851		567962.9147	20.92979663	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDD	10.617		4703254.458	16.84362861	Y
2,4'-DDE	9.479		4517551.887	18.31138186	Y
2,4'-DDT	11.861		3683367.332	13.20377198	Y
4,4'-DDD	11.781		8139755.764	19.42342547	Y
4,4'-DDE	10.407		3648274.138	16.13239291	Y
4,4'-DDT	12.948		2583057.509	17.94273439	Y
Aldrin	7.996		562432.0644	19.77772411	Y
alpha-Chlordane	9.822		1243884.972	18.19310906	Y
cis-Nonachlor	11.798		306952.419	18.41552852	Y
Dieldrin	10.634		383683.1776	19.92366159	Y
gamma-BHC (Lindane)	6.064		3949194.928	17.79646253	Y
gamma-Chlordane	9.469		515490.4928	18.83646945	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File:	Y:\MS42\data\112118\112118F001.D	**Instrument:**	K-MS-42
Acqu Date:	11/21/18 12:19	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817797-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Heptachlor	7.255		1071382.013	18.89582817	Y
trans-Nonachlor	9.899		716630.2865	16.286691	Y

U: Undetected at or above MDL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	Y:\MS42\data\112118\112118F001.D	**Instrument:**	K-MS-42
Acqu Date:	11/21/18 12:19	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817797-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	OC_Pest_MS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	617359	**Prep Lot:**		**Report Group:**	KQ1817797
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.764		7265536.929	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
S_4,4'DDD-d4	11.697		1297648.725	5.028709023	Y
S_4,4'-DDT-d4	12.884		622138.6959	5.396030893	Y
S_Aldrin-13C12	7.986		797486.6129	20.8352811	Y
S_Endrin-13C12	11.290		252473.34	19.01363441	Y
S_GBHCD6	6.007		2121518.512	20.93314775	Y
S_Heptachlor-13C10	7.252		978212.6242	23.34217605	Y
S_Heptachlrepox13C10	8.847		283451.3667	21.22775082	Y
S_Oxychlordane-13C10	8.851		567962.9147	20.92979663	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDD	10.617		4703254.458	16.84362861	Y
2,4'-DDE	9.479		4517551.887	18.31138186	Y
2,4'-DDT	11.861		3683367.332	13.20377198	Y
4,4'-DDD	11.781		8139755.764	19.42342547	Y
4,4'-DDE	10.407		3648274.138	16.13239291	Y
4,4'-DDT	12.948		2583057.509	17.94273439	Y
Aldrin	7.996		562432.0644	19.77772411	Y
alpha-Chlordane	9.822		1243884.972	18.19310906	Y
cis-Nonachlor	11.798		306952.419	18.41552852	Y
Dieldrin	10.634		383683.1776	19.92366159	Y
gamma-BHC (Lindane)	6.064		3949194.928	17.79646253	Y
gamma-Chlordane	9.469		515490.4928	18.83646945	Y

Data File:	Y:\MS42\data\112118\112118F001.D	**Instrument:**	K-MS-42
Acqu Date:	11/21/18 12:19	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817797-02	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Heptachlor	7.255		1071382.013	18.89582817	Y
Oxychlordane	8.859		1468327.554	19.12118782	Y
trans-Nonachlor	9.899		716630.2865	16.286691	Y

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Injection Log

Batch Data Path	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin				
Analysis Time	11/20/2018 10:57:01 AM	**Analyst Name**	CORP\alkls.nouser	**Report Generator Name**	CORP\elissa.bruno
Calibration Last Update	11/20/2018 10:57:00 AM	**Analyze Quant Version**	B.09.00	**Report Quant Version**	B.09.00

Sequence Table

Data File	Name	Type	Vial	Vol.	Level	Acq. Method File	Acq. Date-Time
111618F005.D	OC PEST D/E BREAKDOWN SVM59-70F	QC	1	1	20	OC Pest_dMRM	11/16/2018 12:29:43 PM
111618F006.D	IB	Blank	2	1		OC Pest_dMRM	11/16/2018 12:47:19 PM
111618F007.D	OC PEST ICAL 0.5ng/mL SVM59-48A	Cal	3	1	0.5	OC Pest_dMRM	11/16/2018 1:04:54 PM
111618F008.D	OC PEST ICAL 1ng/mL SVM59-48B	Cal	4	1	1	OC Pest_dMRM	11/16/2018 1:22:31 PM
111618F009.D	OC PEST ICAL 2ng/mL SVM59-48C	Cal	5	1	2	OC Pest_dMRM	11/16/2018 1:40:12 PM
111618F010.D	OC PEST ICAL5ng/mL SVM59-48D	Cal	6	1	5	OC Pest_dMRM	11/16/2018 1:57:46 PM
111618F011.D	OC PEST ICAL 10ng/mL SVM59-48E	Cal	7	1	10	OC Pest_dMRM	11/16/2018 2:15:21 PM
111618F012.D	OC PEST ICAL 20ng/mL SVM59-48F	Cal	8	1	20	OC Pest_dMRM	11/16/2018 2:32:59 PM
111618F013.D	OC PEST ICAL 40ng/mL SVM59-48G	Cal	9	1	40	OC Pest_dMRM	11/16/2018 2:50:39 PM
111618F014.D	OC PEST ICAL 60ng/mL SVM59-48H	Cal	10	1	60	OC Pest_dMRM	11/16/2018 3:08:17 PM
111618F015.D	OC PEST ICAL 80ng/mL SVM59-48I	Cal	11	1	80	OC Pest_dMRM	11/16/2018 3:25:54 PM
111618F016.D	OC PEST ICAL 100ng/mL SVM59-48J	Cal	12	1	100	OC Pest_dMRM	11/16/2018 3:43:29 PM
111618F018.D	OC PEST ICV 20ng/mL SVM59-48K	CC	13	1	20	OC Pest_dMRM	11/16/2018 4:18:45 PM

Revision

OC Pest ICAL KC1900105

MAR 14 2019 lb

Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F007.D	**Vial**	3
Acq. Date-Time	11/16/2018 1:04:54 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 0.5ng/mL SVM59-48A	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.686	289.8 -> 254.8	1056496	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2088961	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.227	276.8 -> 241.8	853911	20.000 ng/ml	0.011
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1122652	20.000 ng/ml	0.000
Aldrin-13C(IS)	7.958	269.8 -> 200.0	816641	20.000 ng/ml	0.005
Octachlorostyrene-13C8(IS)	8.543	315.8 -> 245.8	568089	20.000 ng/ml	0.005
Isodrin-13C12(IS)	8.626	199.9 -> 130.1	889186	20.000 ng/ml	0.009
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	264168	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.811	190.0 -> 125.0	548085	20.000 ng/ml	0.006
Pyrene-d10	9.725	212.0 -> 208.0	7863270	100.000 ng/ml	0.007
Endrin-13C12(IS)	11.250	269.8 -> 200.0	278342	20.000 ng/ml	0.002
4,4'-DDD d4(IS)	11.656	243.0 -> 173.1	1241029	5.000 ng/ml	0.007
4,4'-DDT-d4(IS)	12.859	243.0 -> 173.1	586462	5.000 ng/ml	0.008
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	33051	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	1635583	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	505351	5.000 ng/ml	0.011

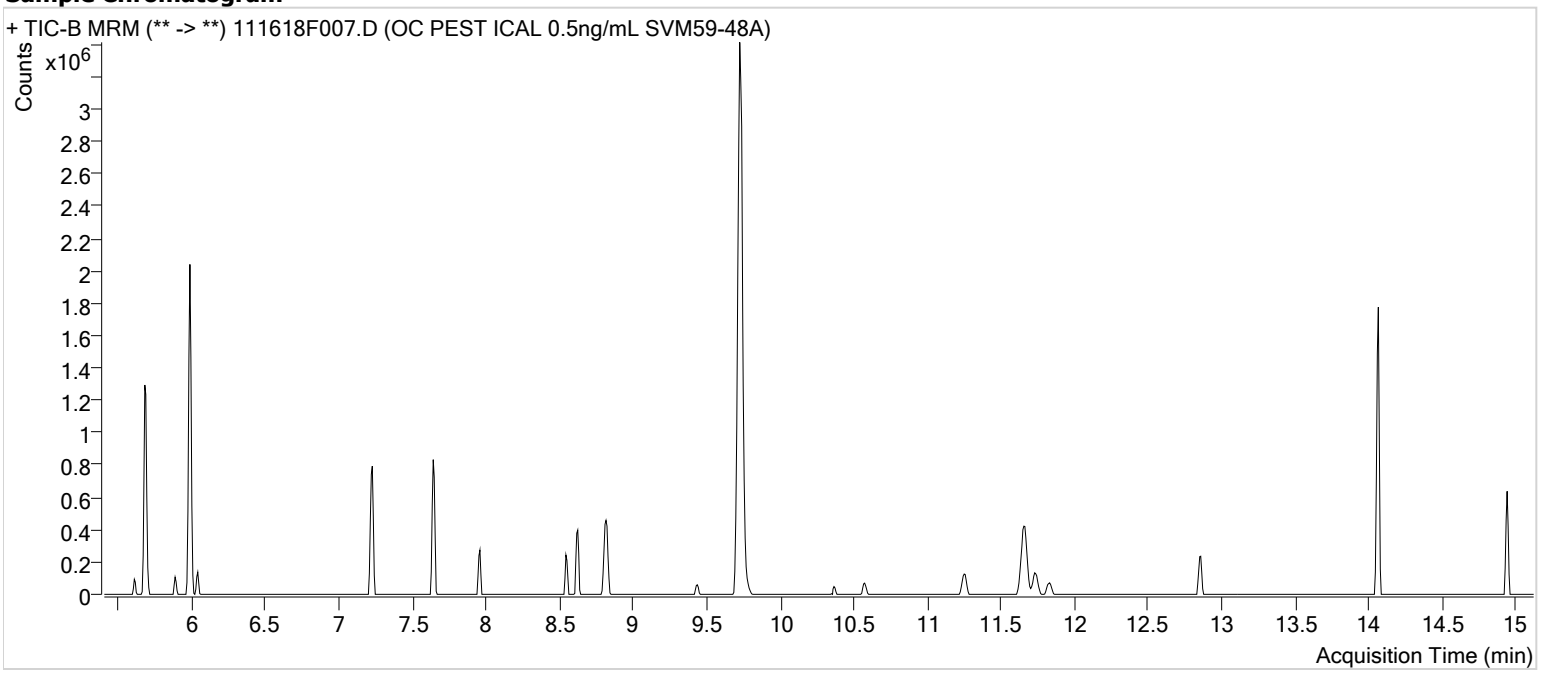
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1056496	18.253 ng/ml	
		Spiked Amount =	20.0	Recovery =	*91.3 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2088961	19.045 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.2 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	853911	18.827 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.1 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1122652	19.730 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.7 %*
Aldrin-13C	7.952	269.8 -> 200.0	816638	19.714 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.6 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	568089	19.153 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.8 %*
Isodrin-13C12	8.616	199.9 -> 130.1	889186	19.673 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.4 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	264168	18.280 ng/ml	
		Spiked Amount =	20.0	Recovery =	*91.4 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	548085	18.662 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.3 %*
Endrin-13C12	11.247	269.8 -> 200.0	278342	19.368 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.8 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1241029	4.444 ng/ml	
		Spiked Amount =	5.0	Recovery =	*88.9 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	586462	4.700 ng/ml	
		Spiked Amount =	5.0	Recovery =	*94.0 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	33051	18.573 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.9 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	1635583	19.837 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.2 %*
Mirex-13C10	14.930	276.8 -> 241.8	505351	4.195 ng/ml	
		Spiked Amount =	5.0	Recovery =	*83.9 %*

Quantitative Analysis Sample Report

Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	84862	0.568	ng/ml	92
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	58403	0.611	ng/ml	95
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	106230	0.562	ng/ml	96
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	123335	0.564	ng/ml	95
δ-BHC	γ-BHC-d6(IS)	6.404	181.1 -> 145.1	49948	0.574	ng/ml	99
Heptachlor	Heptachlor-13C10(IS)	7.230	271.7 -> 236.9	29760	0.601	ng/ml	1
Chorpyrifos	Chorpyrifos-d10(IS)	7.725	196.9 -> 169.0	49814	0.629	ng/ml	99
Aldrin	Aldrin-13C(IS)	7.955	254.9 -> 220.0	87884	0.421	ng/ml	10
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.556	342.8 -> 307.8	42801	0.585	ng/ml	99
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	27455	0.602	ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.823	352.8 -> 262.9	8251	0.549	ng/ml	98
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	44367	0.599	ng/ml	98
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.430	271.8 -> 236.9	15226	0.577	ng/ml	98
2,4'-DDE	4,4'-DDD d4(IS)	9.440	246.0 -> 176.2	137990	0.585	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	39271	0.595	ng/ml	96
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	8977	0.514	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	23699	0.558	ng/ml	92
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	131805	0.609	ng/ml	98
2,4'-DDD	4,4'-DDD d4(IS)	10.577	235.0 -> 165.1	156454	0.586	ng/ml	99
Dieldrin	Endrin-13C12(IS)	10.594	262.9 -> 193.0	11269	0.531	ng/ml	90
Endosulfan II	Endrin-13C12(IS)	11.247	206.9 -> 172.0	30367	0.000	ng/ml	81
Endrin	Endrin-13C12(IS)	11.258	262.8 -> 193.0	12125	0.635	ng/ml	100
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	243480	0.608	ng/ml	95
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	9064	0.564	ng/ml	88
2,4'-DDT	4,4'-DDT-d4(IS)	11.834	235.0 -> 165.1	150685	0.573	ng/ml	92
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	2930	0.544	ng/ml	97
Endosulfan sulfate	Endrin-13C12(IS)	12.804	271.9 -> 237.0	17751	0.543	ng/ml	97
4,4'-DDT	4,4'-DDT-d4(IS)	12.916	235.0 -> 165.1	73999	0.545	ng/ml	99
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	8092	0.696	ng/ml	78
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	63559	0.609	ng/ml	86
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	78961	0.485	ng/ml	91

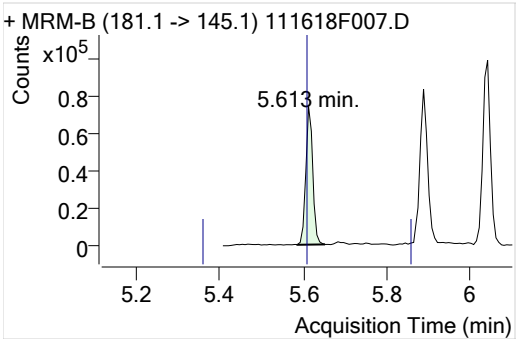
(m) = manual integration ND = Not Detected NC = Not Calculated

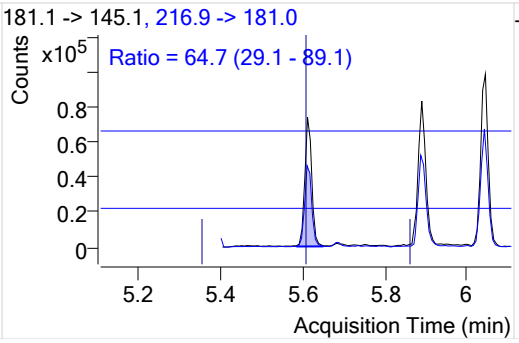
Sample Chromatogram

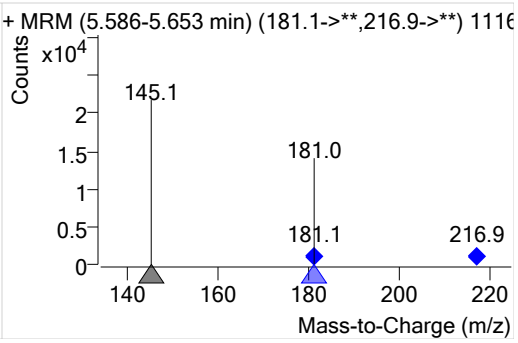


Quantitative Analysis Sample Report

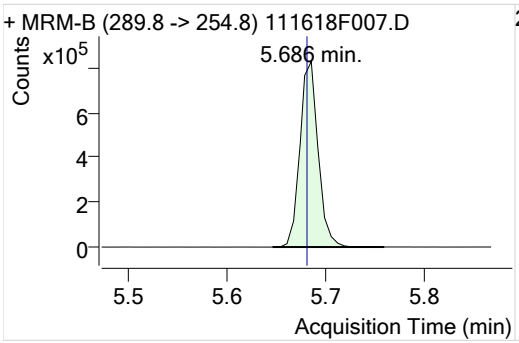
α-BHC

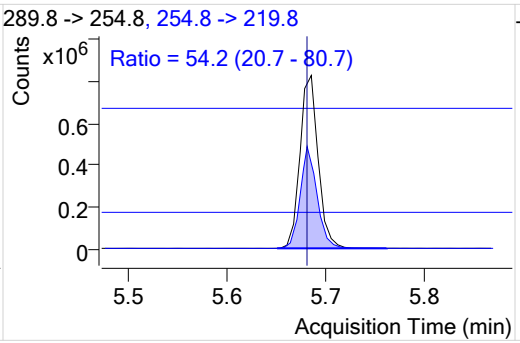


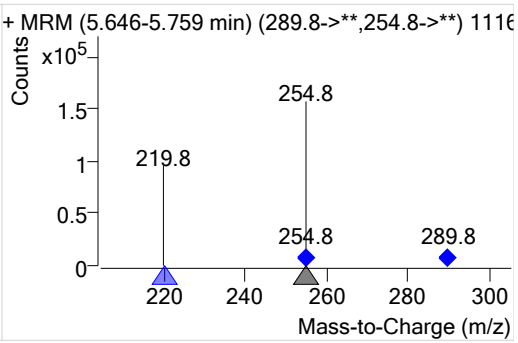




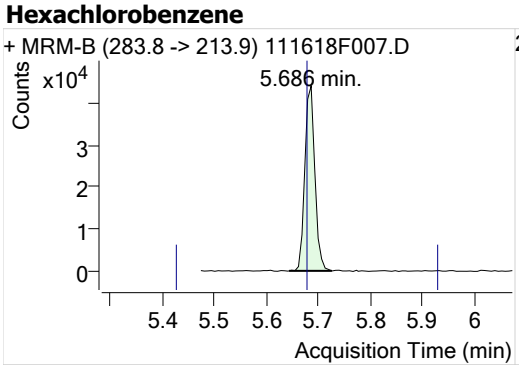
Hexachlorobenzene-13C6

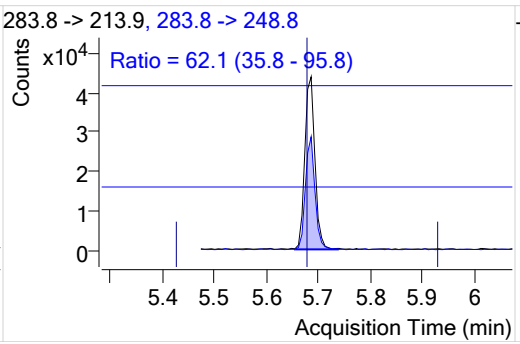


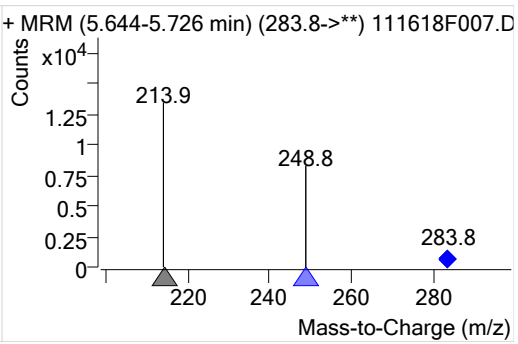




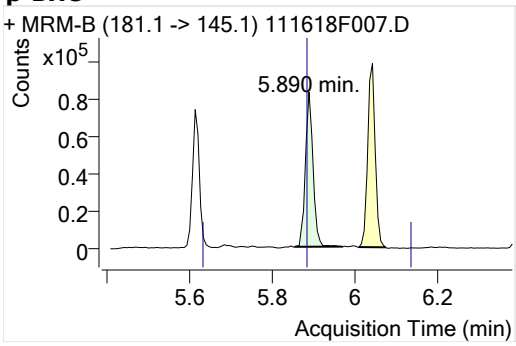
Hexachlorobenzene

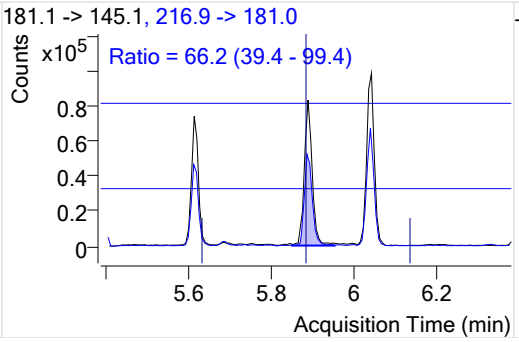


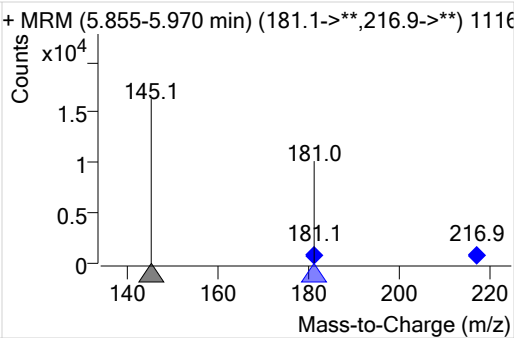




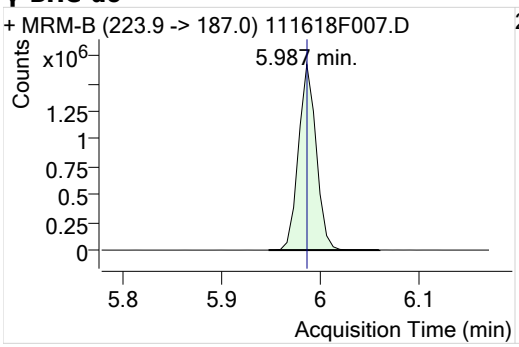
β-BHC

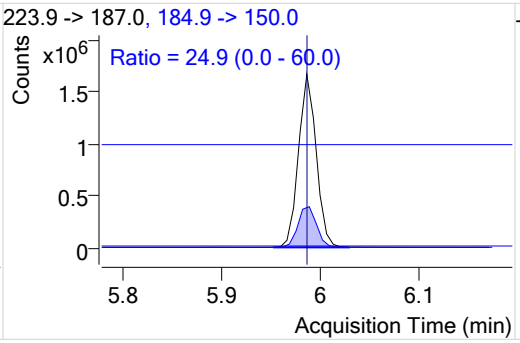


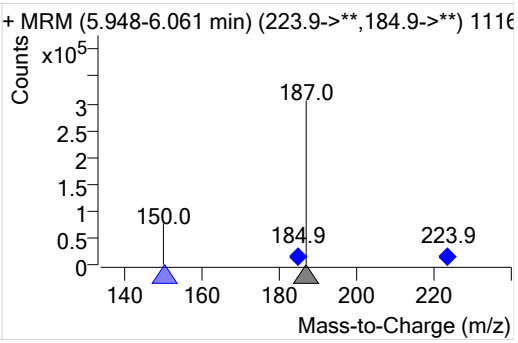




γ-BHC-d6

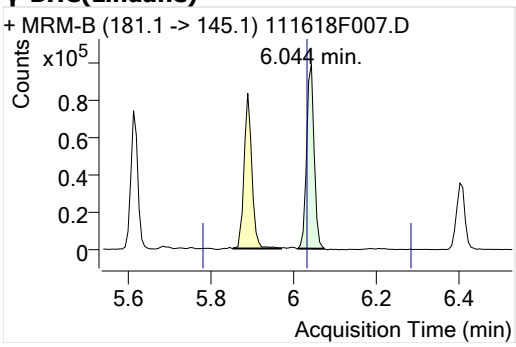


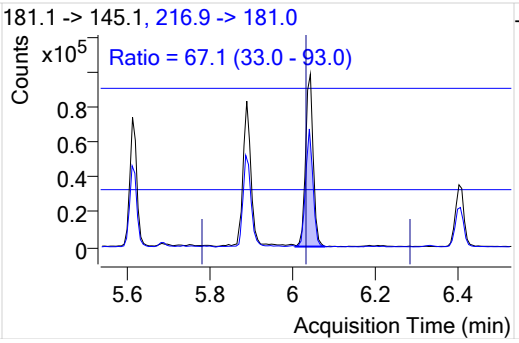


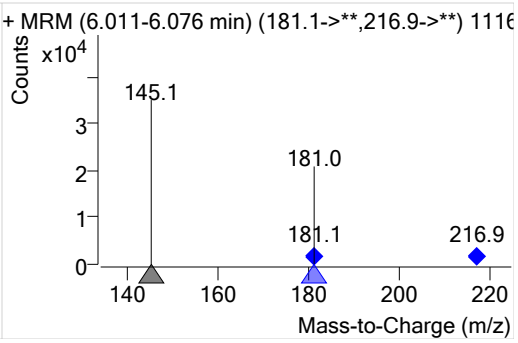


Quantitative Analysis Sample Report

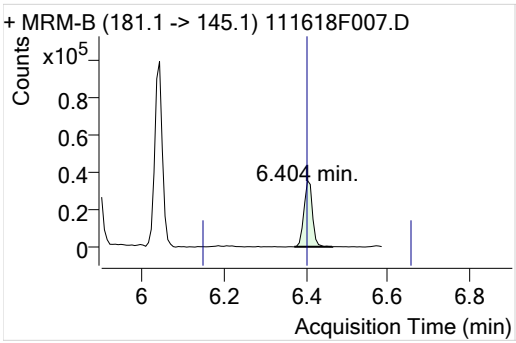
γ-BHC(Lindane)

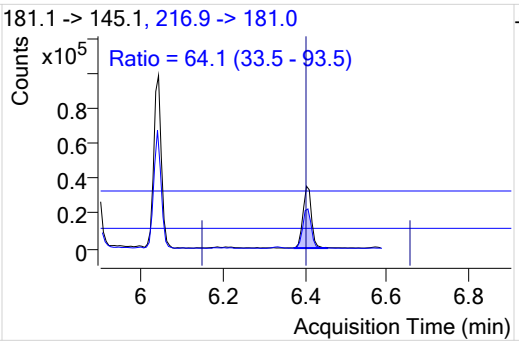


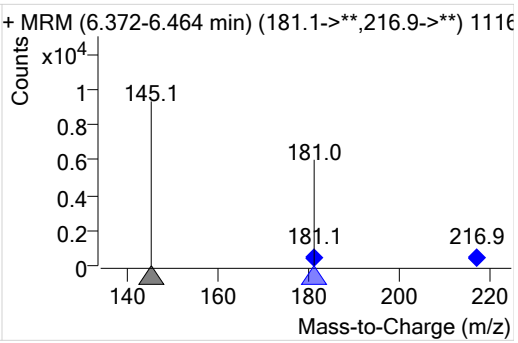




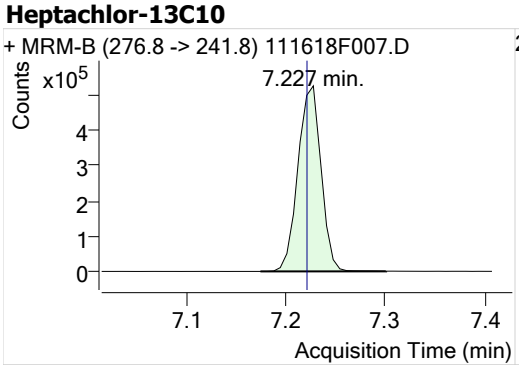
δ-BHC

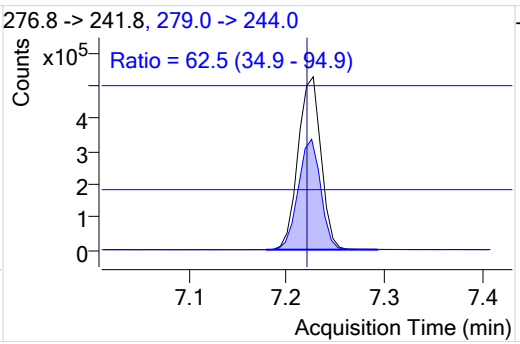


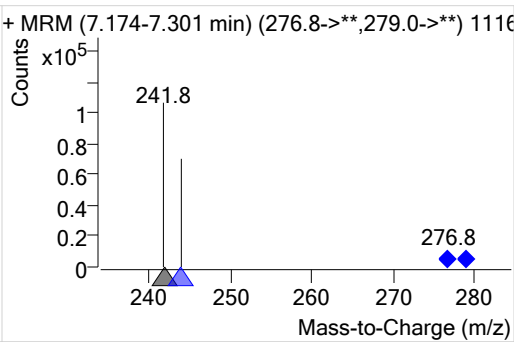




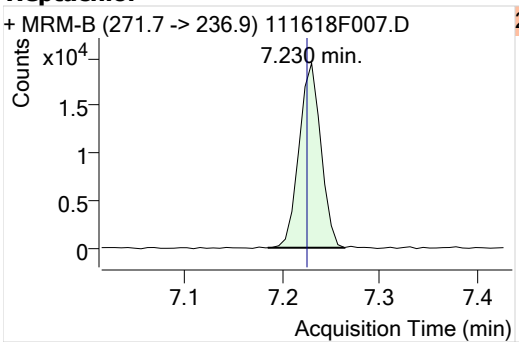
Heptachlor-13C10

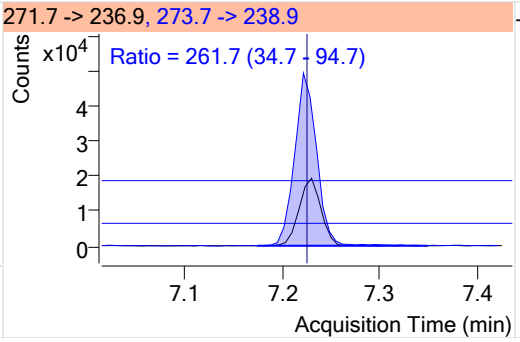


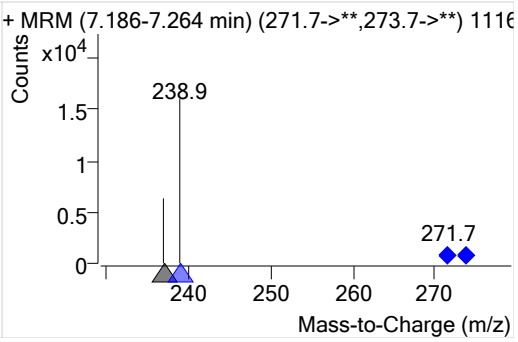




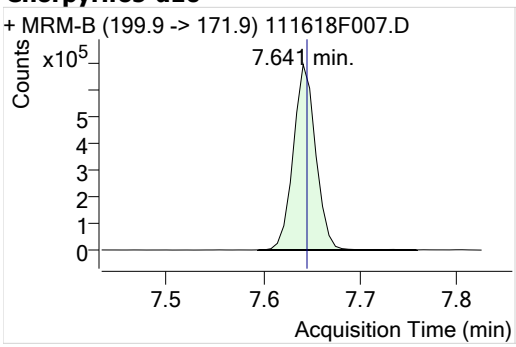
Heptachlor

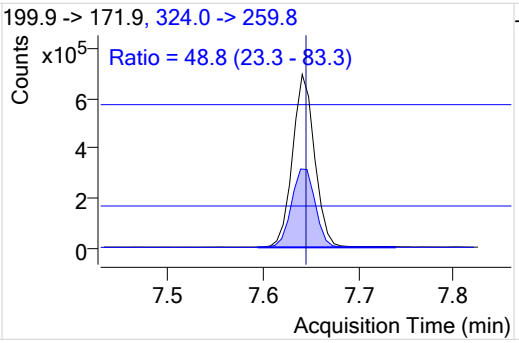


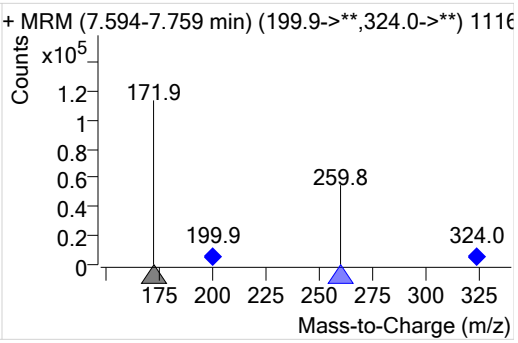




Chorpyrifos-d10

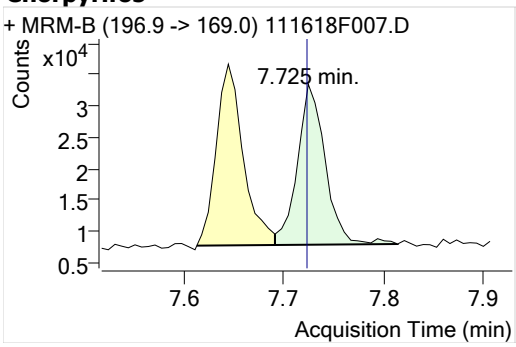


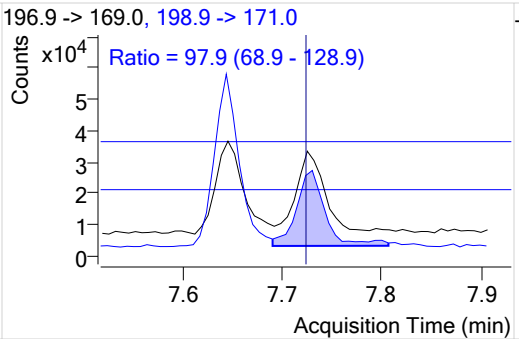


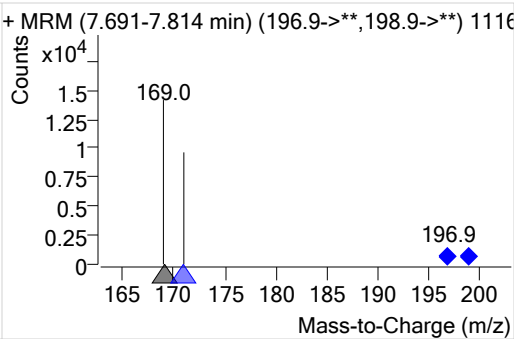


Quantitative Analysis Sample Report

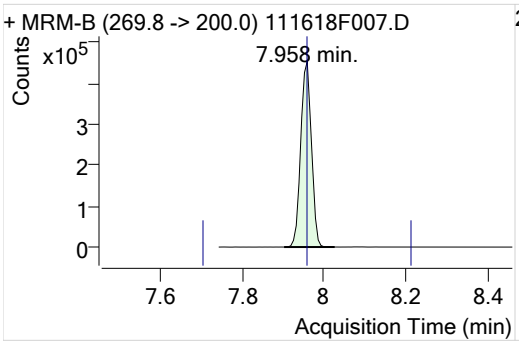
Chorpyrifos

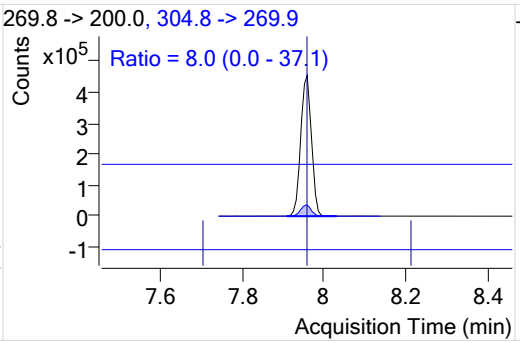


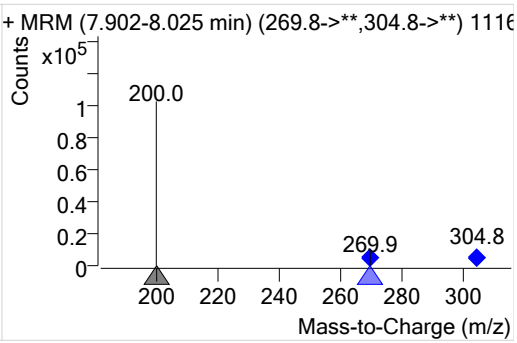




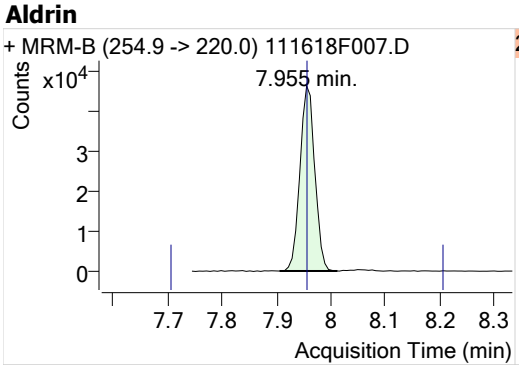
Aldrin-13C

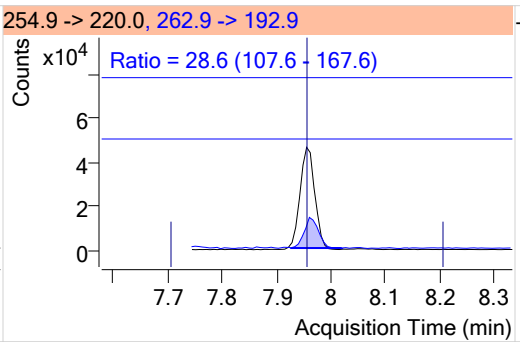


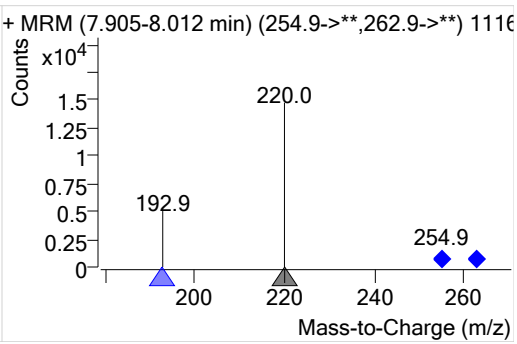




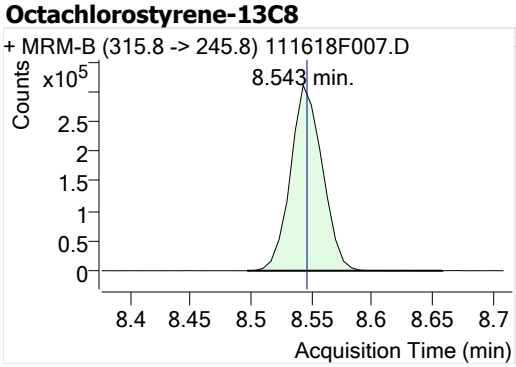
Aldrin

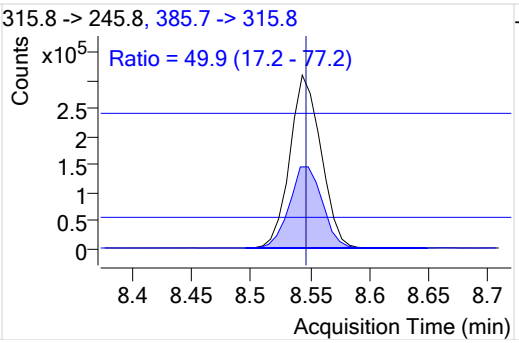


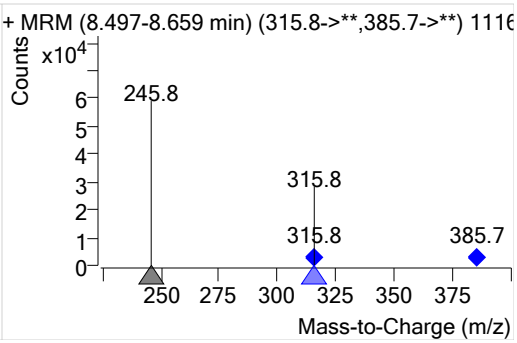




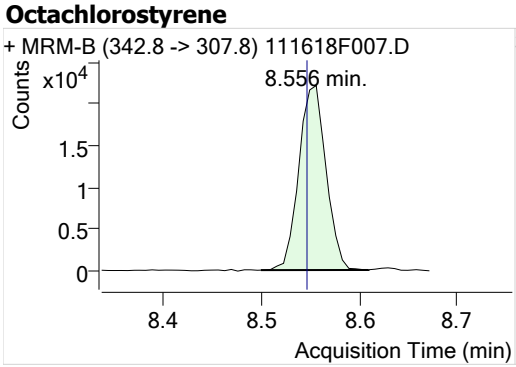
Octachlorostyrene-13C8

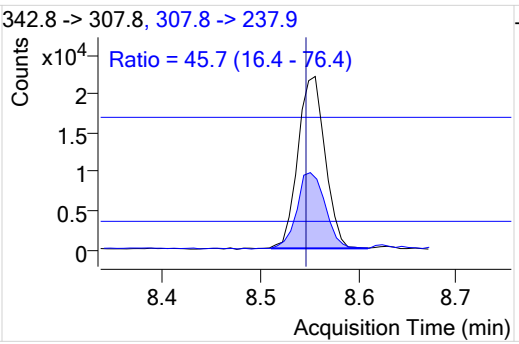


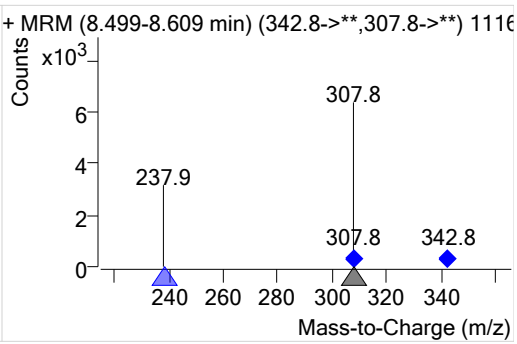




Octachlorostyrene

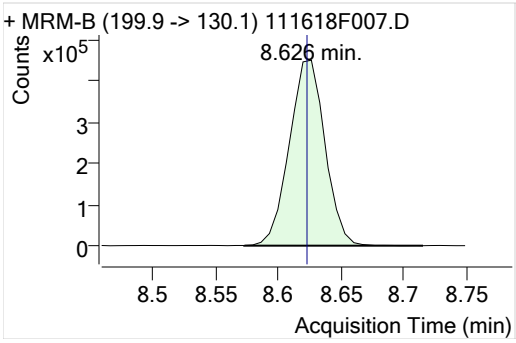


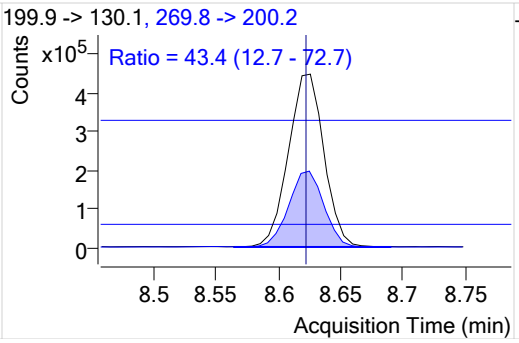


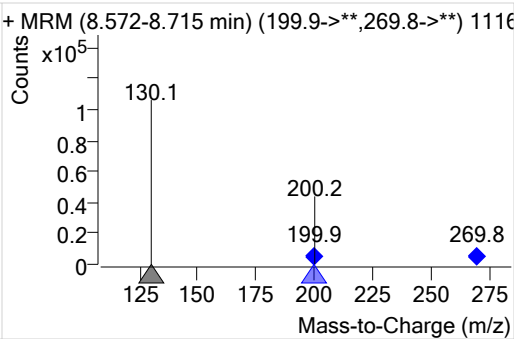


Quantitative Analysis Sample Report

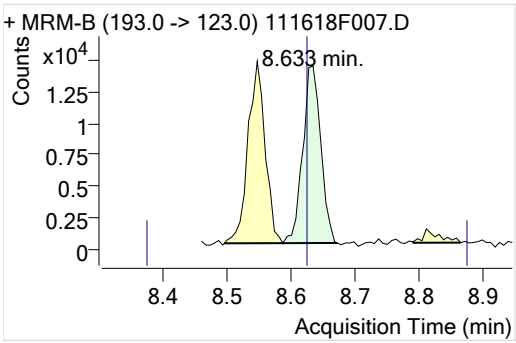
Isodrin-13C12

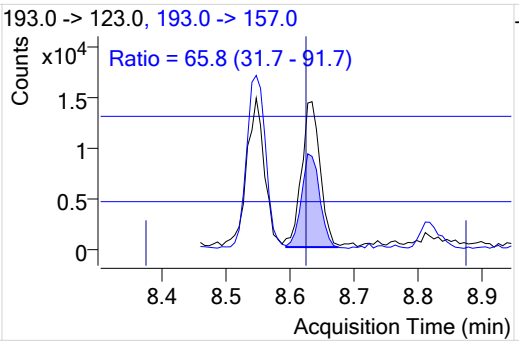


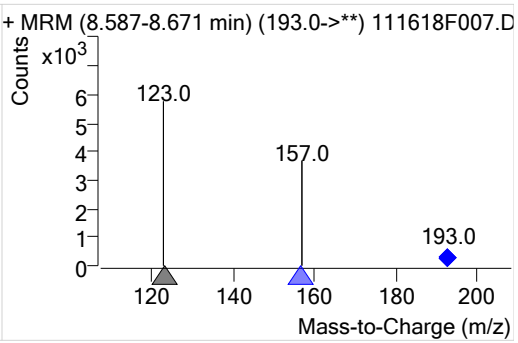




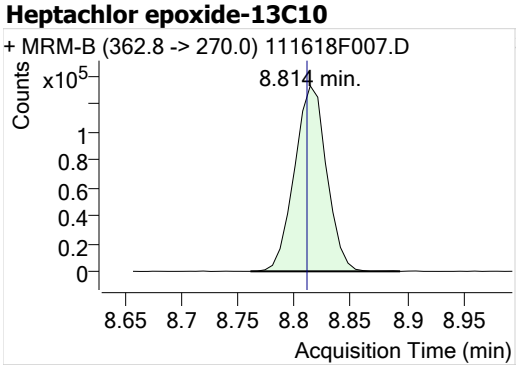
Isodrin

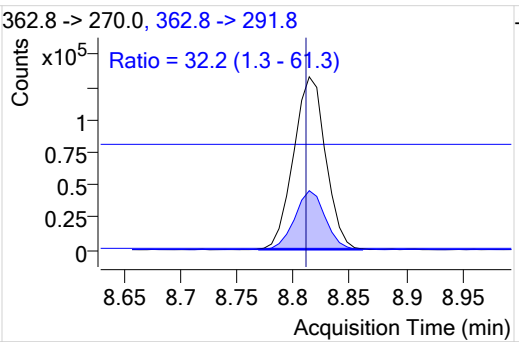


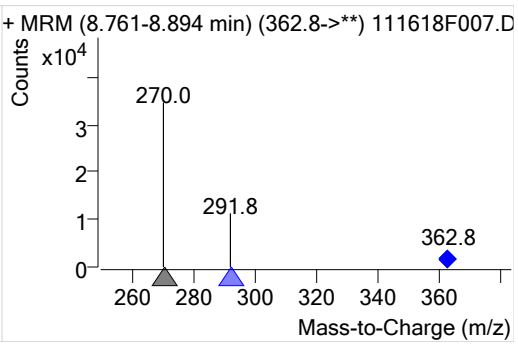




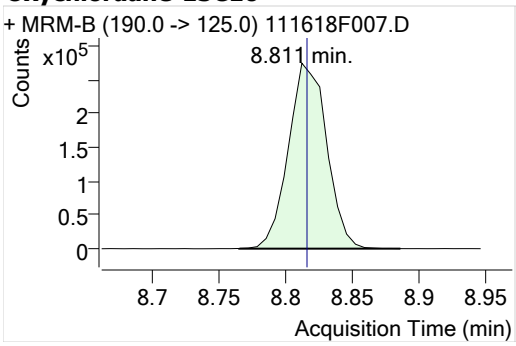
Heptachlor epoxide-13C10

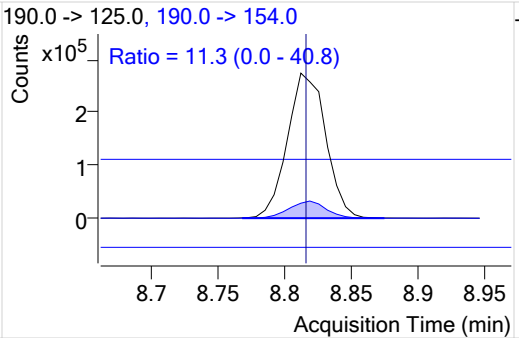


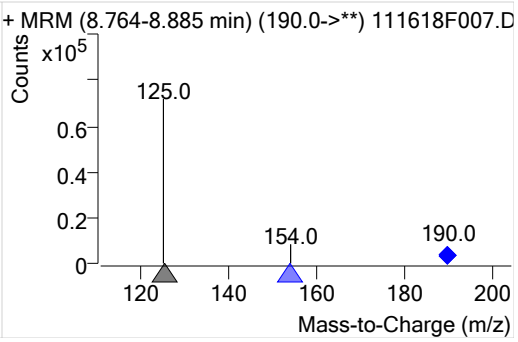




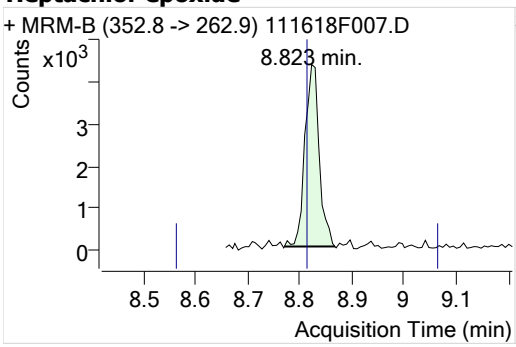
Oxychlordane-13C10

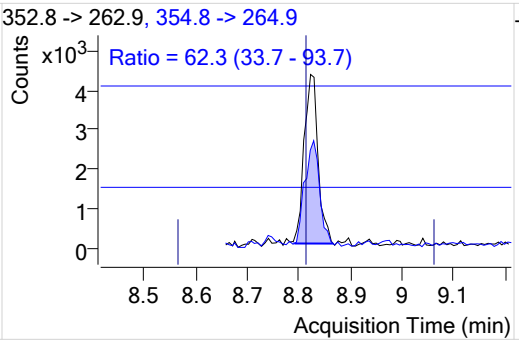


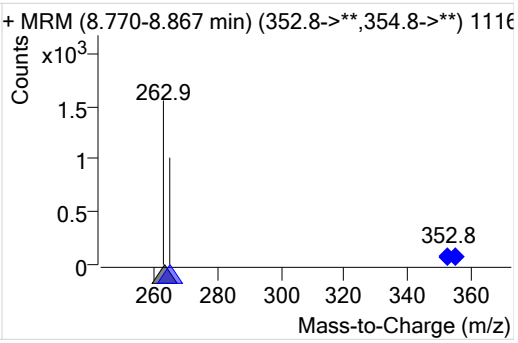




Heptachlor epoxide

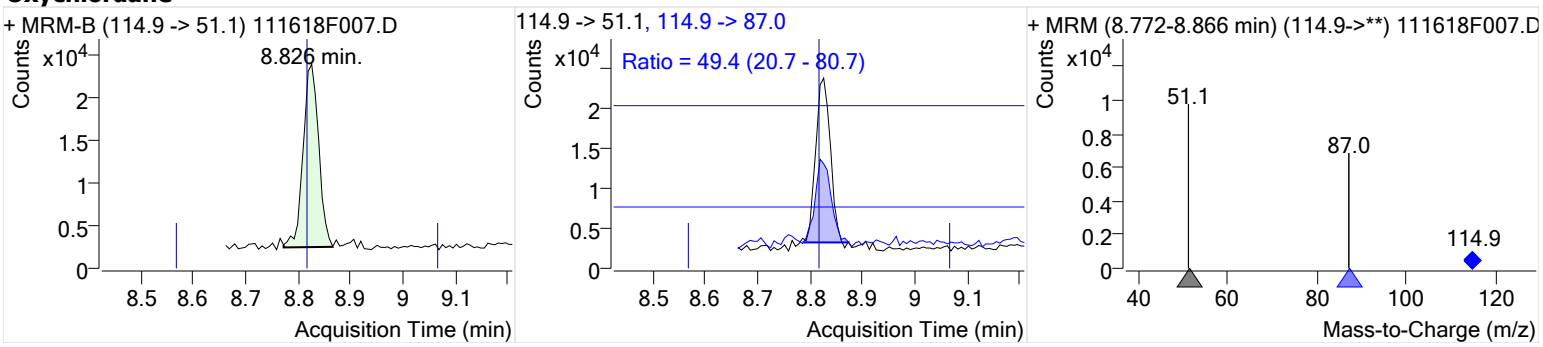




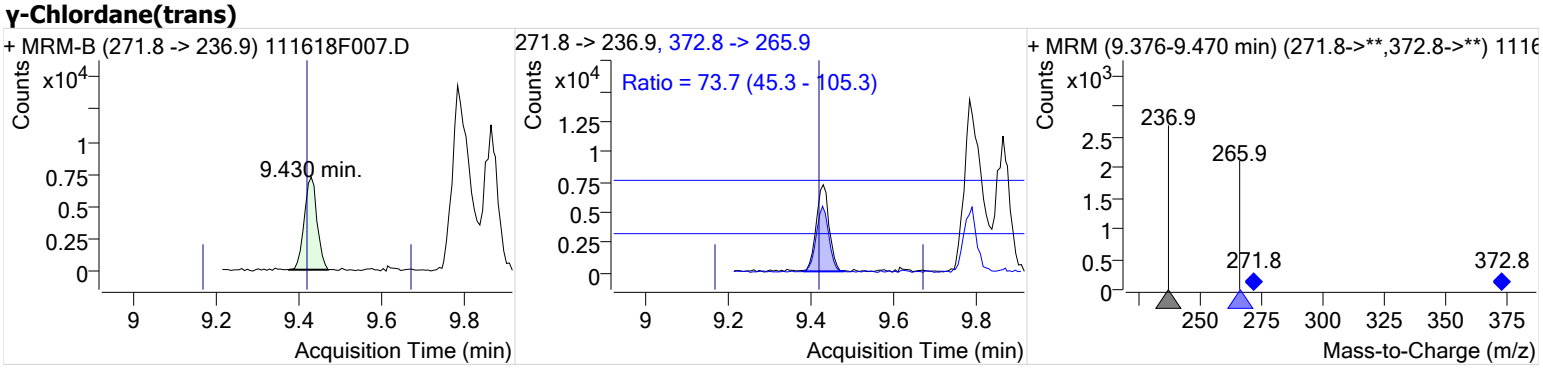


Quantitative Analysis Sample Report

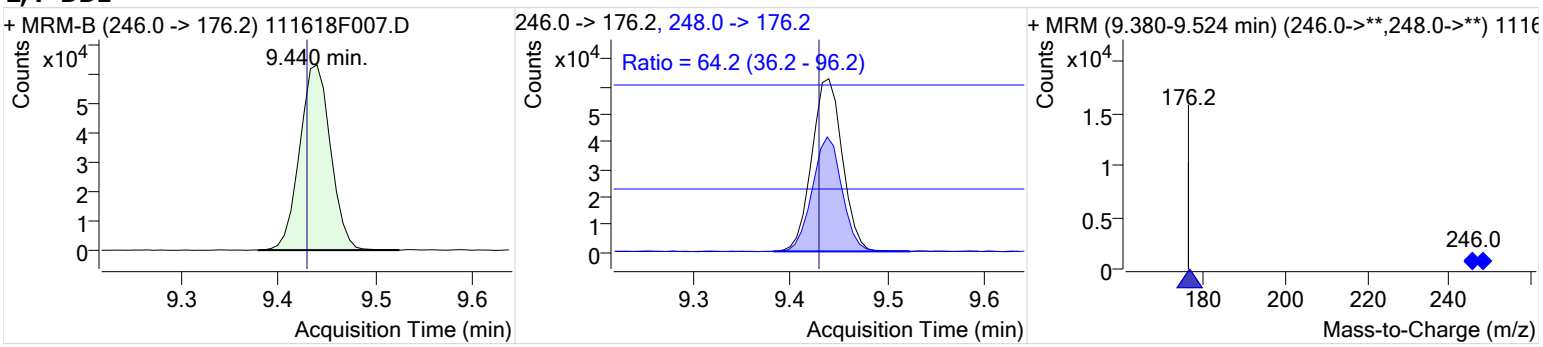
Oxychlordane



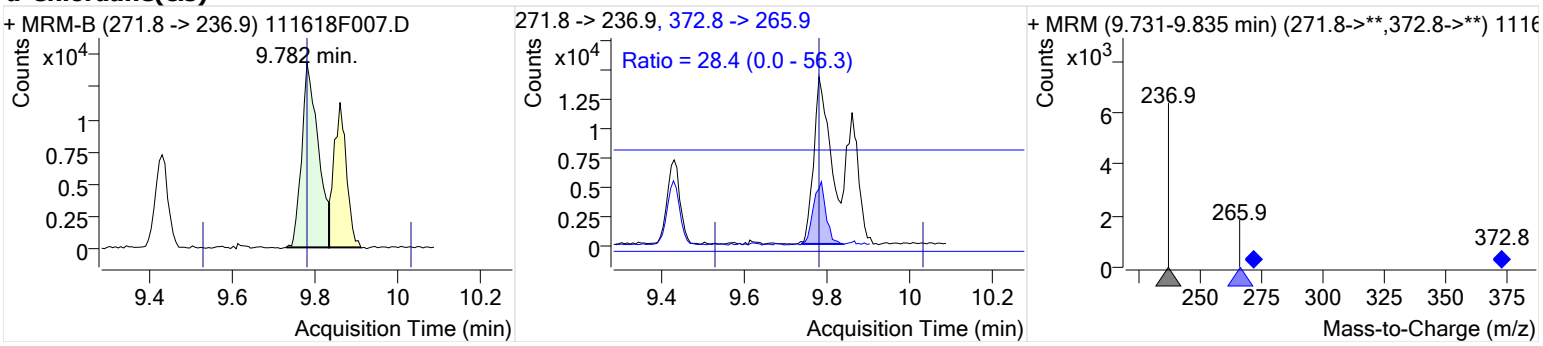
γ-Chlordane(trans)



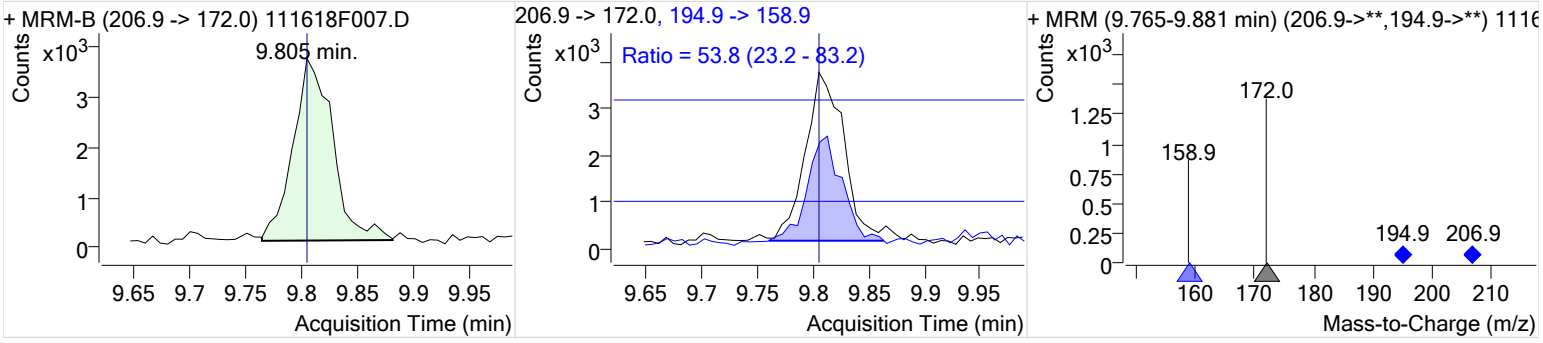
2,4'-DDE



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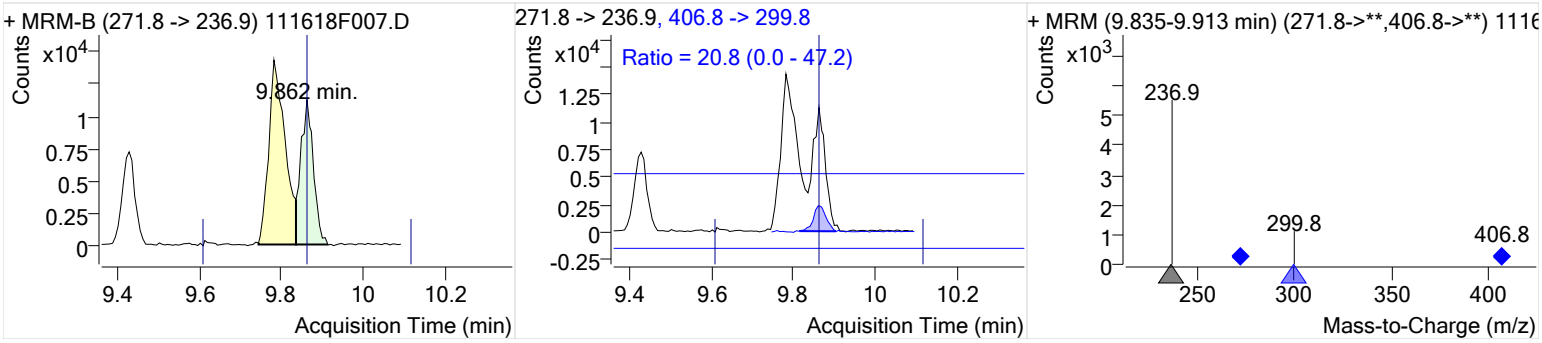


Endosulfan I

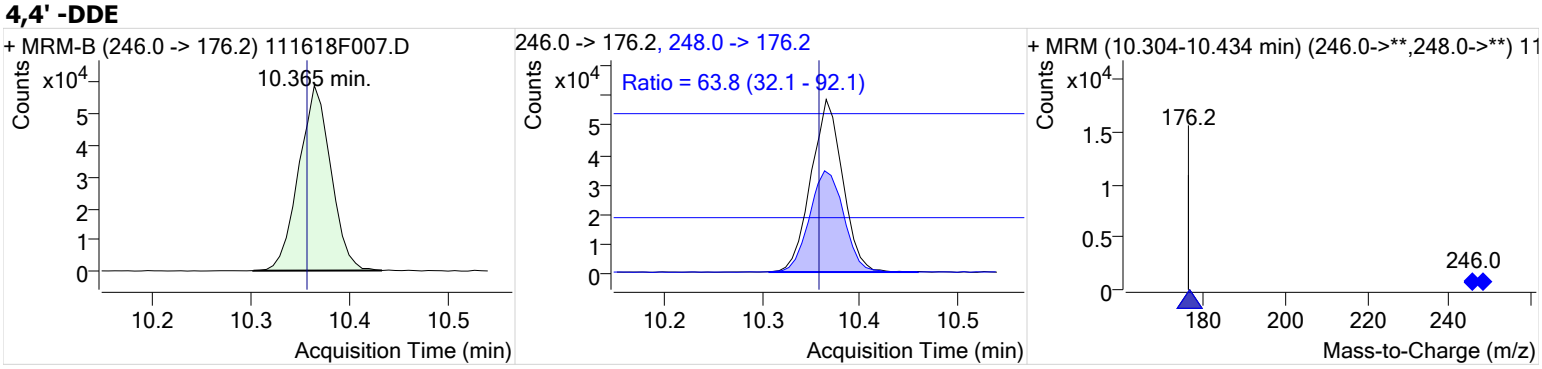


Quantitative Analysis Sample Report

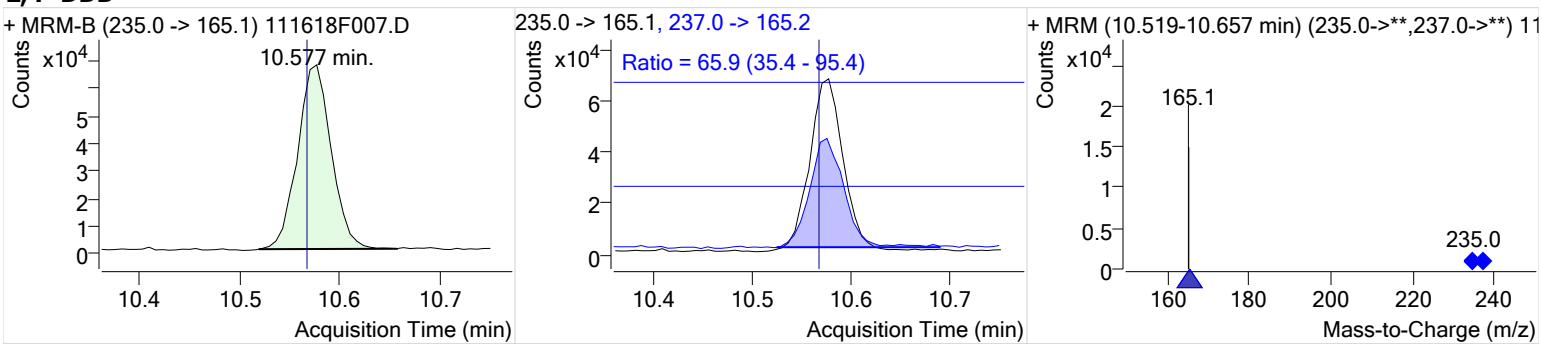
trans-Nanochlor



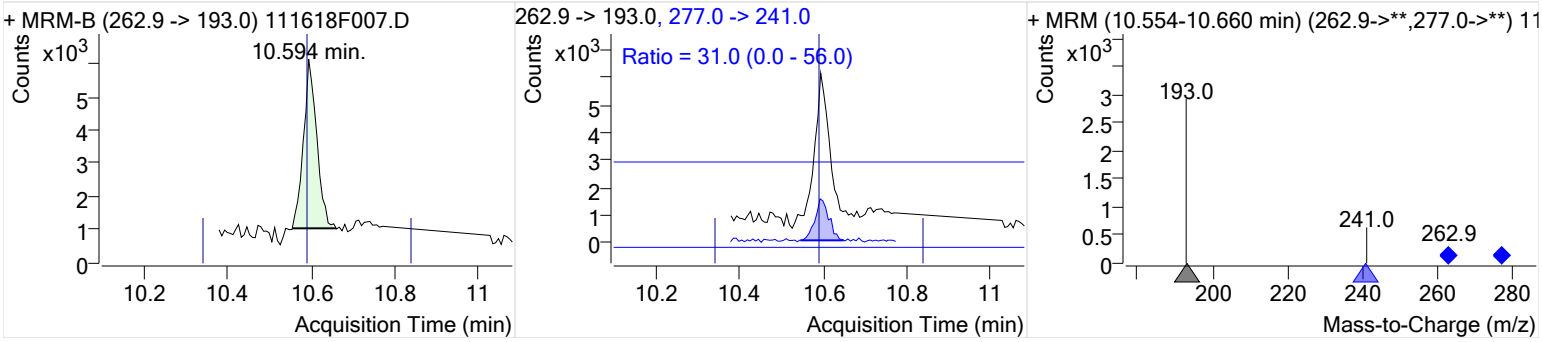
4,4' -DDE



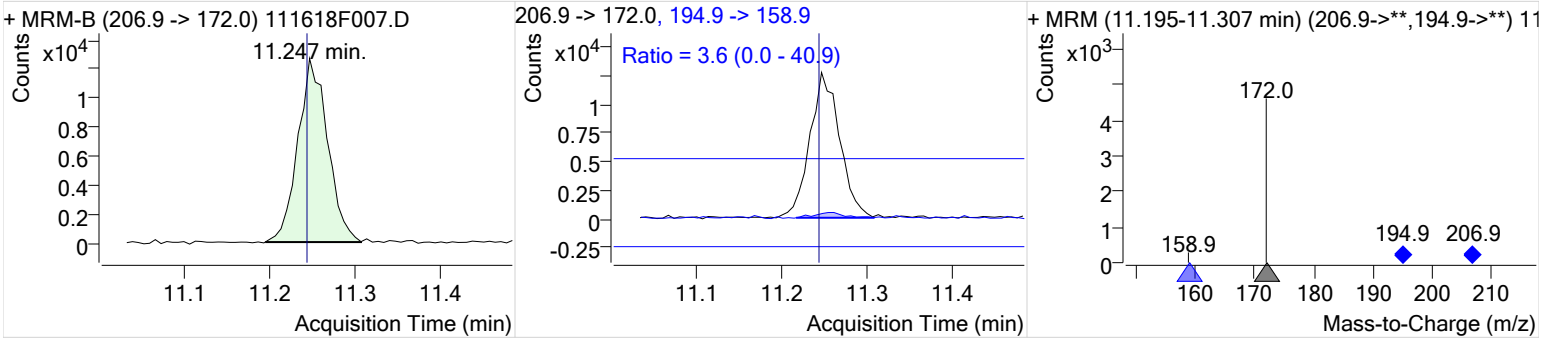
2,4'-DDD



Dieldrin

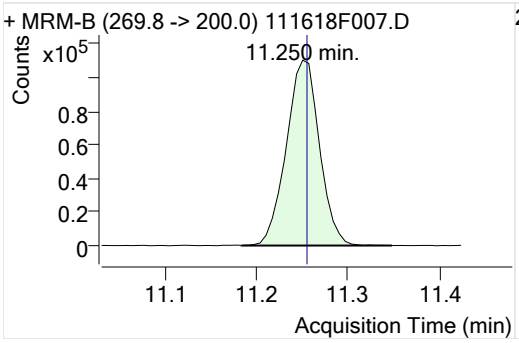


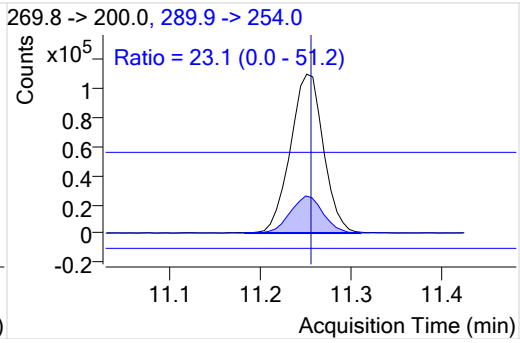
Endosulfan II

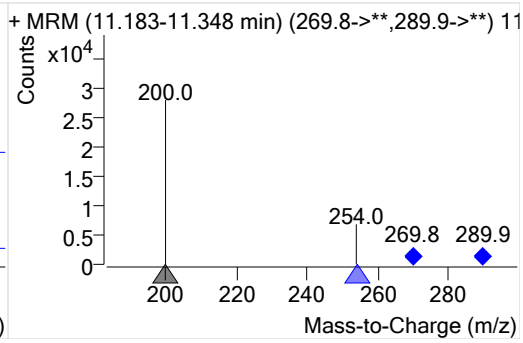


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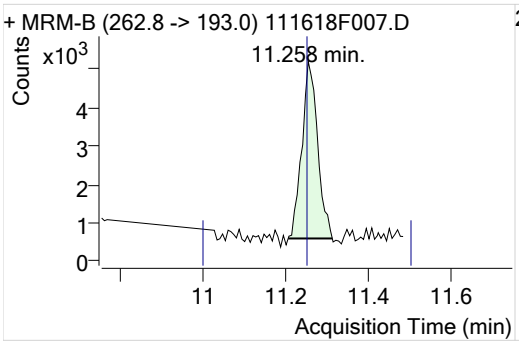
Endrin-13C12

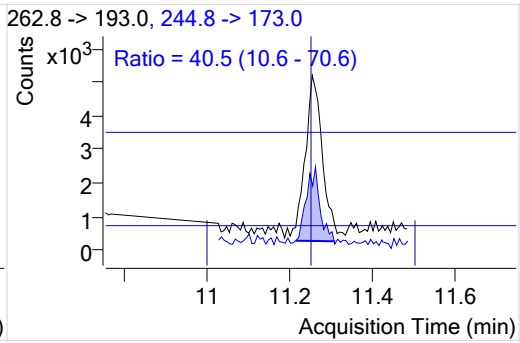


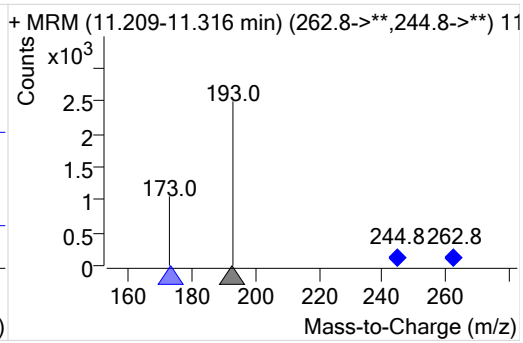




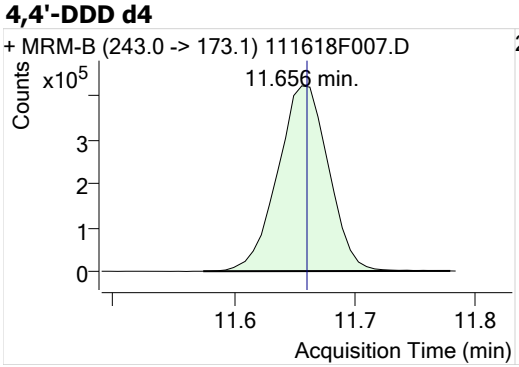
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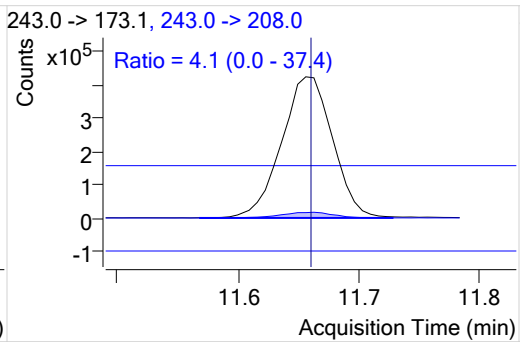


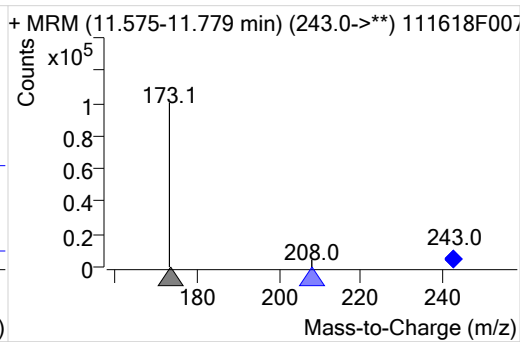




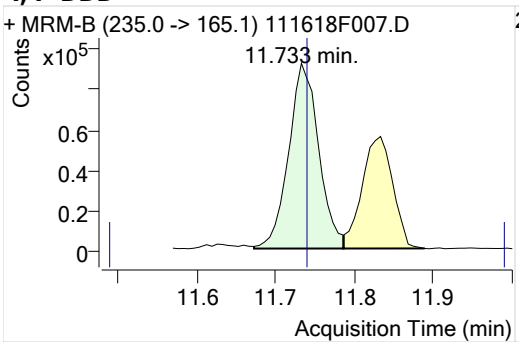
4,4'-DDD d4

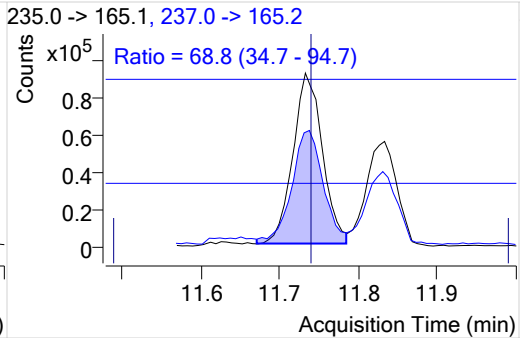


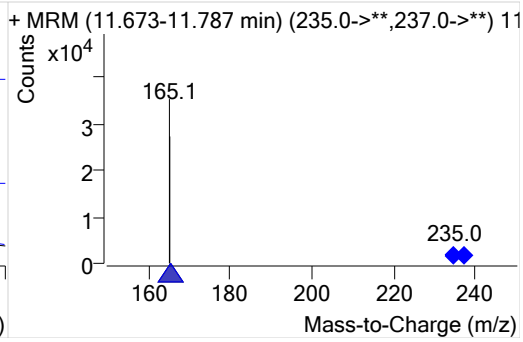




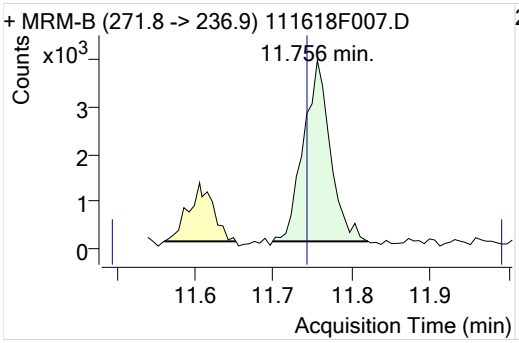
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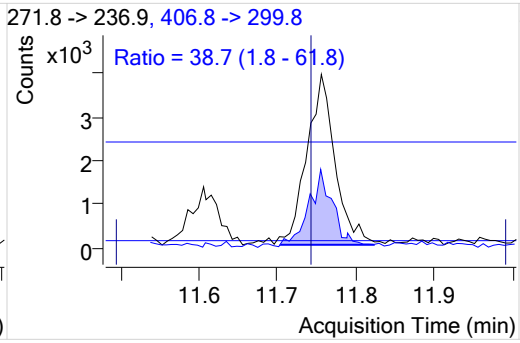


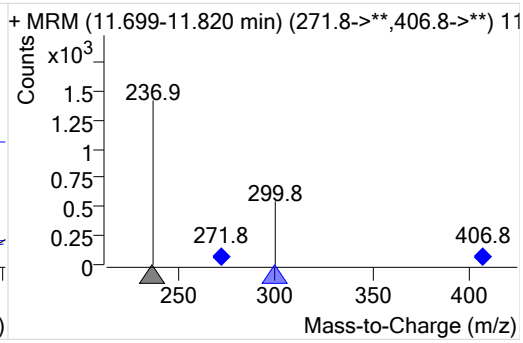




cis-Nonachlor

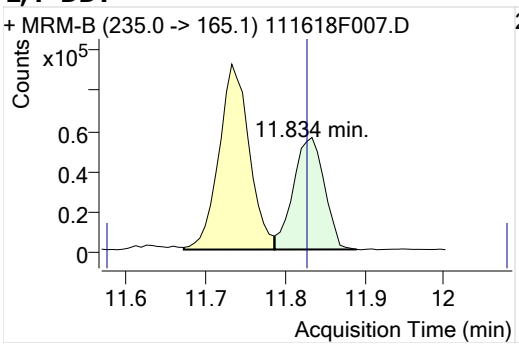


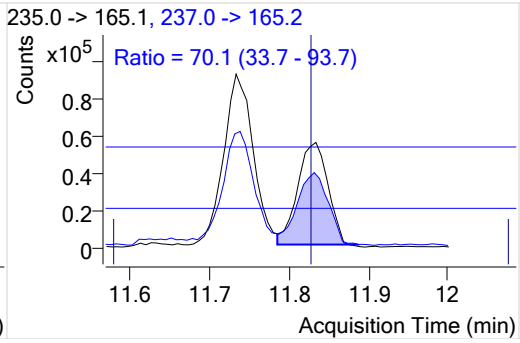


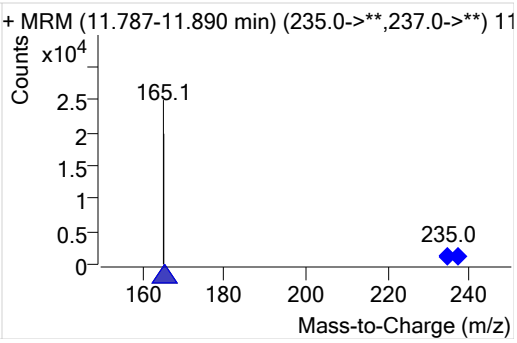


Quantitative Analysis Sample Report

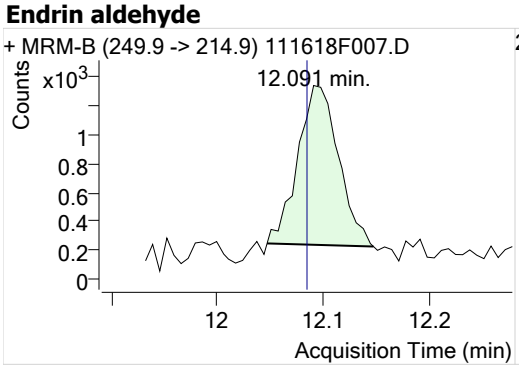
2,4'-DDT

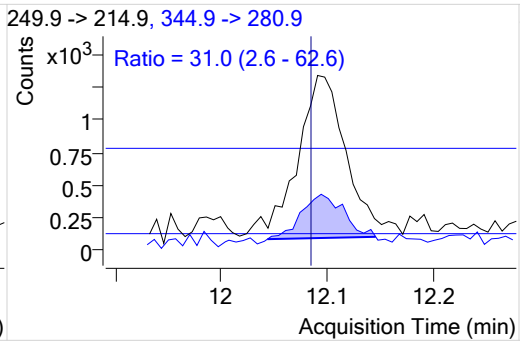


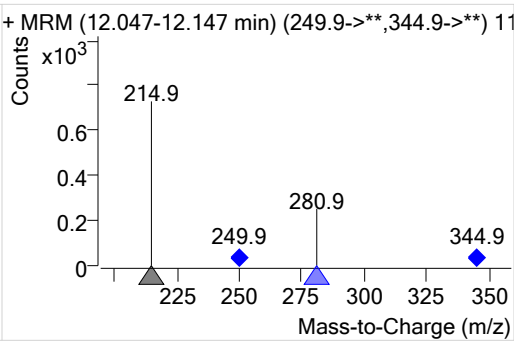




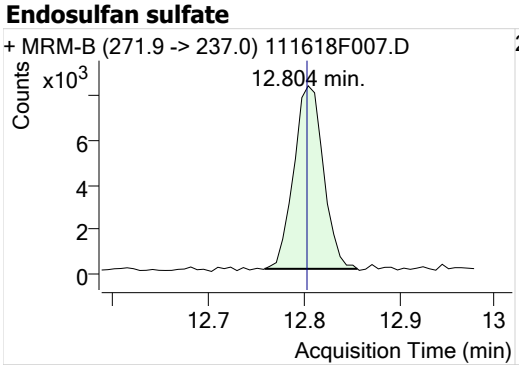
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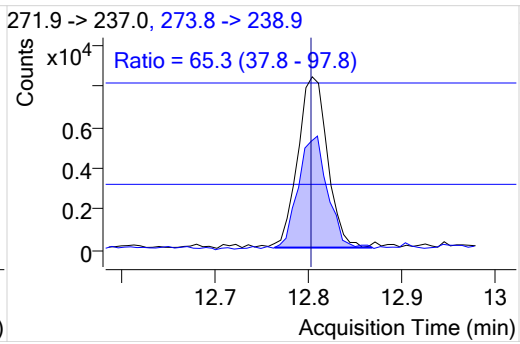


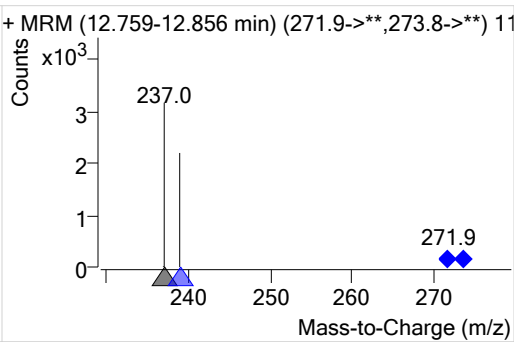




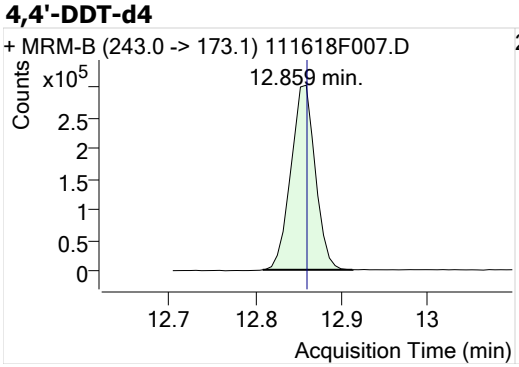
Endosulfan sulfate

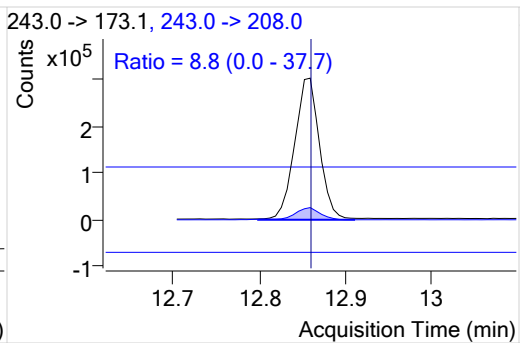


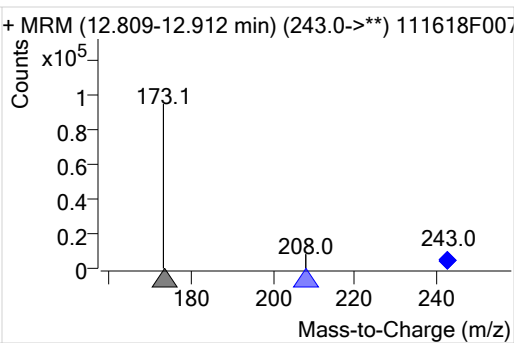




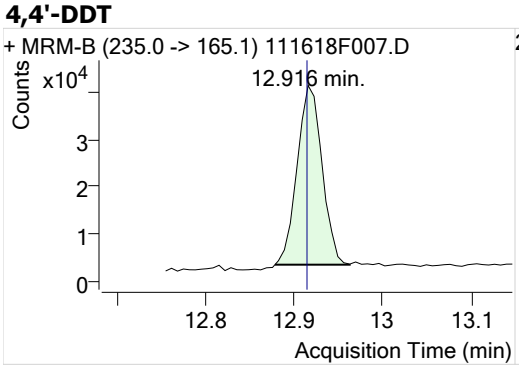
4,4'-DDT-d4

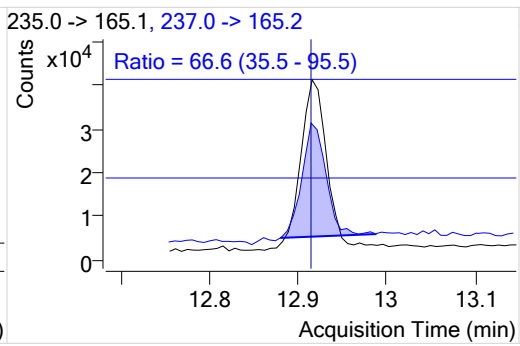


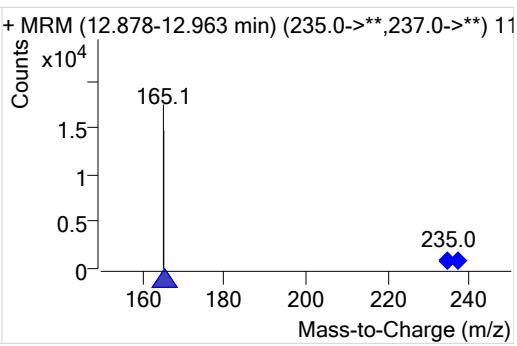




4,4'-DDT

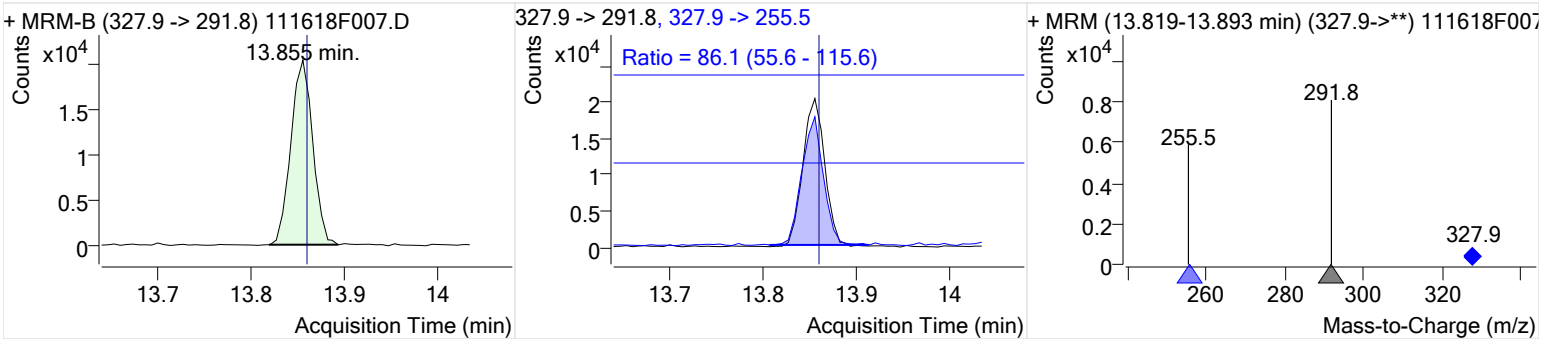




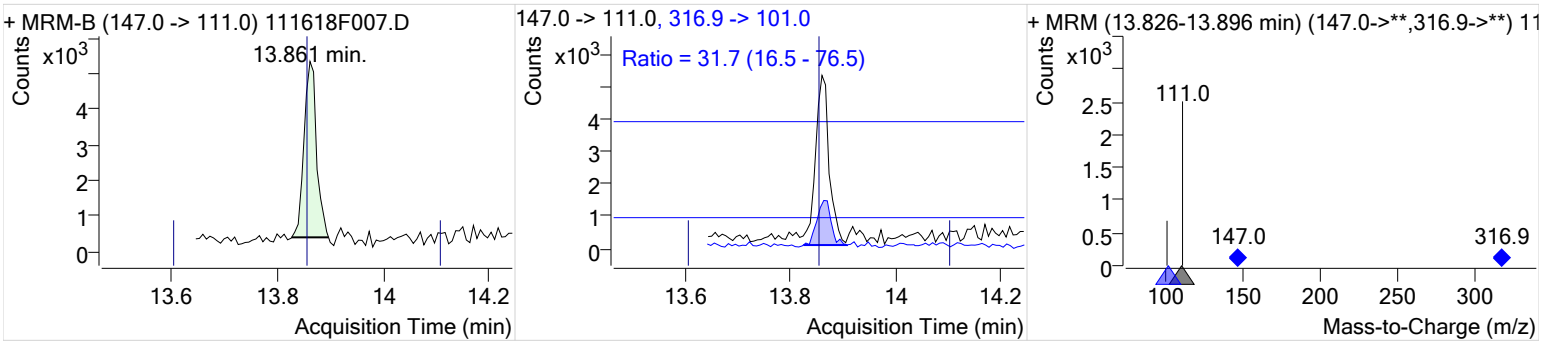


Quantitative Analysis Sample Report

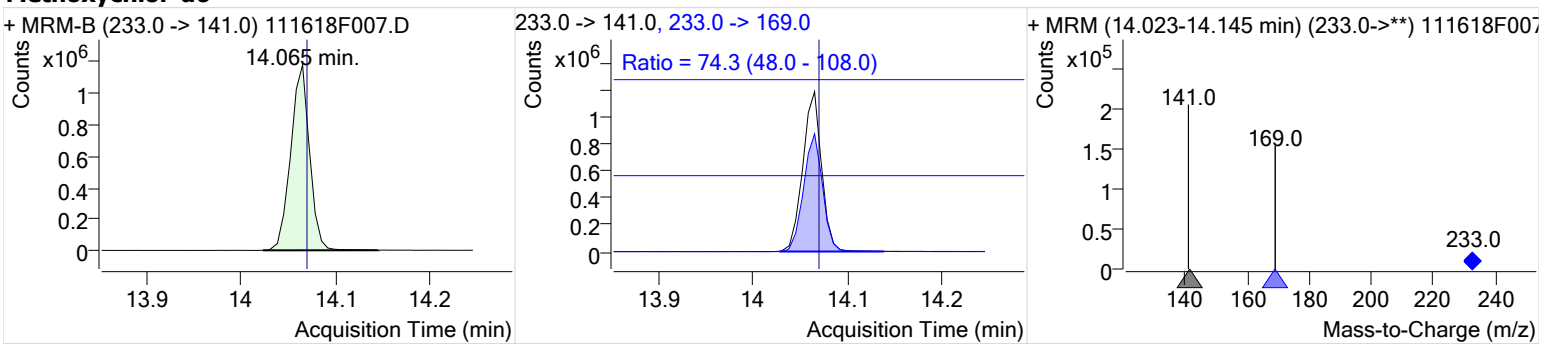
Endrin ketone-13C12



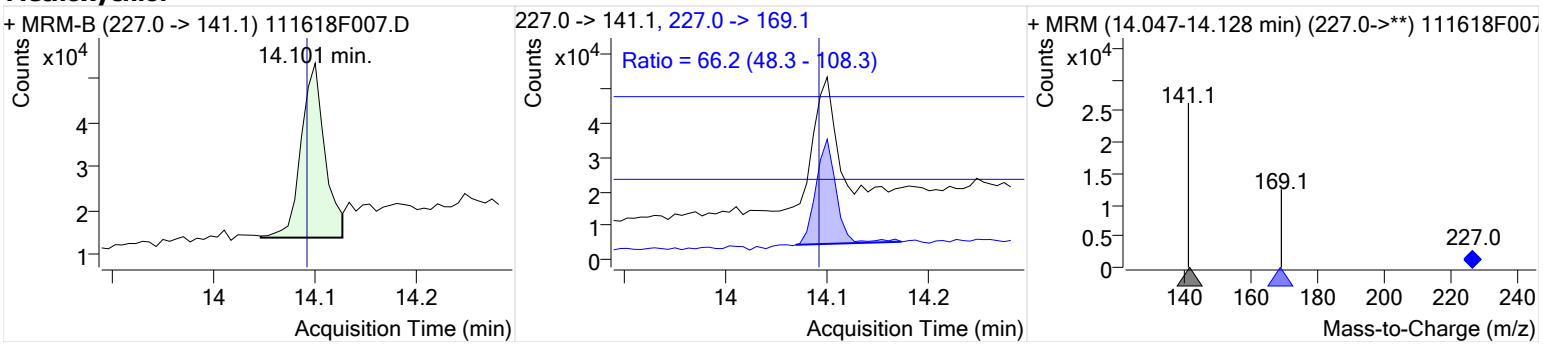
Endrin ketone



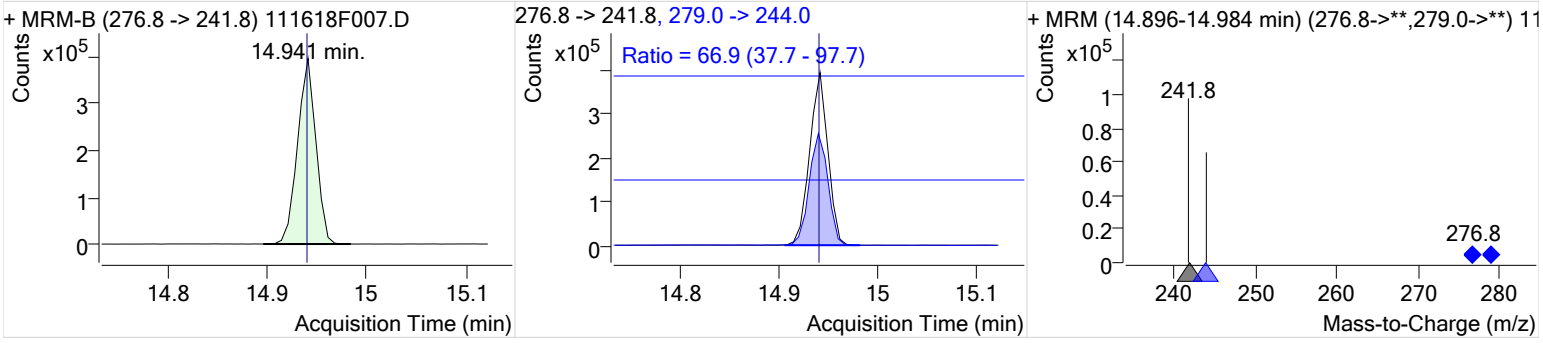
Methoxychlor-d6



Methoxychlor

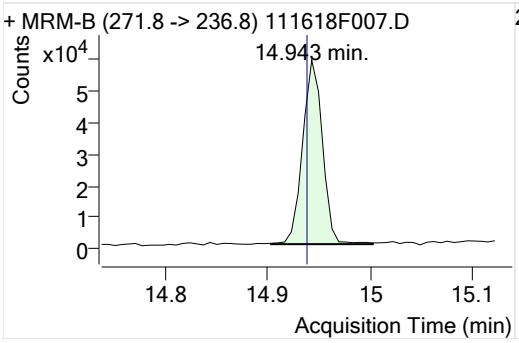


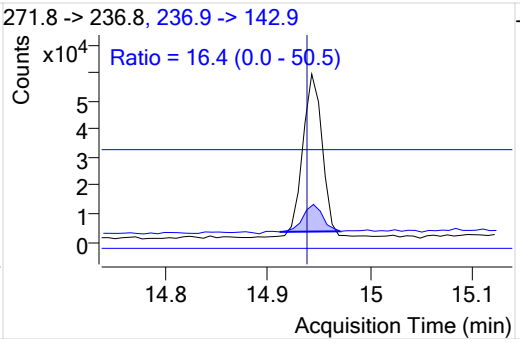
Mirex-13C10

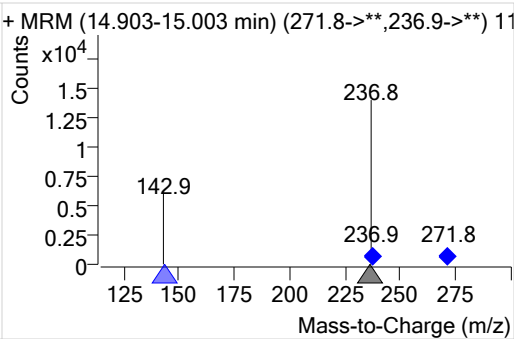


Quantitative Analysis Sample Report

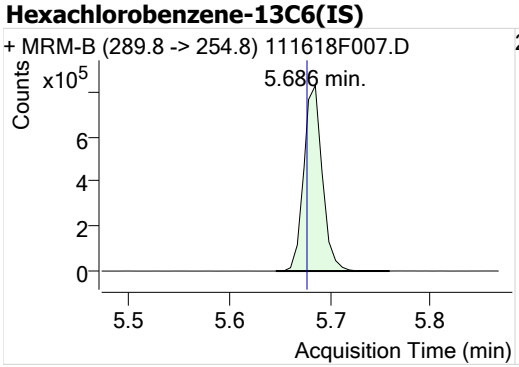
Mirex

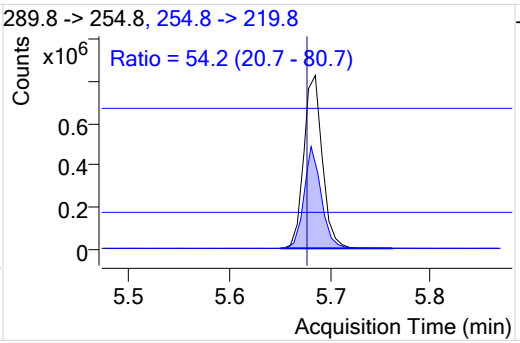


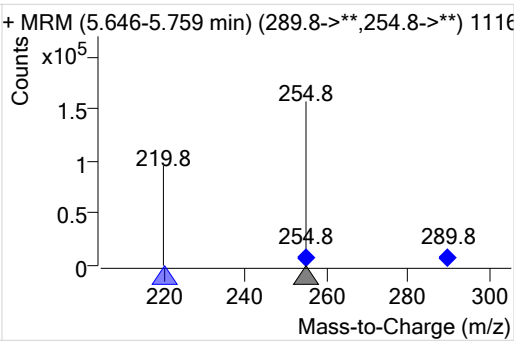




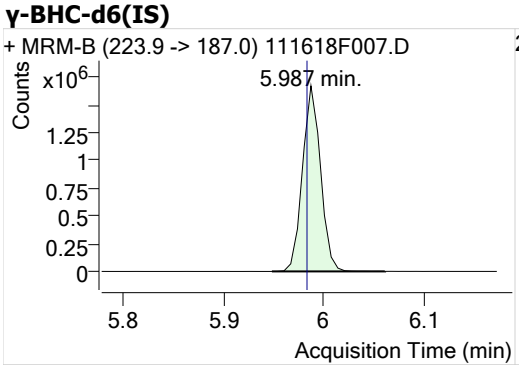
Hexachlorobenzene-13C6(IS)

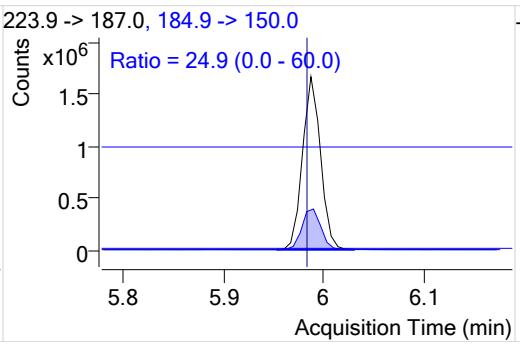


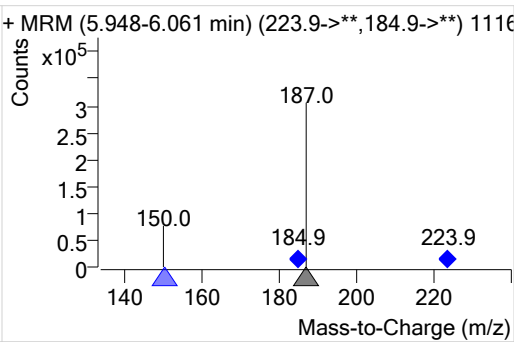




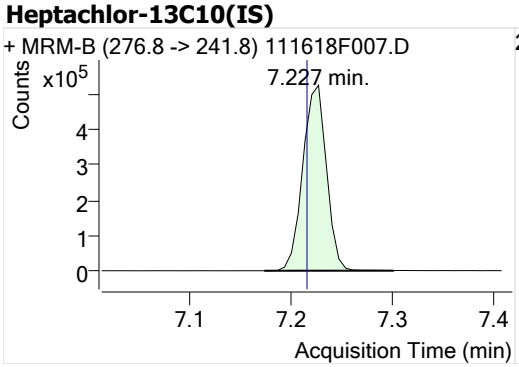
γ-BHC-d6(IS)

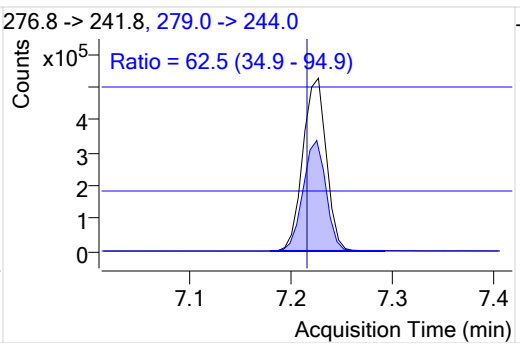


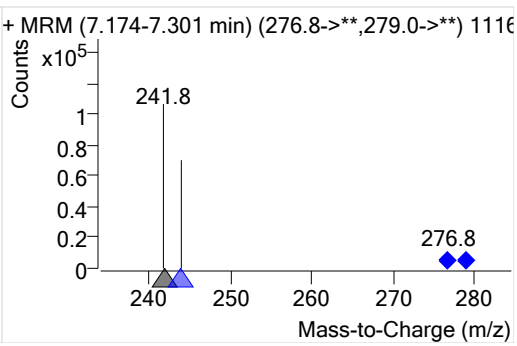




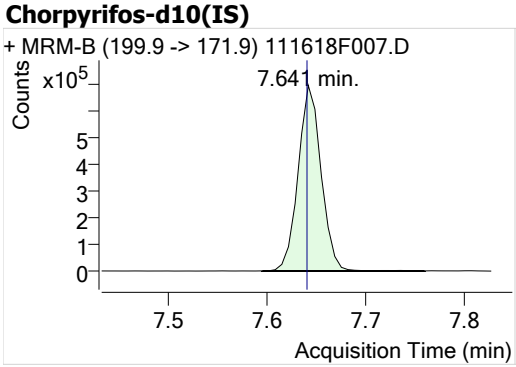
Heptachlor-13C10(IS)

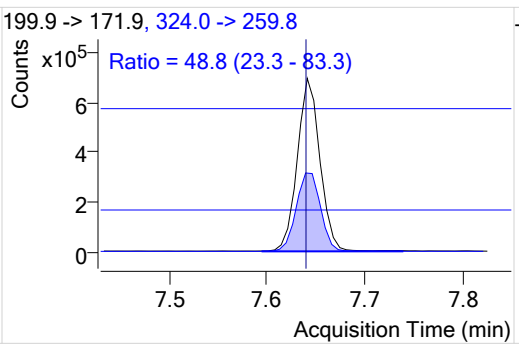


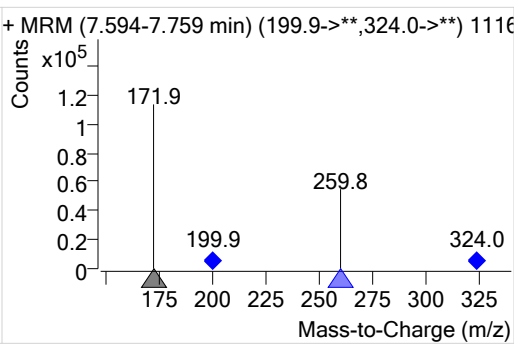




Chorpyrifos-d10(IS)

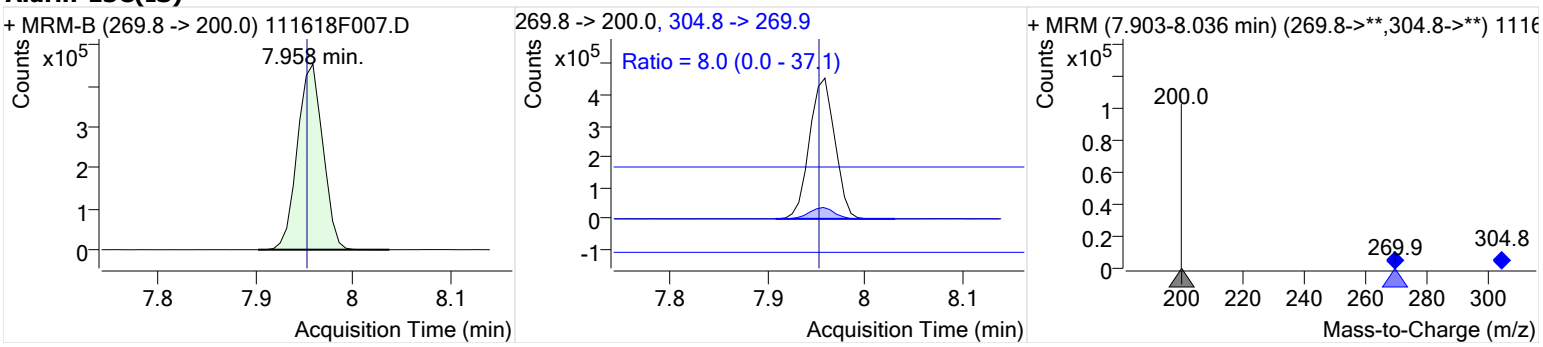




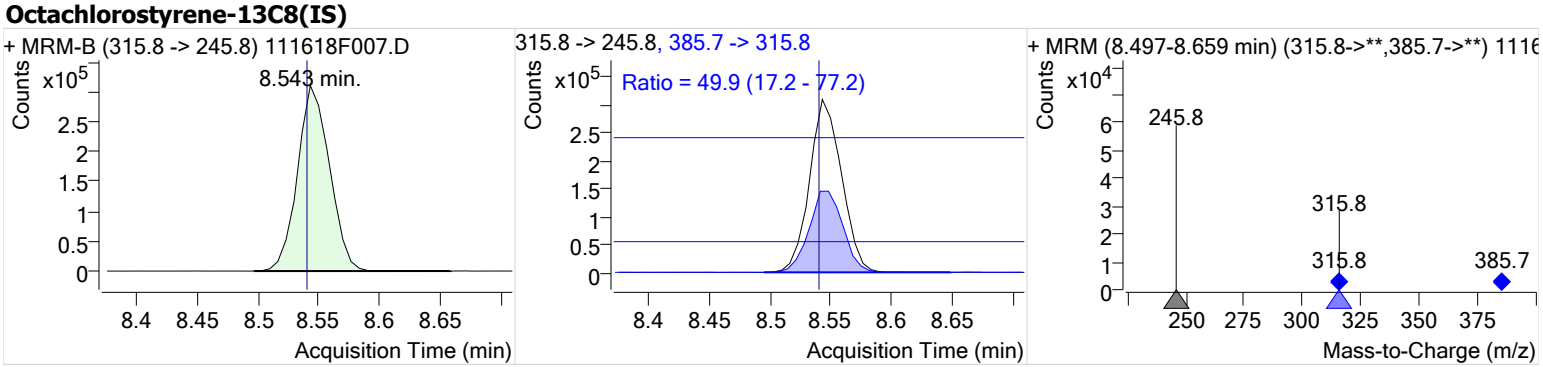


Quantitative Analysis Sample Report

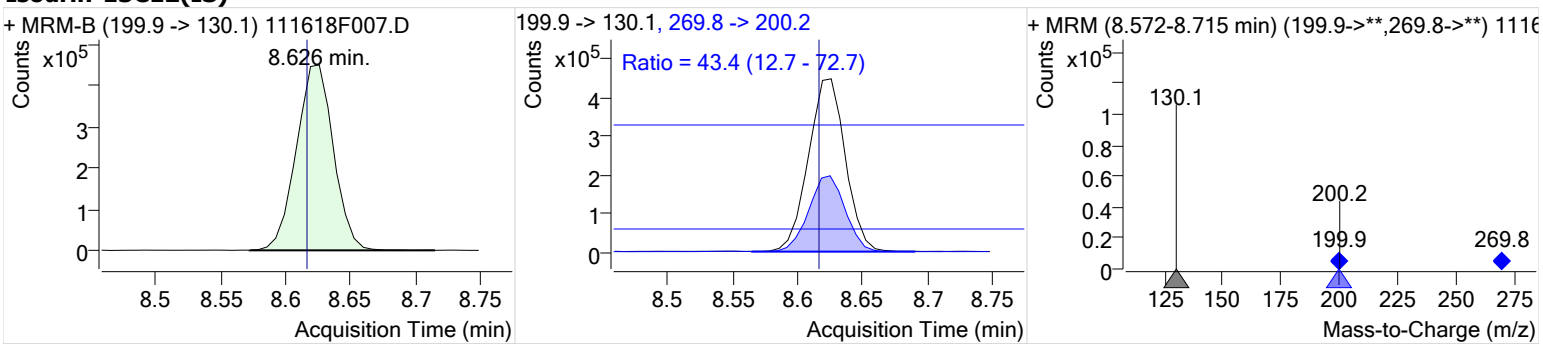
Aldrin-13C(IS)



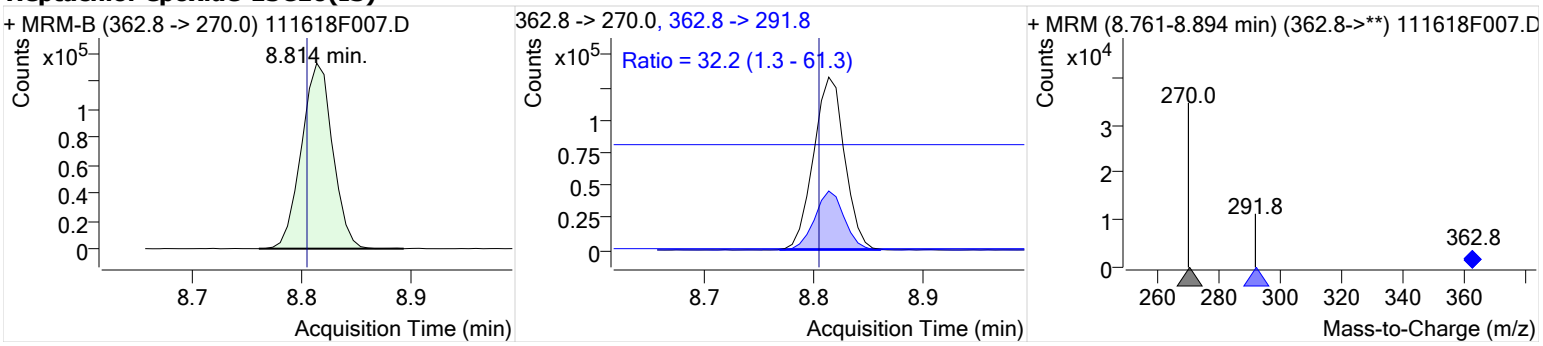
Octachlorostyrene-13C8(IS)



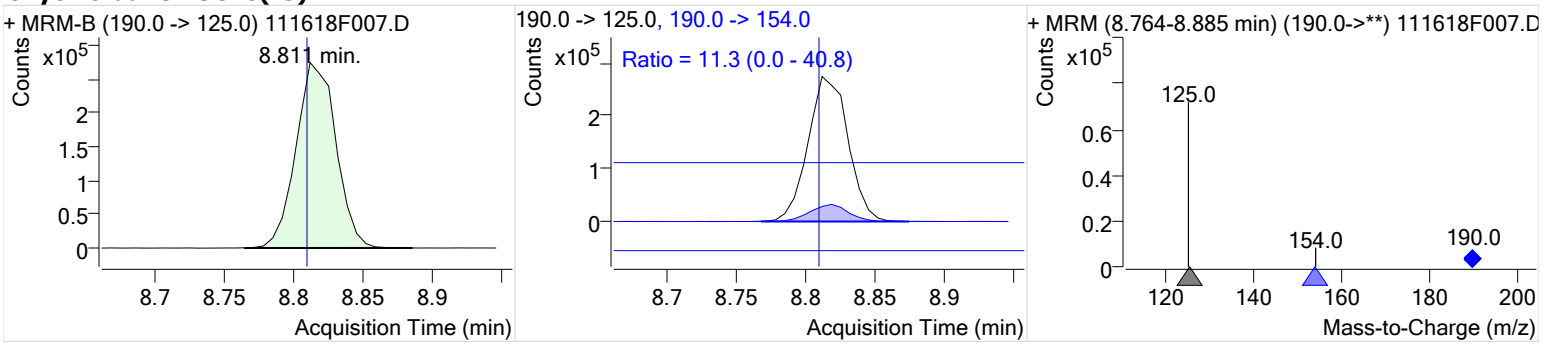
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

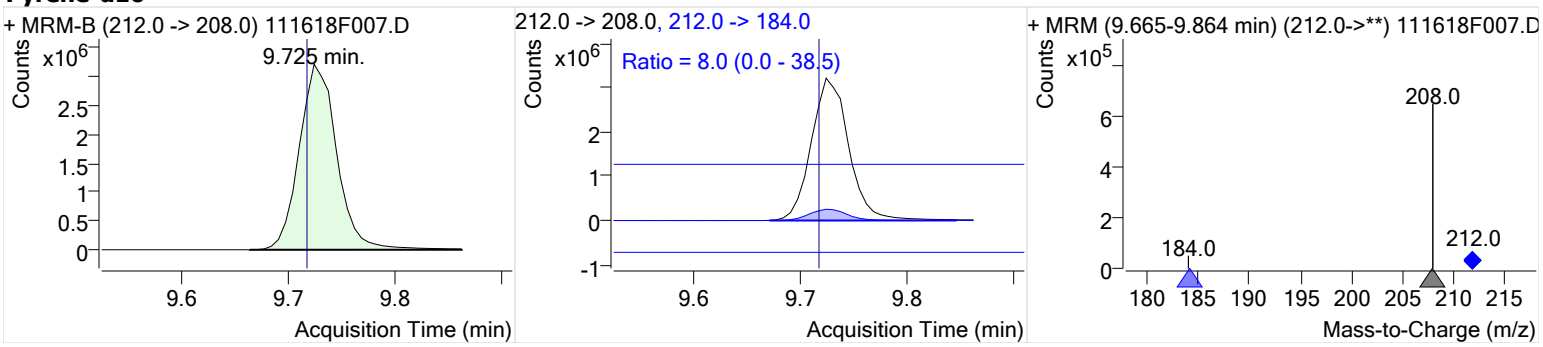


Oxychlordane-13C10(IS)

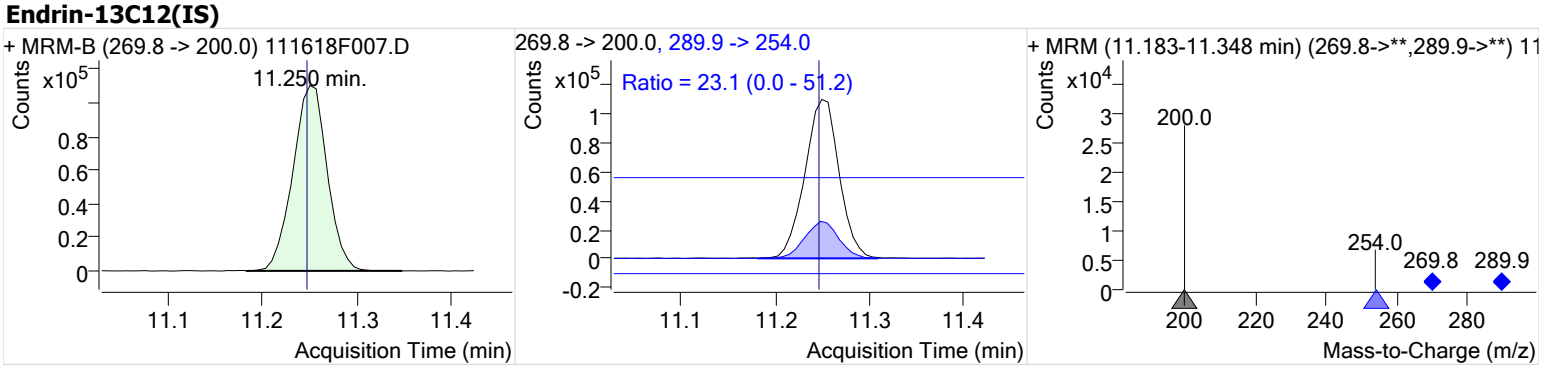


Quantitative Analysis Sample Report

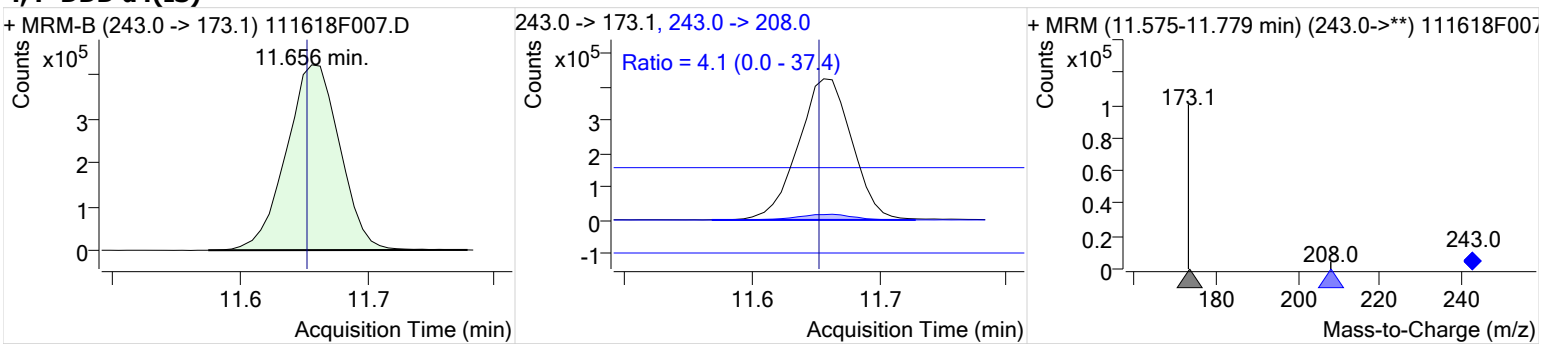
Pyrene-d10



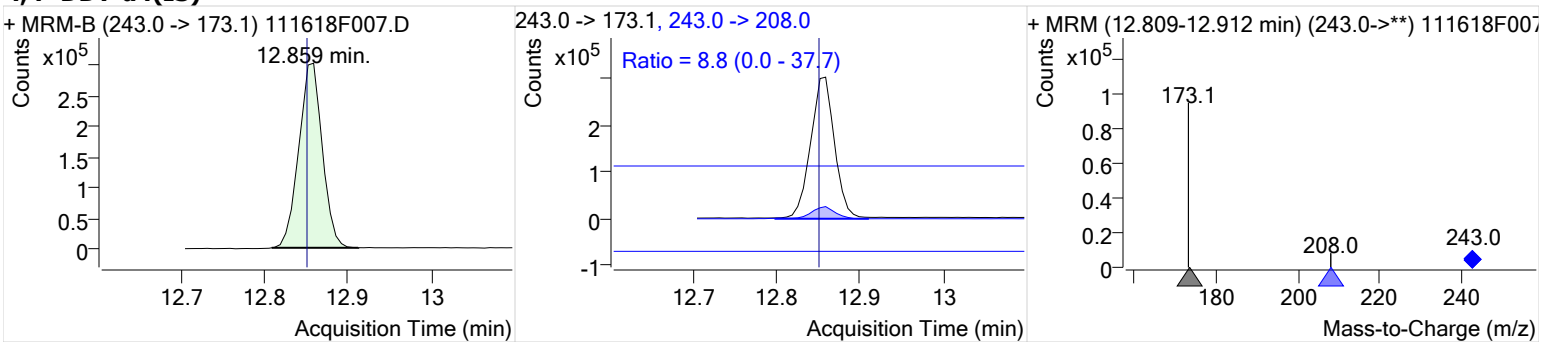
Endrin-13C12(IS)



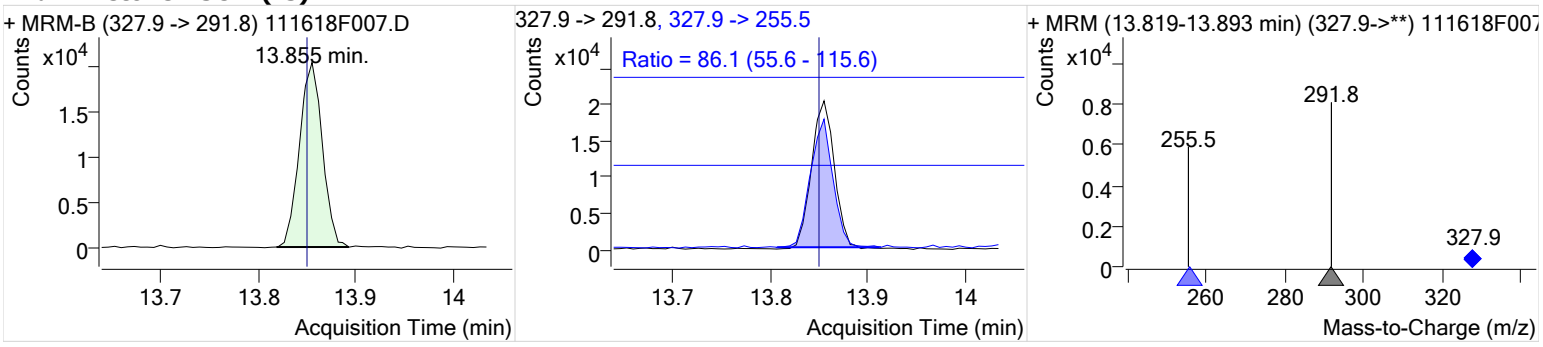
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

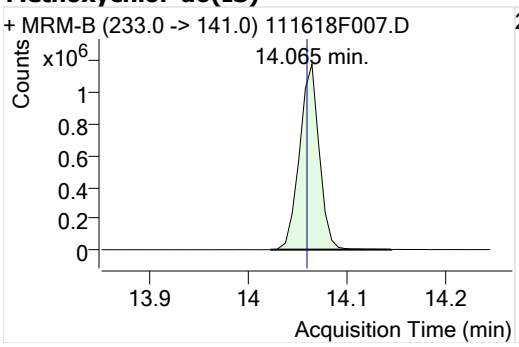


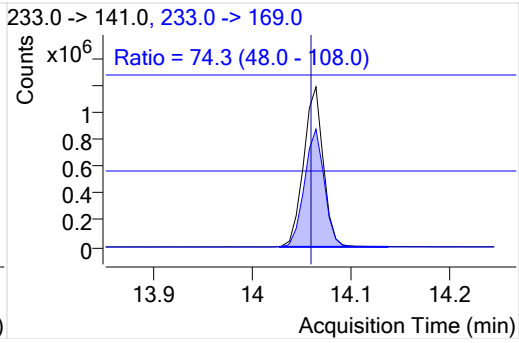
Endrin ketone-13C12(IS)

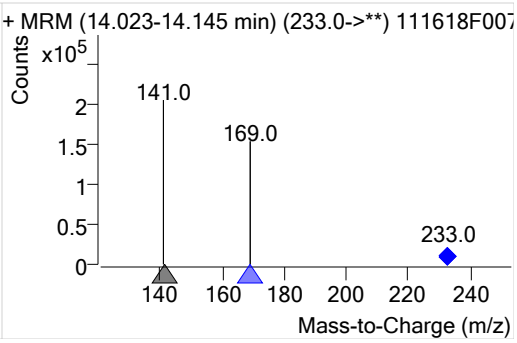


Quantitative Analysis Sample Report

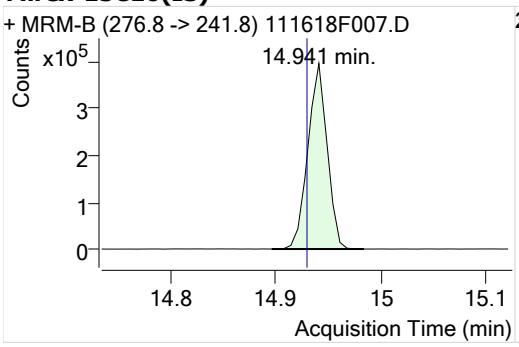
Methoxychlor-d6(IS)

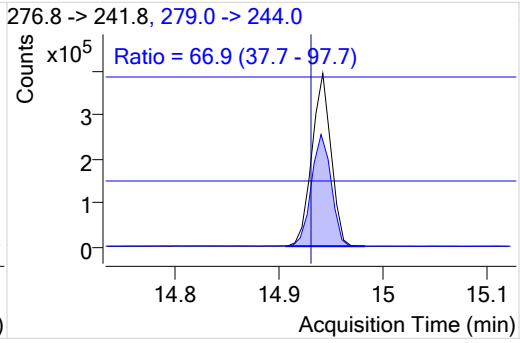


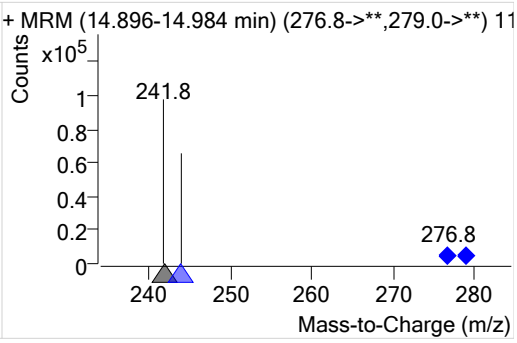




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F008.D	**Vial**	4
Acq. Date-Time	11/16/2018 1:22:31 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 1ng/mL SVM59-48B	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.685	289.8 -> 254.8	1336710	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2605641	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.225	276.8 -> 241.8	1096902	20.000 ng/ml	0.009
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1443684	20.000 ng/ml	0.000
Aldrin-13C(IS)	7.953	269.8 -> 200.0	1013979	20.000 ng/ml	0.000
Octachlorostyrene-13C8(IS)	8.549	315.8 -> 245.8	732513	20.000 ng/ml	0.008
Isodrin-13C12(IS)	8.625	199.9 -> 130.1	1099593	20.000 ng/ml	0.008
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	355852	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	725133	20.000 ng/ml	0.009
Pyrene-d10	9.725	212.0 -> 208.0	9986978	100.000 ng/ml	0.006
Endrin-13C12(IS)	11.250	269.8 -> 200.0	365478	20.000 ng/ml	0.003
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1639274	5.000 ng/ml	0.004
4,4'-DDT-d4(IS)	12.851	243.0 -> 173.1	725744	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	41741	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	2023984	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	659697	5.000 ng/ml	0.010

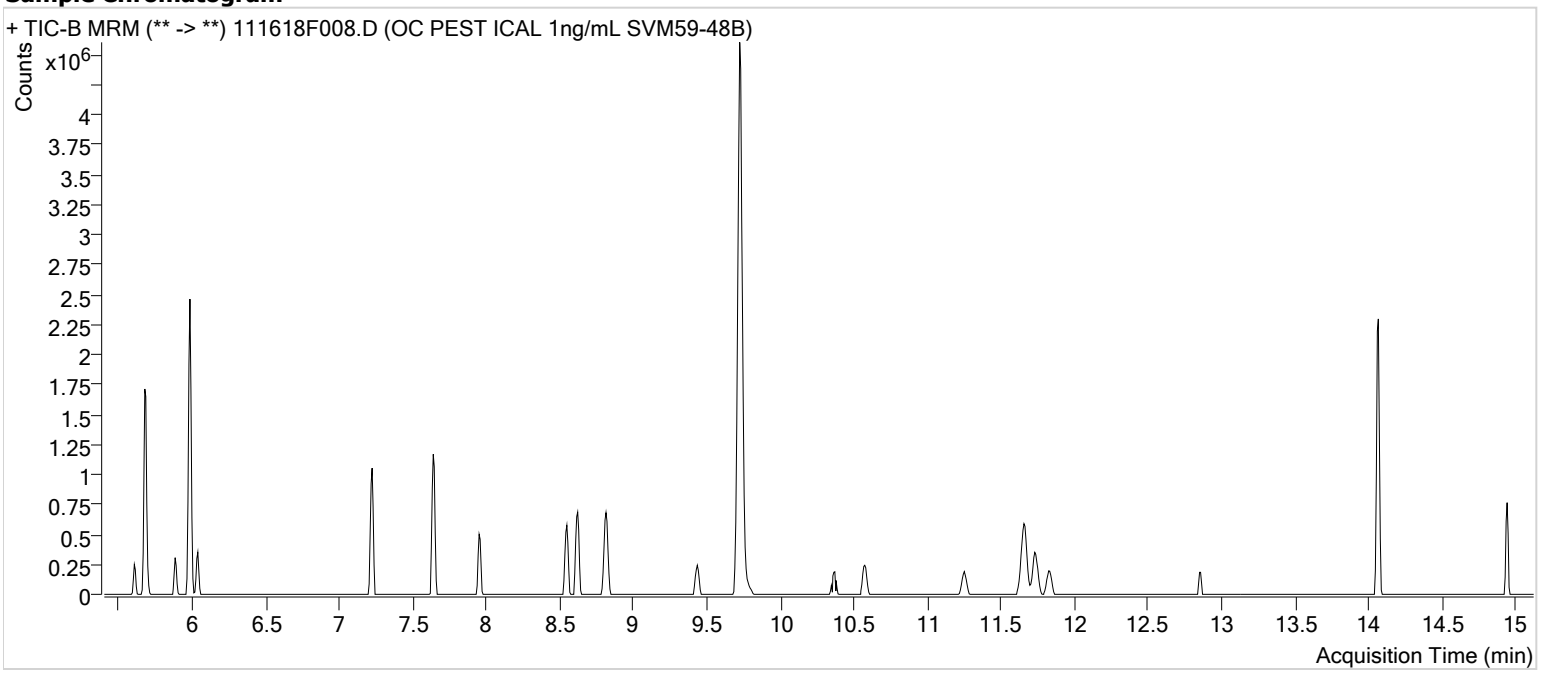
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1336710	18.183 ng/ml	
		Spiked Amount =	20.0	Recovery =	*90.9 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2605641	18.704 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.5 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1096902	19.042 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.2 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1443684	19.977 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.9 %*
Aldrin-13C	7.952	269.8 -> 200.0	1013979	19.273 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.4 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	732513	19.445 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.2 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1099593	19.155 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.8 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	355852	19.388 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.9 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	725133	19.440 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.2 %*
Endrin-13C12	11.247	269.8 -> 200.0	365478	20.024 ng/ml	
		Spiked Amount =	20.0	Recovery =	*100.1 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1639274	4.622 ng/ml	
		Spiked Amount =	5.0	Recovery =	*92.4 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	725744	4.579 ng/ml	
		Spiked Amount =	5.0	Recovery =	*91.6 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	41741	18.468 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.3 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	2023984	19.328 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.6 %*
Mirex-13C10	14.930	276.8 -> 241.8	659697	4.312 ng/ml	
		Spiked Amount =	5.0	Recovery =	*86.2 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	194585	1.044	ng/ml	93
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	132245	1.093	ng/ml	97
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	249415	1.058	ng/ml	97
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	289558	1.062	ng/ml	96
δ-BHC	γ-BHC-d6(IS)	6.405	181.1 -> 145.1	115789	1.066	ng/ml	98
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	69217	1.089	ng/ml	1
Chorpyrifos	Chorpyrifos-d10(IS)	7.731	196.9 -> 169.0	113480	1.114	ng/ml	97
Aldrin	Aldrin-13C(IS)	7.956	254.9 -> 220.0	129921	1.083	ng/ml	23
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.555	342.8 -> 307.8	97737	1.037	ng/ml	97
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	59229	1.050	ng/ml	92
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.822	352.8 -> 262.9	20747	1.024	ng/ml	97
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	101180	1.032	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	35700	1.022	ng/ml	95
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	349362	1.121	ng/ml	96
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.781	271.8 -> 236.9	89883	1.030	ng/ml	96
Endosulfan I	Endrin-13C12(IS)	9.811	206.9 -> 172.0	22533	0.984	ng/ml	97
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	59458	1.058	ng/ml	98
4,4' -DDE	4,4'-DDD d4(IS)	10.364	246.0 -> 176.2	331306	1.160	ng/ml	97
2,4'-DDD	4,4'-DDD d4(IS)	10.578	235.0 -> 165.1	401261	1.138	ng/ml	100
Dieldrin	Endrin-13C12(IS)	10.594	262.9 -> 193.0	28855	1.035	ng/ml	90
Endosulfan II	Endrin-13C12(IS)	11.240	206.9 -> 172.0	43224	0.958	ng/ml	82
Endrin	Endrin-13C12(IS)	11.265	262.8 -> 193.0	27002	1.077	ng/ml	92
4,4'-DDD	4,4'-DDD d4(IS)	11.734	235.0 -> 165.1	572982	1.082	ng/ml	97
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	21567	1.013	ng/ml	85
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	350526	1.077	ng/ml	96
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	7670	1.084	ng/ml	97
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	41306	0.962	ng/ml	99
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	167299	0.996	ng/ml	97
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	16579	1.128	ng/ml	89
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	131270	1.016	ng/ml	92
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	174524	0.977	ng/ml	93

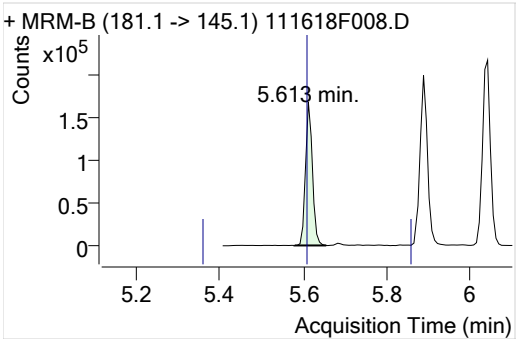
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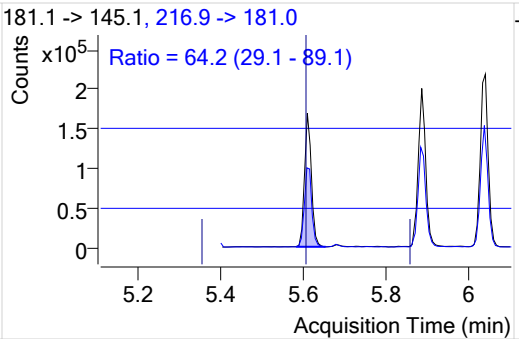
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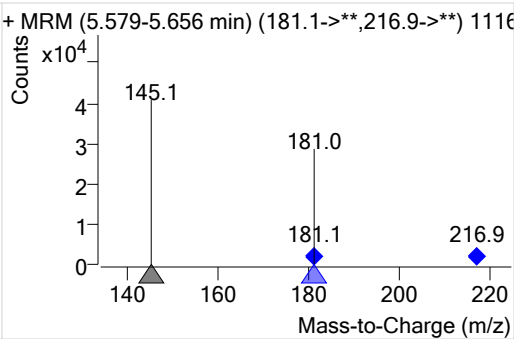


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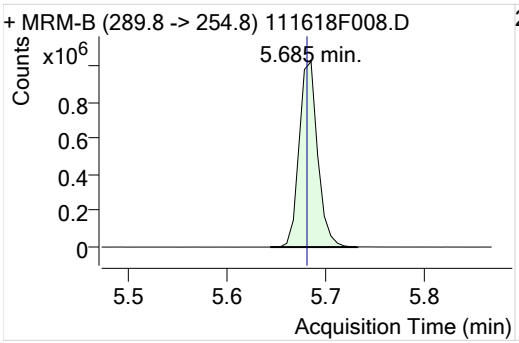
α-BHC

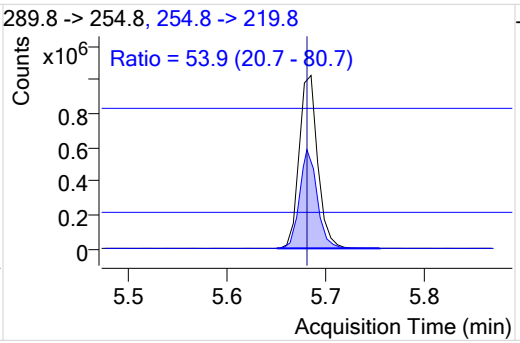


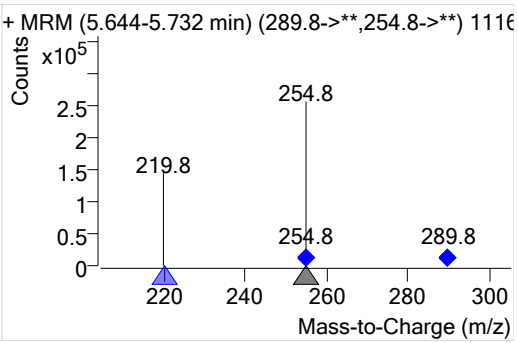




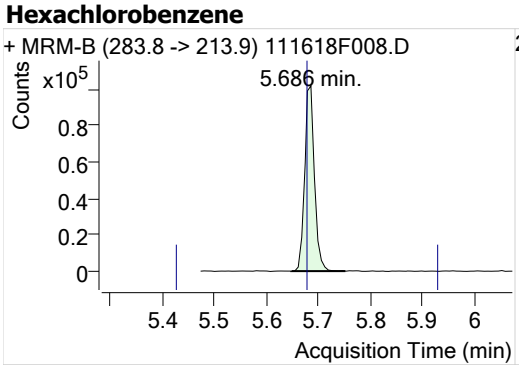
Hexachlorobenzene-13C6

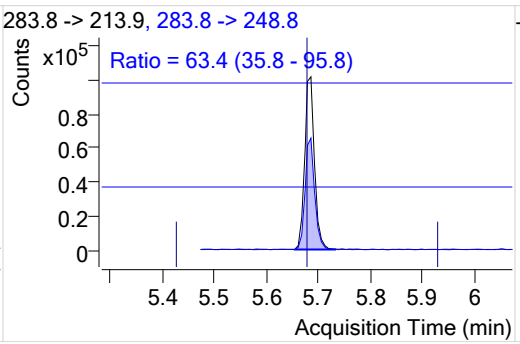


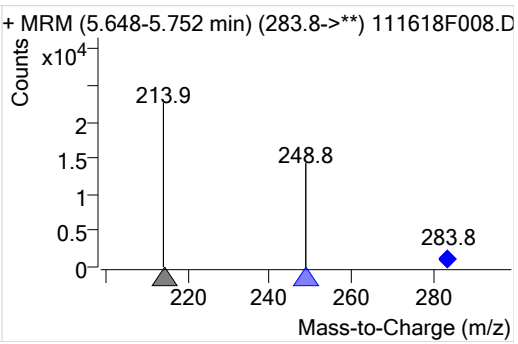




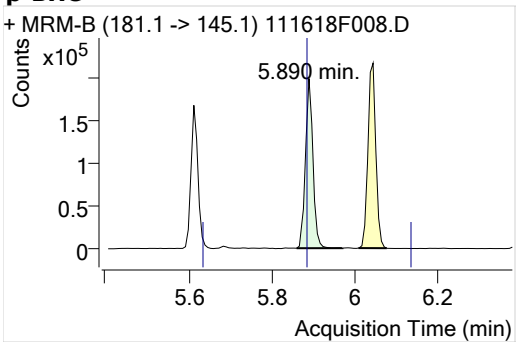
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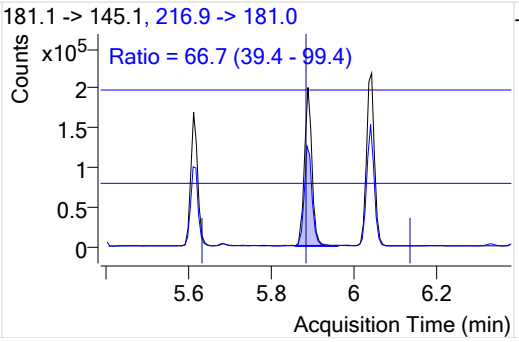


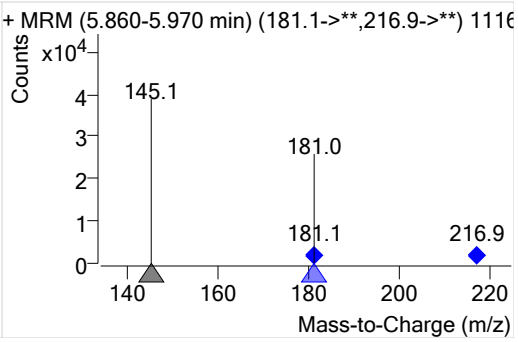




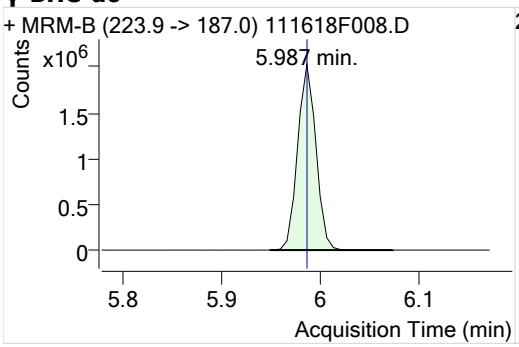
β-BHC

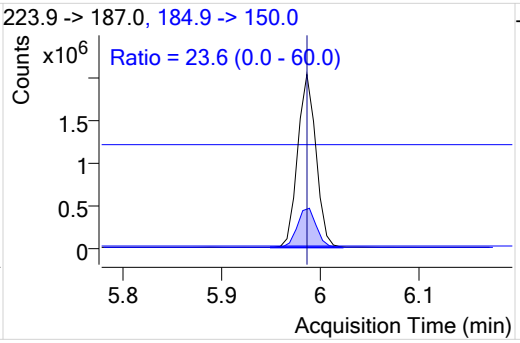


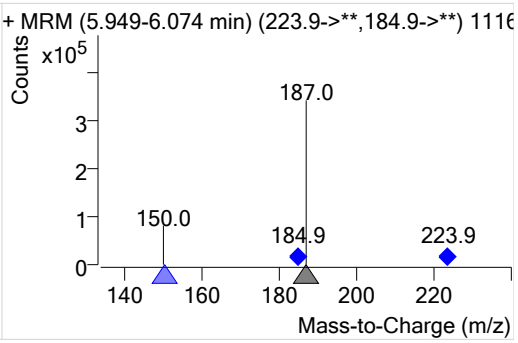




γ-BHC-d6

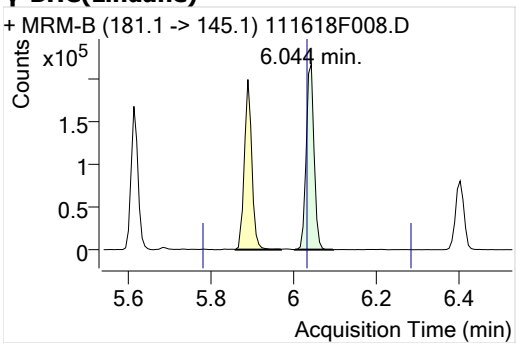


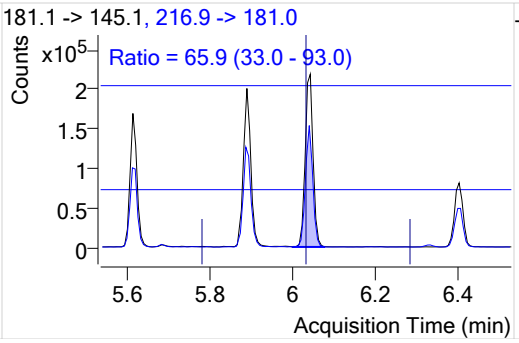


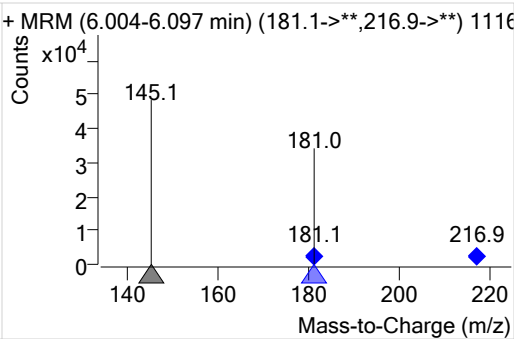


Quantitative Analysis Sample Report

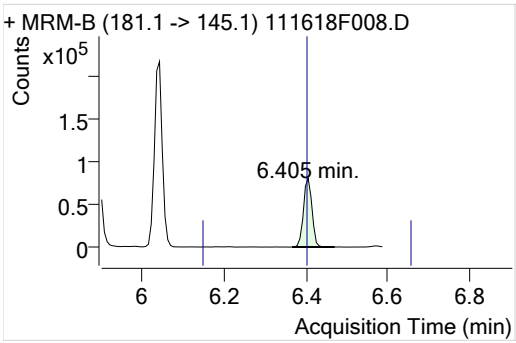
γ-BHC(Lindane)

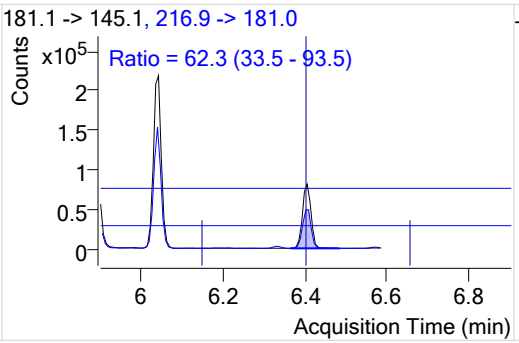


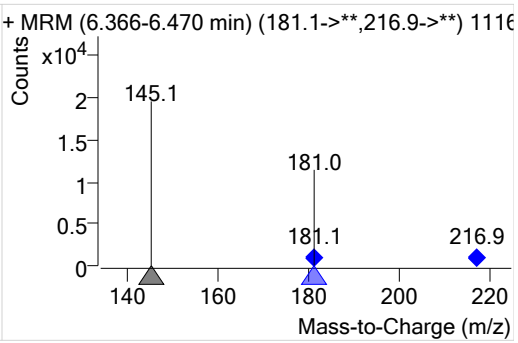




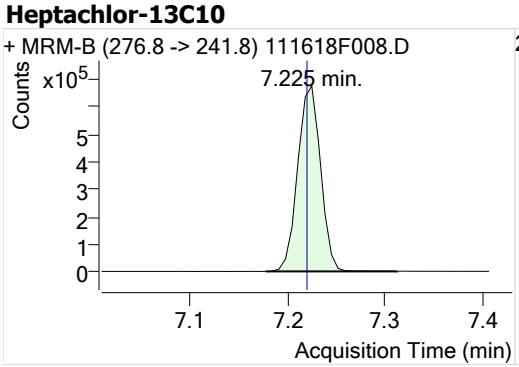
δ-BHC

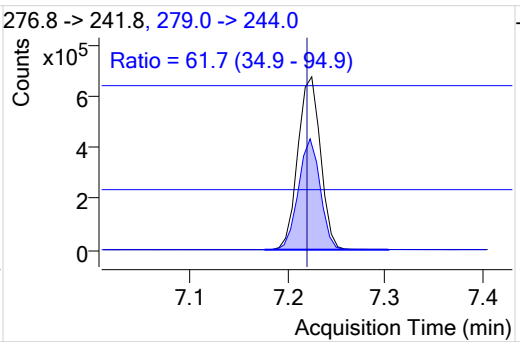


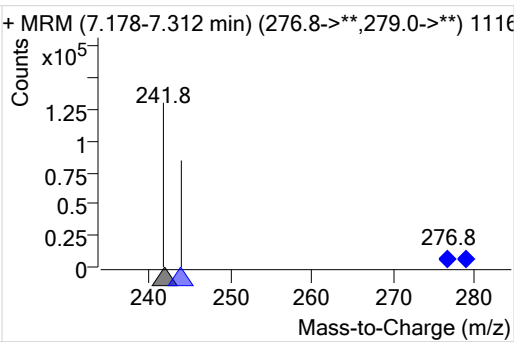




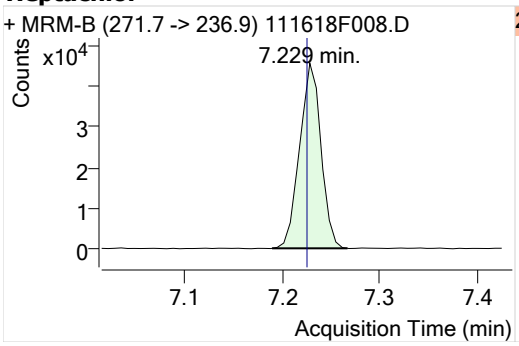
Heptachlor-13C10

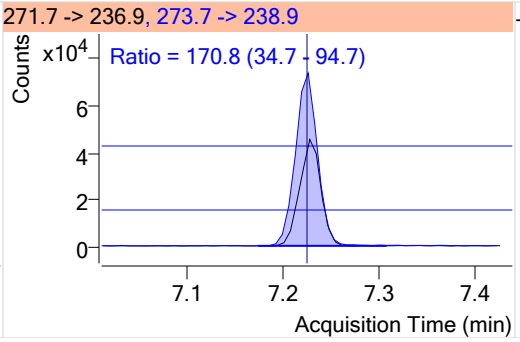


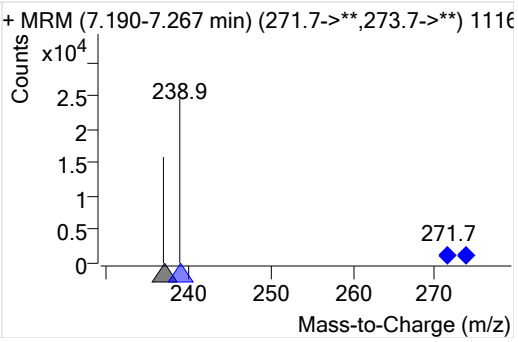




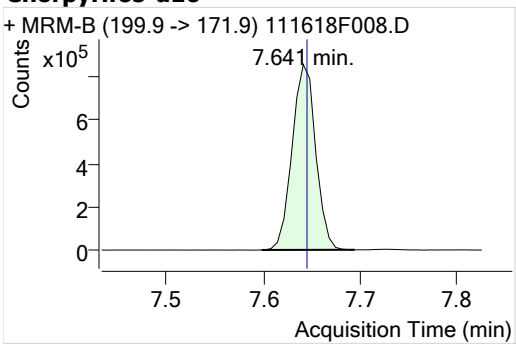
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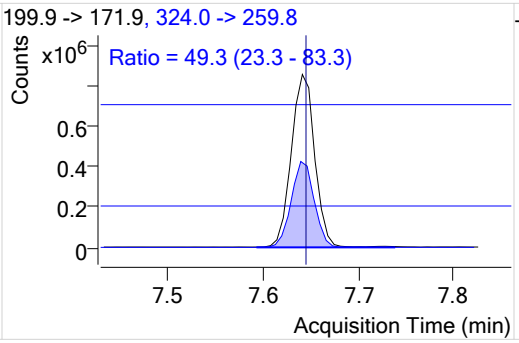


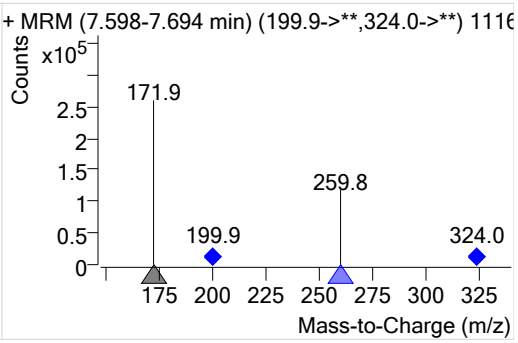




Chorpyrifos-d10

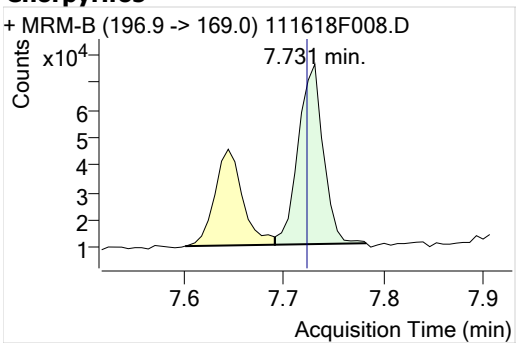


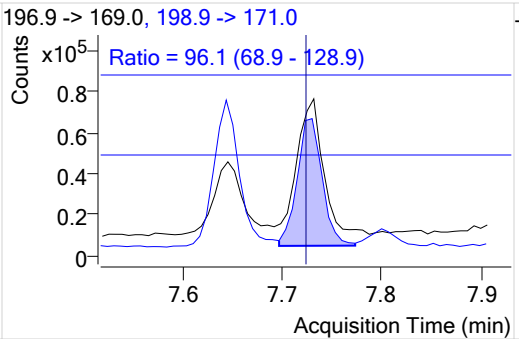


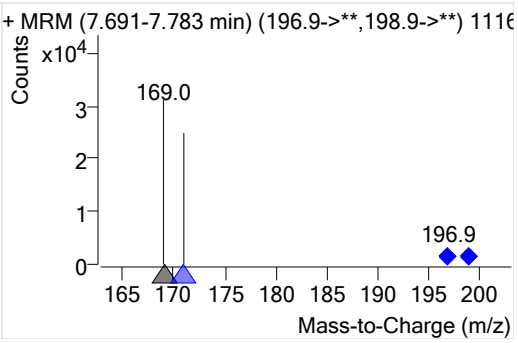


Quantitative Analysis Sample Report

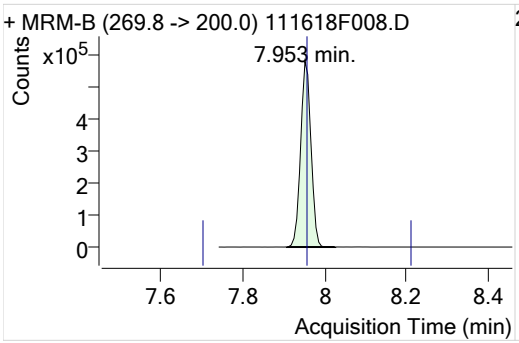
Chorpyrifos

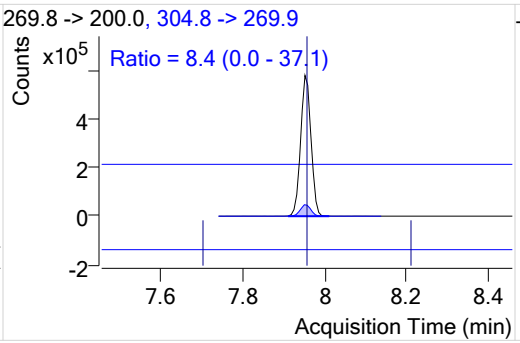


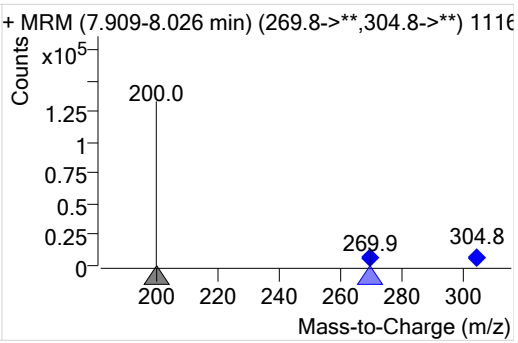




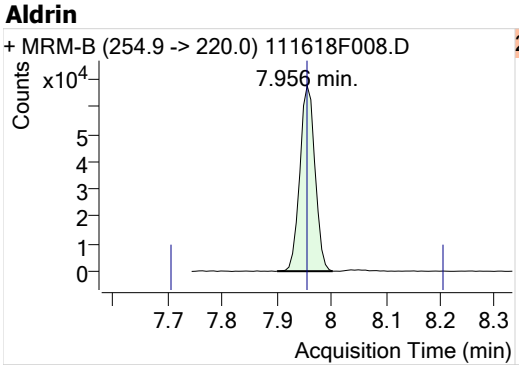
Aldrin-13C

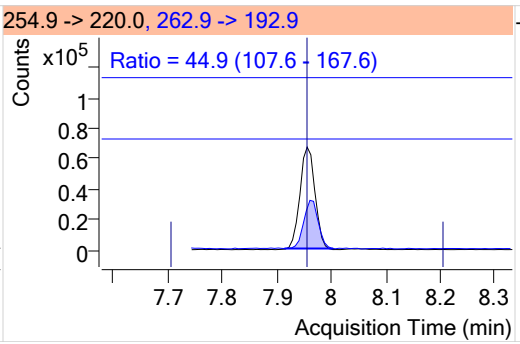


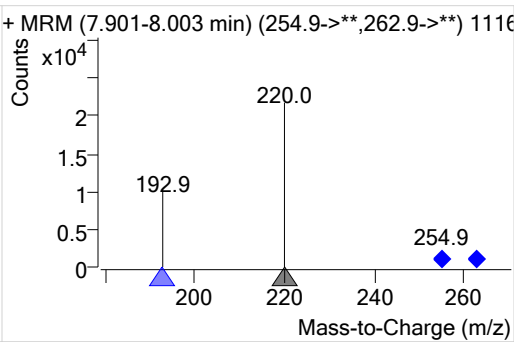




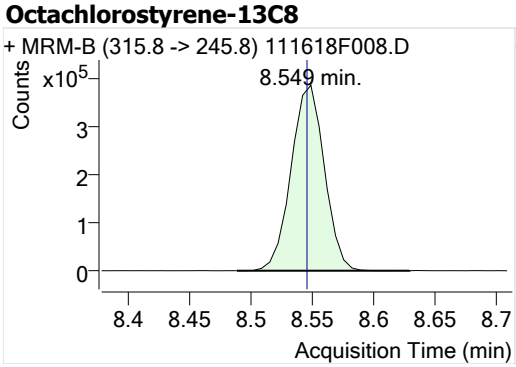
Aldrin

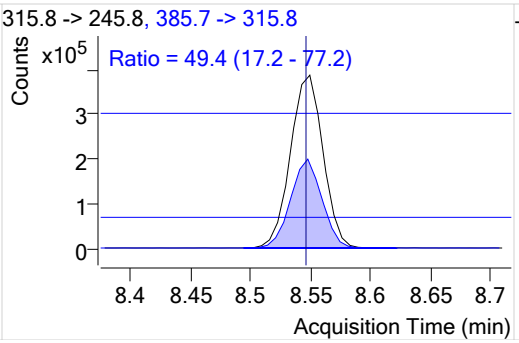


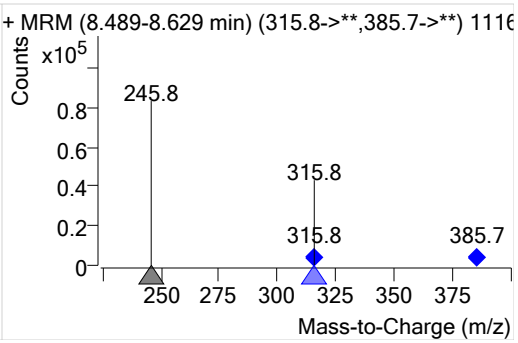




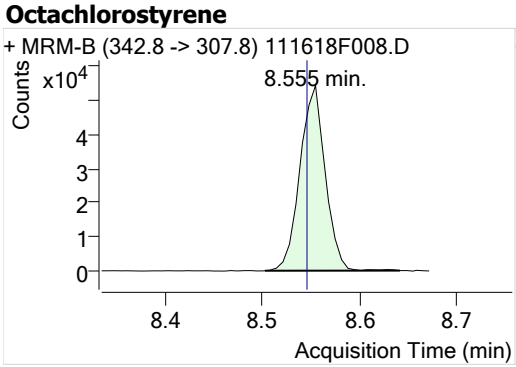
Octachlorostyrene-13C8

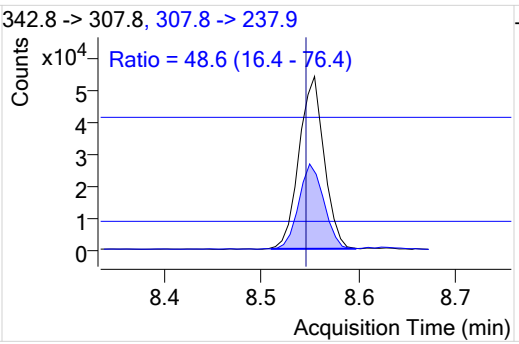


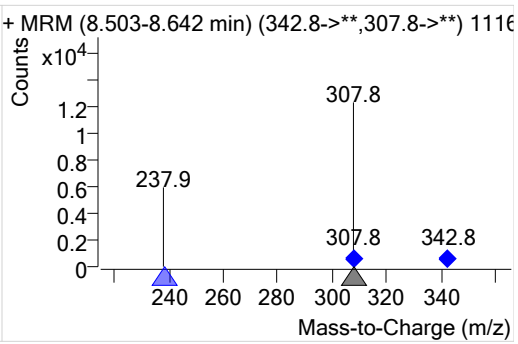




Octachlorostyrene

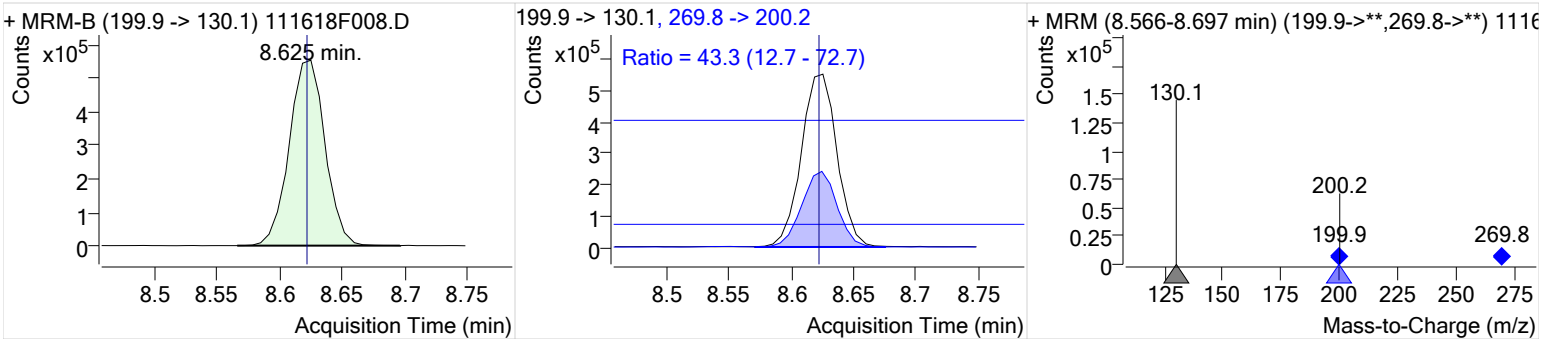




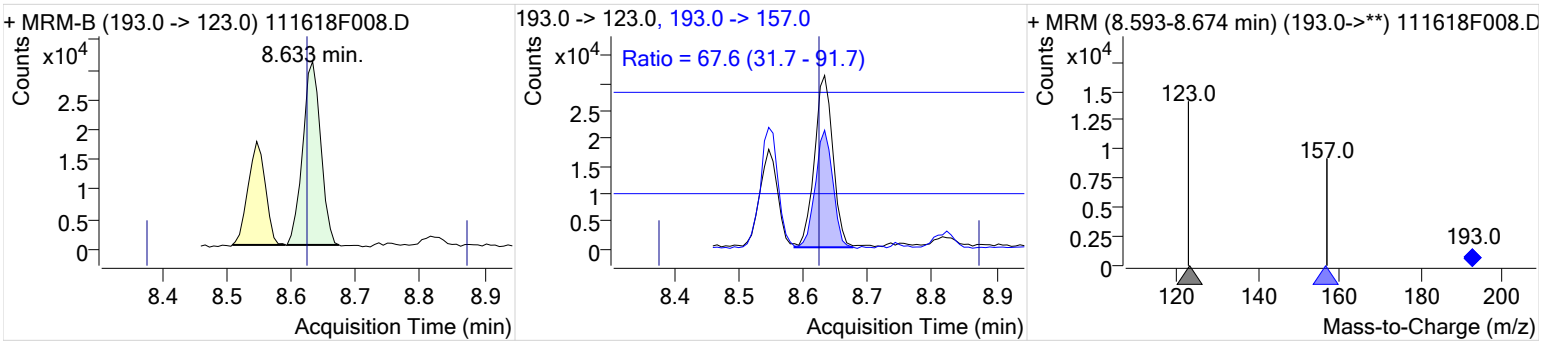


Quantitative Analysis Sample Report

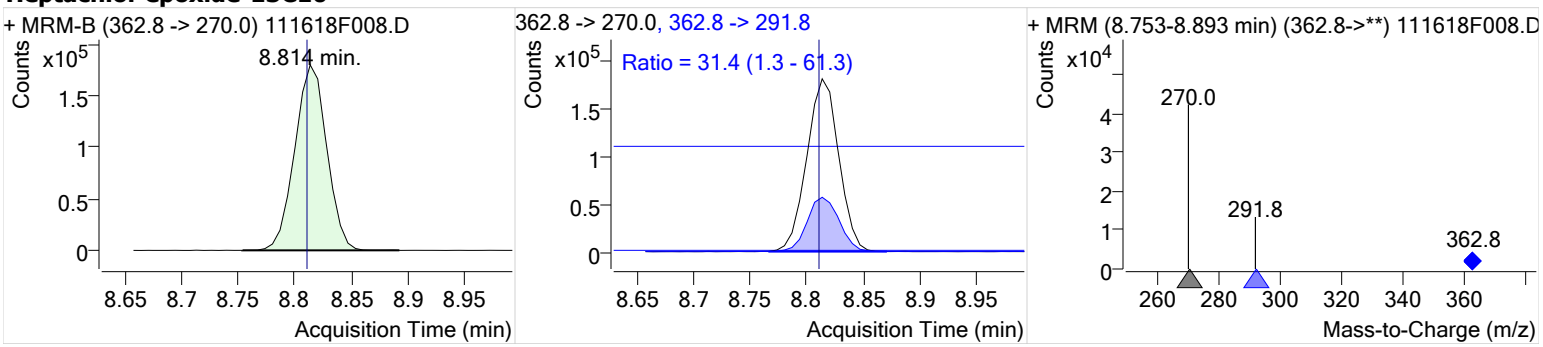
Isodrin-13C12



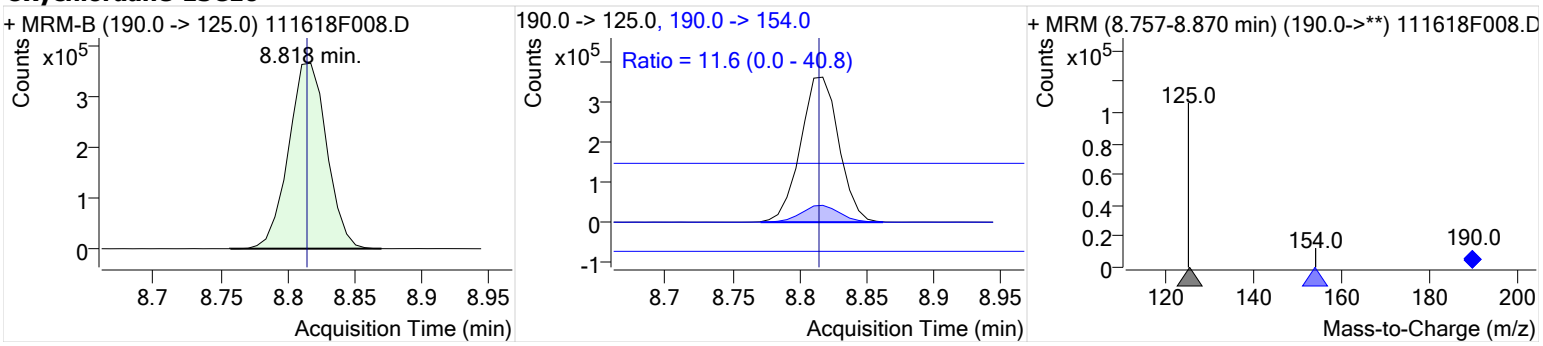
Isodrin



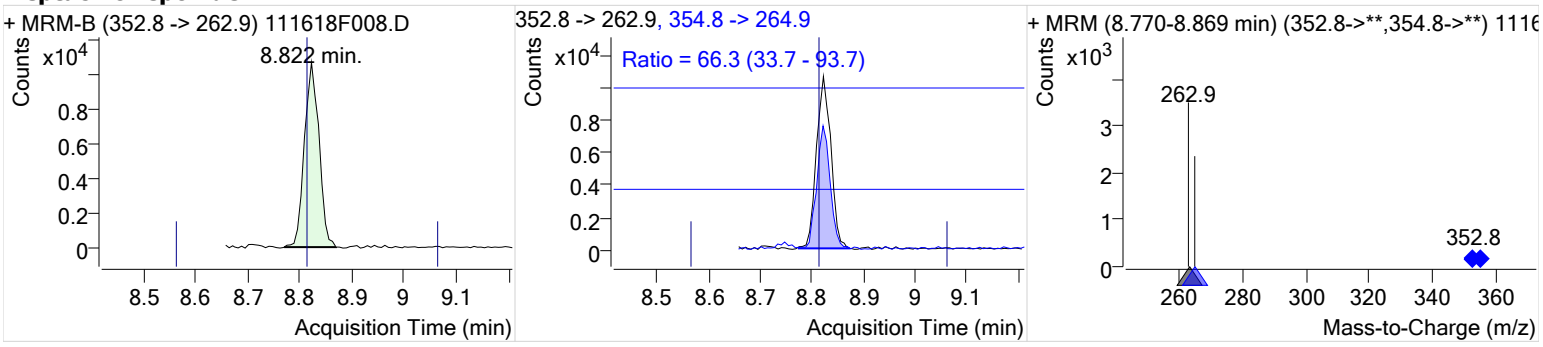
Heptachlor epoxide-13C10



Oxychlordane-13C10

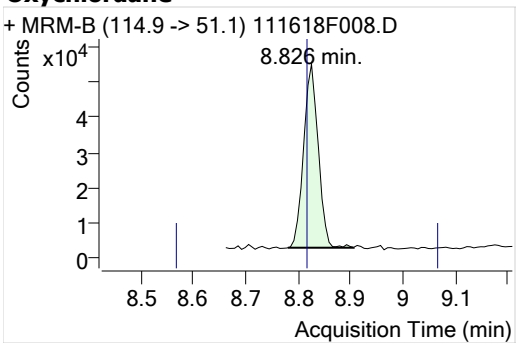


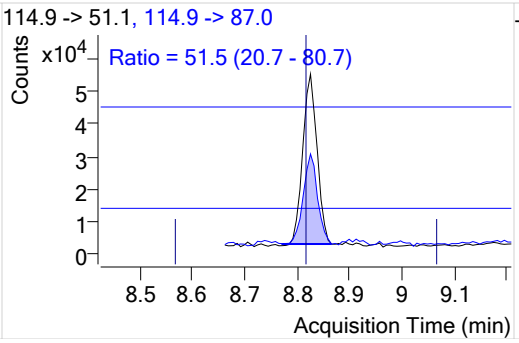
Heptachlor epoxide

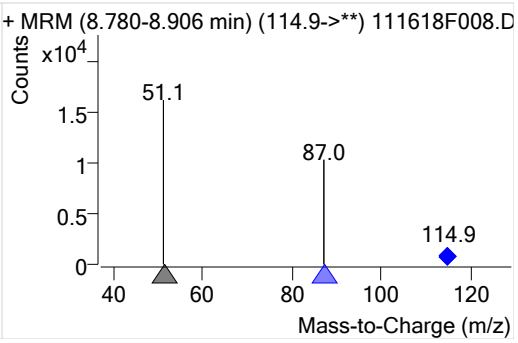


Quantitative Analysis Sample Report

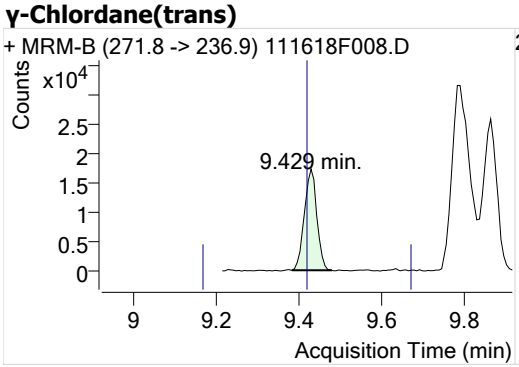
Oxychlordane

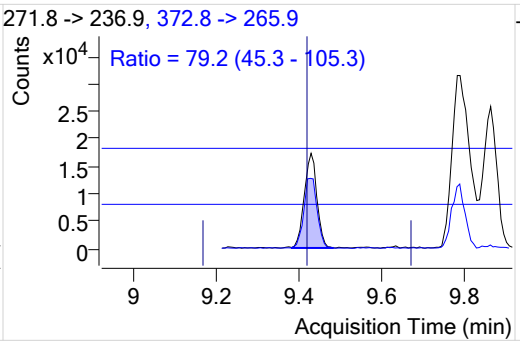


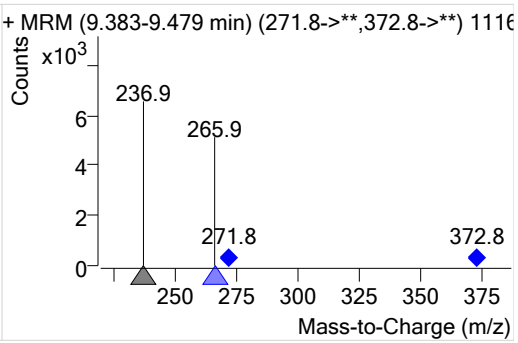




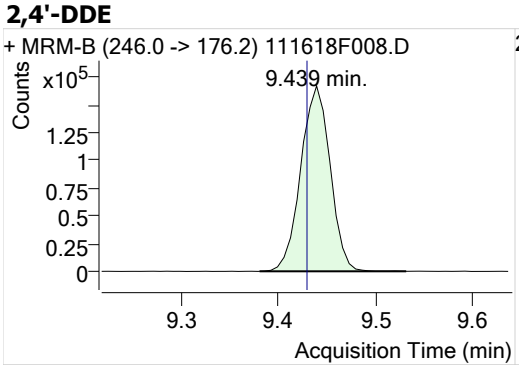
γ-Chlordane(trans)

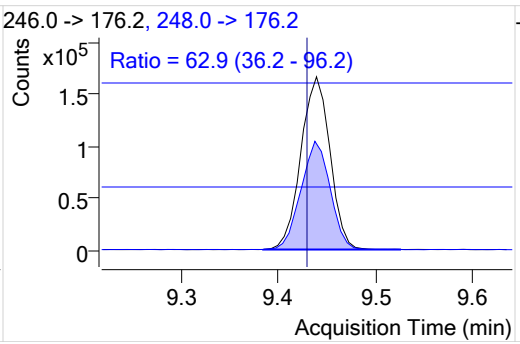


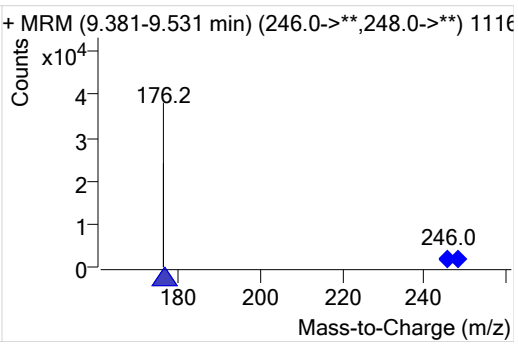




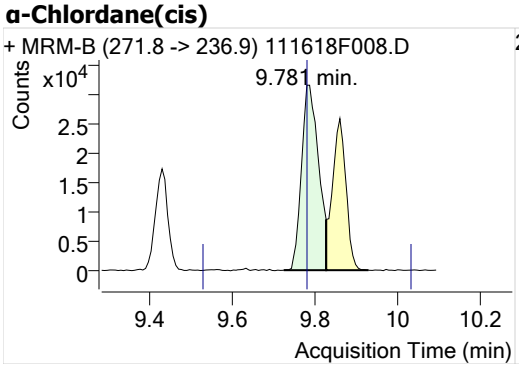
2,4'-DDE

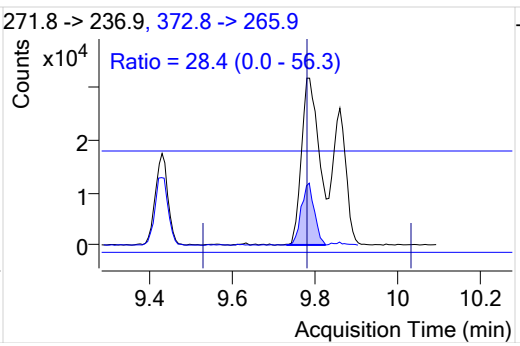


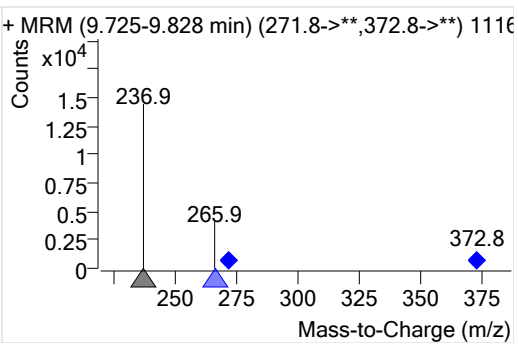




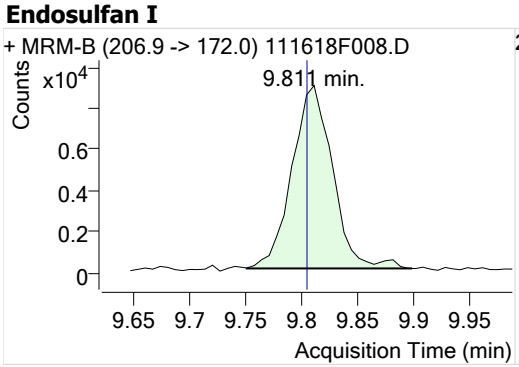
α-Chlordane(cis)

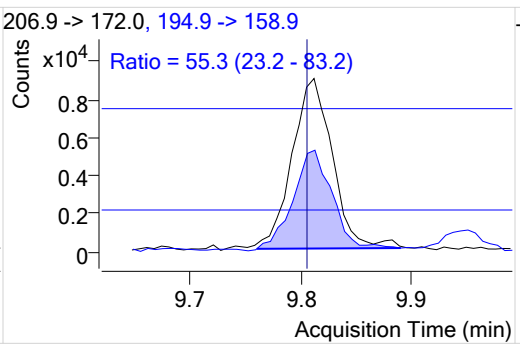


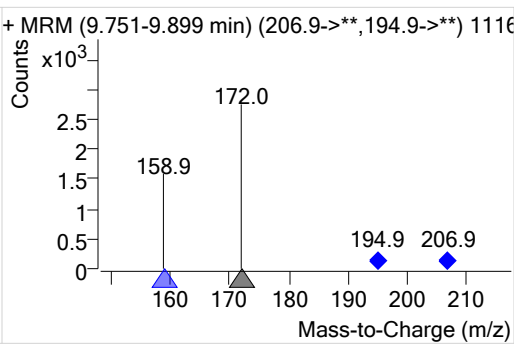




Endosulfan I

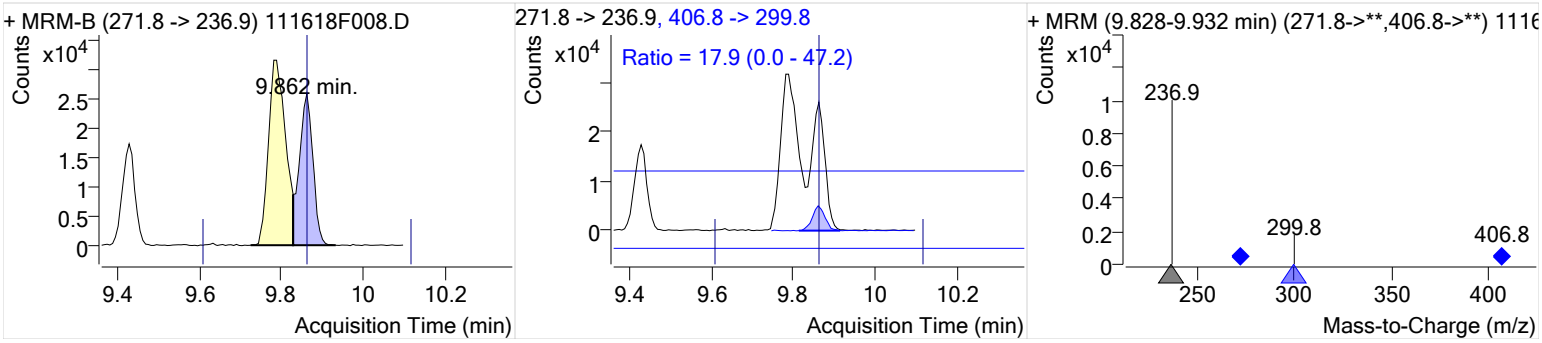




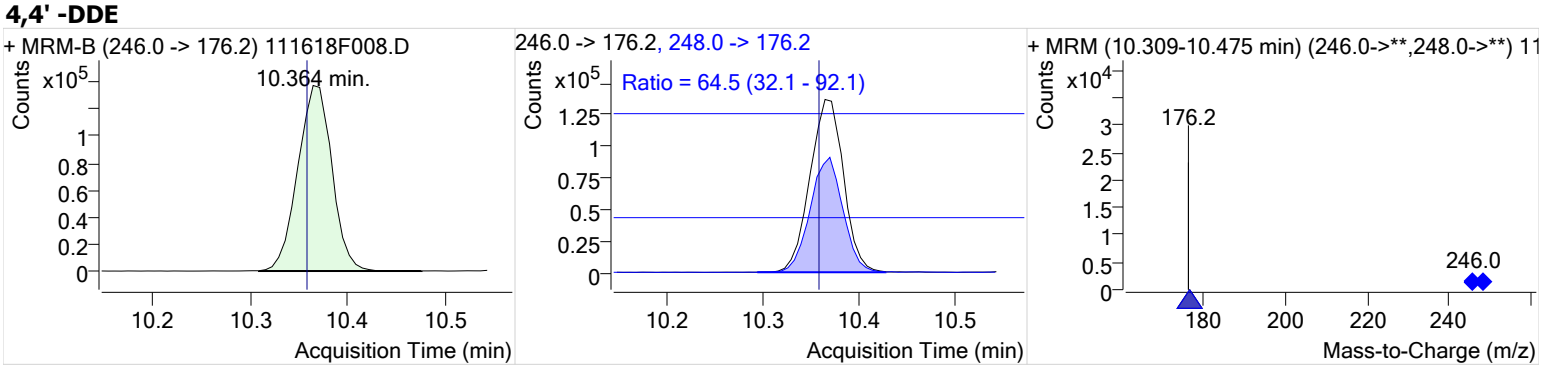


Quantitative Analysis Sample Report

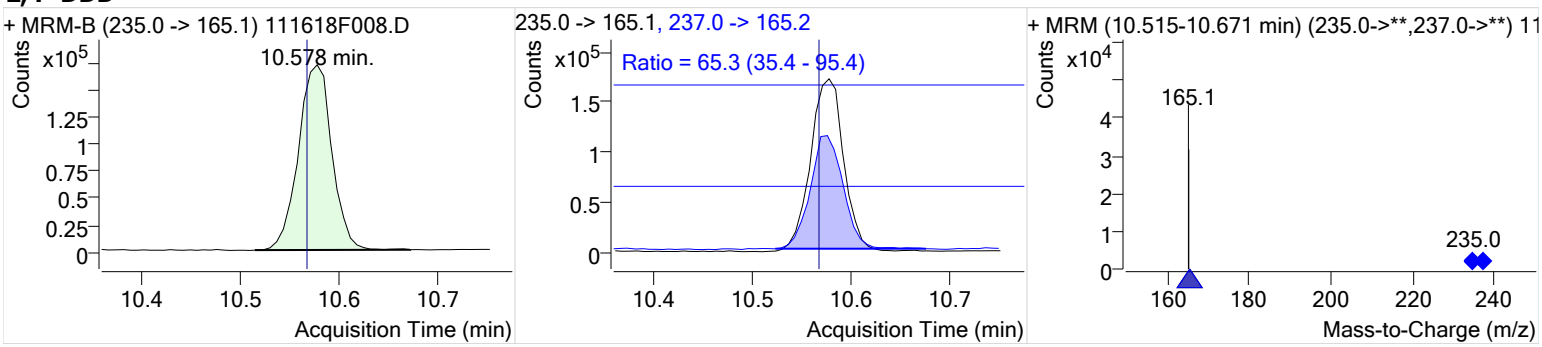
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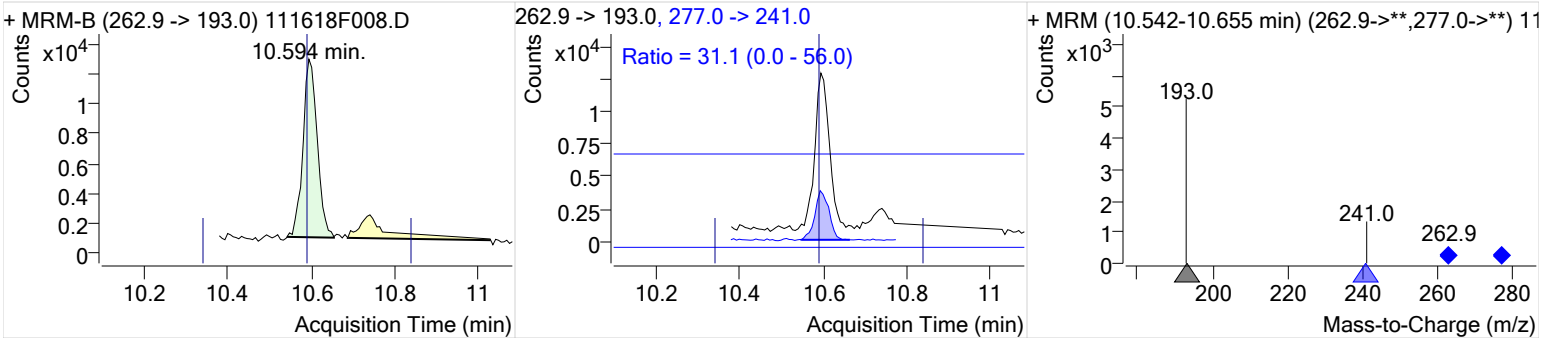
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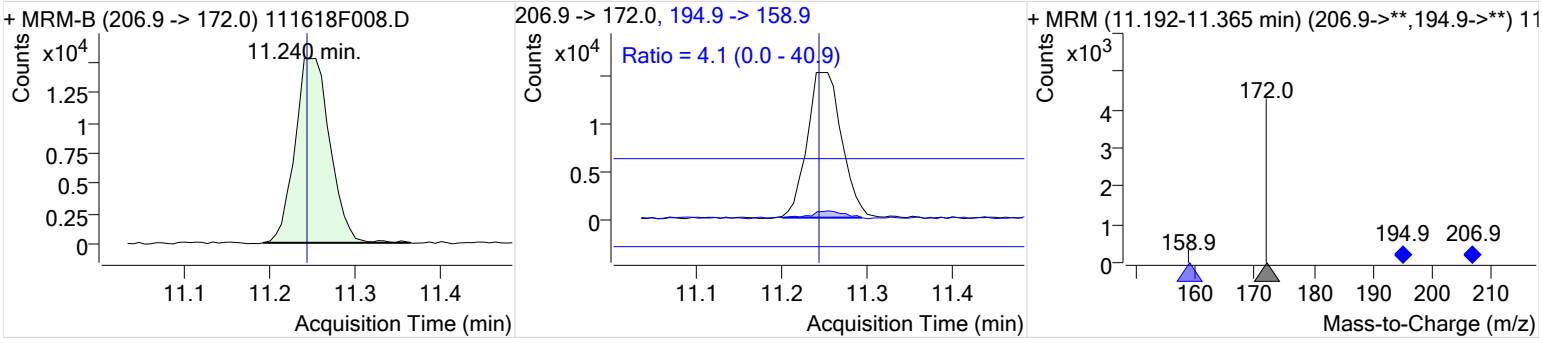
2,4'-DDD



Dieldrin

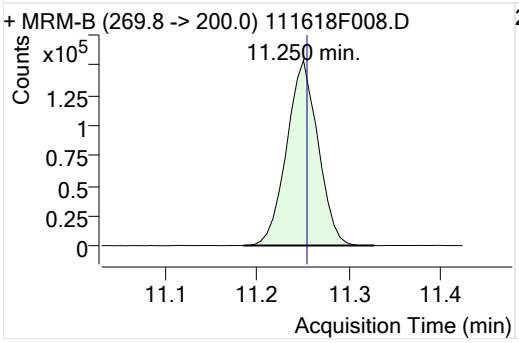


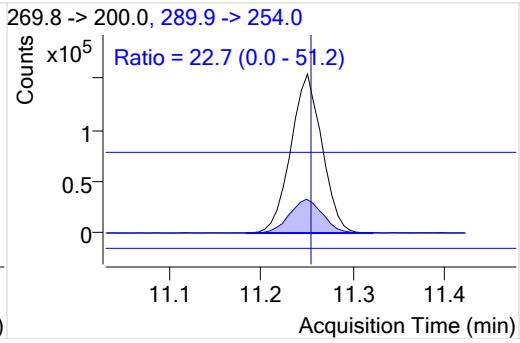
Endosulfan II

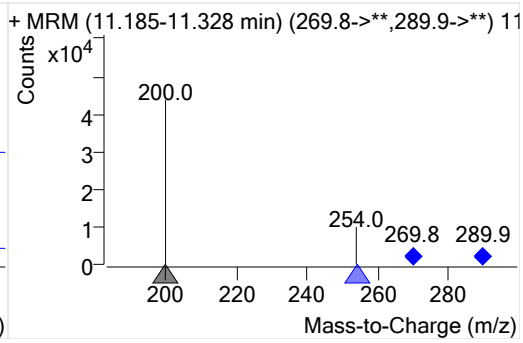


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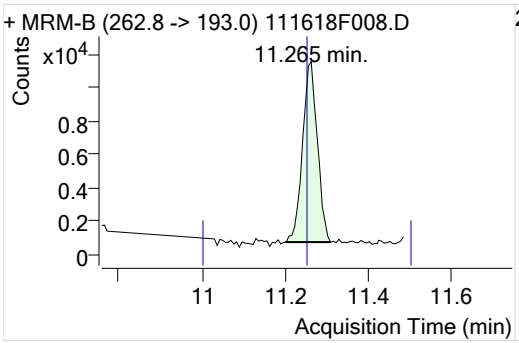
Endrin-13C12

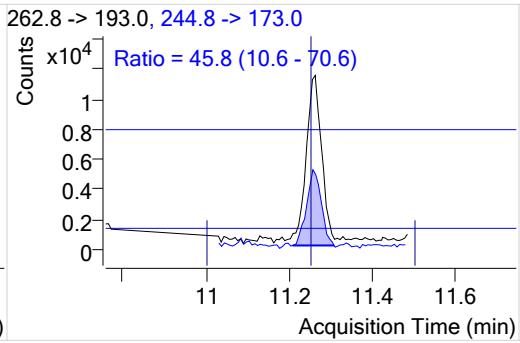


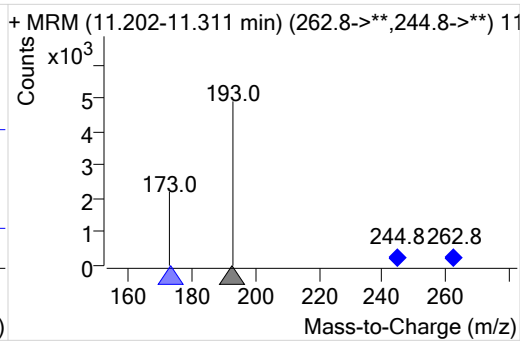




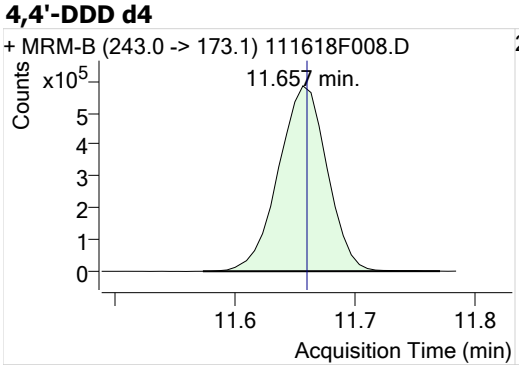
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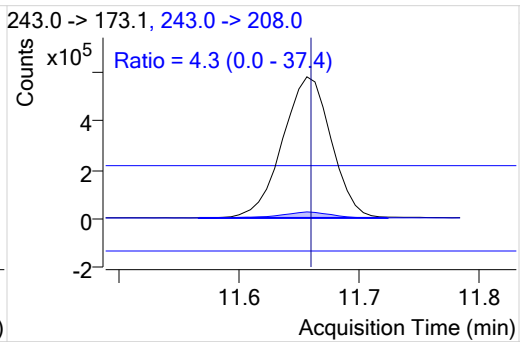


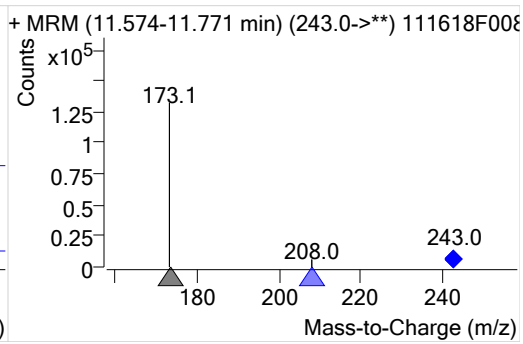




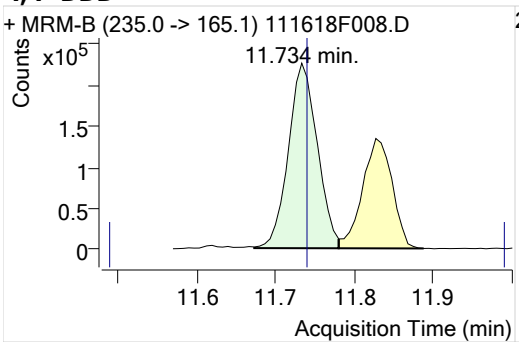
4,4'-DDD d4

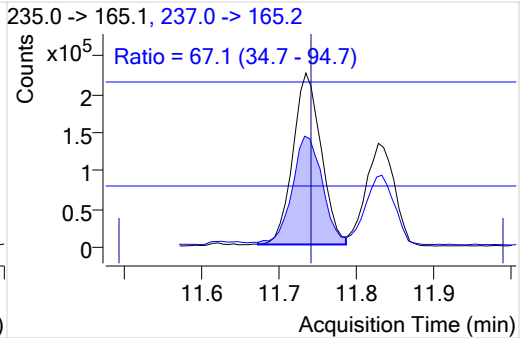


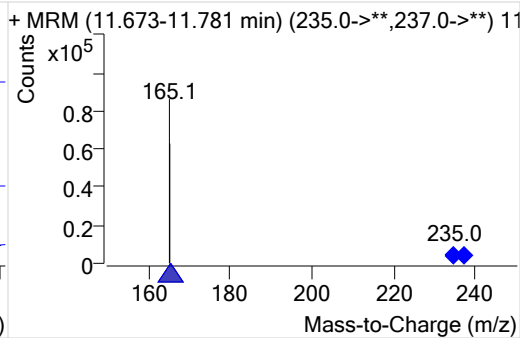




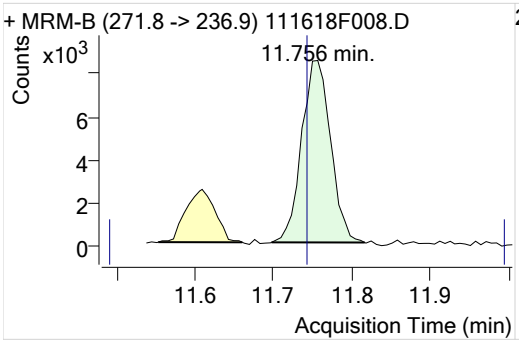
4,4'-DDD

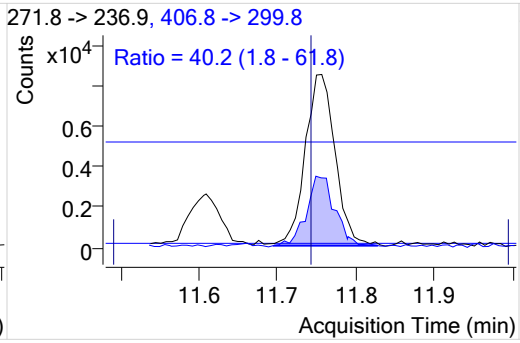


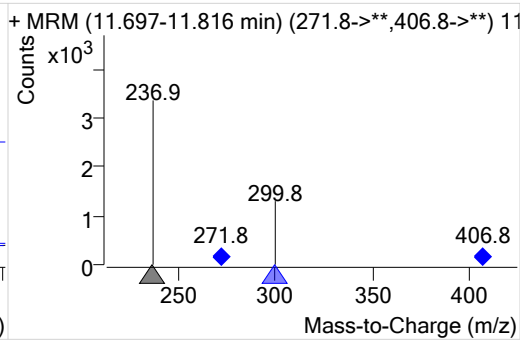




cis-Nonachlor

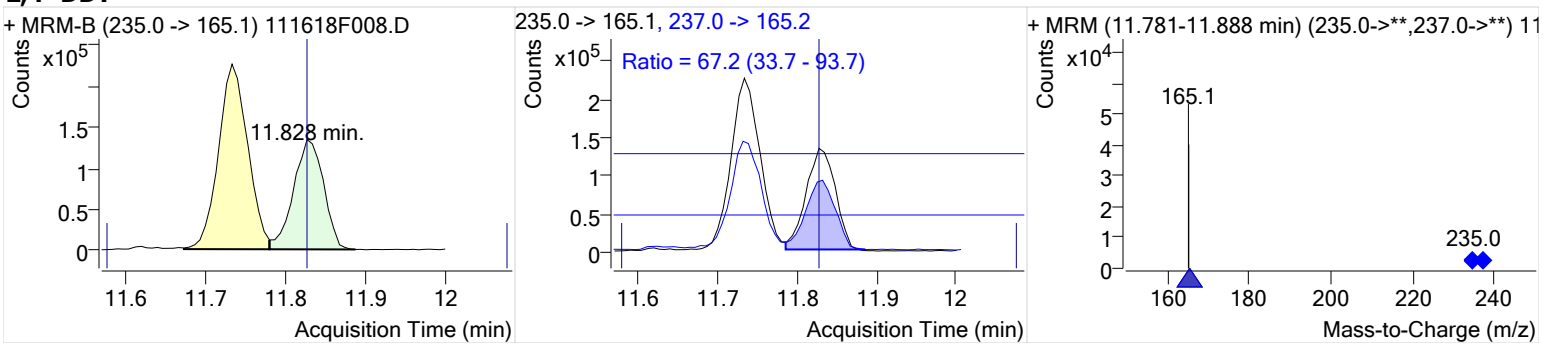




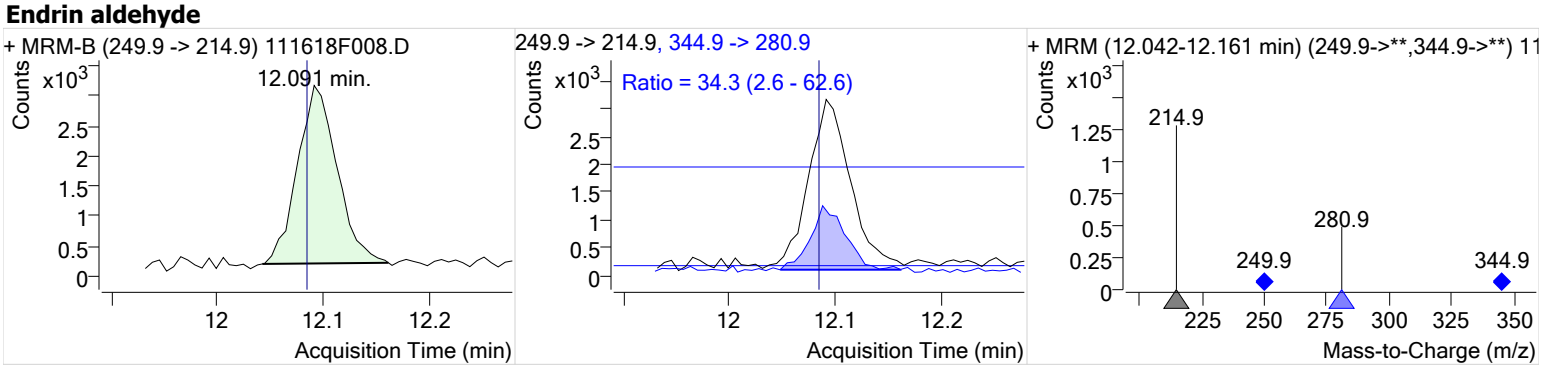


Quantitative Analysis Sample Report

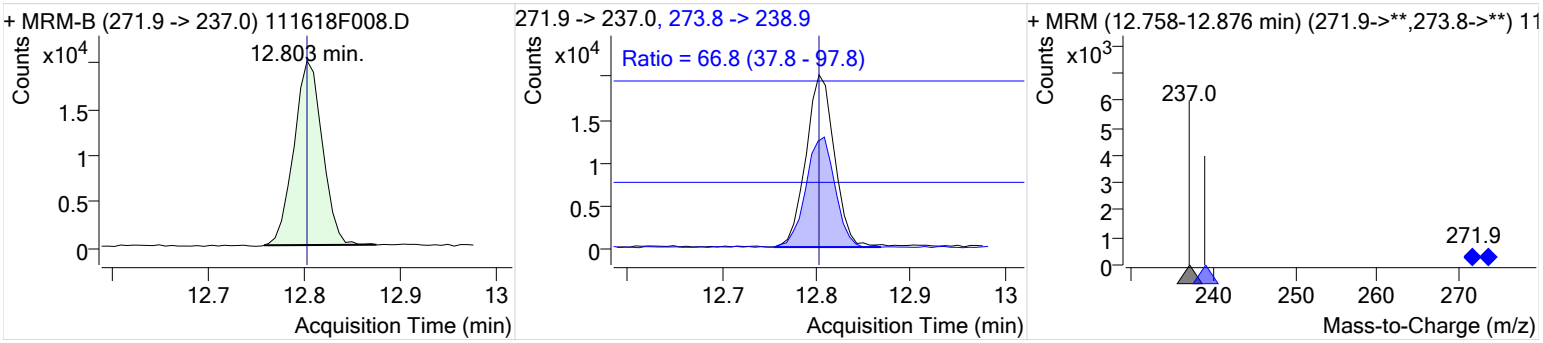
2,4'-DDT



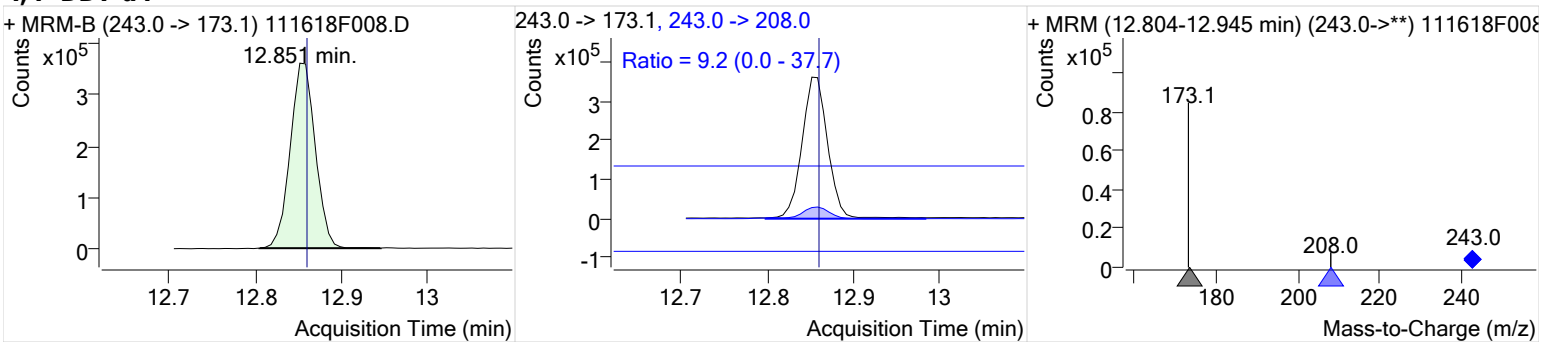
Endrin aldehyde



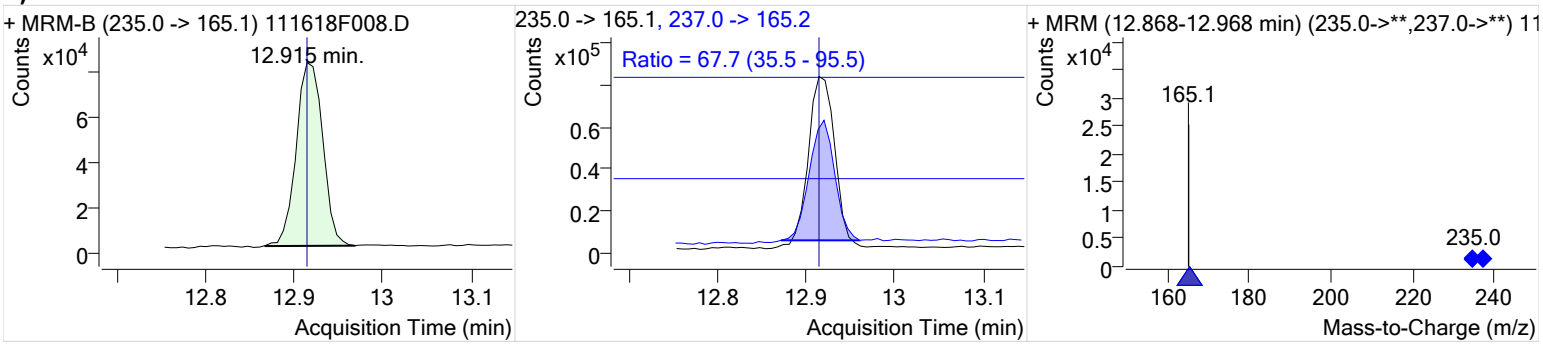
Endosulfan sulfate



4,4'-DDT-d4

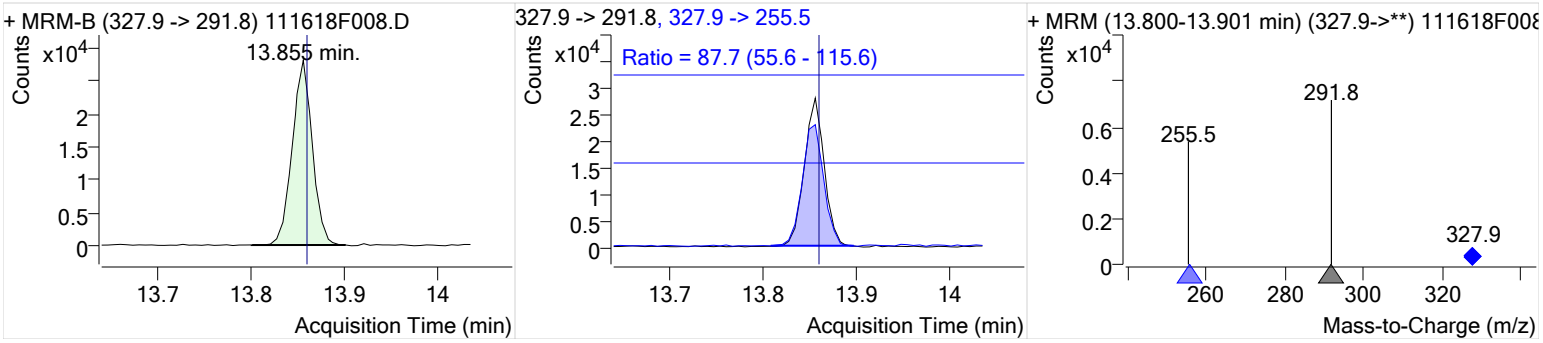


4,4'-DDT

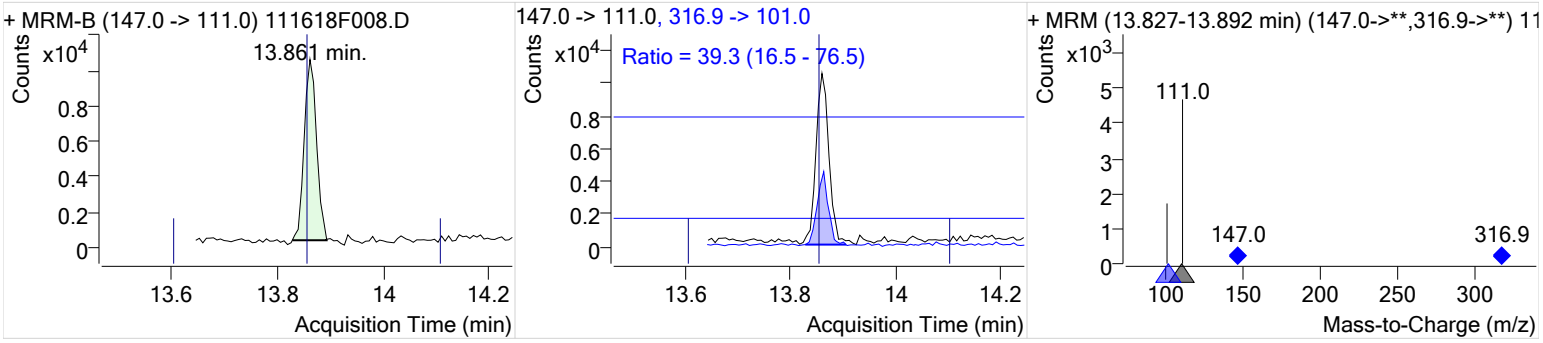


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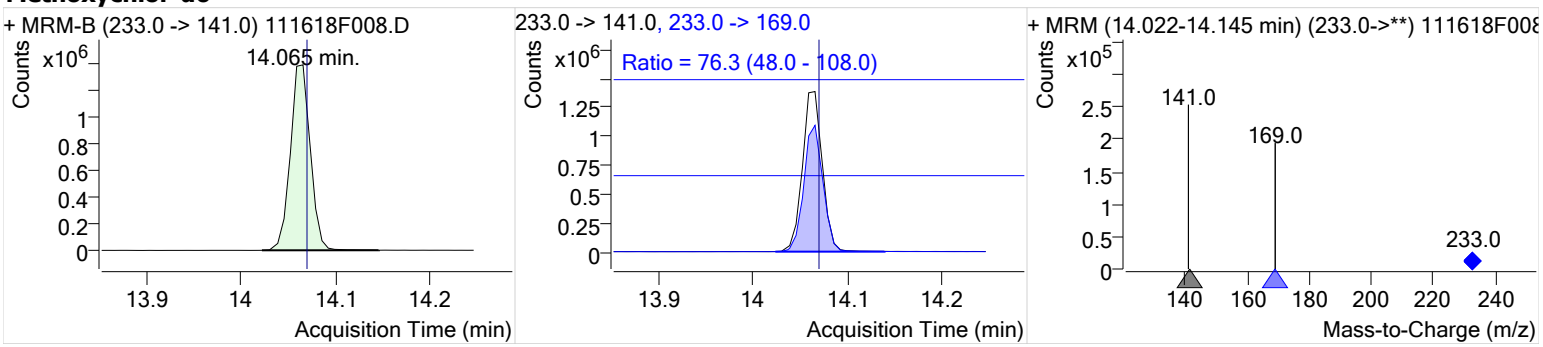
Endrin ketone-13C12



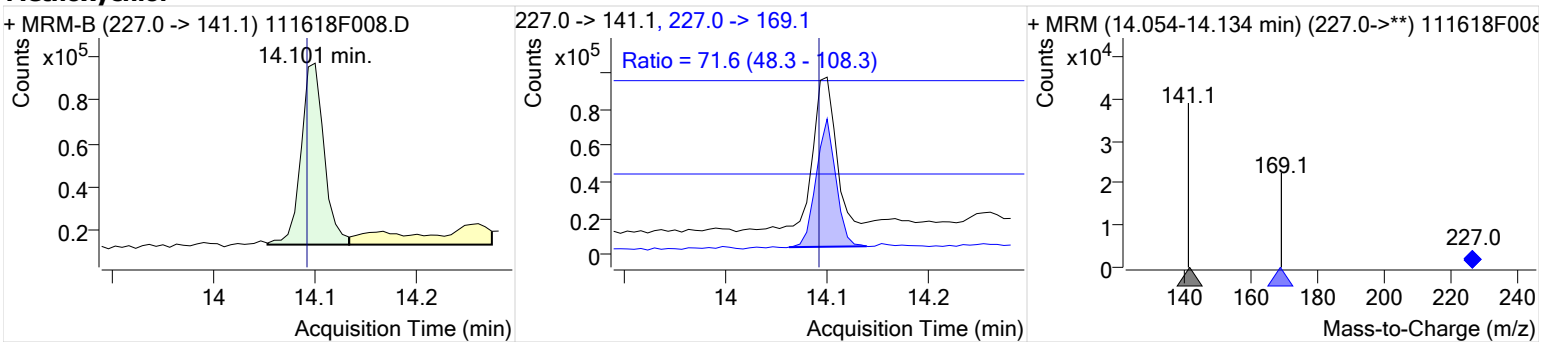
Endrin ketone



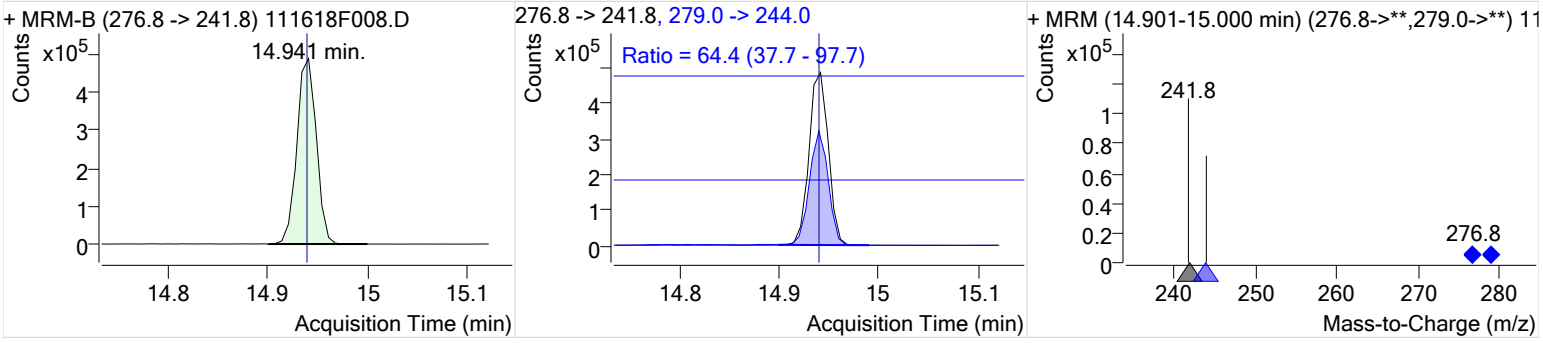
Methoxychlor-d6



Methoxychlor

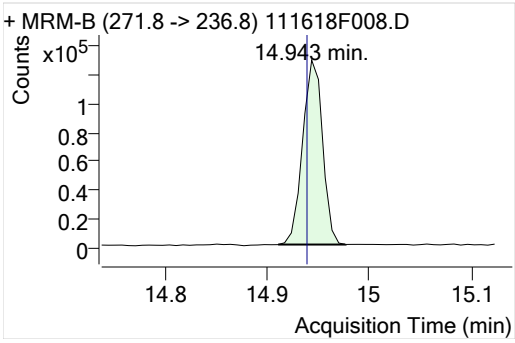


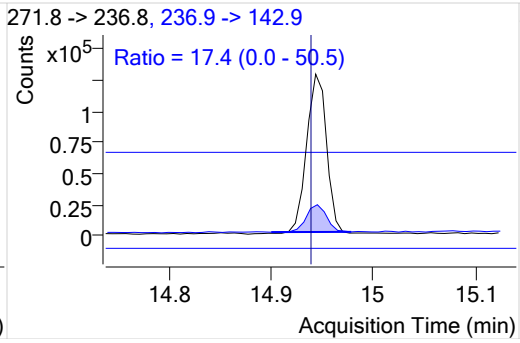
Mirex-13C10

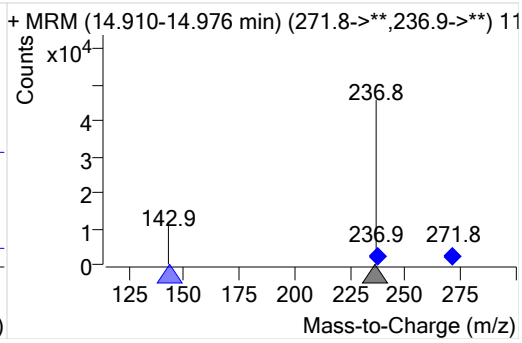


Quantitative Analysis Sample Report

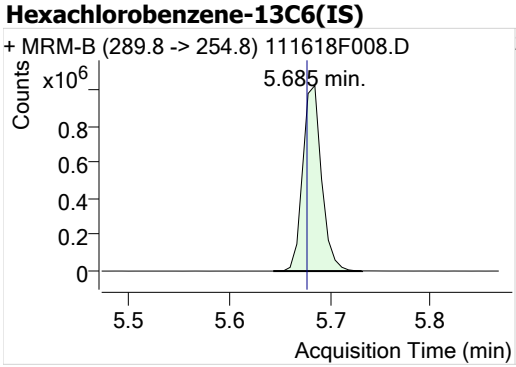
Mirex

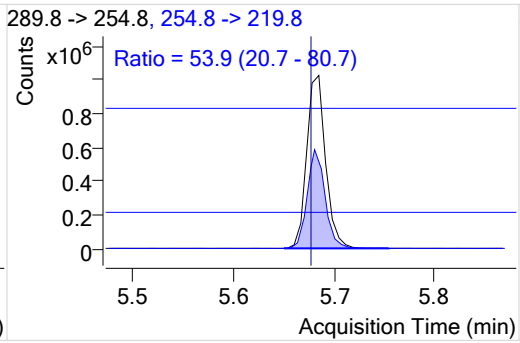


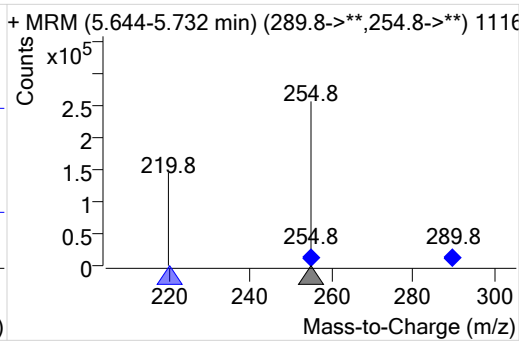




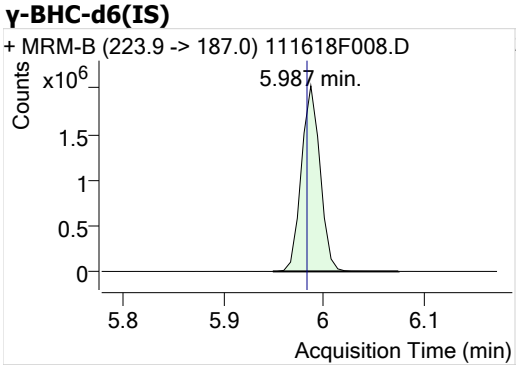
Hexachlorobenzene-13C6(IS)

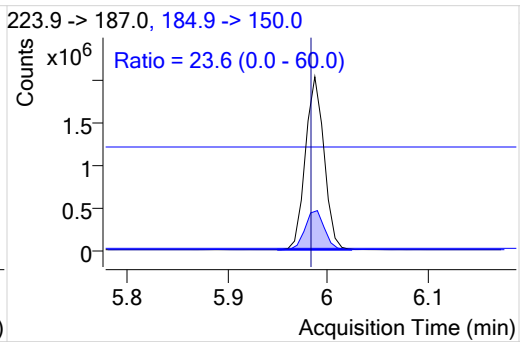


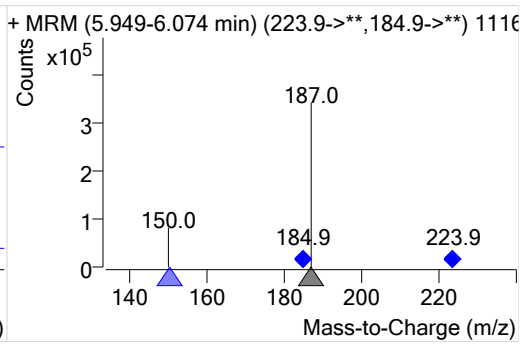




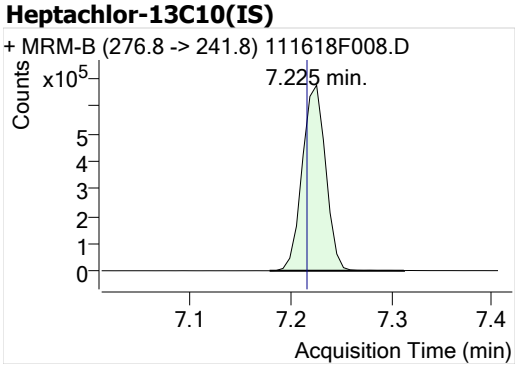
γ-BHC-d6(IS)

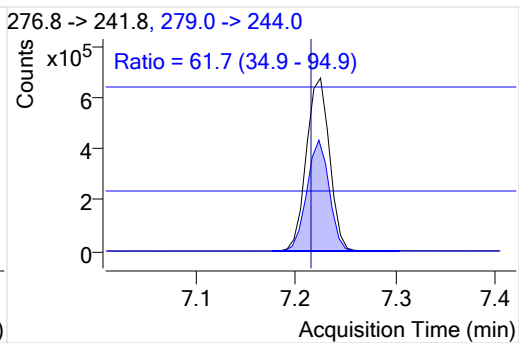


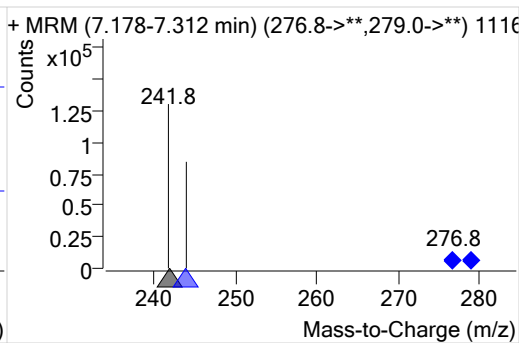




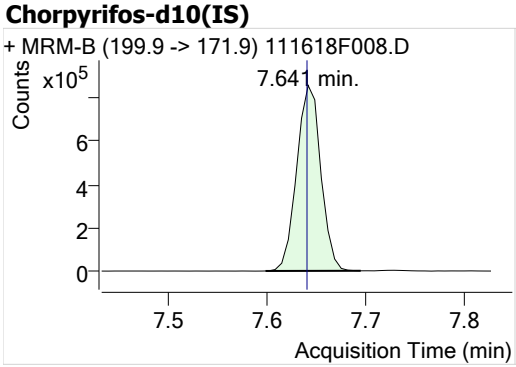
Heptachlor-13C10(IS)

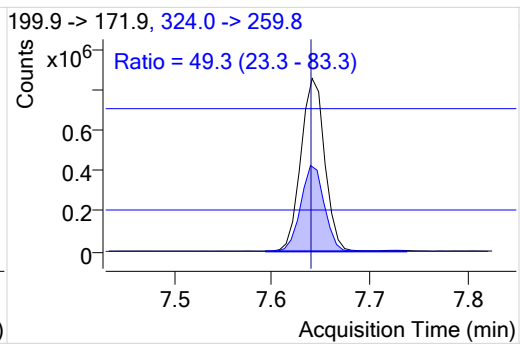


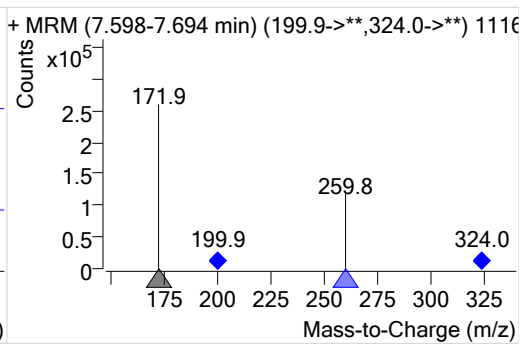




Chorpyrifos-d10(IS)

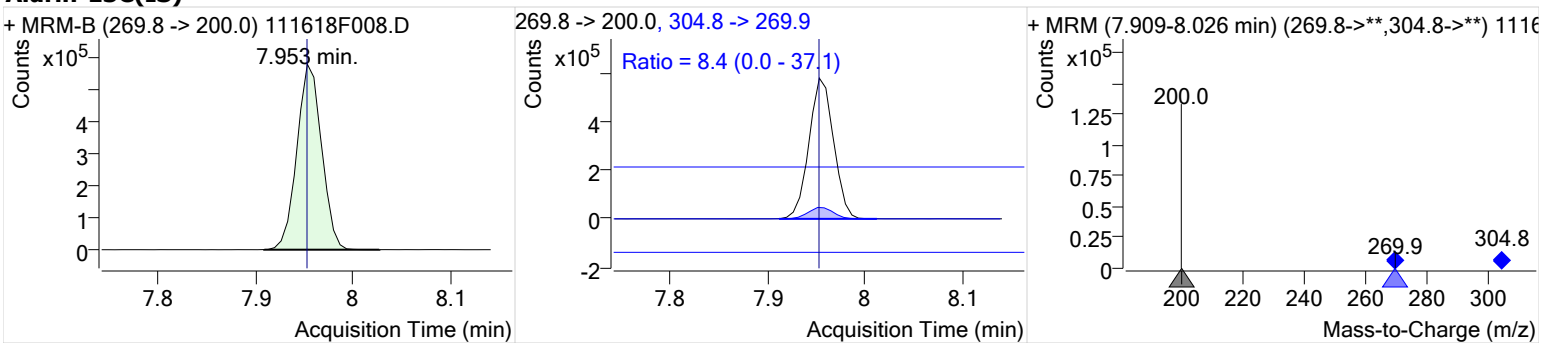




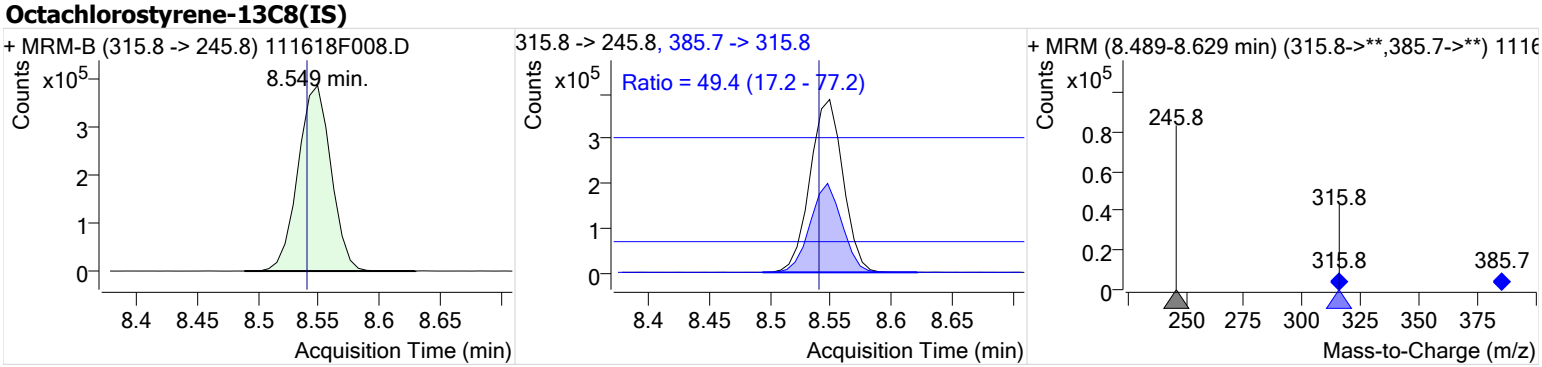


Quantitative Analysis Sample Report

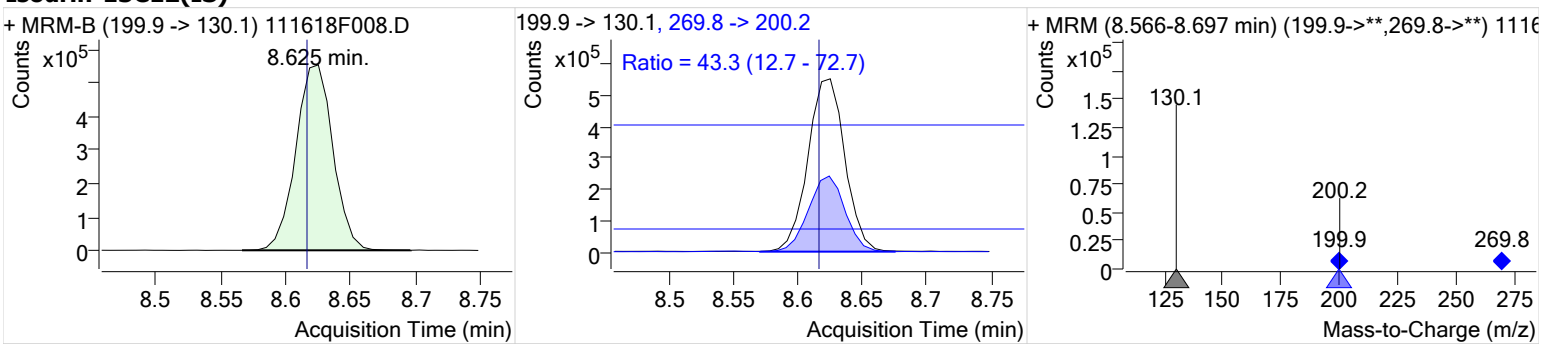
Aldrin-13C(IS)



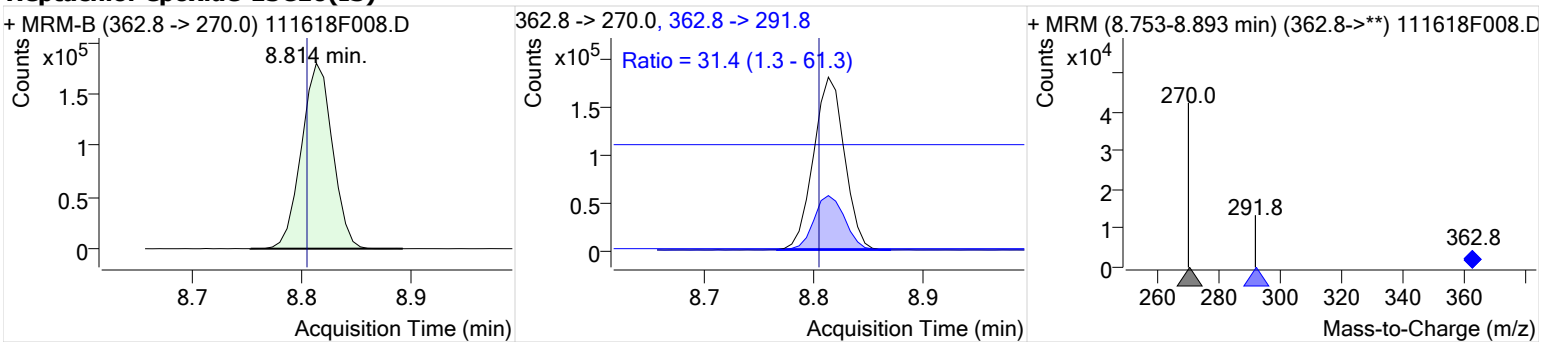
Octachlorostyrene-13C8(IS)



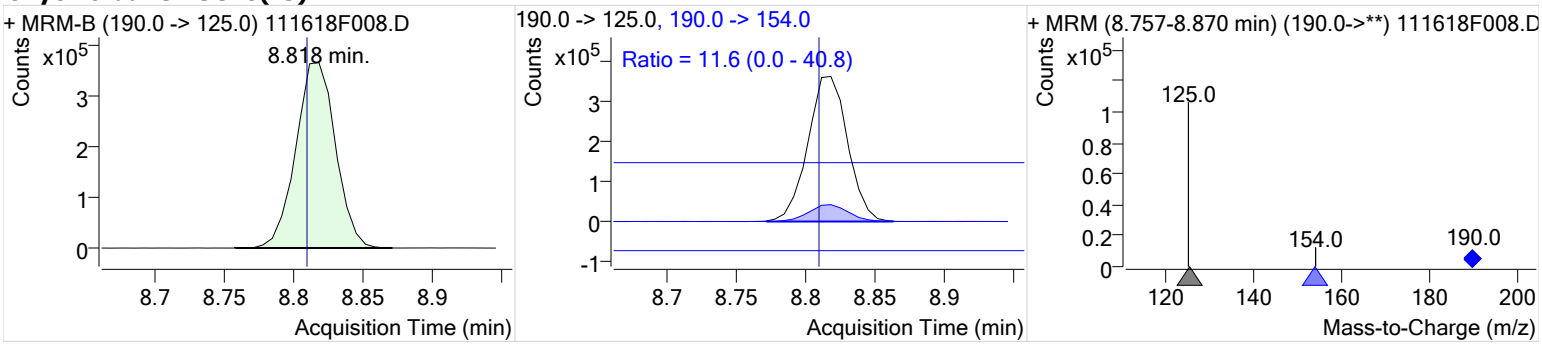
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

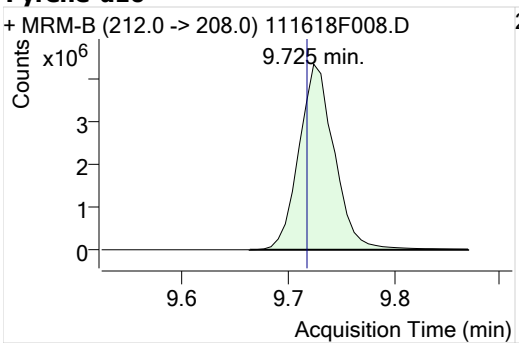


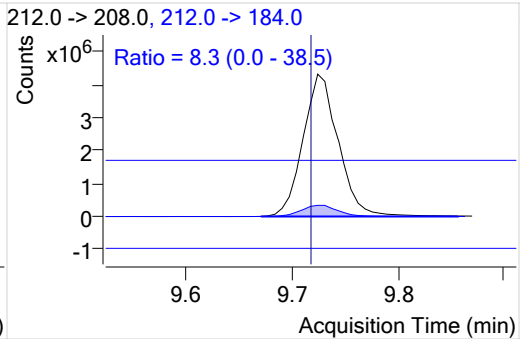
Oxychlordane-13C10(IS)

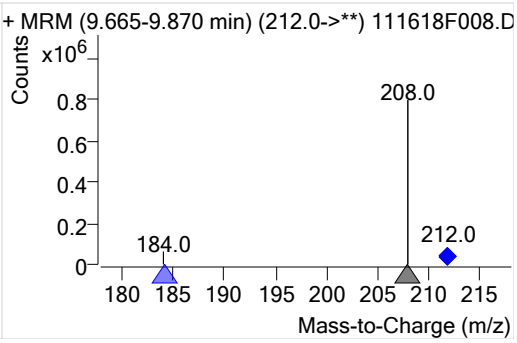


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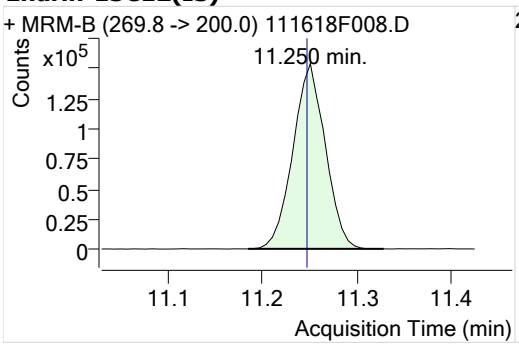
Pyrene-d10

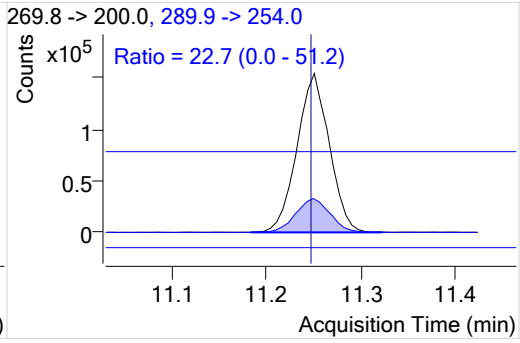


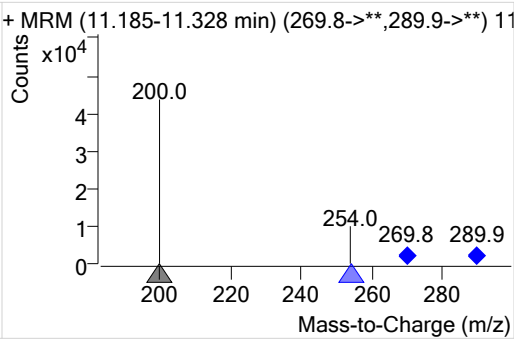




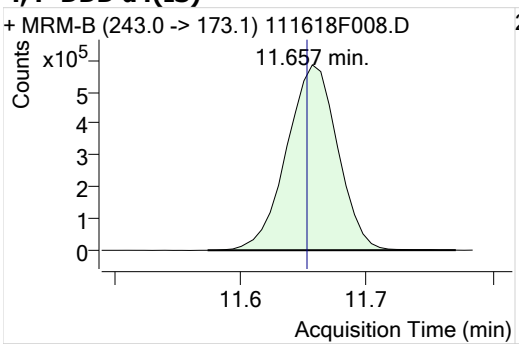
Endrin-13C12(IS)

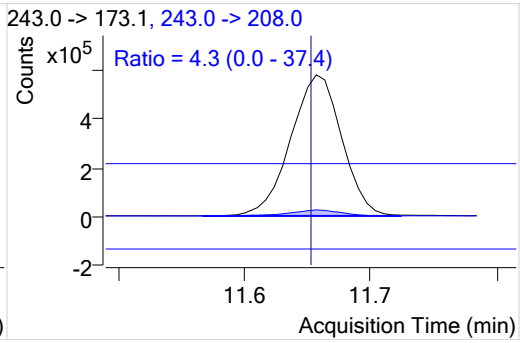


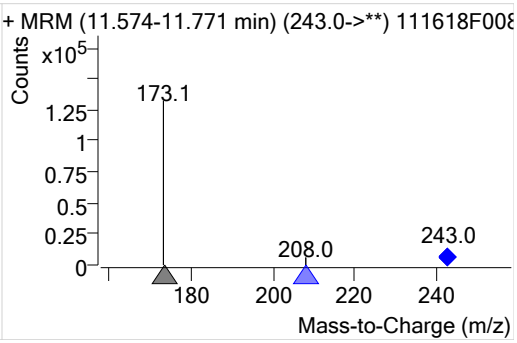




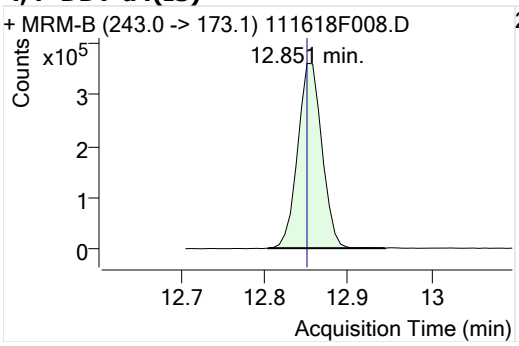
4,4'-DDD d4(IS)

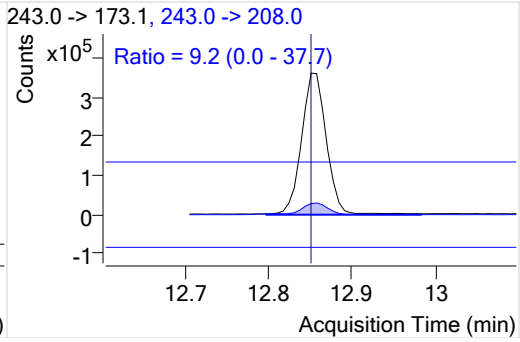


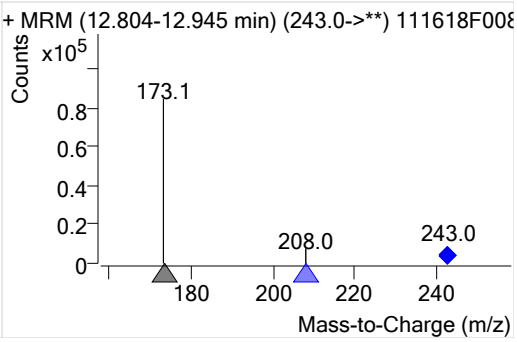




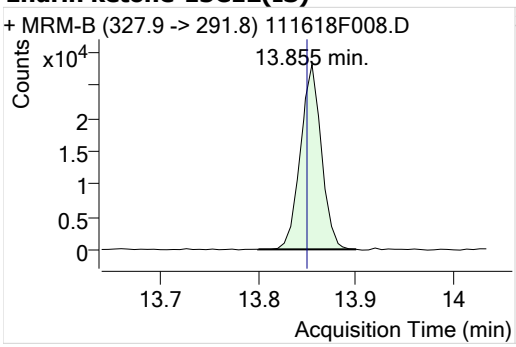
4,4'-DDT-d4(IS)

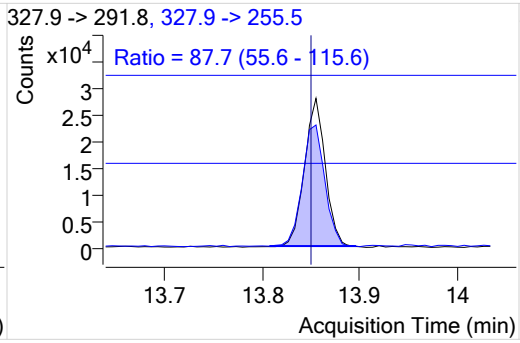


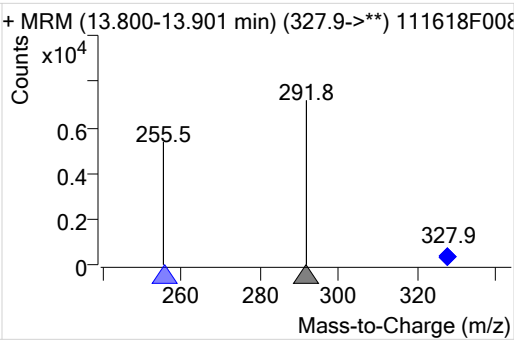




Endrin ketone-13C12(IS)

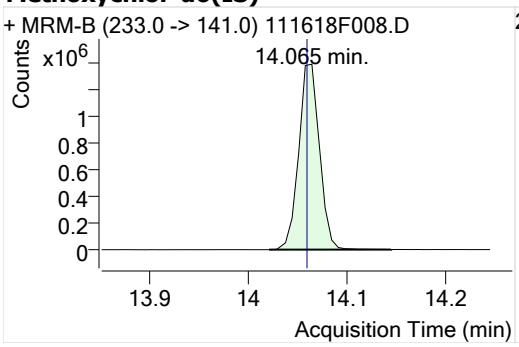


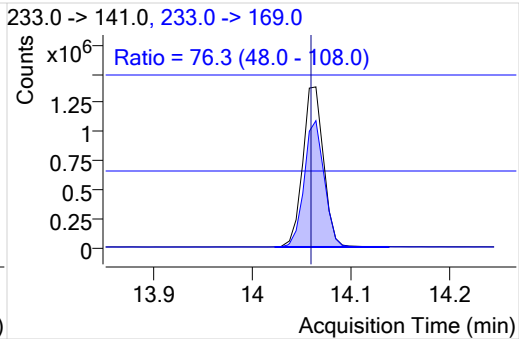


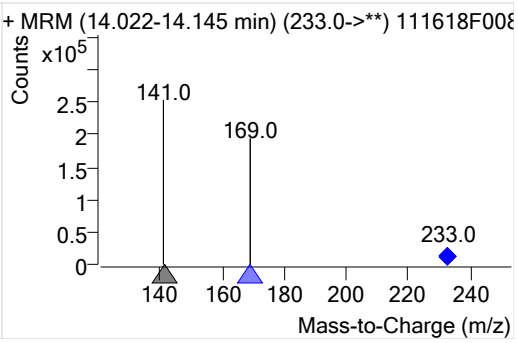


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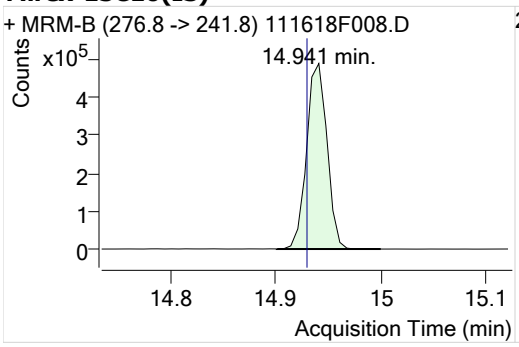
Methoxychlor-d6(IS)

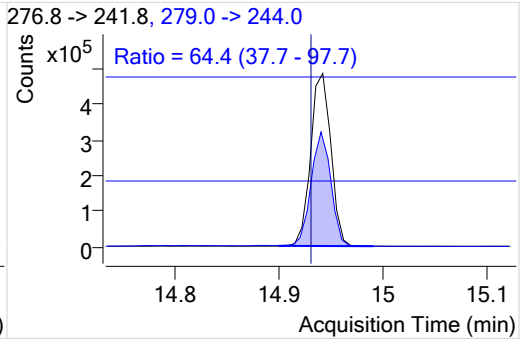


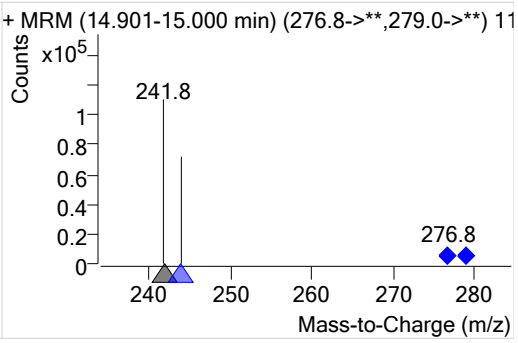




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F009.D	**Vial**	5
Acq. Date-Time	11/16/2018 1:40:12 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 2ng/mL SVM59-48C	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.686	289.8 -> 254.8	1303208	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2652438	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.220	276.8 -> 241.8	1097745	20.000 ng/ml	0.007
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1445003	20.000 ng/ml	0.001
Aldrin-13C(IS)	7.959	269.8 -> 200.0	1014999	20.000 ng/ml	0.005
Octachlorostyrene-13C8(IS)	8.550	315.8 -> 245.8	735834	20.000 ng/ml	0.009
Isodrin-13C12(IS)	8.619	199.9 -> 130.1	1090183	20.000 ng/ml	0.003
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	355850	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	711471	20.000 ng/ml	0.009
Pyrene-d10	9.732	212.0 -> 208.0	10565294	100.000 ng/ml	0.013
Endrin-13C12(IS)	11.250	269.8 -> 200.0	365734	20.000 ng/ml	0.003
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1736441	5.000 ng/ml	0.004
4,4'-DDT-d4(IS)	12.851	243.0 -> 173.1	794678	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	44724	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.058	233.0 -> 141.0	2204620	20.000 ng/ml	0.002
Mirex-13C10(IS)	14.941	276.8 -> 241.8	692057	5.000 ng/ml	0.010

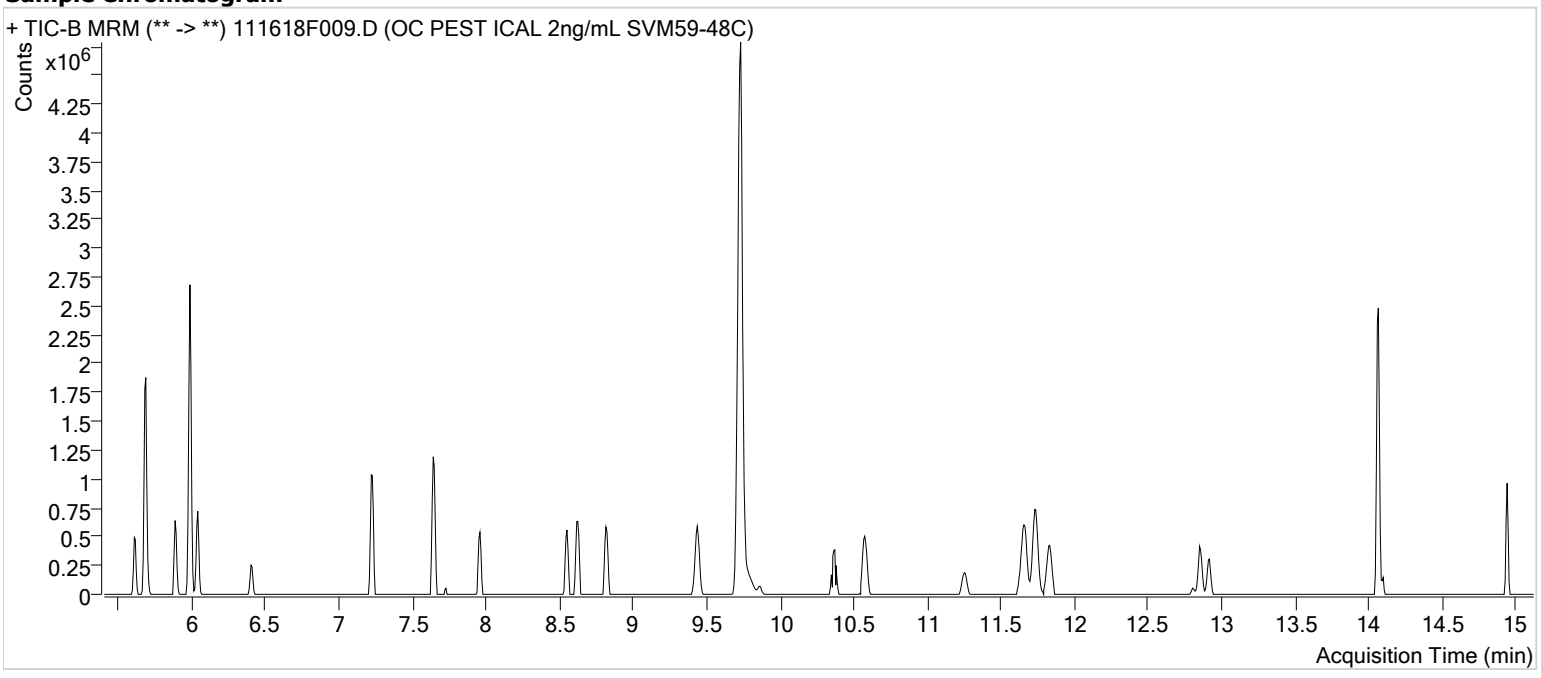
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1303208	16.757 ng/ml	
		Spiked Amount =	20.0	Recovery =	*83.8 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2652438	17.998 ng/ml	
		Spiked Amount =	20.0	Recovery =	*90.0 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1097745	18.013 ng/ml	
		Spiked Amount =	20.0	Recovery =	*90.1 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1445003	18.901 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.5 %*
Aldrin-13C	7.952	269.8 -> 200.0	1015016	18.236 ng/ml	
		Spiked Amount =	20.0	Recovery =	*91.2 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	735834	18.464 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.3 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1090183	17.951 ng/ml	
		Spiked Amount =	20.0	Recovery =	*89.8 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	355850	18.326 ng/ml	
		Spiked Amount =	20.0	Recovery =	*91.6 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	711471	18.030 ng/ml	
		Spiked Amount =	20.0	Recovery =	*90.1 %*
Endrin-13C12	11.247	269.8 -> 200.0	365734	18.941 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.7 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1736441	4.627 ng/ml	
		Spiked Amount =	5.0	Recovery =	*92.5 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	794678	4.740 ng/ml	
		Spiked Amount =	5.0	Recovery =	*94.8 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	44724	18.705 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.5 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	2204620	19.901 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.5 %*
Mirex-13C10	14.930	276.8 -> 241.8	692057	4.276 ng/ml	
		Spiked Amount =	5.0	Recovery =	*85.5 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	383275	2.021	ng/ml	91
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	273115	2.315	ng/ml	95
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	507271	2.114	ng/ml	97
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	567029	2.044	ng/ml	97
δ-BHC	γ-BHC-d6(IS)	6.404	181.1 -> 145.1	229254	2.073	ng/ml	97
Heptachlor	Heptachlor-13C10(IS)	7.230	271.7 -> 236.9	137506	2.161	ng/ml	35
Chorpyrifos	Chorpyrifos-d10(IS)	7.725	196.9 -> 169.0	230570	2.260	ng/ml	93
Aldrin	Aldrin-13C(IS)	7.962	254.9 -> 220.0	163459	2.145	ng/ml	44
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.549	342.8 -> 307.8	193178	2.040	ng/ml	95
Isodrin	Isodrin-13C12(IS)	8.634	193.0 -> 123.0	114544	2.048	ng/ml	92
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.829	352.8 -> 262.9	42676	2.107	ng/ml	97
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	203948	2.120	ng/ml	98
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	74453	2.172	ng/ml	97
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	692095	2.096	ng/ml	99
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.788	271.8 -> 236.9	183054	2.137	ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.811	206.9 -> 172.0	44317	1.933	ng/ml	98
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	113264	2.055	ng/ml	94
4,4' -DDE	4,4'-DDD d4(IS)	10.371	246.0 -> 176.2	666910	2.204	ng/ml	98
2,4'-DDD	4,4'-DDD d4(IS)	10.578	235.0 -> 165.1	817992	2.189	ng/ml	96
Dieldrin	Endrin-13C12(IS)	10.594	262.9 -> 193.0	58481	2.096	ng/ml	93
Endosulfan II	Endrin-13C12(IS)	11.247	206.9 -> 172.0	47010	2.221	ng/ml	84
Endrin	Endrin-13C12(IS)	11.265	262.8 -> 193.0	52770	2.102	ng/ml	96
4,4'-DDD	4,4'-DDD d4(IS)	11.740	235.0 -> 165.1	1191528	2.125	ng/ml	99
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	44289	2.121	ng/ml	85
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	706566	1.983	ng/ml	94
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	14590	2.061	ng/ml	95
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	90222	2.100	ng/ml	96
4,4'-DDT	4,4'-DDT-d4(IS)	12.921	235.0 -> 165.1	381139	2.073	ng/ml	98
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	34502	2.192	ng/ml	88
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	294905	2.096	ng/ml	92
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	351463	2.086	ng/ml	94

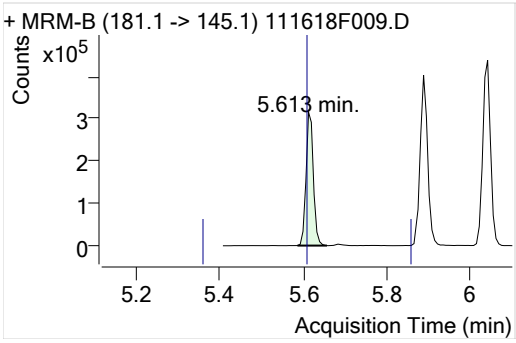
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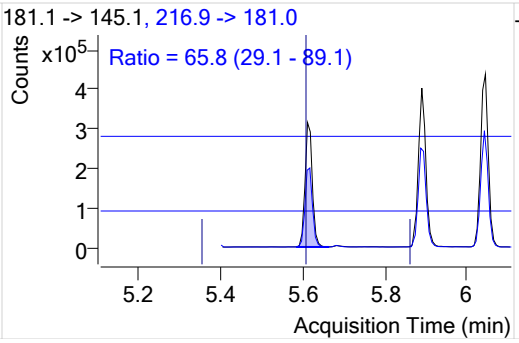
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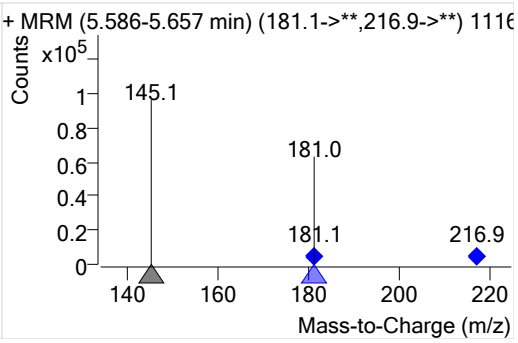


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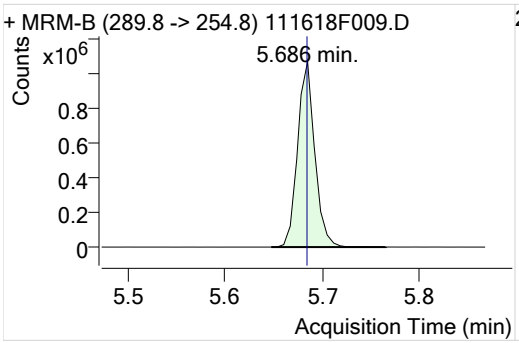
α-BHC

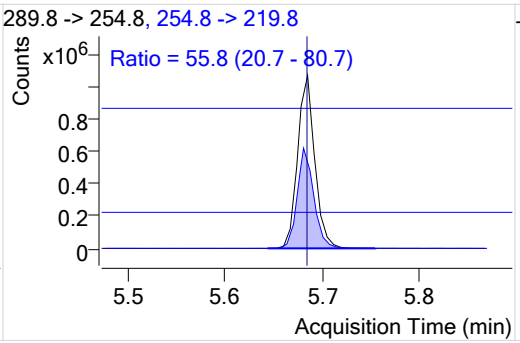


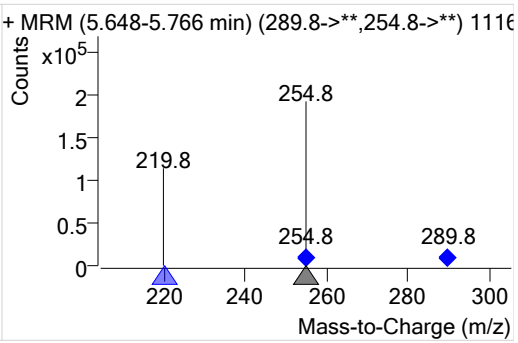




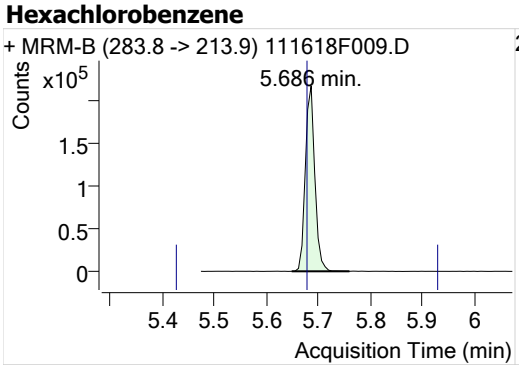
Hexachlorobenzene-13C6

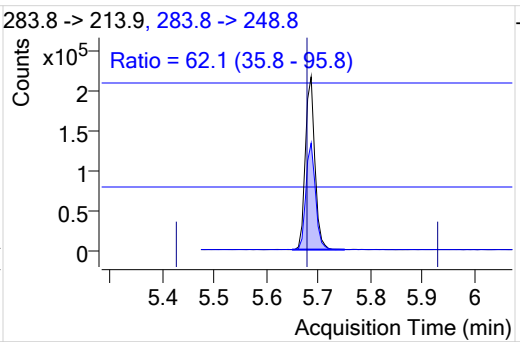


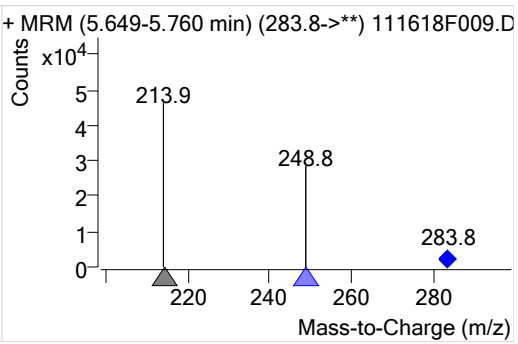




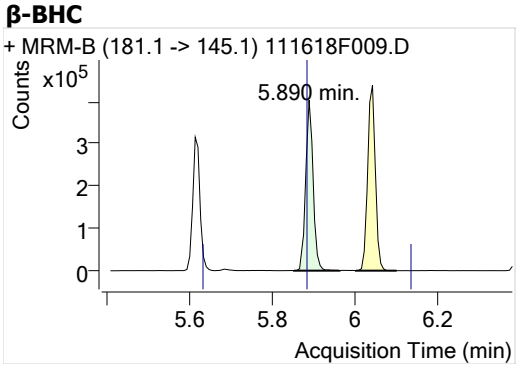
Hexachlorobenzene

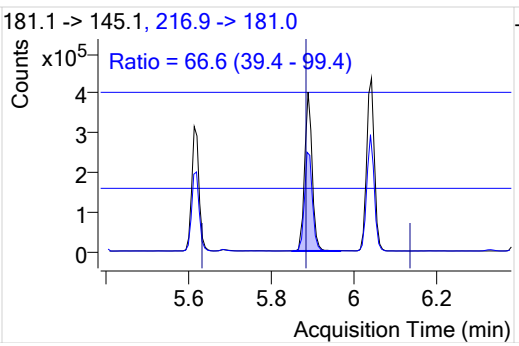


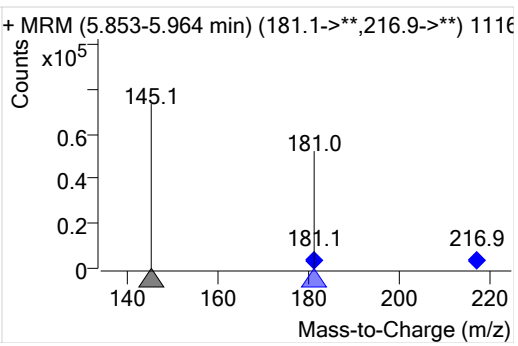




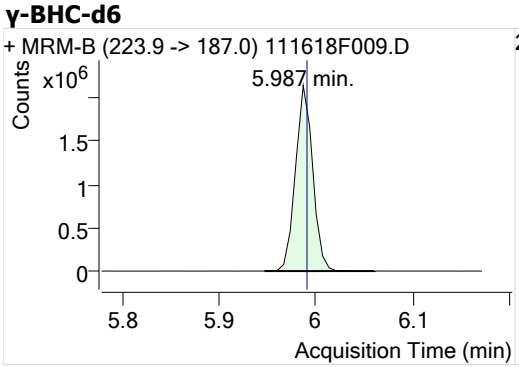
β-BHC

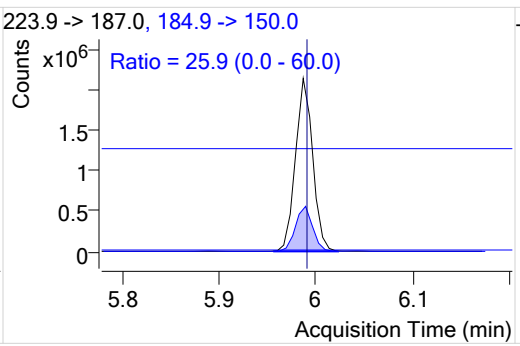


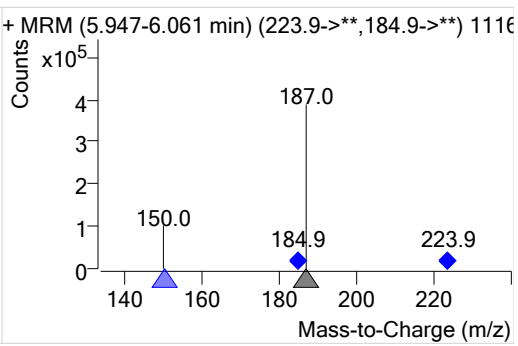




γ-BHC-d6

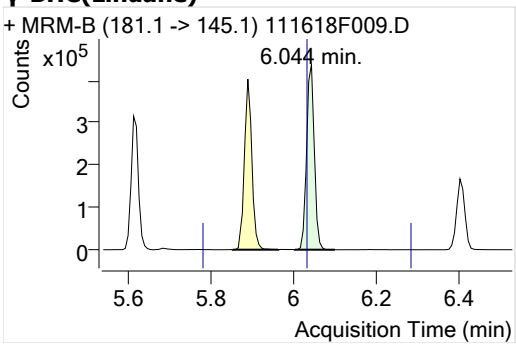


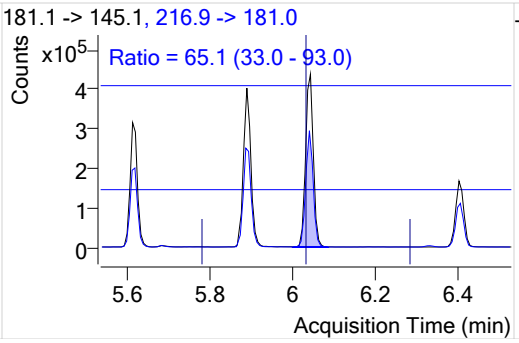


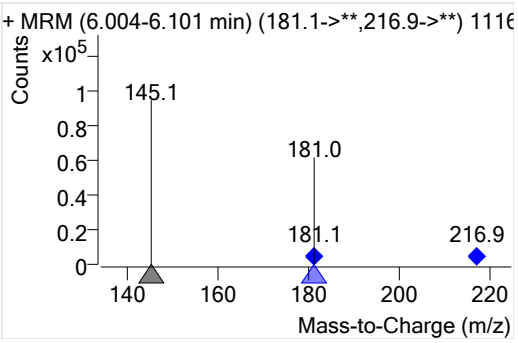


Quantitative Analysis Sample Report

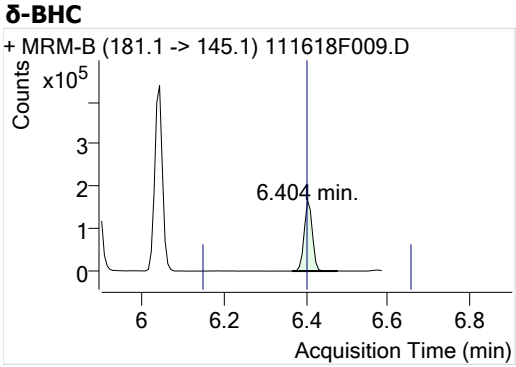
γ-BHC(Lindane)

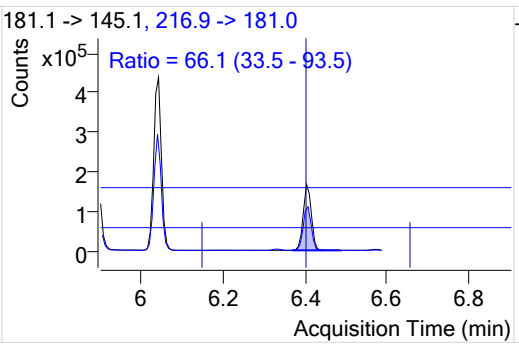


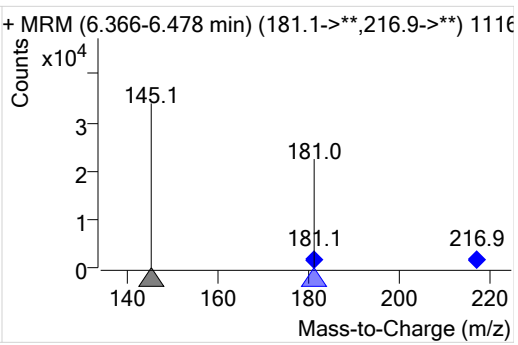




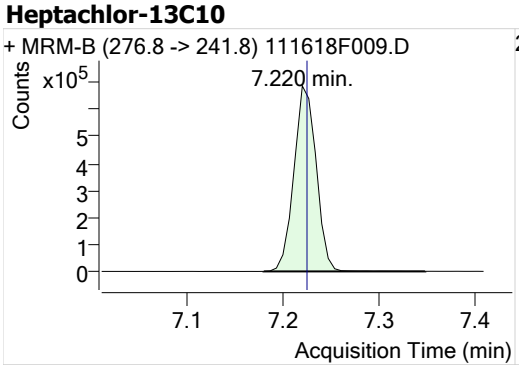
δ-BHC

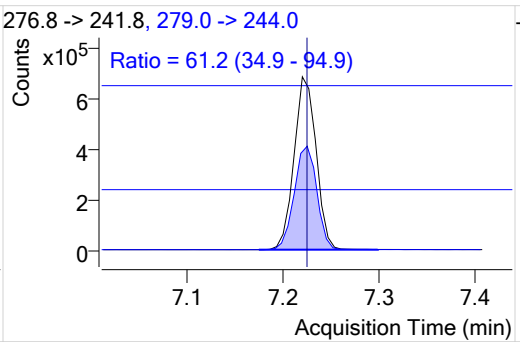


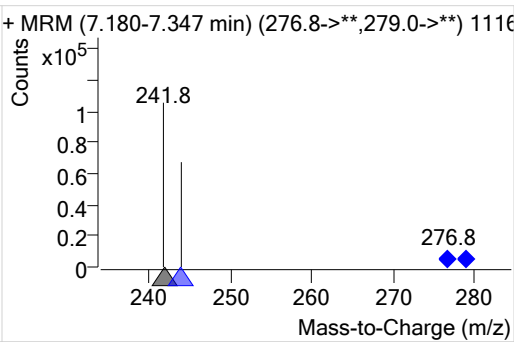




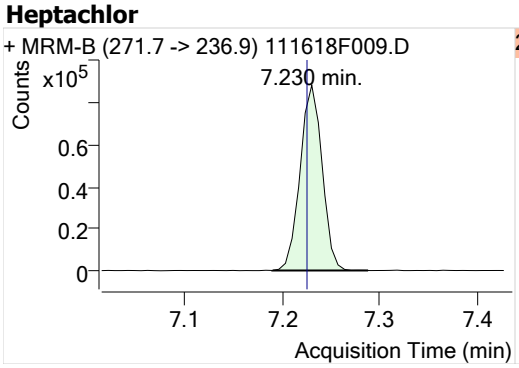
Heptachlor-13C10

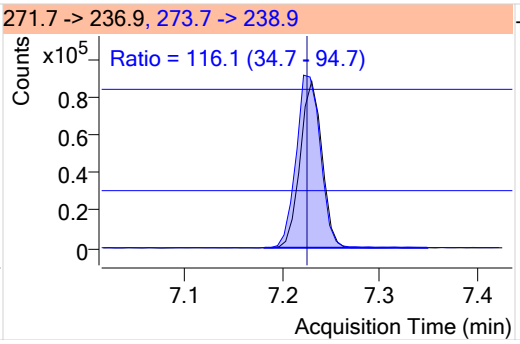


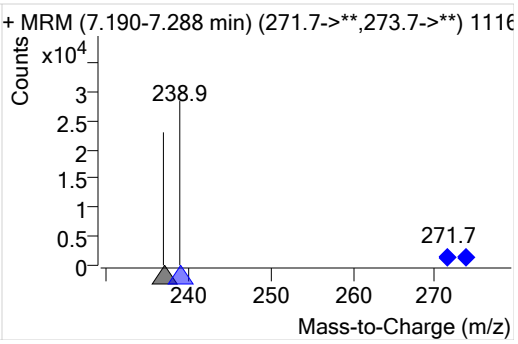




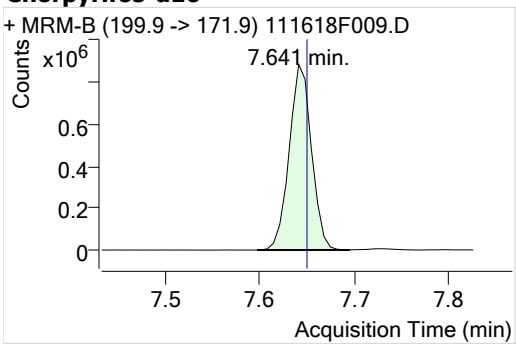
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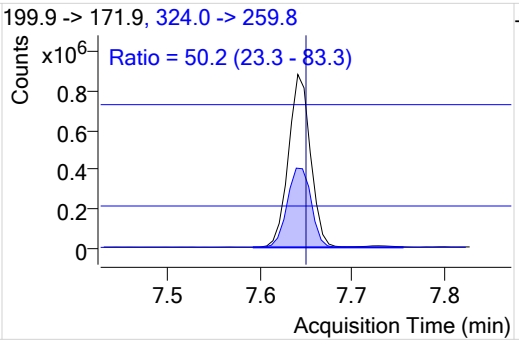


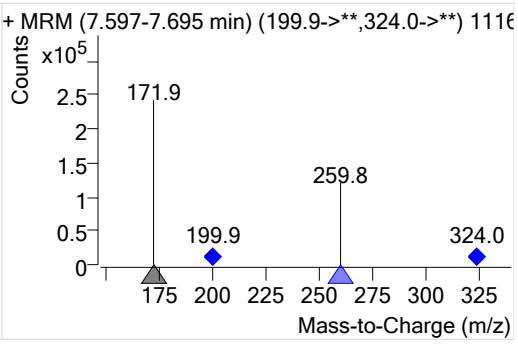




Chorpyrifos-d10

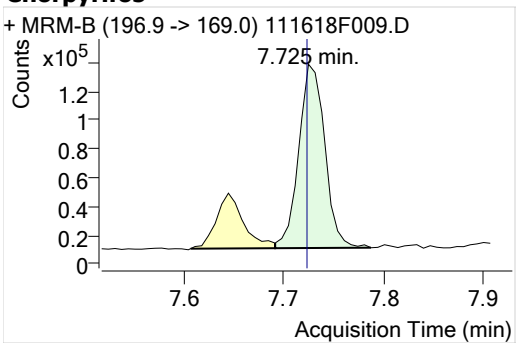


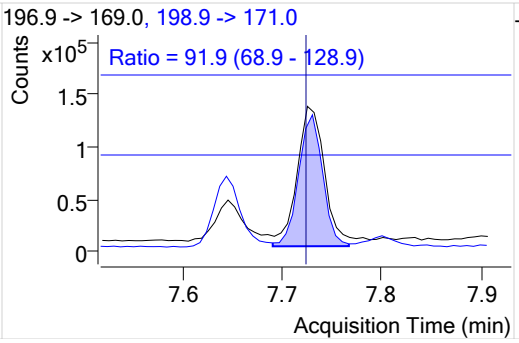


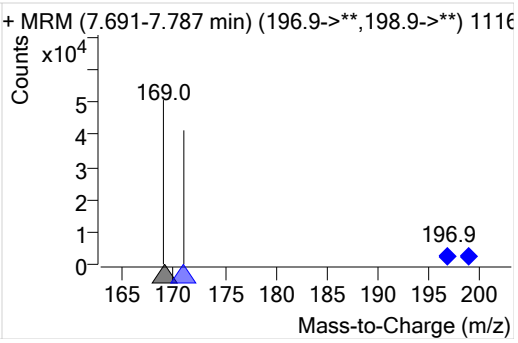


Quantitative Analysis Sample Report

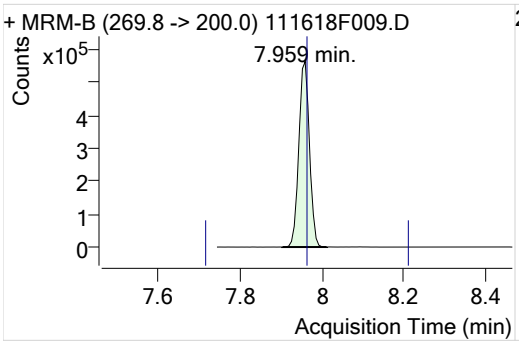
Chorpyrifos

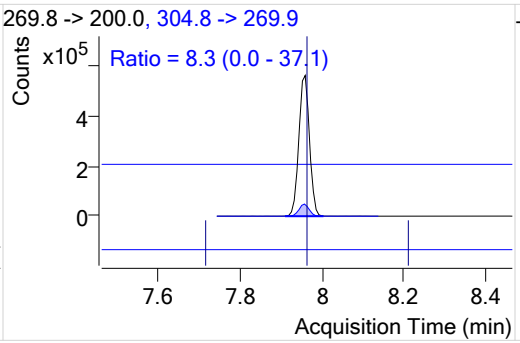


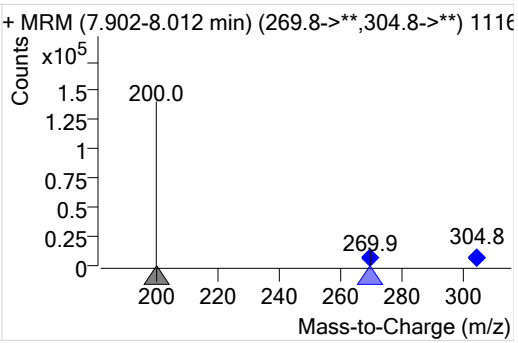




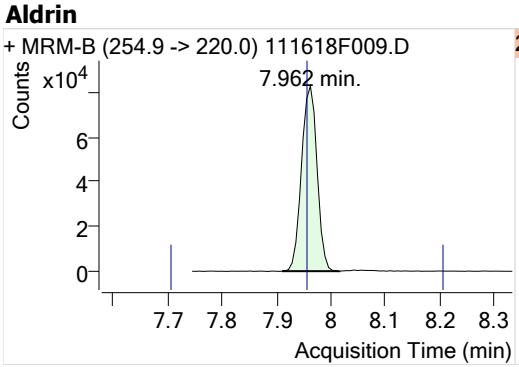
Aldrin-13C

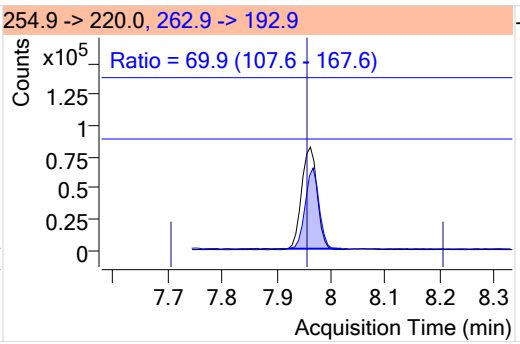


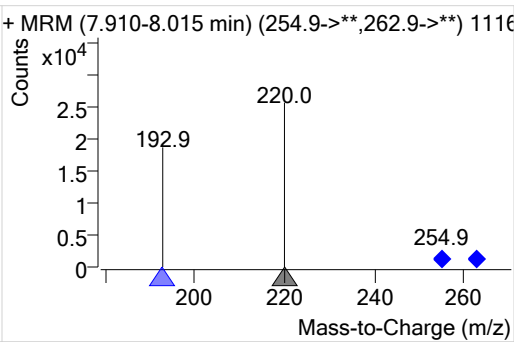




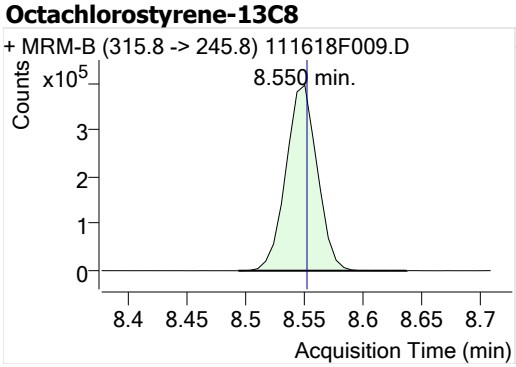
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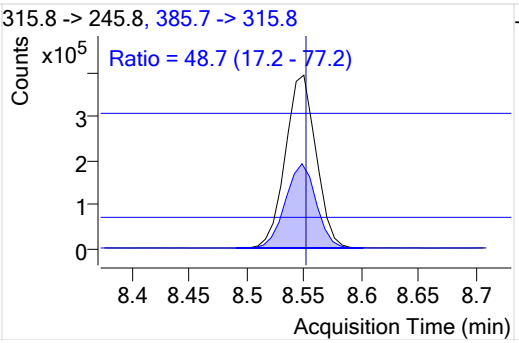


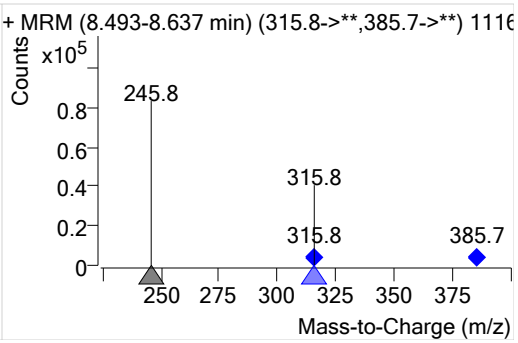




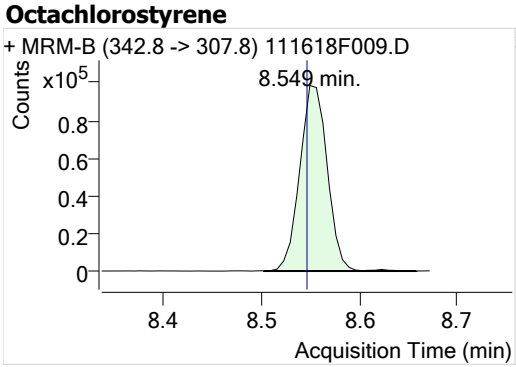
Octachlorostyrene-13C8

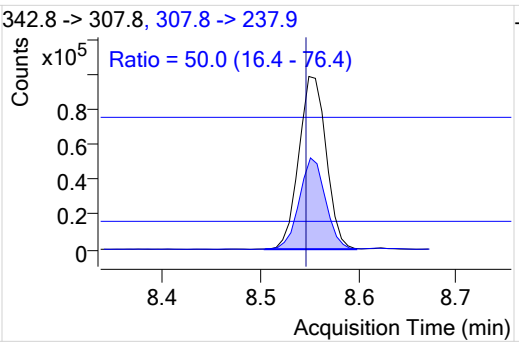


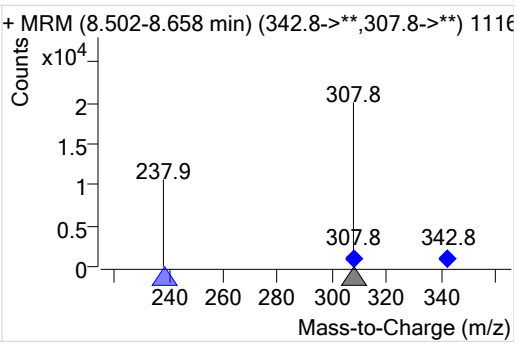




Octachlorostyrene

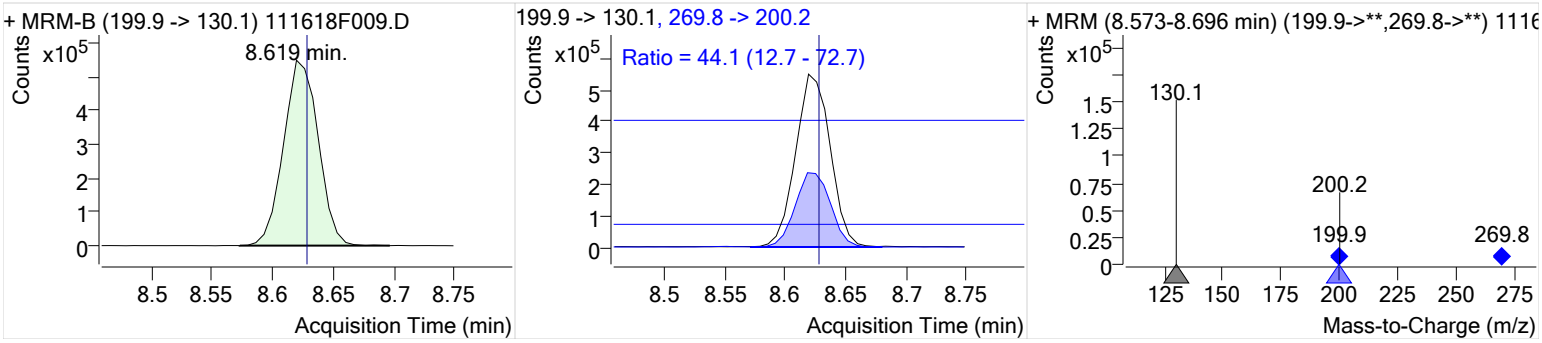




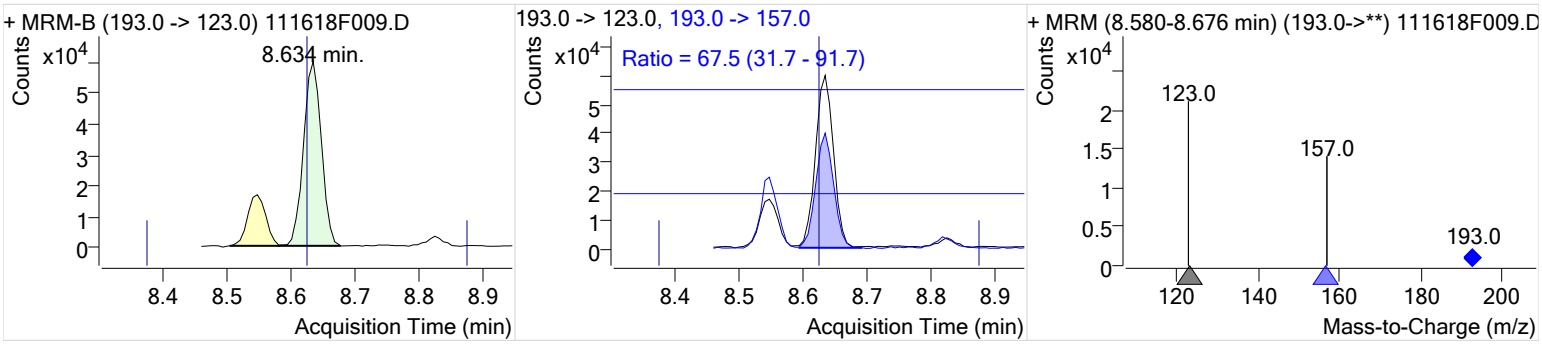


Quantitative Analysis Sample Report

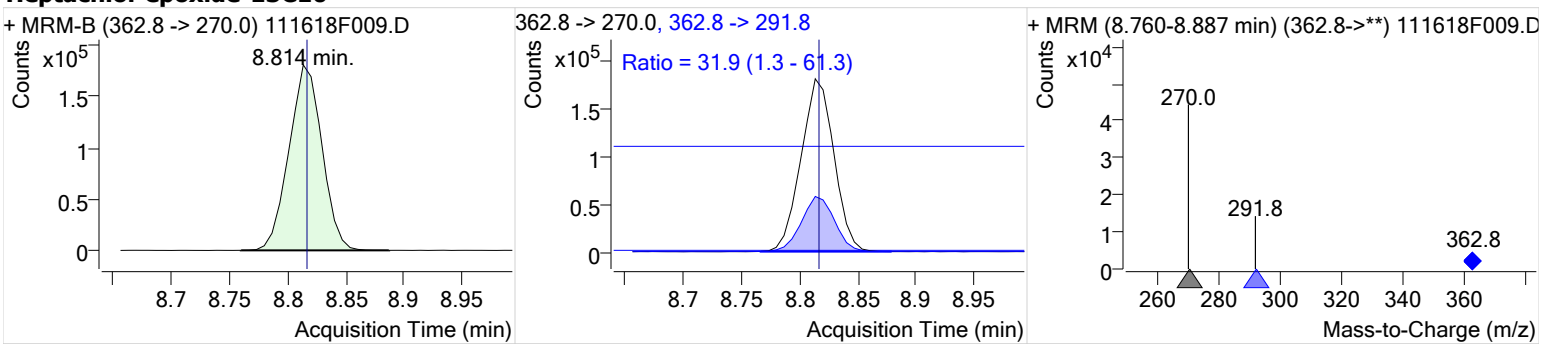
Isodrin-13C12



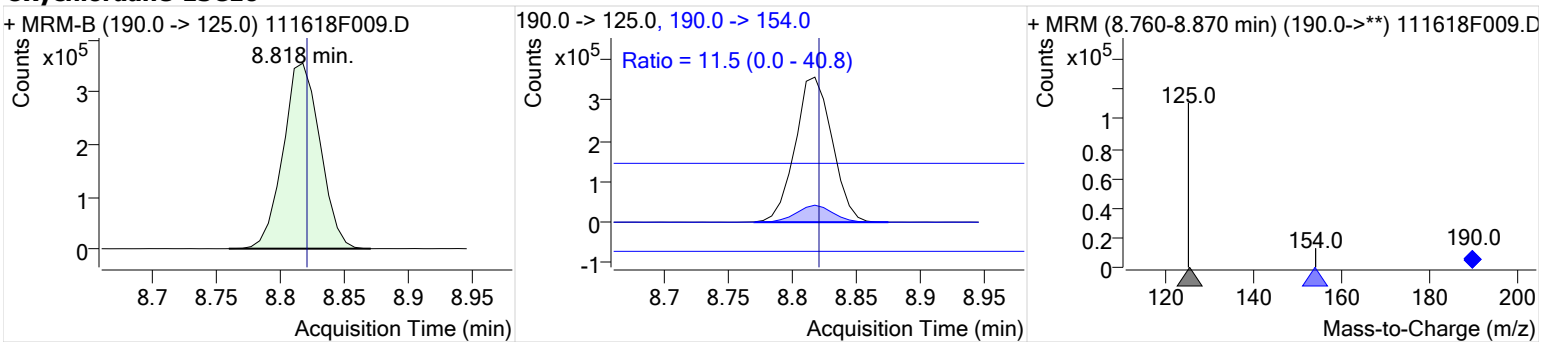
Isodrin



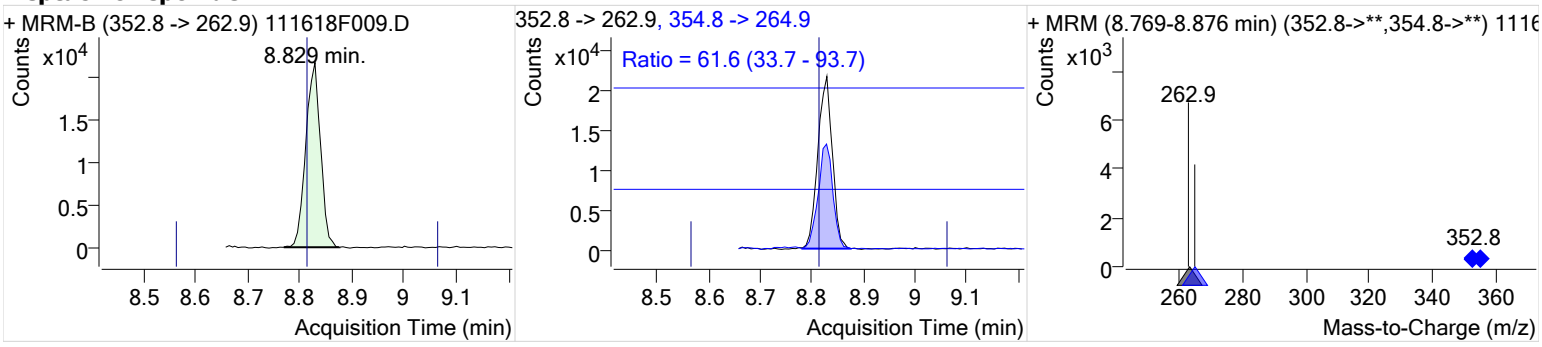
Heptachlor epoxide-13C10



Oxychlordane-13C10

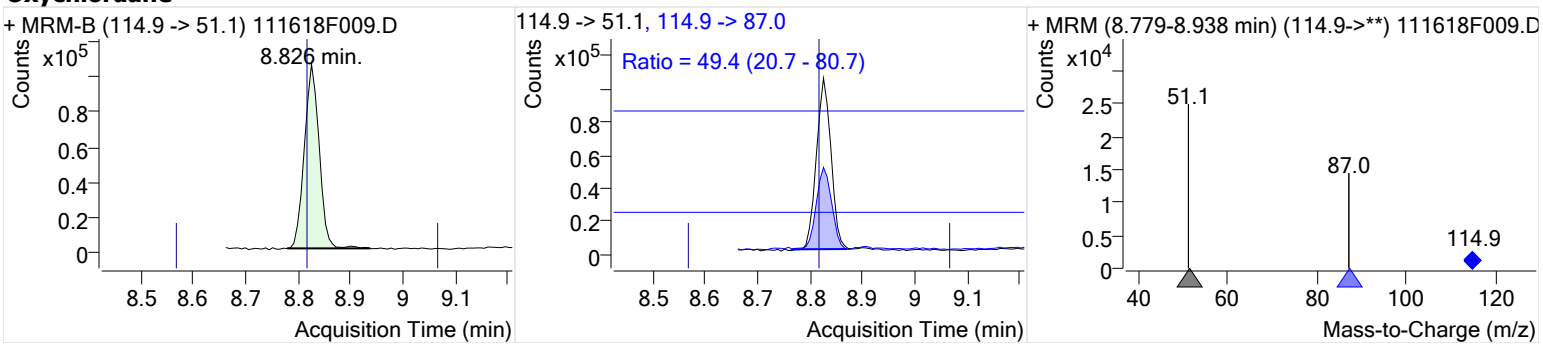


Heptachlor epoxide

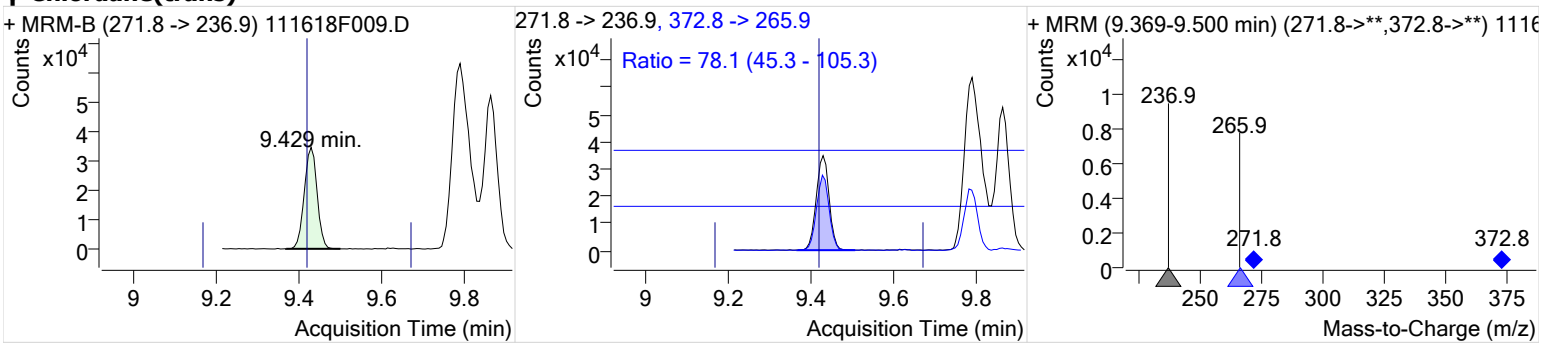


Quantitative Analysis Sample Report

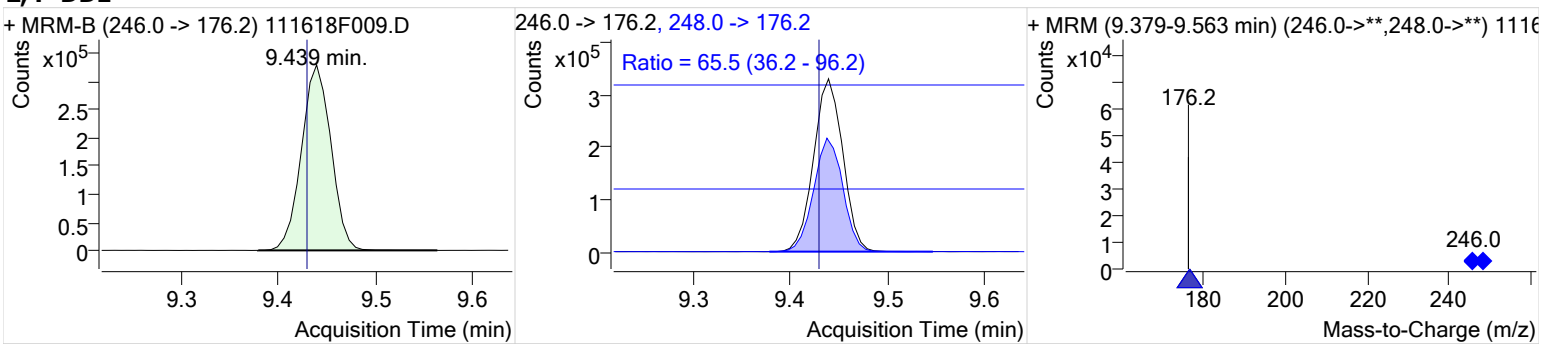
Oxychlordane



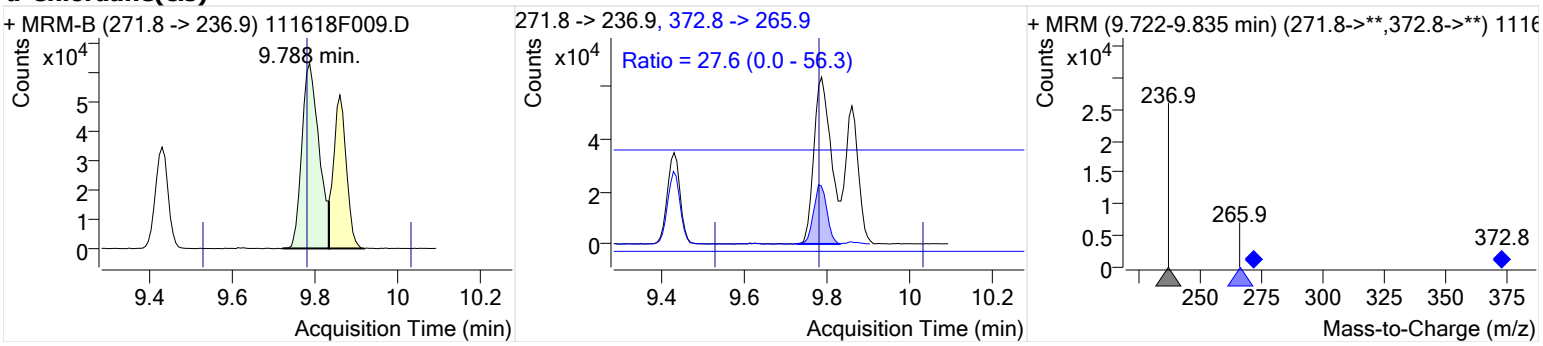
γ-Chlordane(trans)



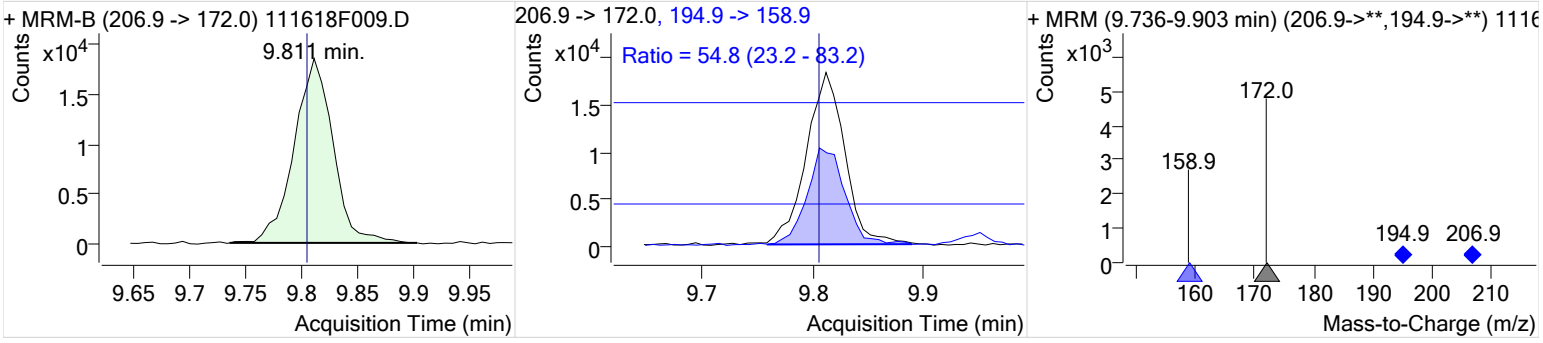
2,4'-DDE



α-Chlordane(cis)

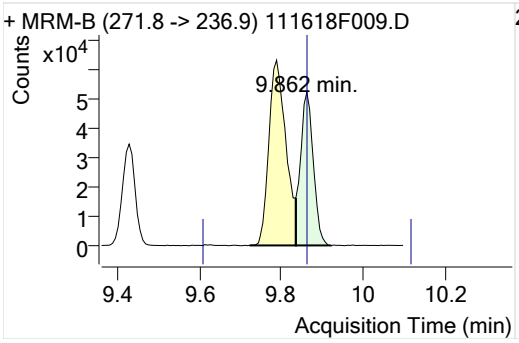


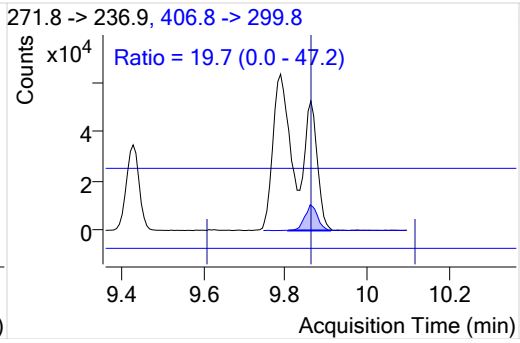
Endosulfan I

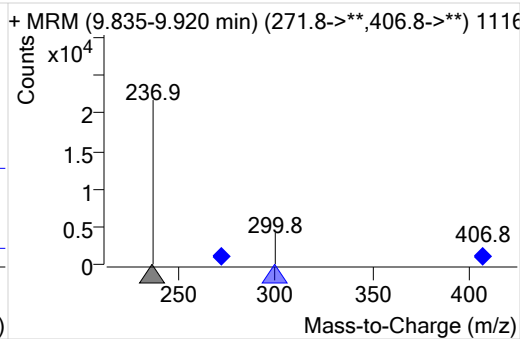


Quantitative Analysis Sample Report

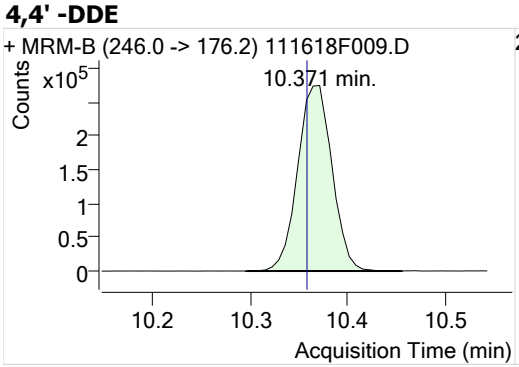
trans-Nanochlor

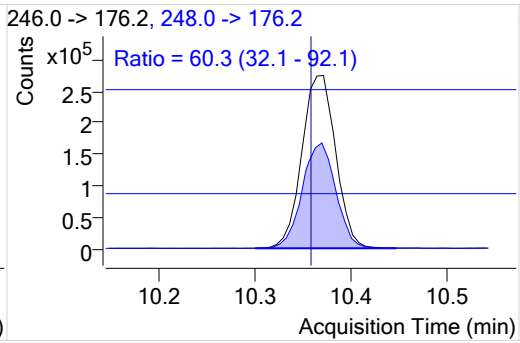


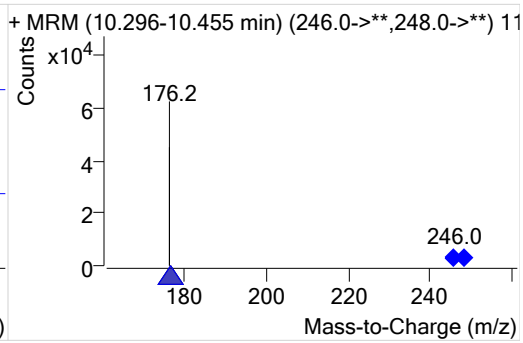




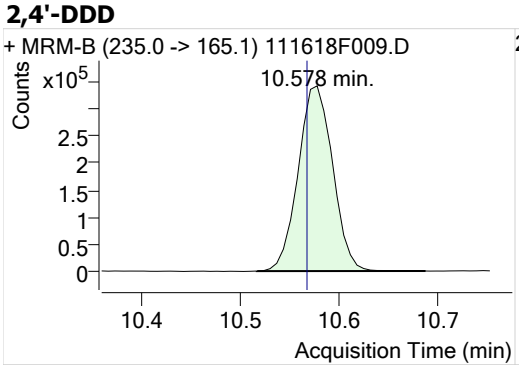
4,4' -DDE

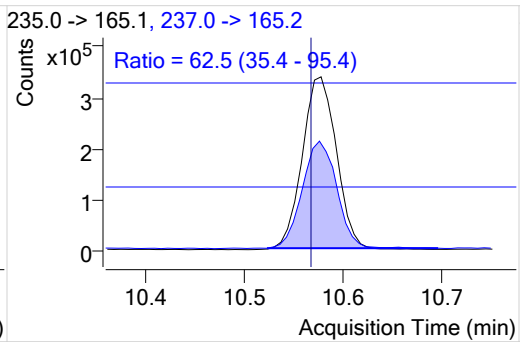


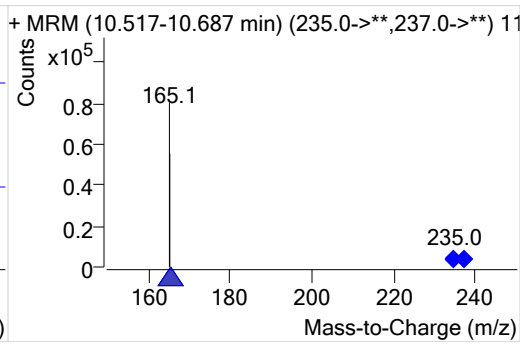




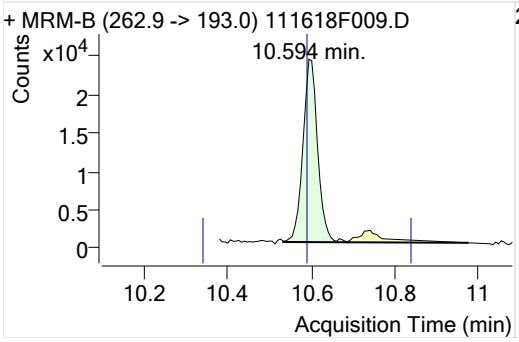
2,4'-DDD

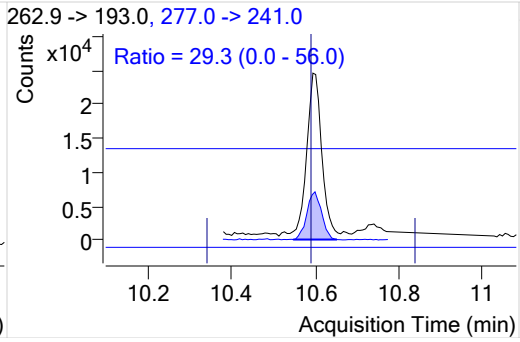


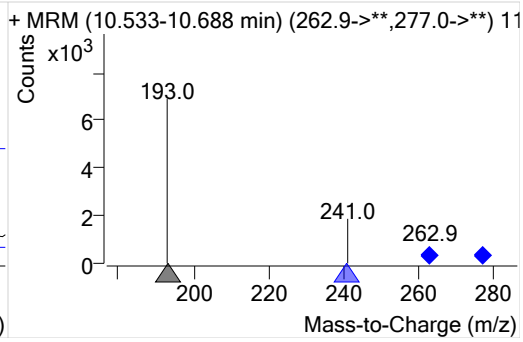




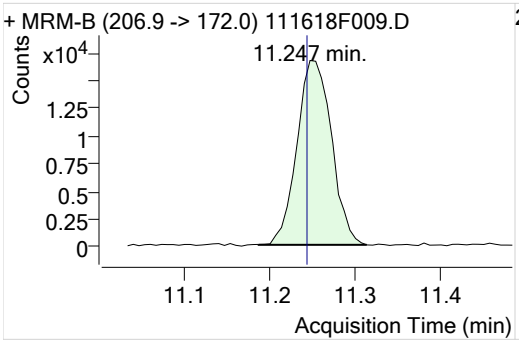
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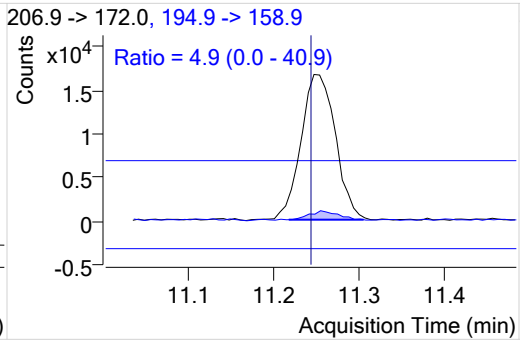


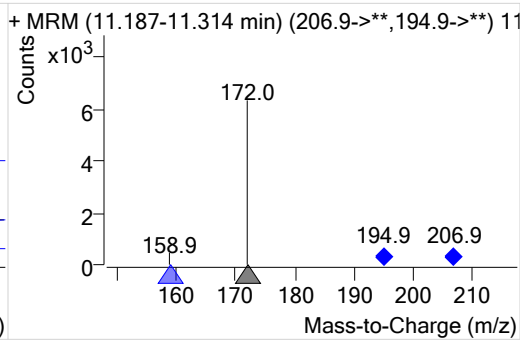




Endosulfan II

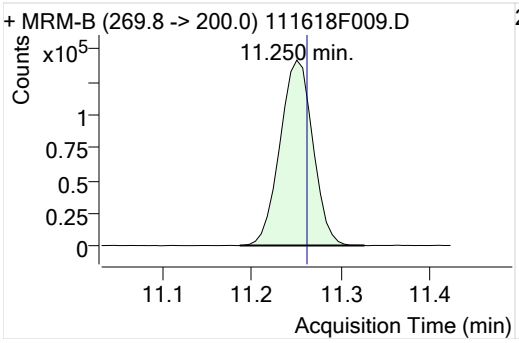


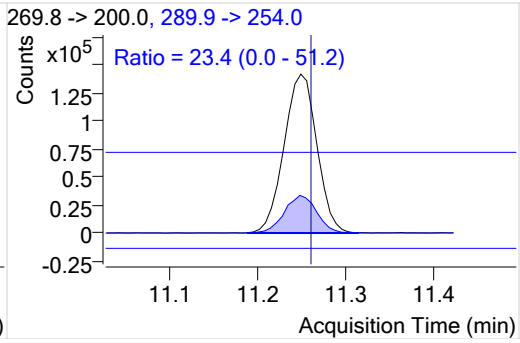


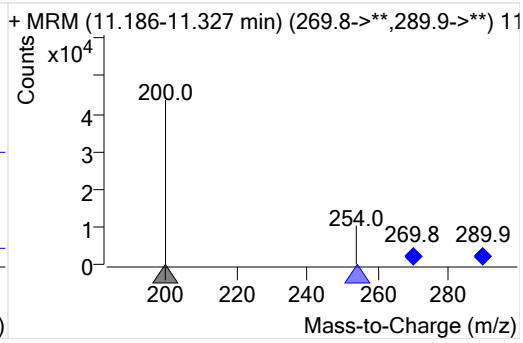


Quantitative Analysis Sample Report

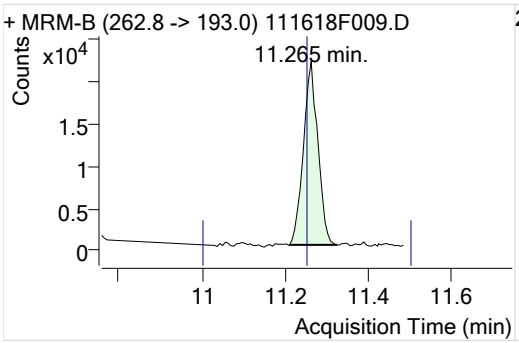
Endrin-13C12

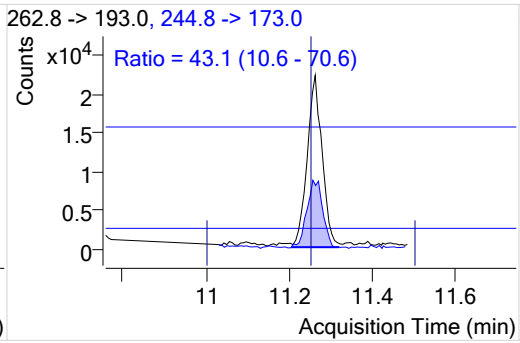


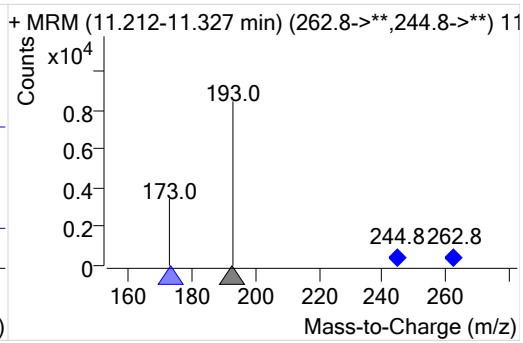




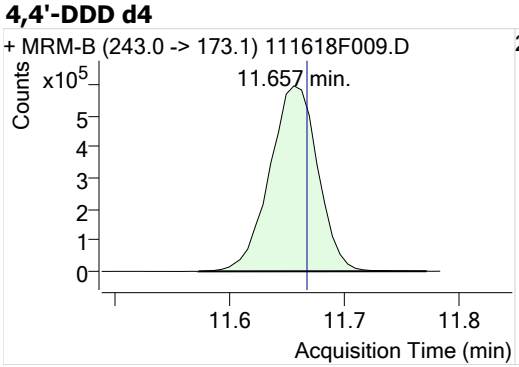
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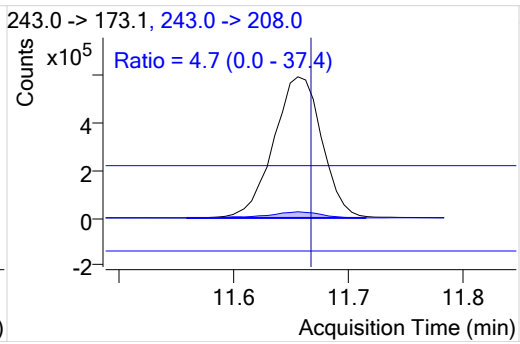


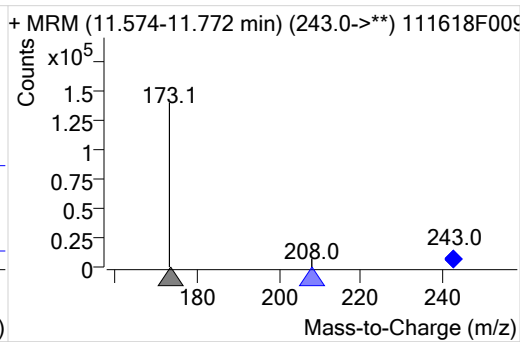




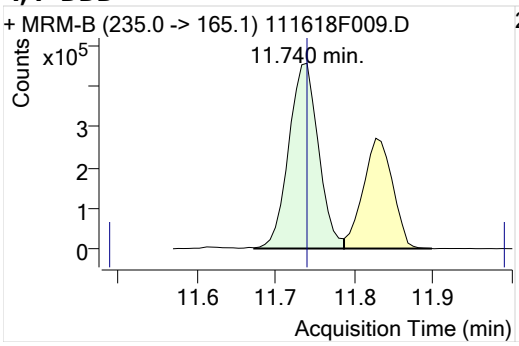
4,4'-DDD d4

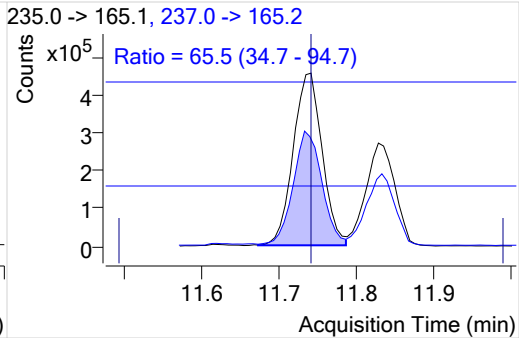


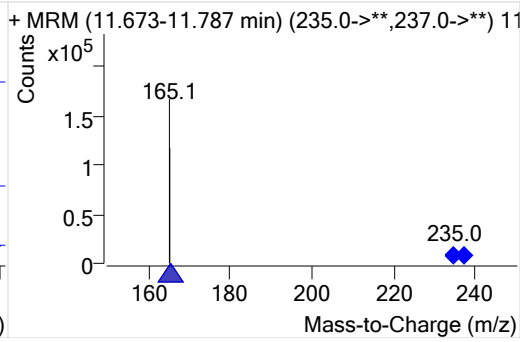




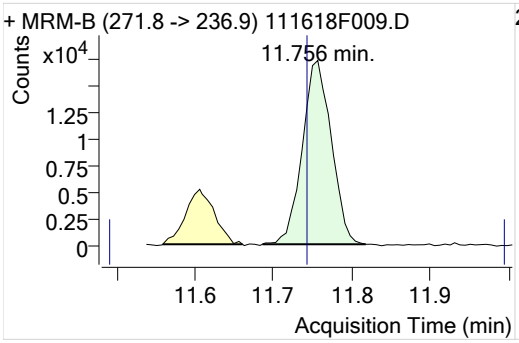
4,4'-DDD

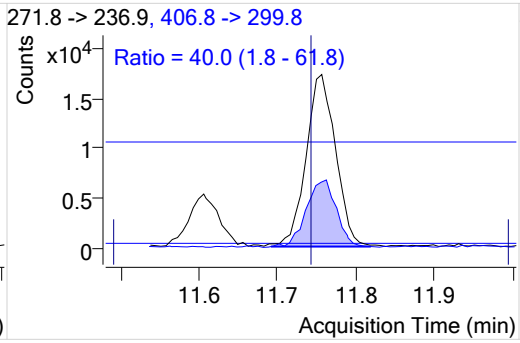


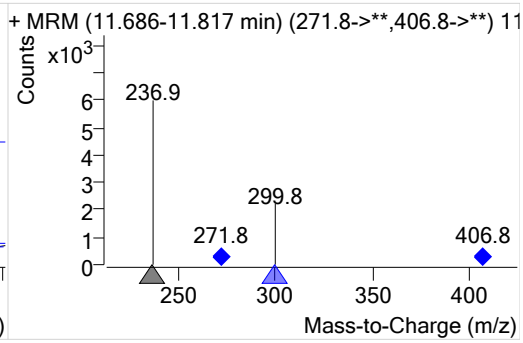




cis-Nonachlor

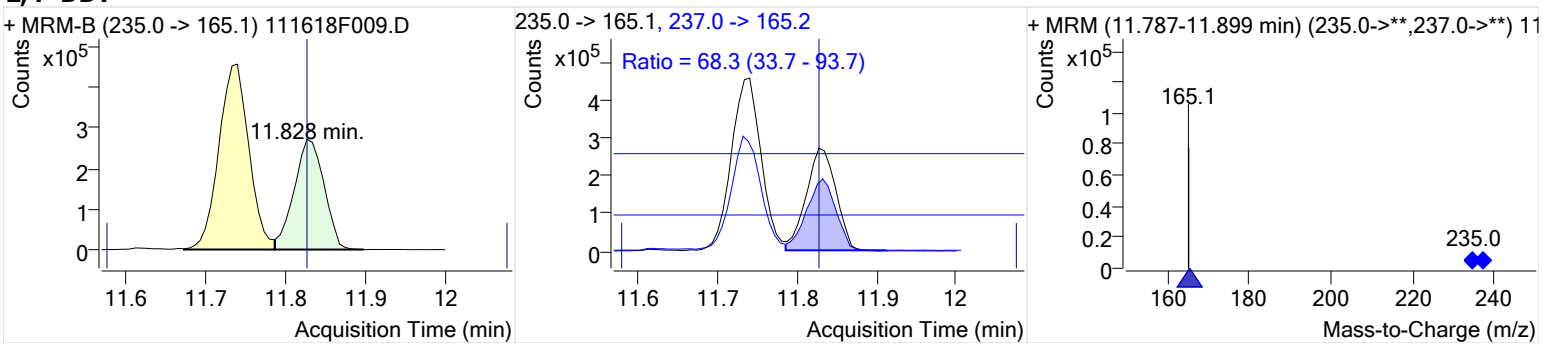




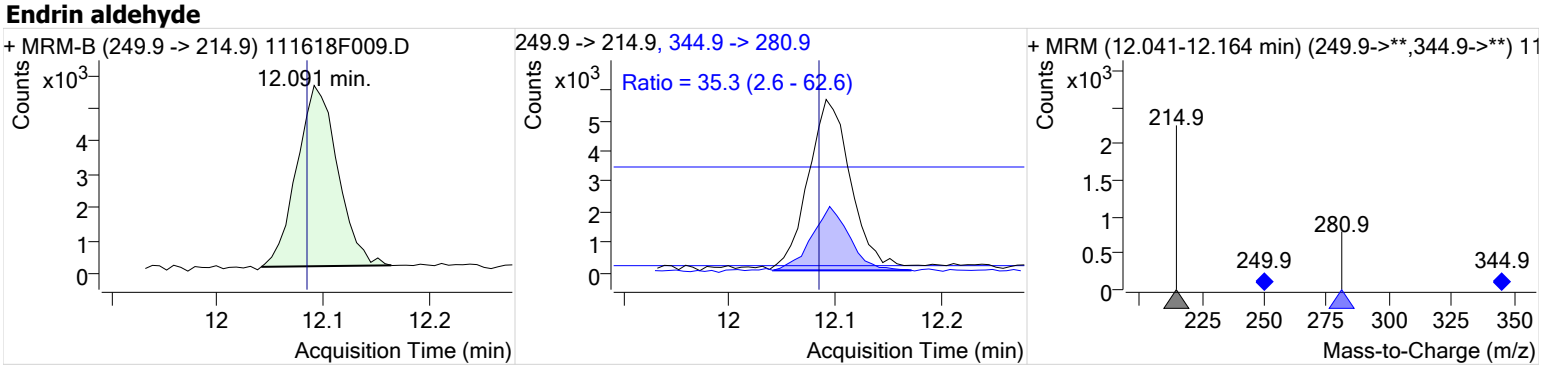


Quantitative Analysis Sample Report

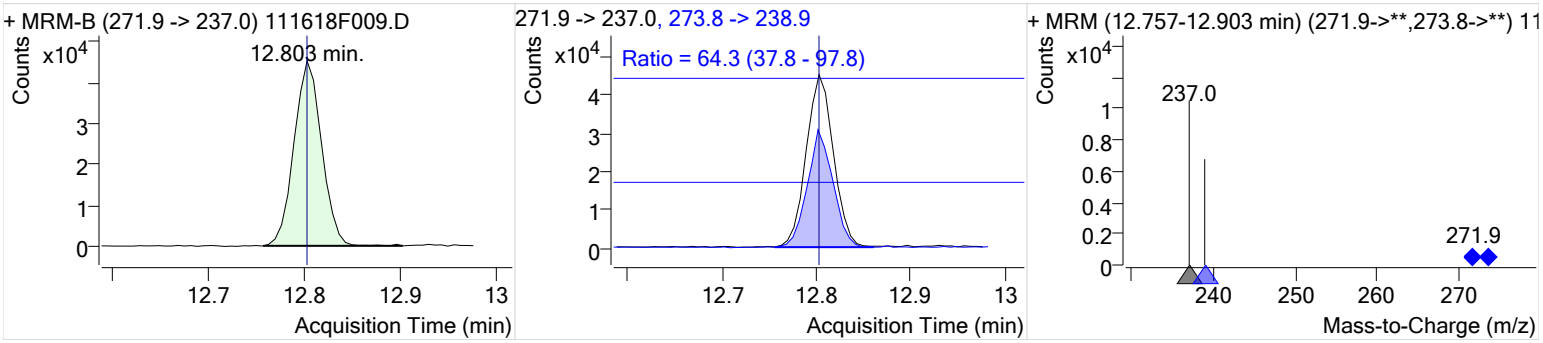
2,4'-DDT



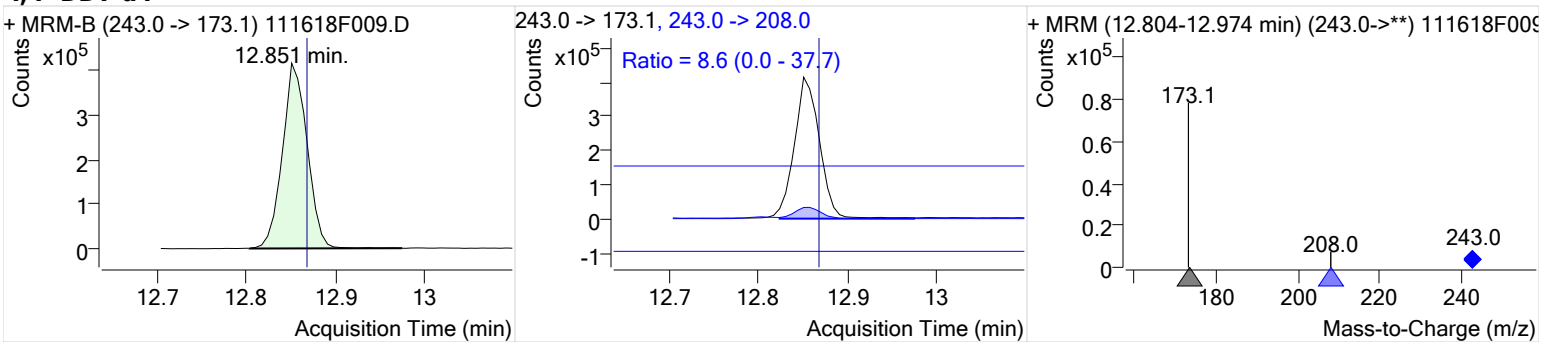
Endrin aldehyde



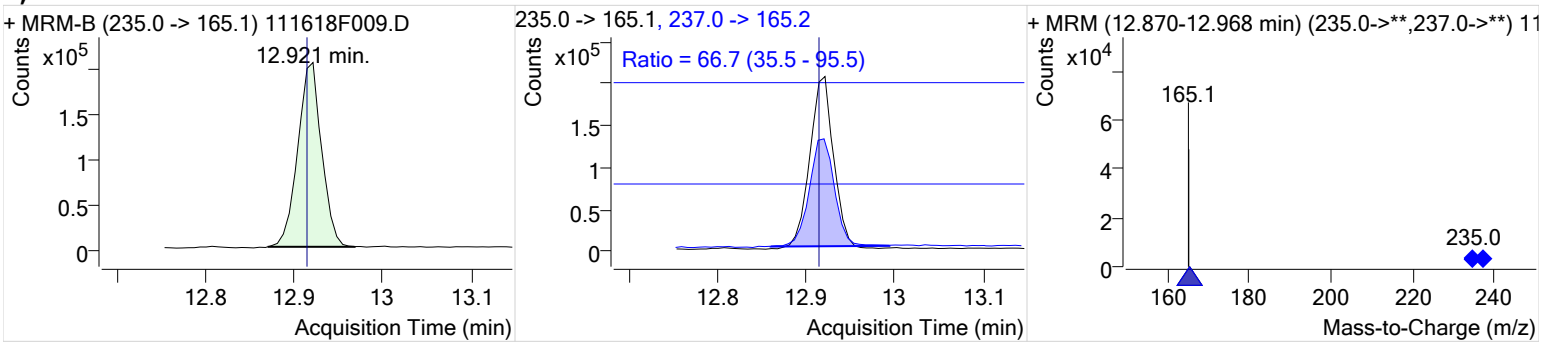
Endosulfan sulfate



4,4'-DDT-d4

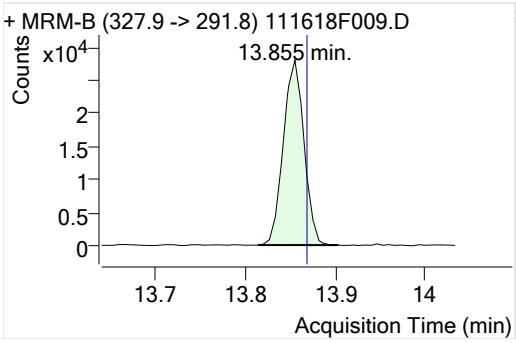


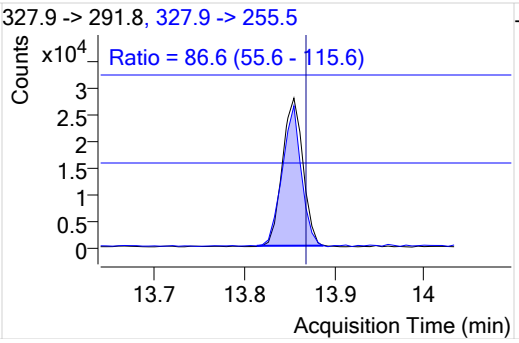
4,4'-DDT

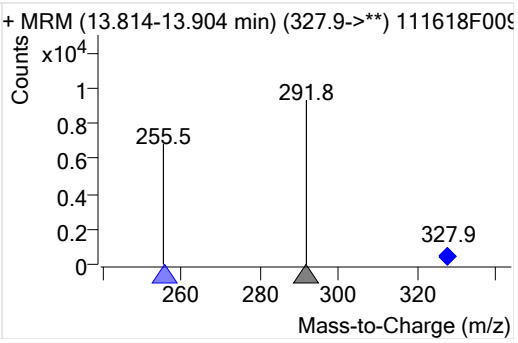


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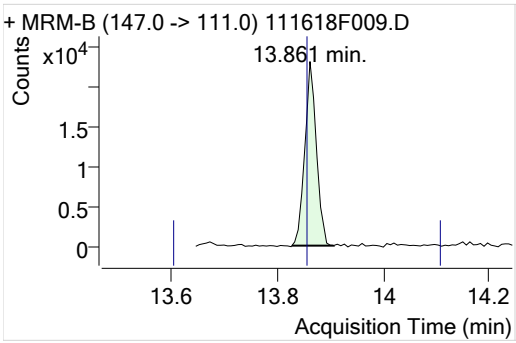
Endrin ketone-13C12

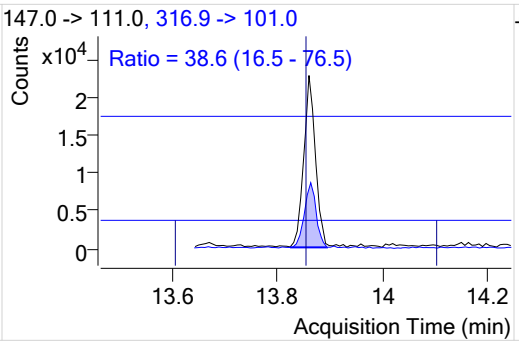


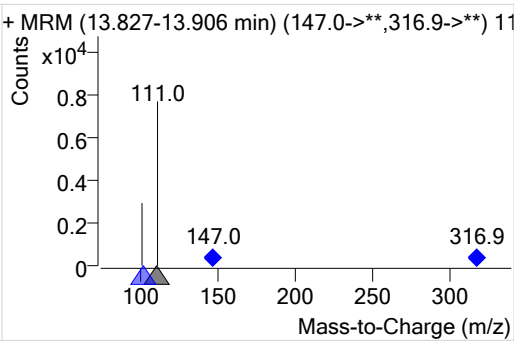




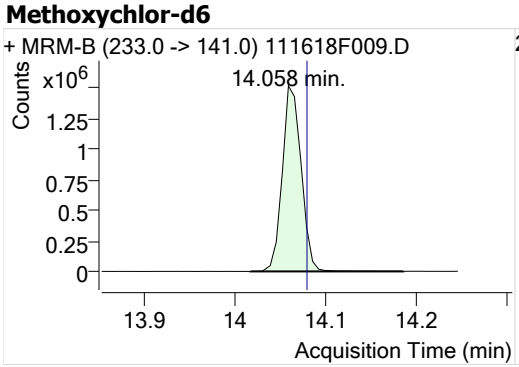
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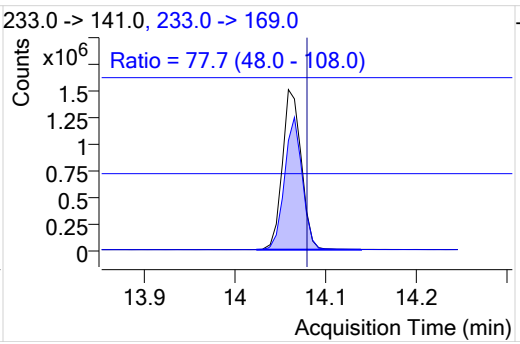


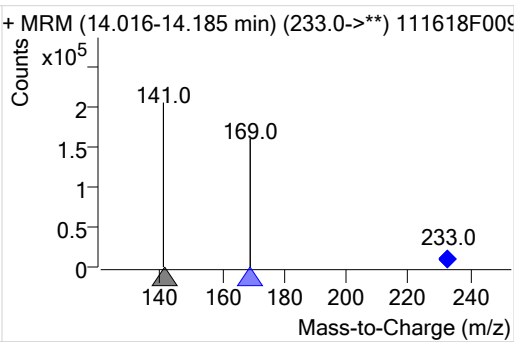




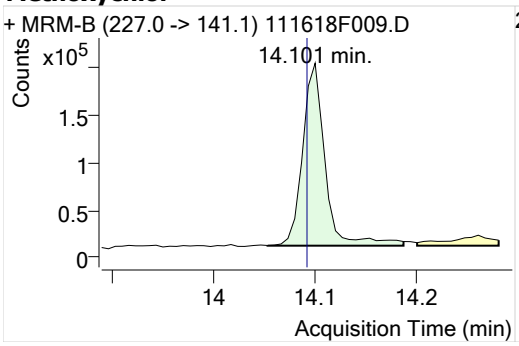
Methoxychlor-d6

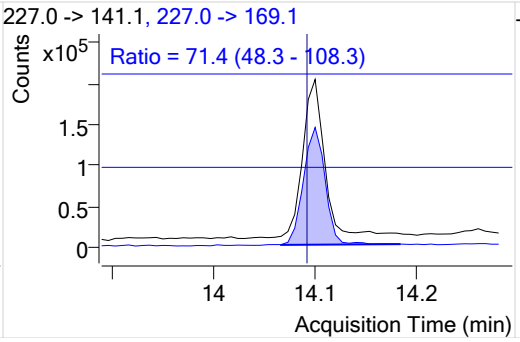


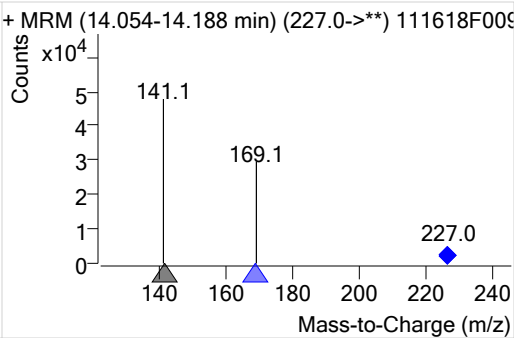




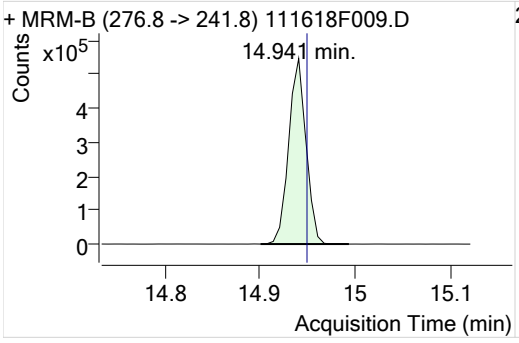
Methoxychlor

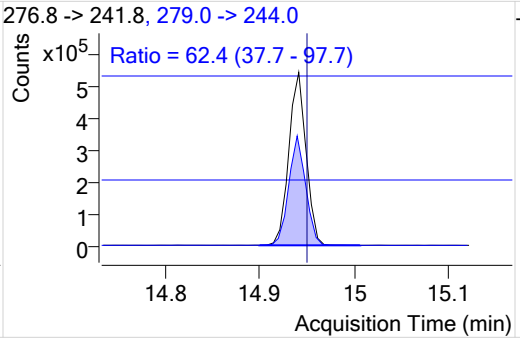


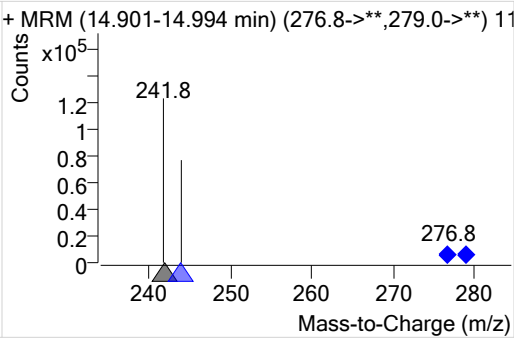




Mirex-13C10

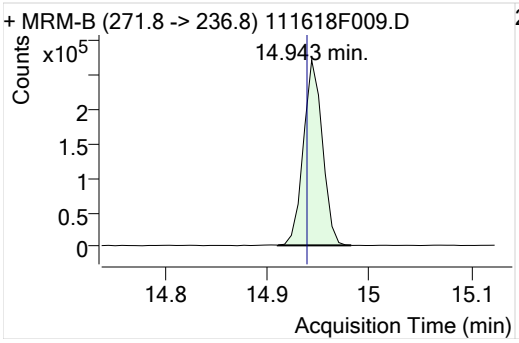


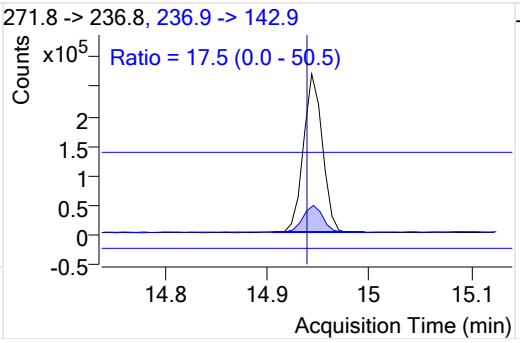


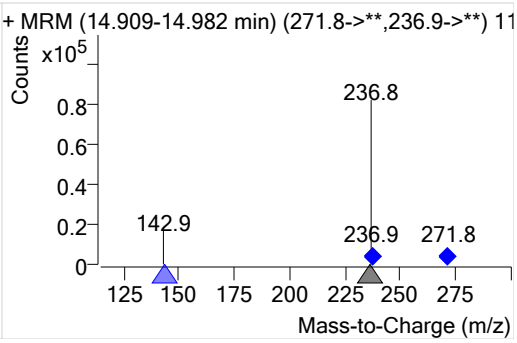


Quantitative Analysis Sample Report

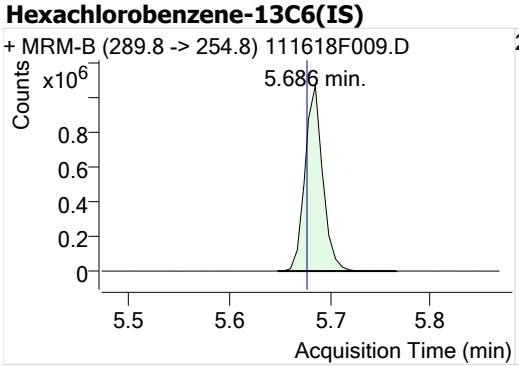
Mirex

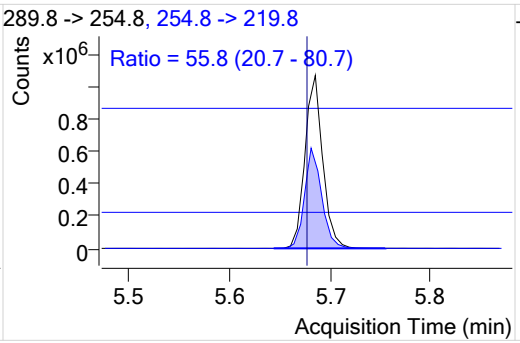


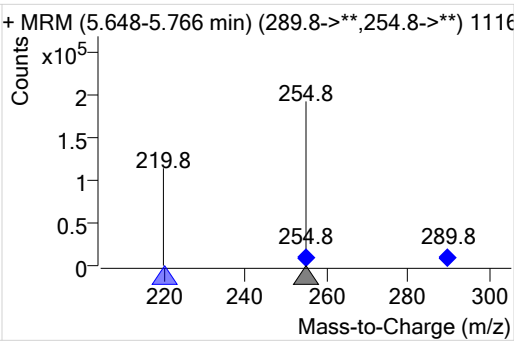




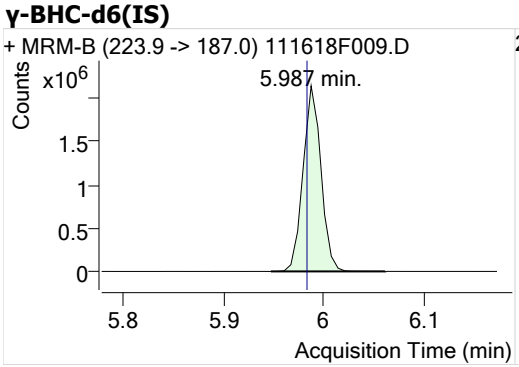
Hexachlorobenzene-13C6(IS)

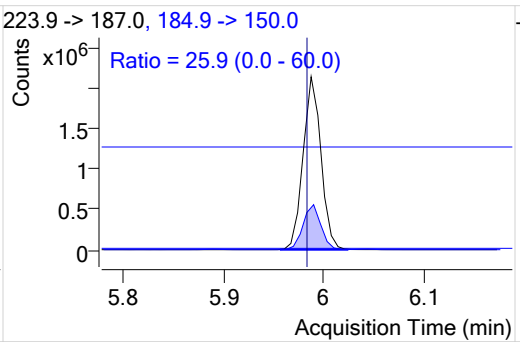


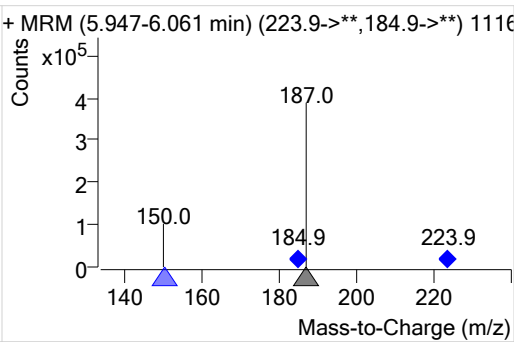




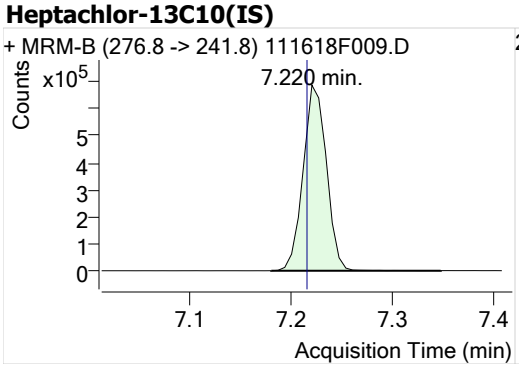
γ-BHC-d6(IS)

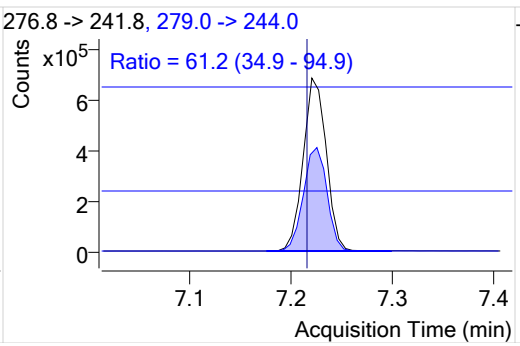


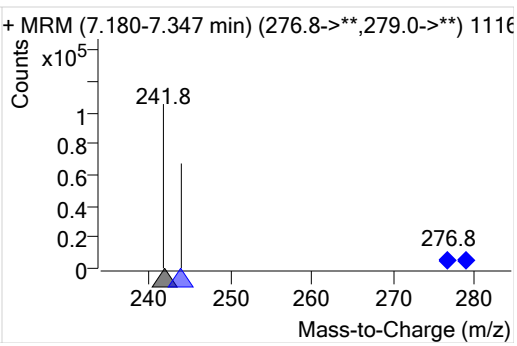




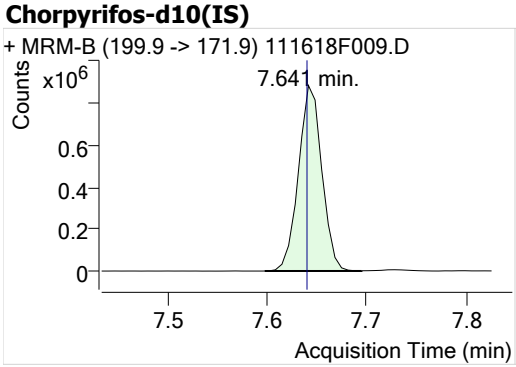
Heptachlor-13C10(IS)

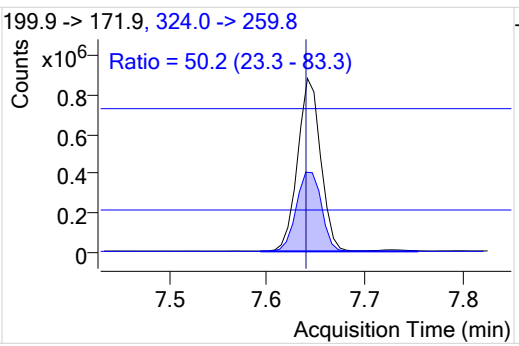


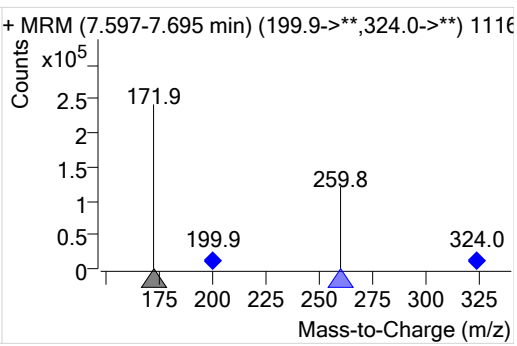




Chorpyrifos-d10(IS)

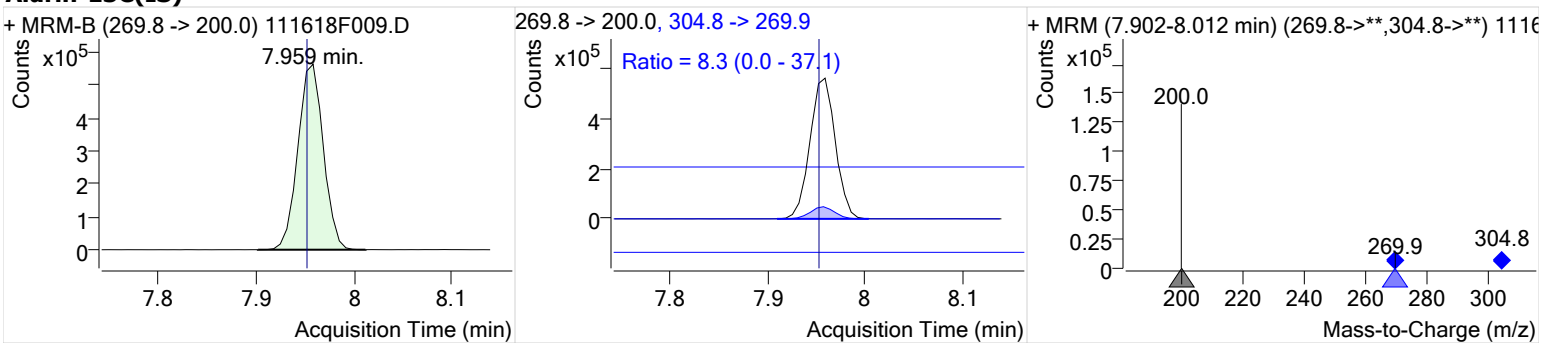




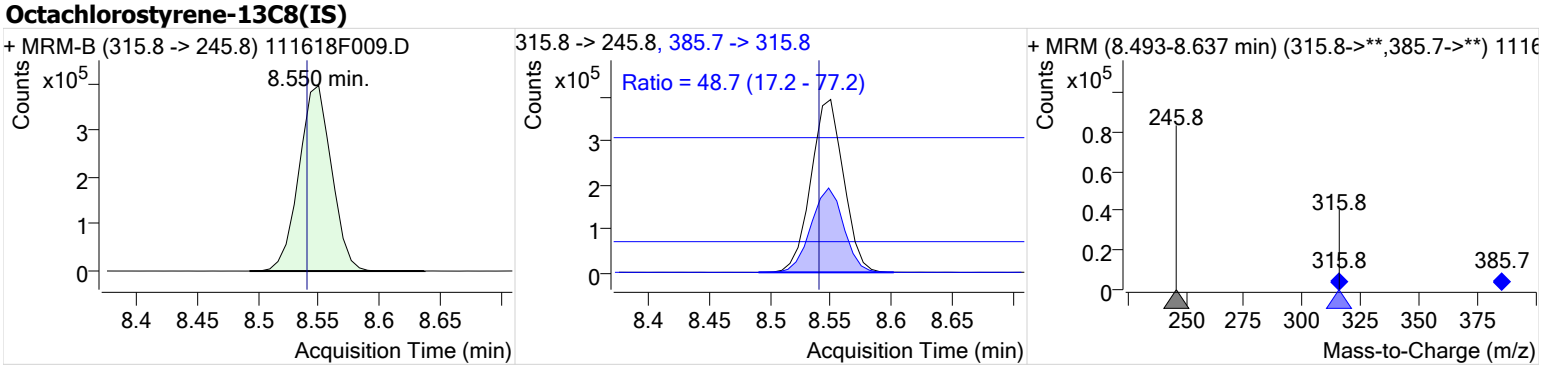


Quantitative Analysis Sample Report

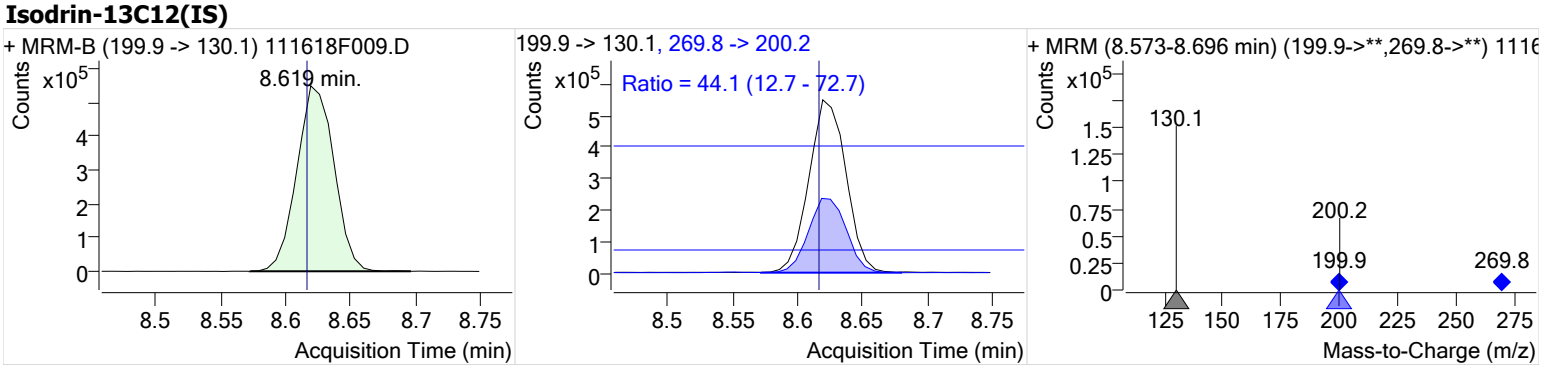
Aldrin-13C(IS)



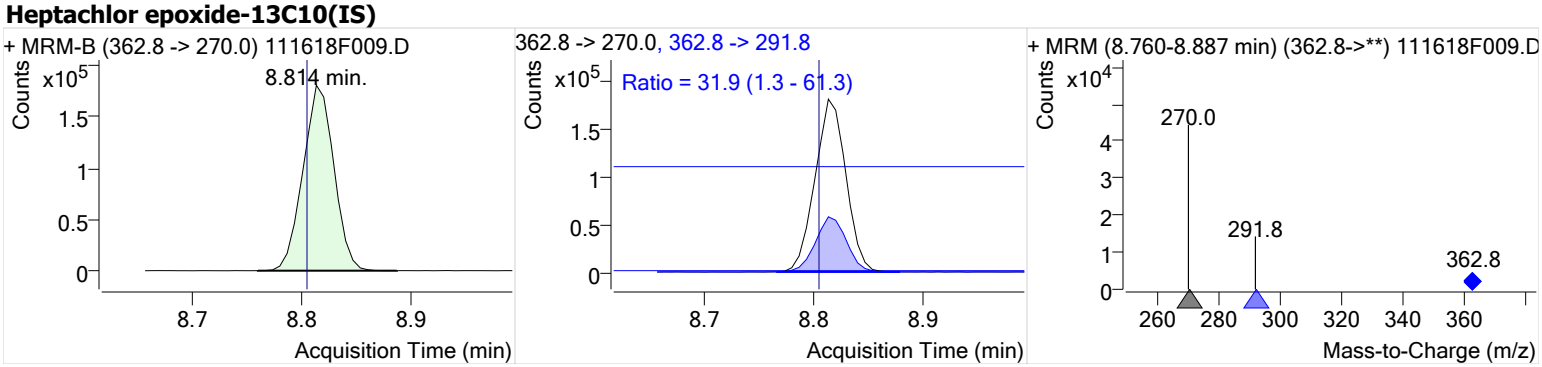
Octachlorostyrene-13C8(IS)



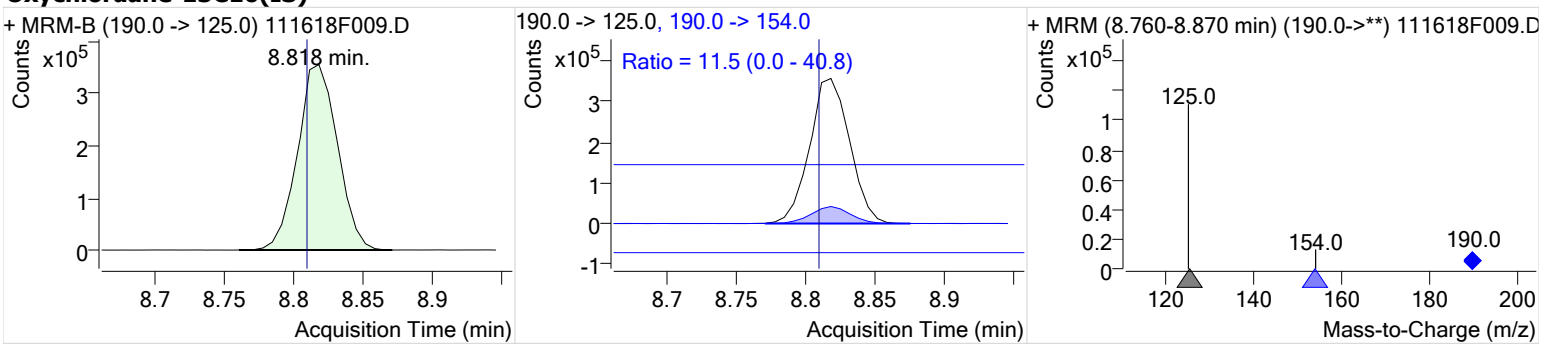
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

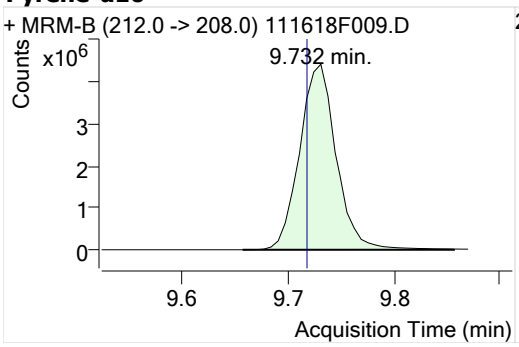


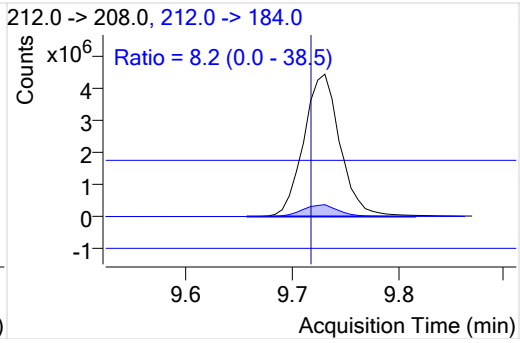
Oxychlordane-13C10(IS)

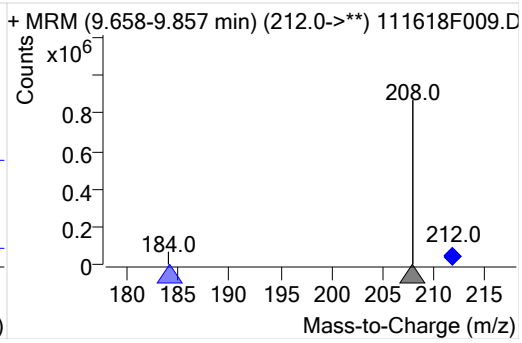


Quantitative Analysis Sample Report

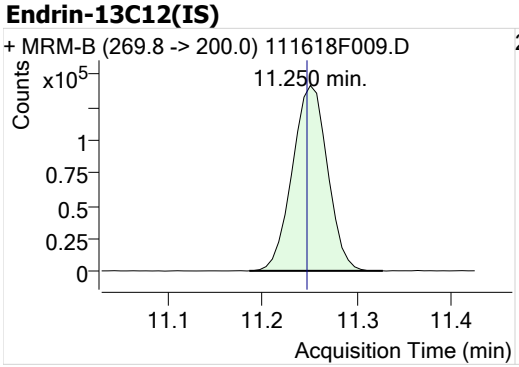
Pyrene-d10

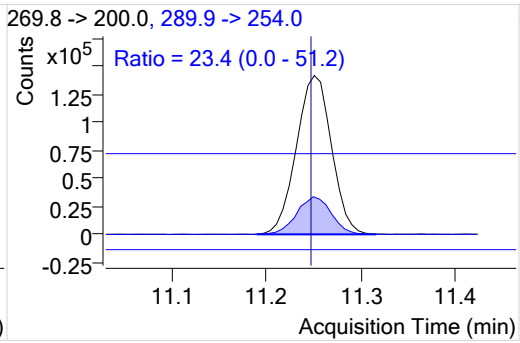


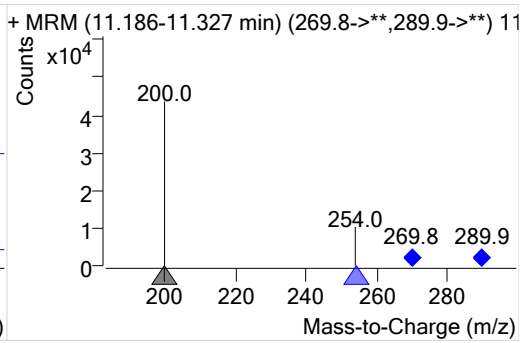




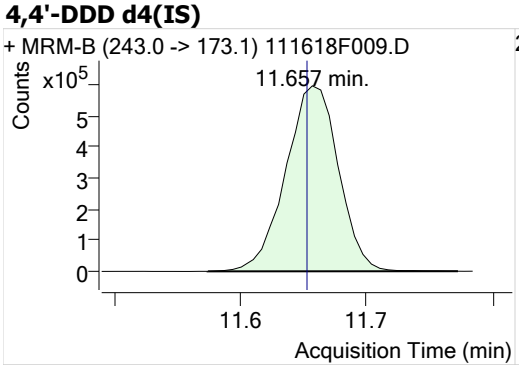
Endrin-13C12(IS)

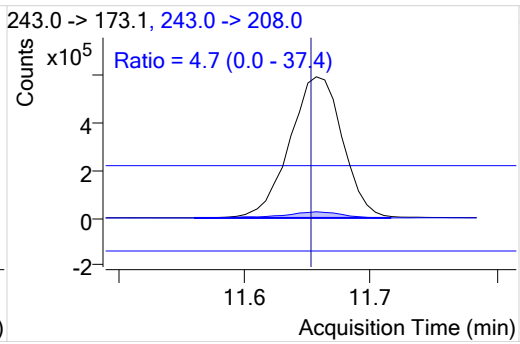


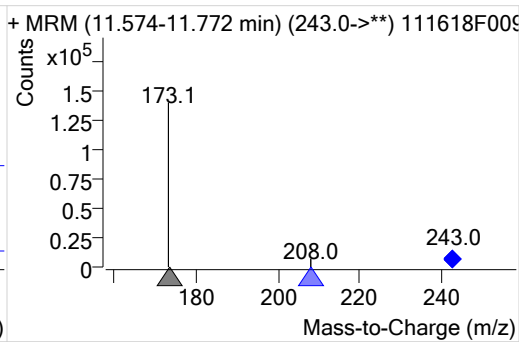




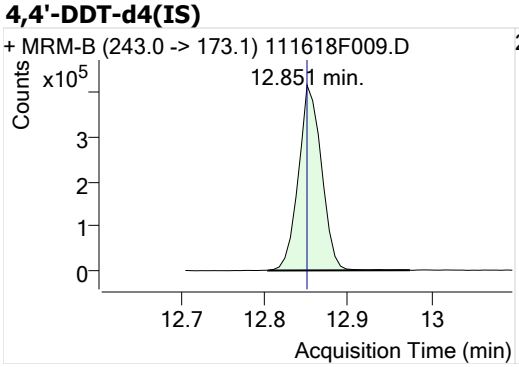
4,4'-DDD d4(IS)

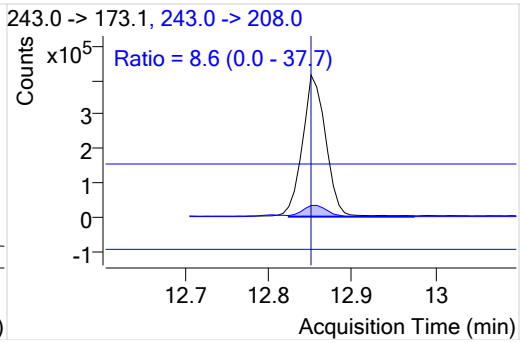


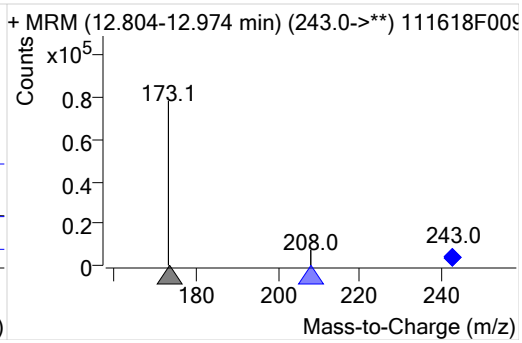




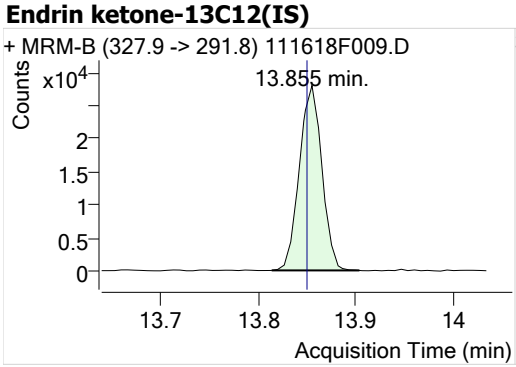
4,4'-DDT-d4(IS)

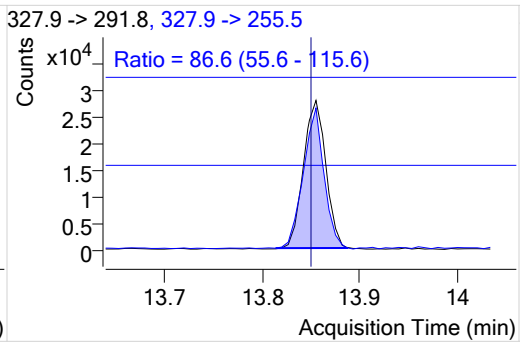


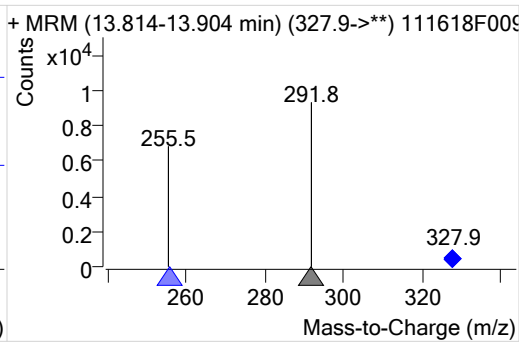




Endrin ketone-13C12(IS)

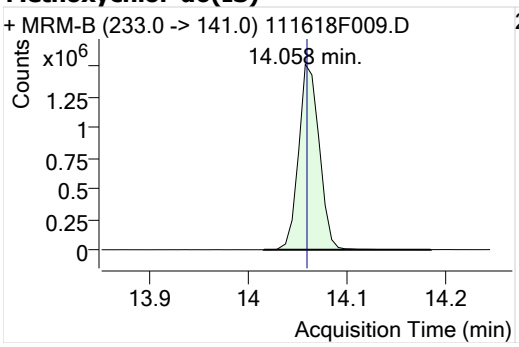


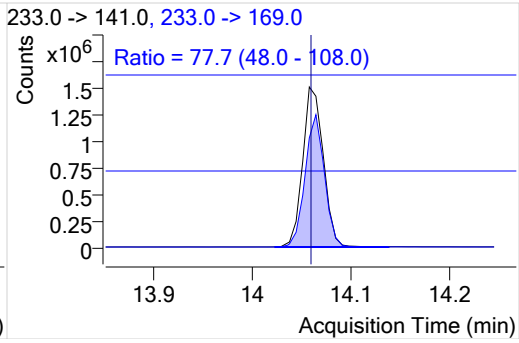


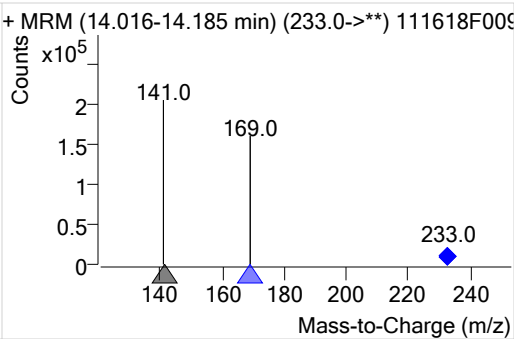


Quantitative Analysis Sample Report

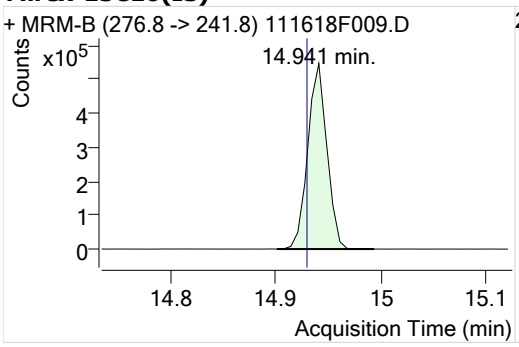
Methoxychlor-d6(IS)

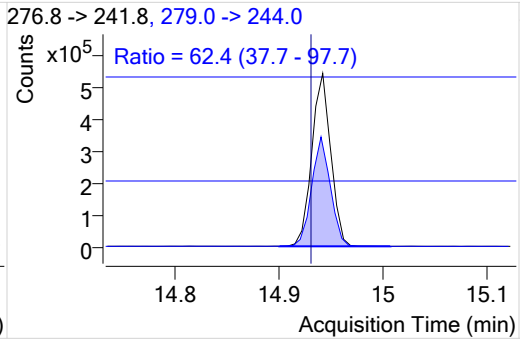


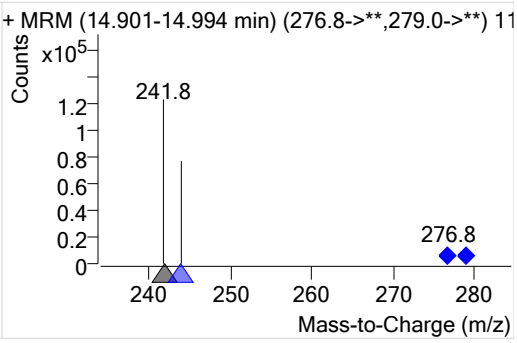




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F010.D	**Vial**	6
Acq. Date-Time	11/16/2018 1:57:46 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL5ng/mL SVM59-48D	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.685	289.8 -> 254.8	1284316	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2525948	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.225	276.8 -> 241.8	1043151	20.000 ng/ml	0.009
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1335606	20.000 ng/ml	0.000
Aldrin-13C(IS)	7.959	269.8 -> 200.0	960947	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.549	315.8 -> 245.8	695065	20.000 ng/ml	0.008
Isodrin-13C12(IS)	8.625	199.9 -> 130.1	1028558	20.000 ng/ml	0.008
Heptachlor epoxide-13C10(IS)	8.813	362.8 -> 270.0	333358	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	678984	20.000 ng/ml	0.009
Pyrene-d10	9.731	212.0 -> 208.0	9351237	100.000 ng/ml	0.010
Endrin-13C12(IS)	11.250	269.8 -> 200.0	329193	20.000 ng/ml	0.001
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1552333	5.000 ng/ml	0.001
4,4'-DDT-d4(IS)	12.858	243.0 -> 173.1	712422	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	41006	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	1844302	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	641611	5.000 ng/ml	0.010

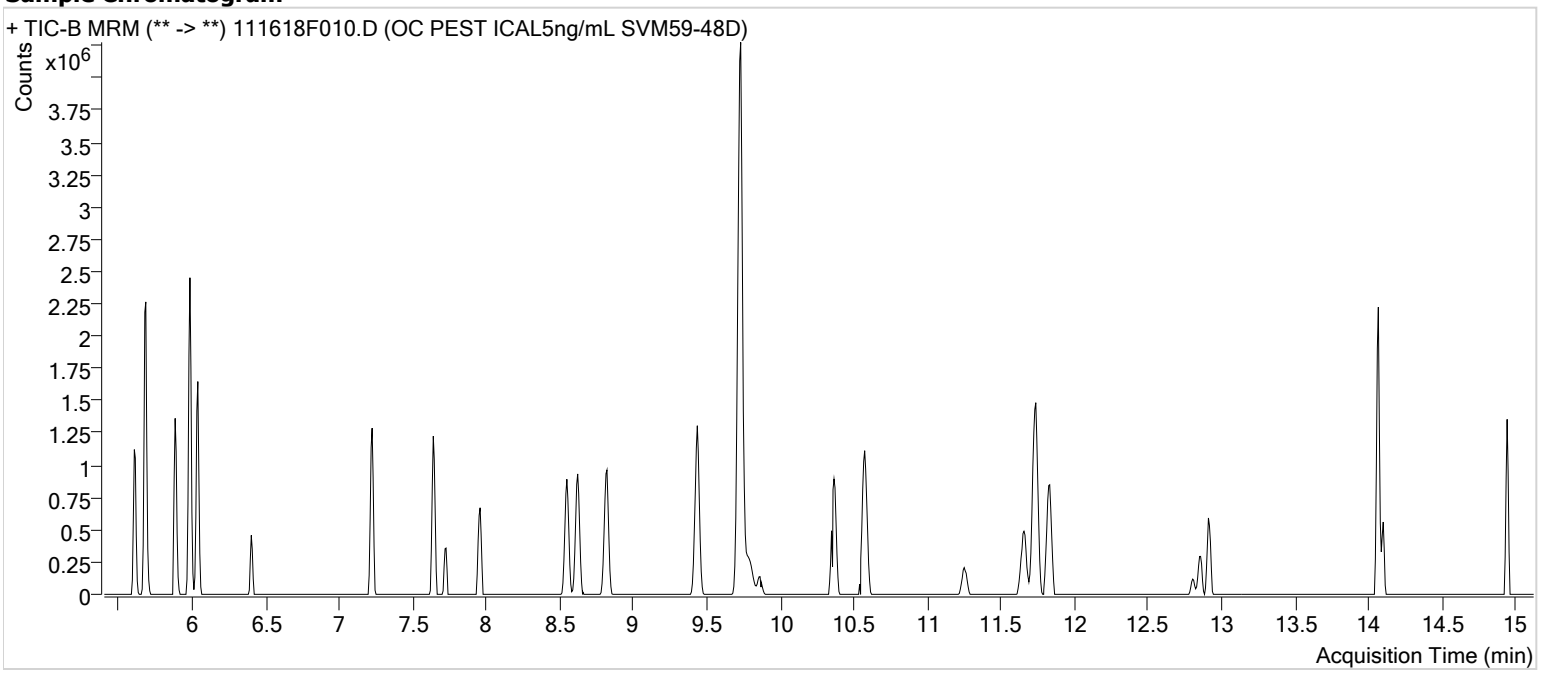
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1284316	18.658 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.3 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2525948	19.365 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.8 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1043151	19.340 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.7 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1335606	19.738 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.7 %*
Aldrin-13C	7.952	269.8 -> 200.0	961587	19.519 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.6 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	695065	19.705 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.5 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1028558	19.135 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.7 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	333358	19.397 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.0 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	678984	19.440 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.2 %*
Endrin-13C12	11.247	269.8 -> 200.0	329193	19.262 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.3 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1552333	4.674 ng/ml	
		Spiked Amount =	5.0	Recovery =	*93.5 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	712422	4.801 ng/ml	
		Spiked Amount =	5.0	Recovery =	*96.0 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	41006	19.377 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.9 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	1844302	18.810 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.0 %*
Mirex-13C10	14.930	276.8 -> 241.8	641611	4.479 ng/ml	
		Spiked Amount =	5.0	Recovery =	*89.6 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	894381	4.952	ng/ml	96
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	588301	5.060	ng/ml	99
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	1084469	4.746	ng/ml	98
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	1277805	4.836	ng/ml	97
δ-BHC	γ-BHC-d6(IS)	6.405	181.1 -> 145.1	493338	4.685	ng/ml	98
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	290572	4.806	ng/ml	75
Chorpyrifos	Chorpyrifos-d10(IS)	7.725	196.9 -> 169.0	451529	4.789	ng/ml	96
Aldrin	Aldrin-13C(IS)	7.963	254.9 -> 220.0	238833	4.971	ng/ml	72
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.548	342.8 -> 307.8	428933	4.795	ng/ml	97
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	257444	4.878	ng/ml	97
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.822	352.8 -> 262.9	89397	4.712	ng/ml	100
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	441231	4.806	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	158232	4.837	ng/ml	99
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	1503266	5.094	ng/ml	95
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.789	271.8 -> 236.9	391325	4.788	ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.812	206.9 -> 172.0	96286	4.666	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.856	271.8 -> 236.9	238407	4.532	ng/ml	92
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	1375276	5.084	ng/ml	98
2,4'-DDD	4,4'-DDD d4(IS)	10.577	235.0 -> 165.1	1675039	5.015	ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.594	262.9 -> 193.0	124546	4.960	ng/ml	95
Endosulfan II	Endrin-13C12(IS)	11.253	206.9 -> 172.0	48845	4.657	ng/ml	88
Endrin	Endrin-13C12(IS)	11.264	262.8 -> 193.0	107033	4.738	ng/ml	98
4,4'-DDD	4,4'-DDD d4(IS)	11.740	235.0 -> 165.1	2455875	4.899	ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	96063	4.821	ng/ml	87
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	1489772	4.664	ng/ml	97
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	32043	5.028	ng/ml	97
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	184890	4.781	ng/ml	96
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	795644	4.826	ng/ml	99
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	67397	4.669	ng/ml	91
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	554900	4.715	ng/ml	100
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	734493	5.016	ng/ml	94

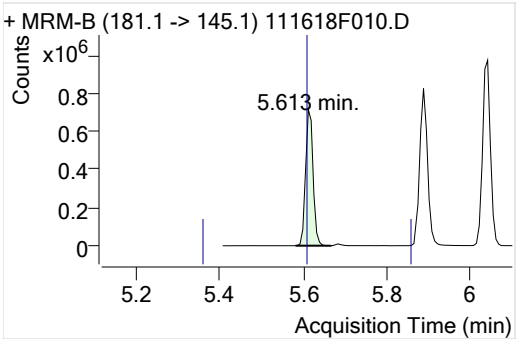
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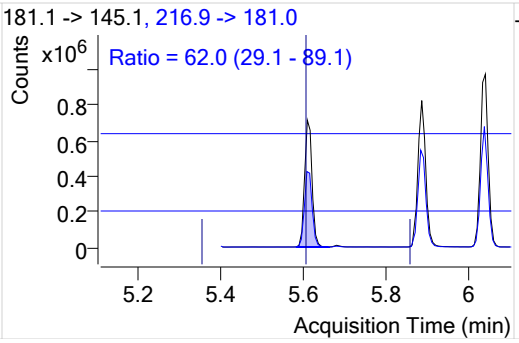
Sample Chromatogram

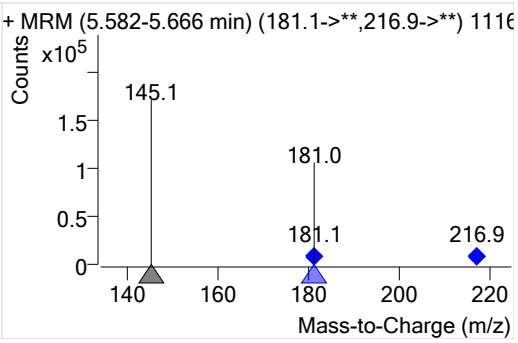


Quantitative Analysis Sample Report

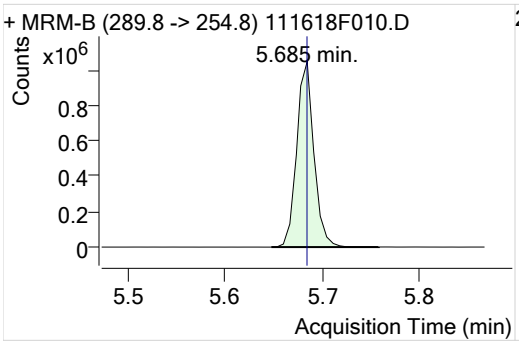
α-BHC

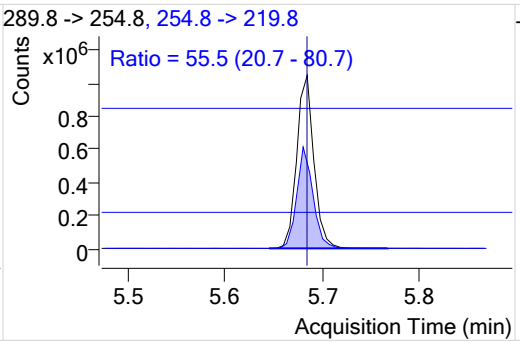


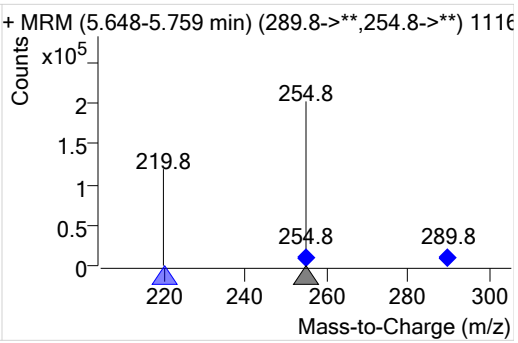




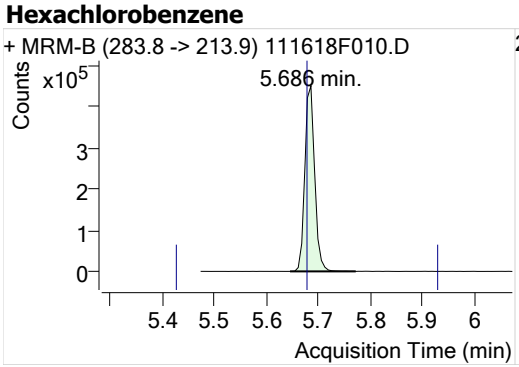
Hexachlorobenzene-13C6

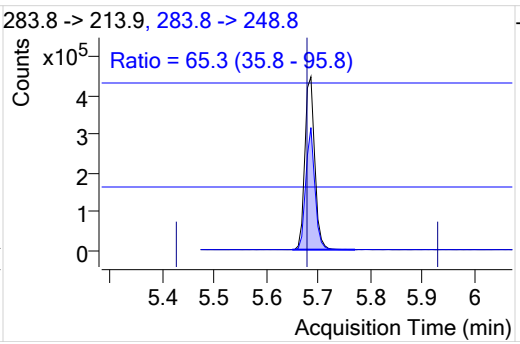


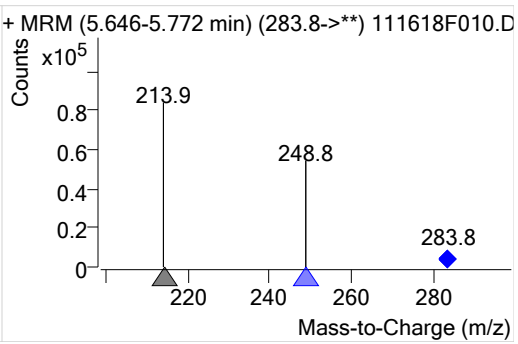




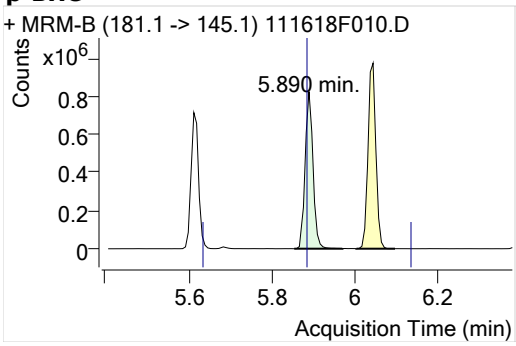
Hexachlorobenzene

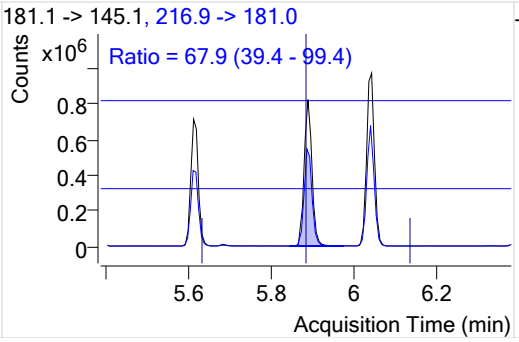


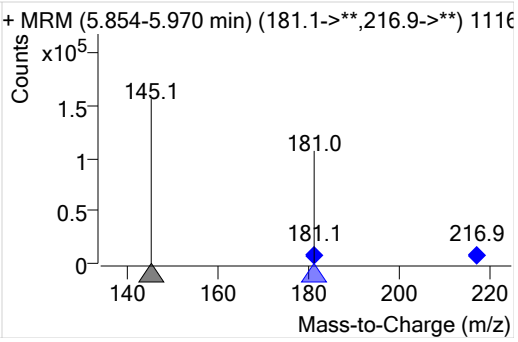




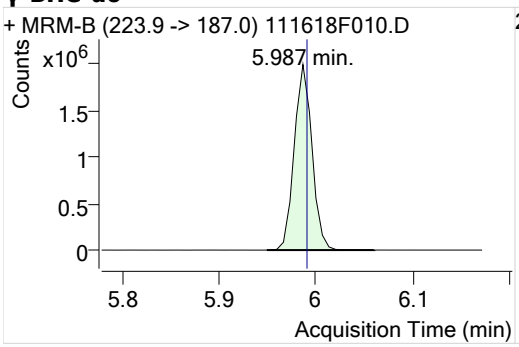
β-BHC

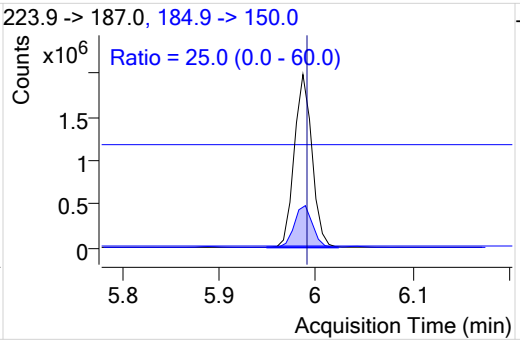


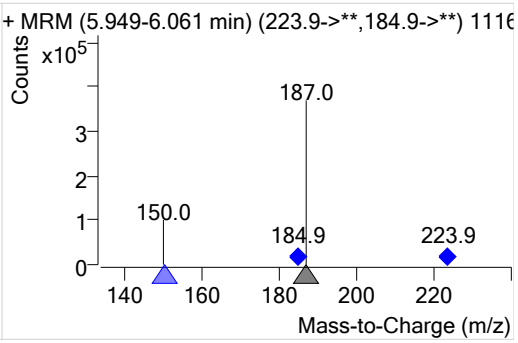




γ-BHC-d6

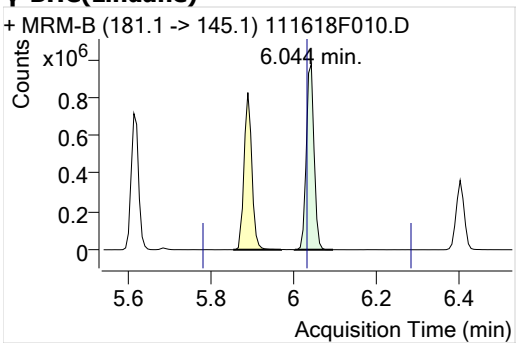


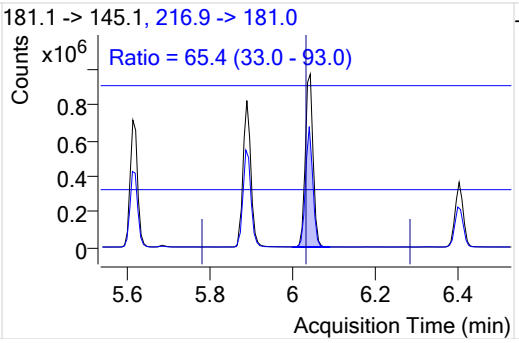


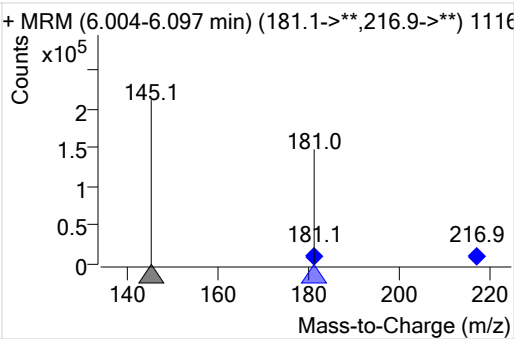


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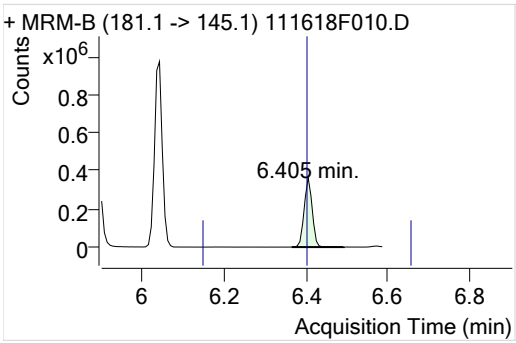
γ-BHC(Lindane)

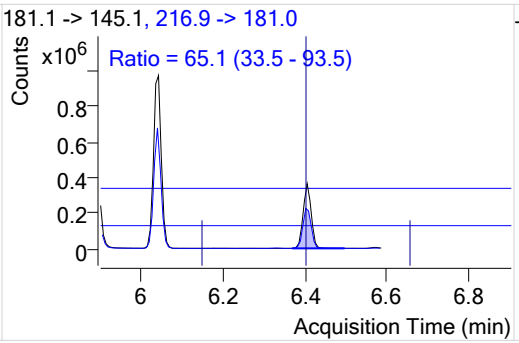


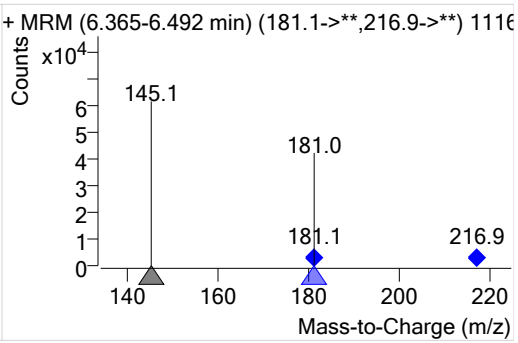




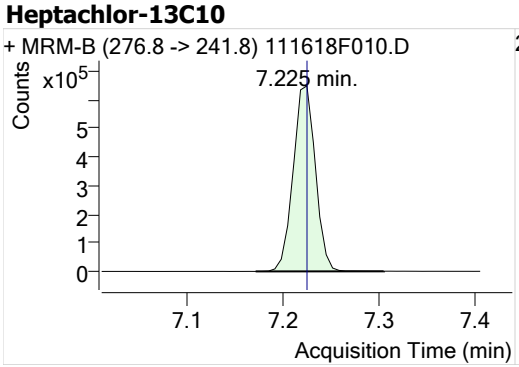
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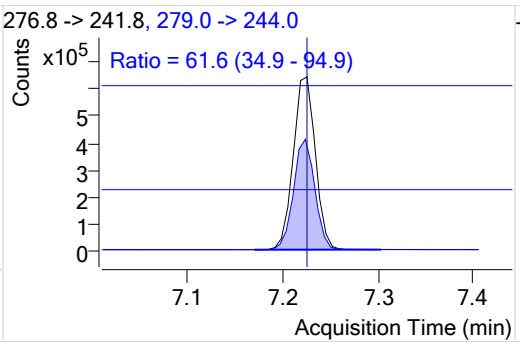


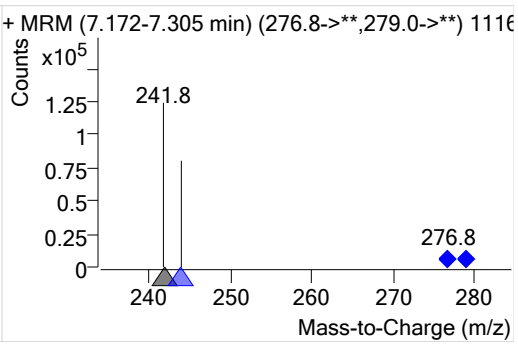




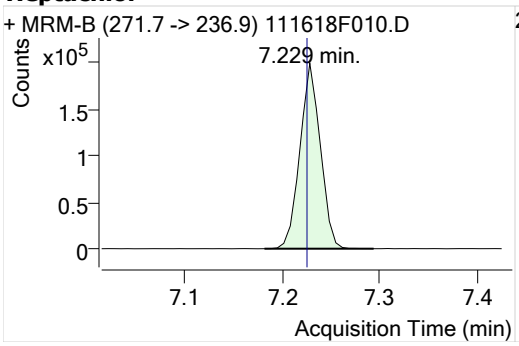
Heptachlor-13C10

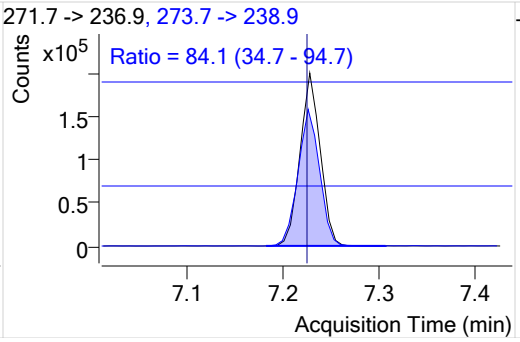


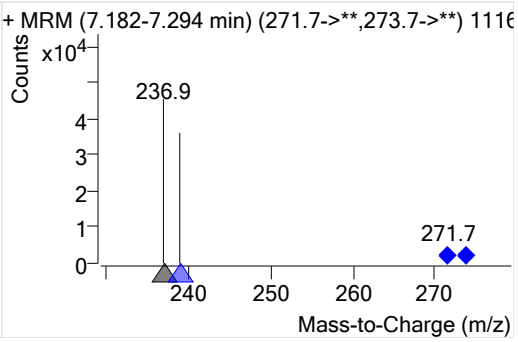




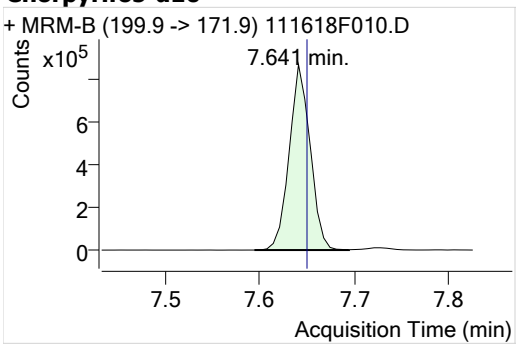
Heptachlor

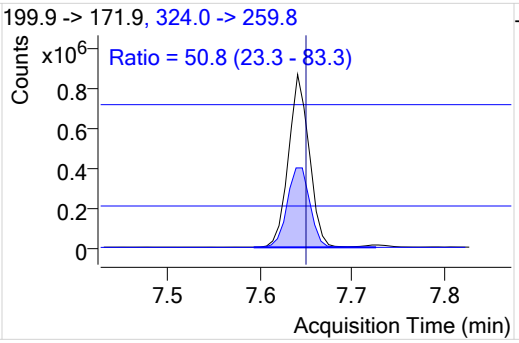


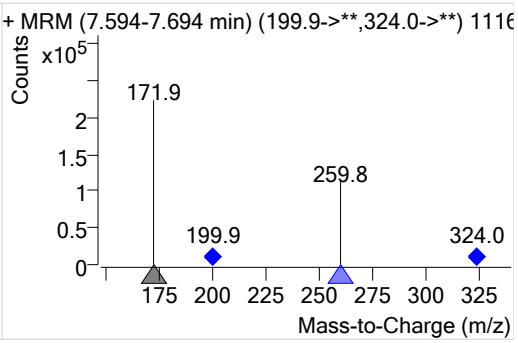




Chorpyrifos-d10

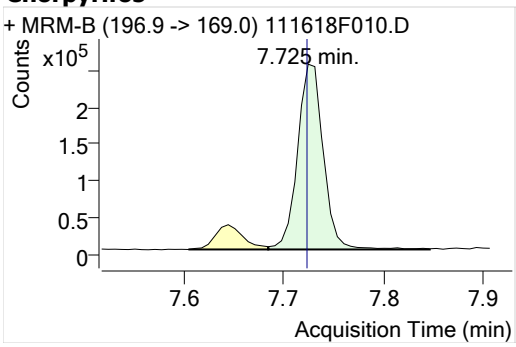


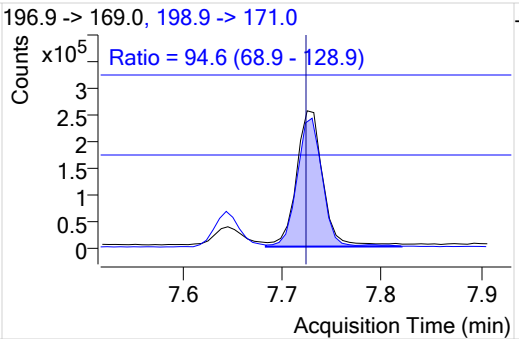


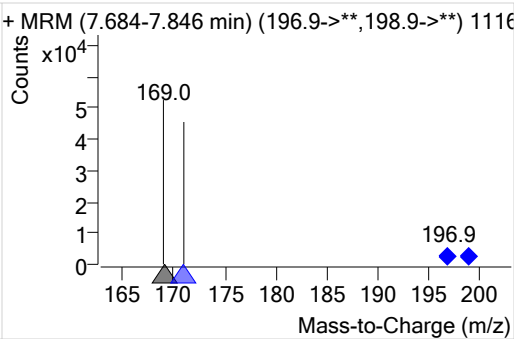


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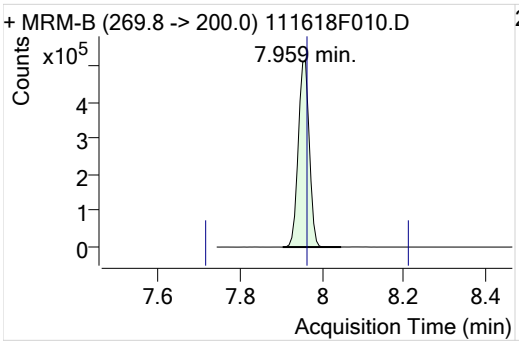
Chorpyrifos

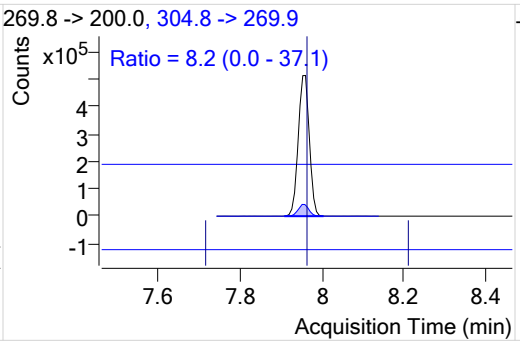


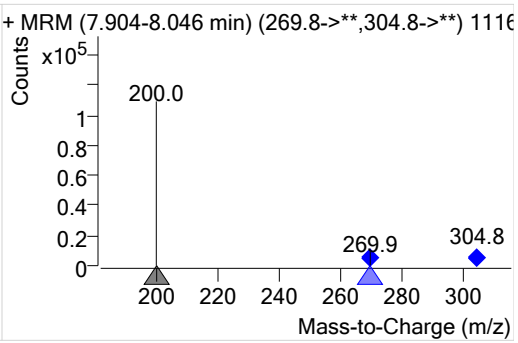




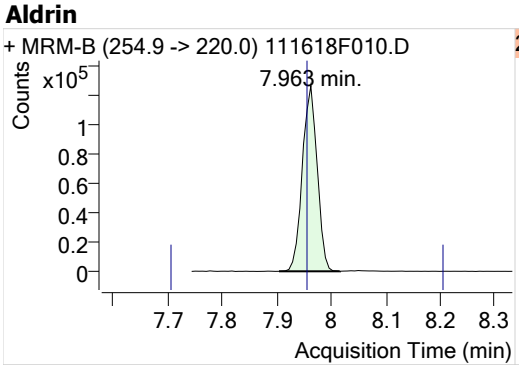
Aldrin-13C

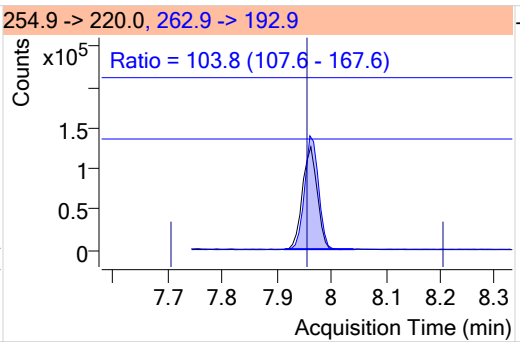


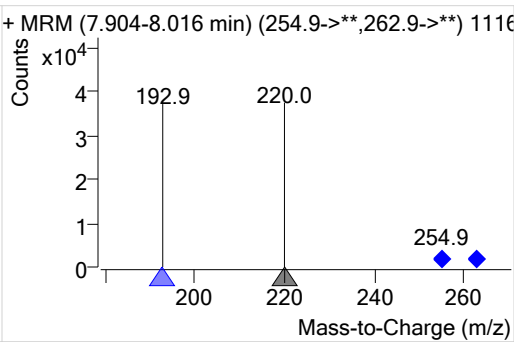




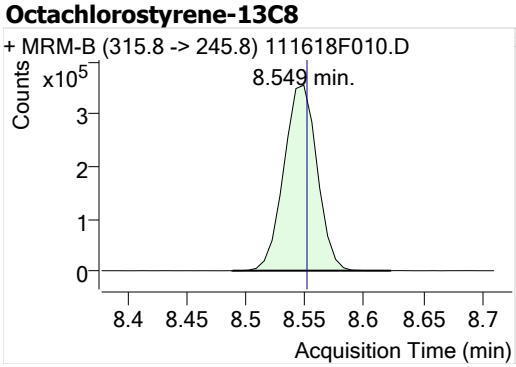
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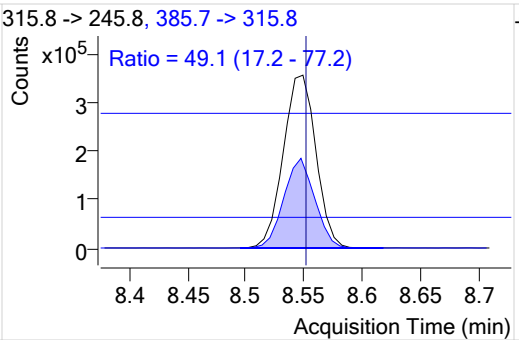


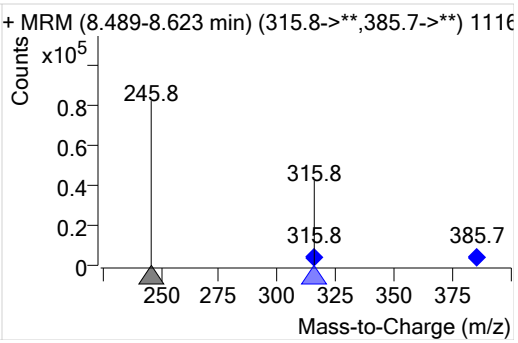




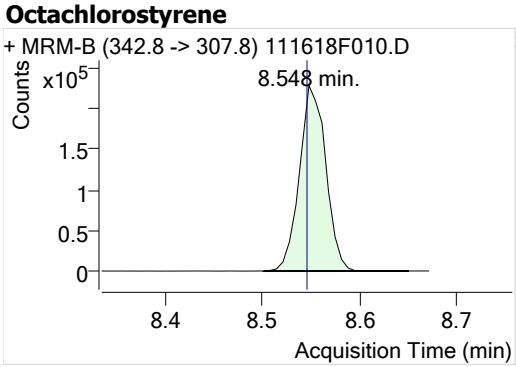
Octachlorostyrene-13C8

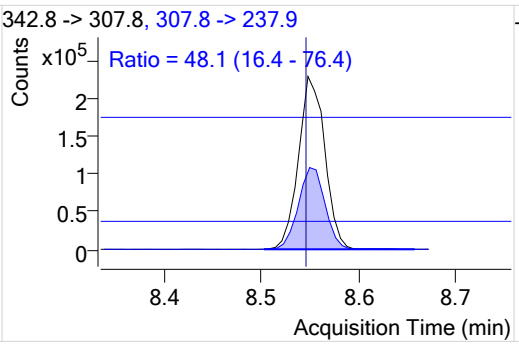


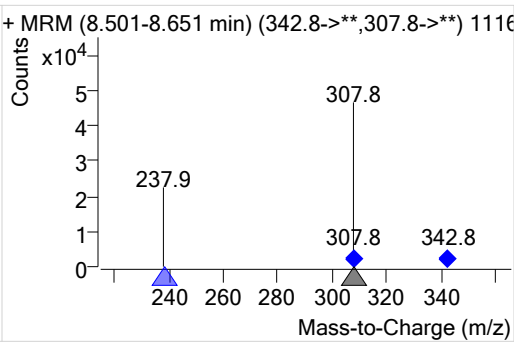




Octachlorostyrene

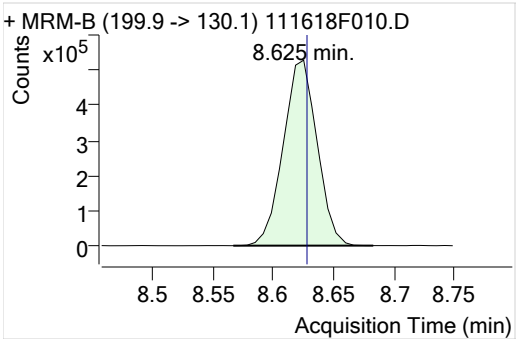


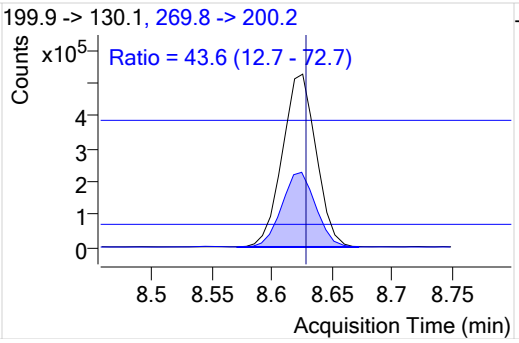


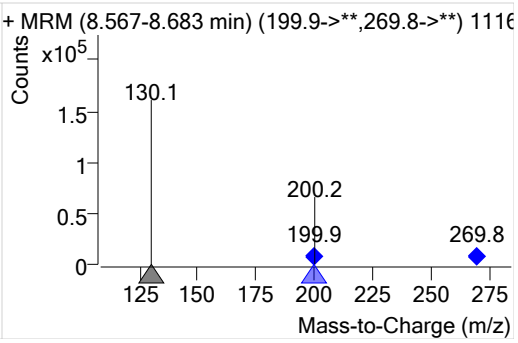


Quantitative Analysis Sample Report

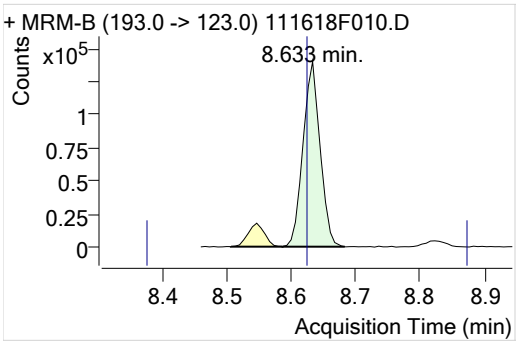
Isodrin-13C12

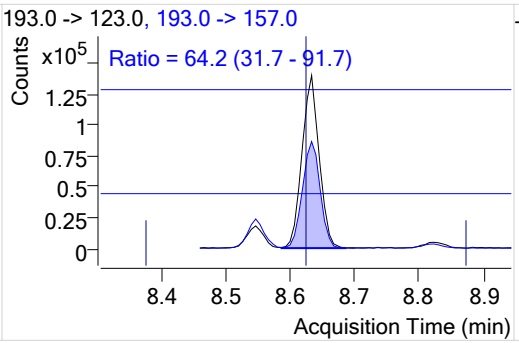


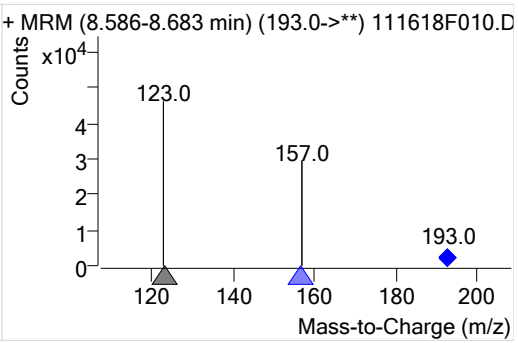




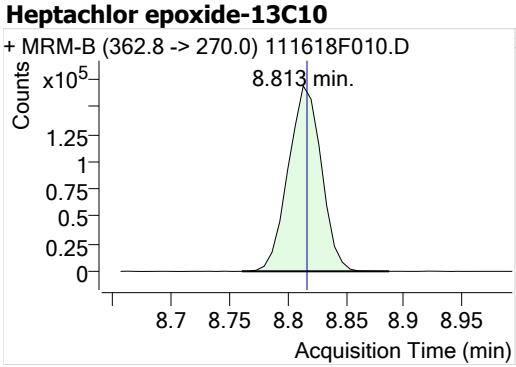
Isodrin

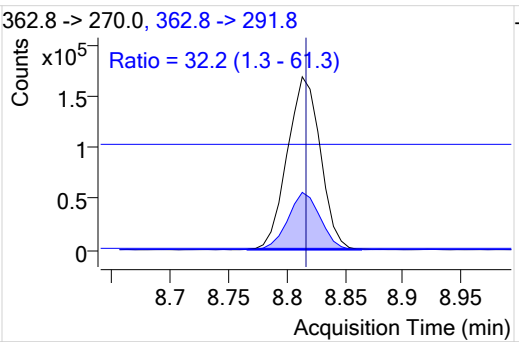


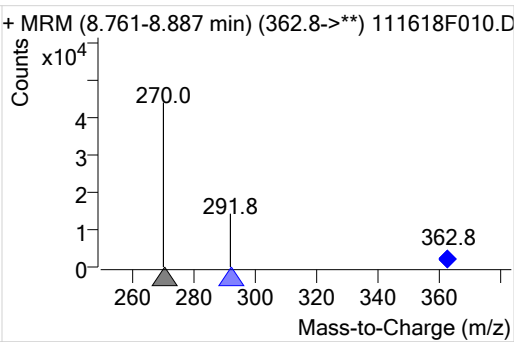




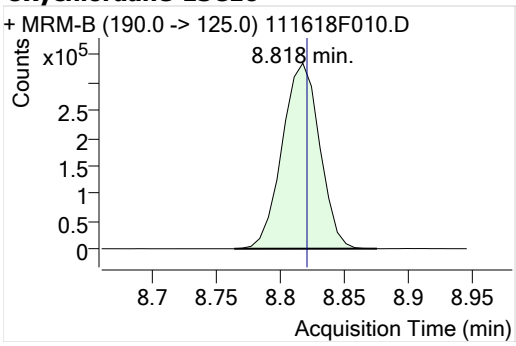
Heptachlor epoxide-13C10

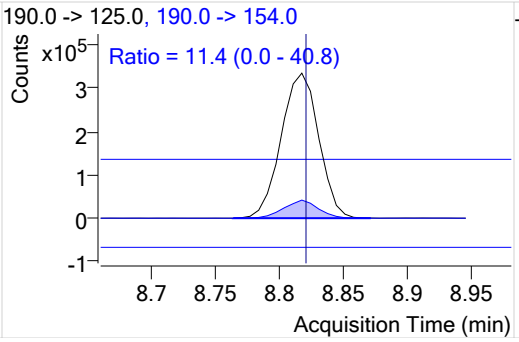


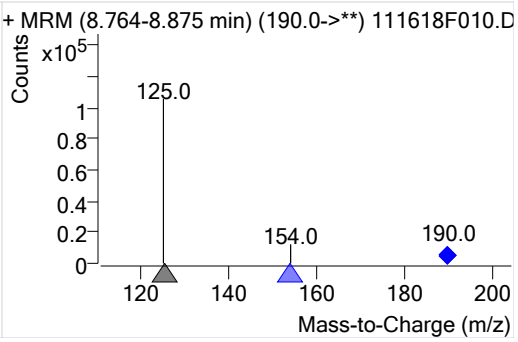




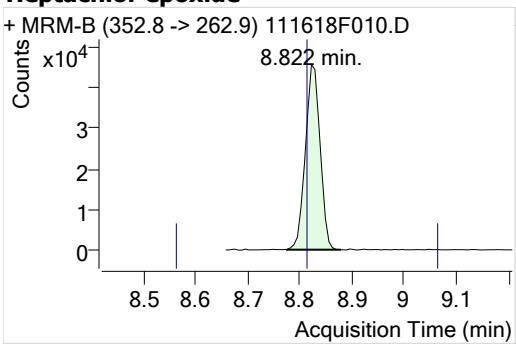
Oxychlordane-13C10

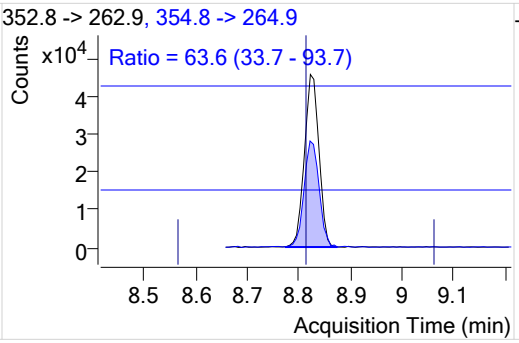


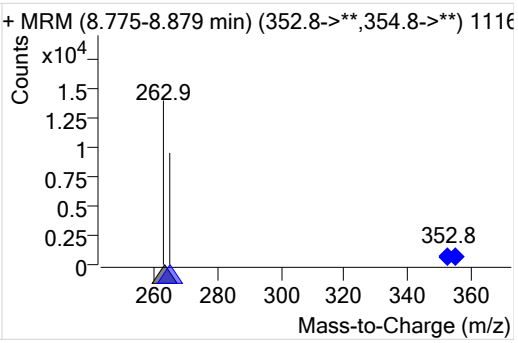




Heptachlor epoxide

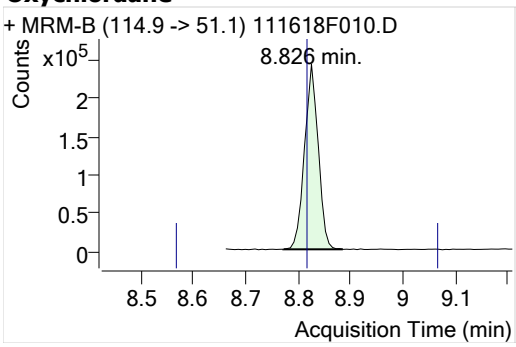


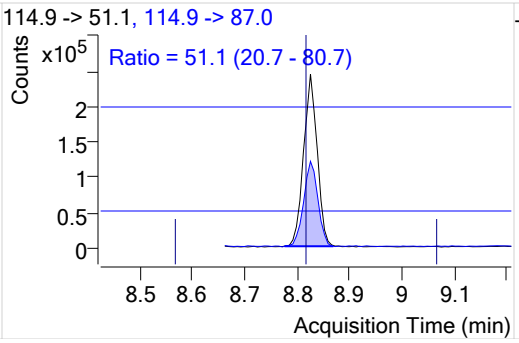


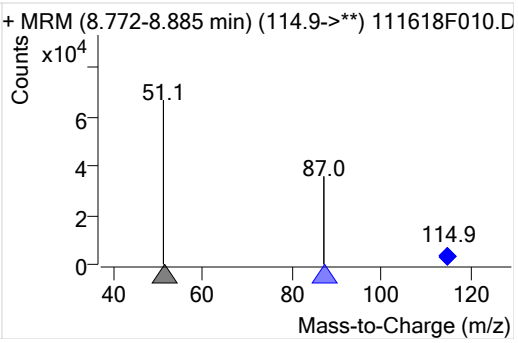


Quantitative Analysis Sample Report

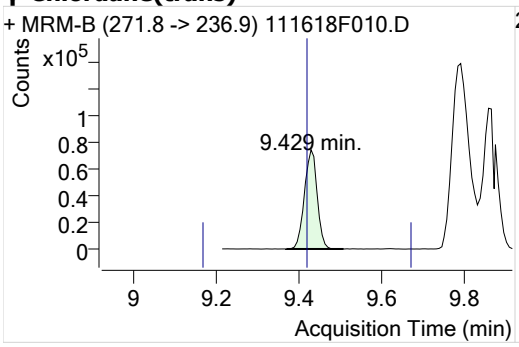
Oxychlordane

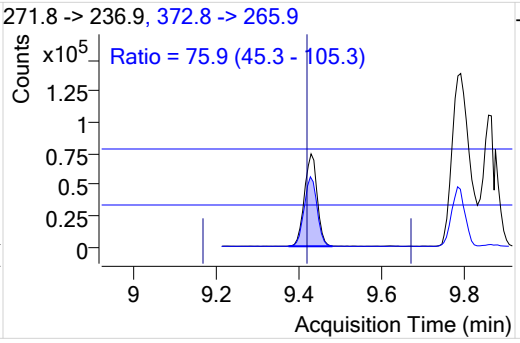


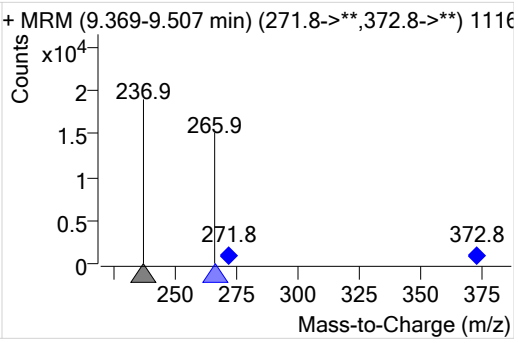




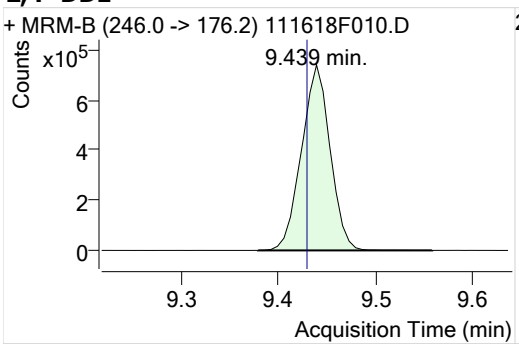
γ-Chlordane(trans)

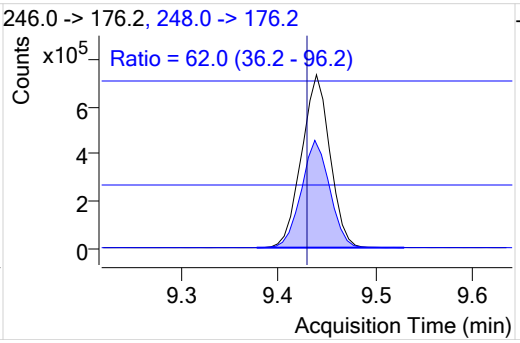


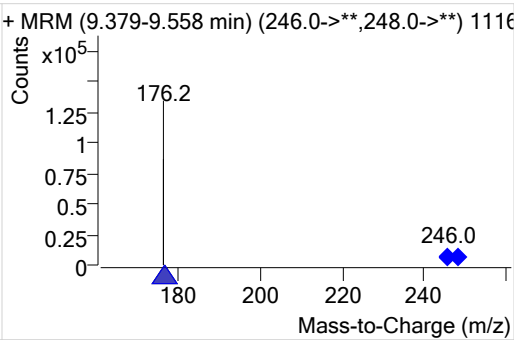




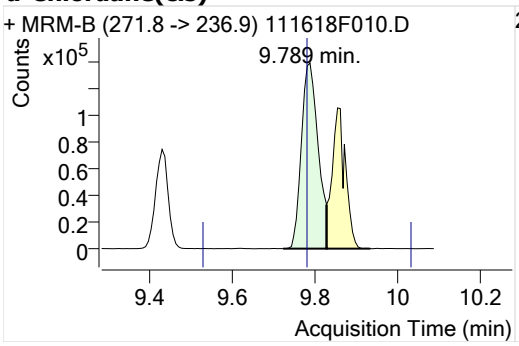
2,4'-DDE

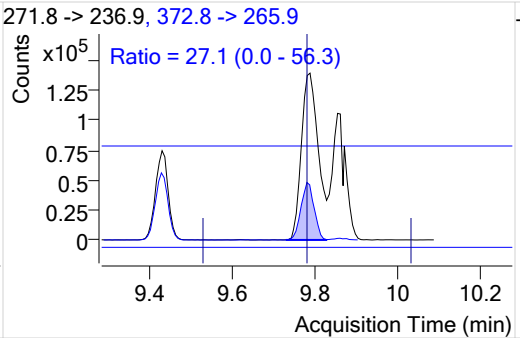


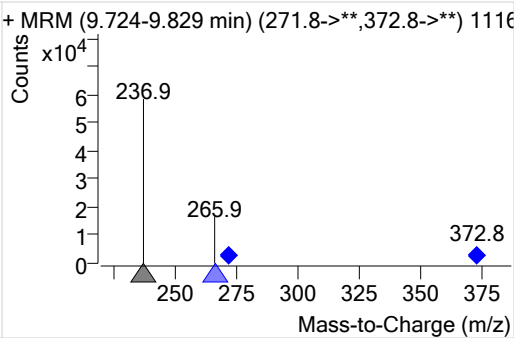




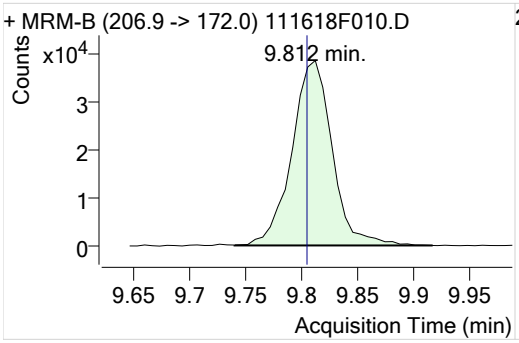
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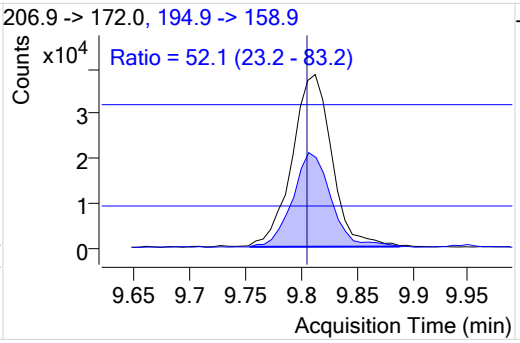


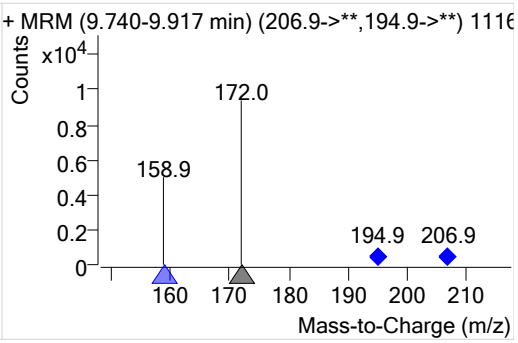




Endosulfan I

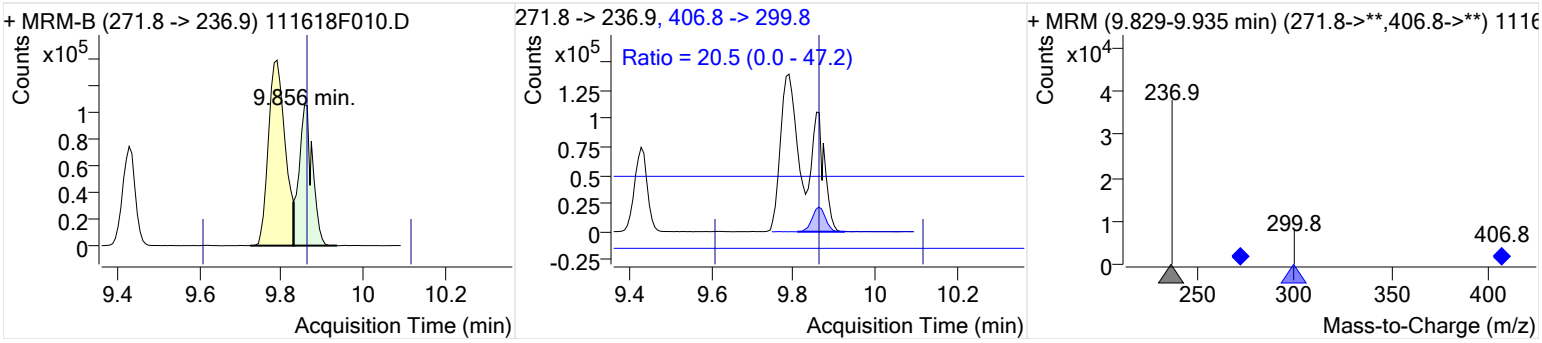




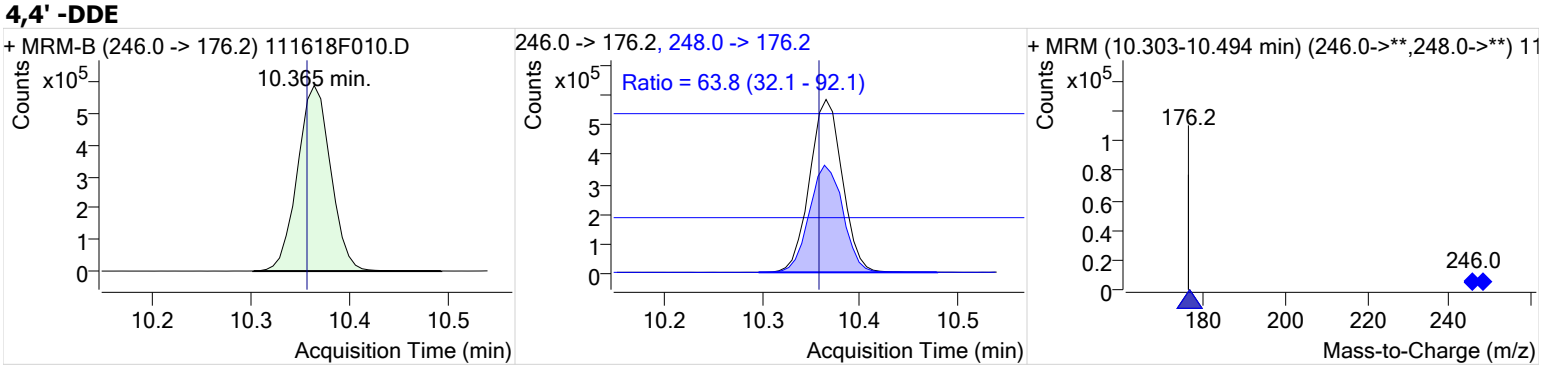


Quantitative Analysis Sample Report

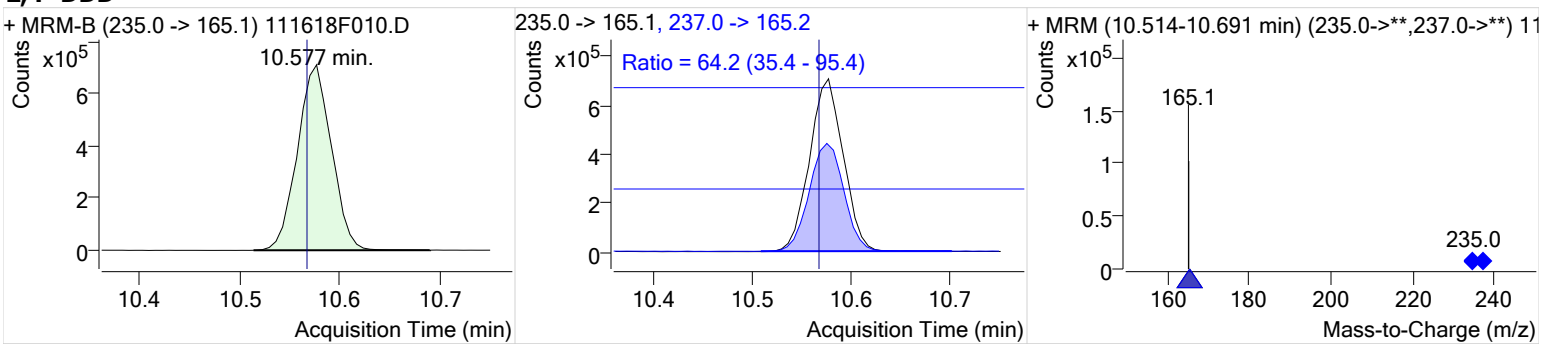
trans-Nanochlor



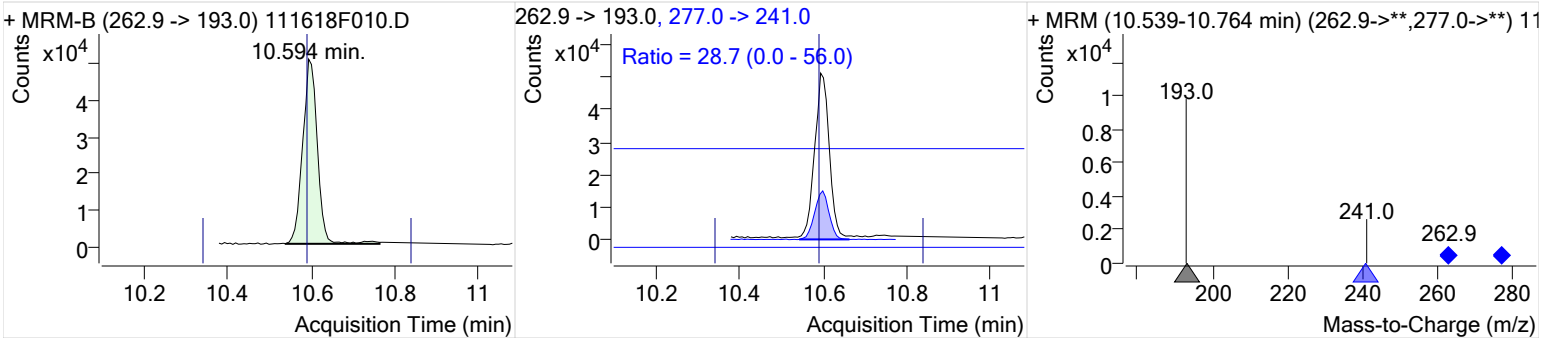
4,4' -DDE



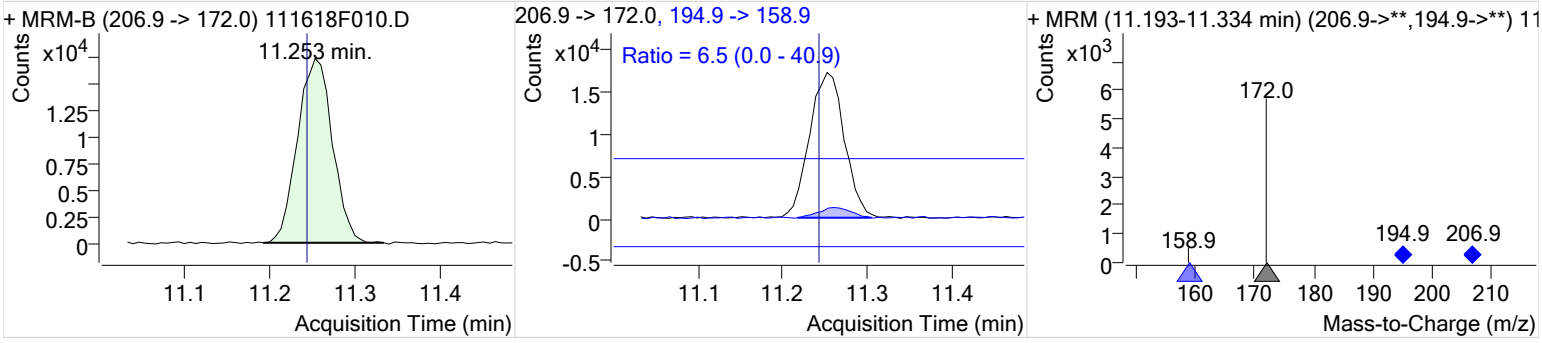
2,4'-DDD



Dieldrin

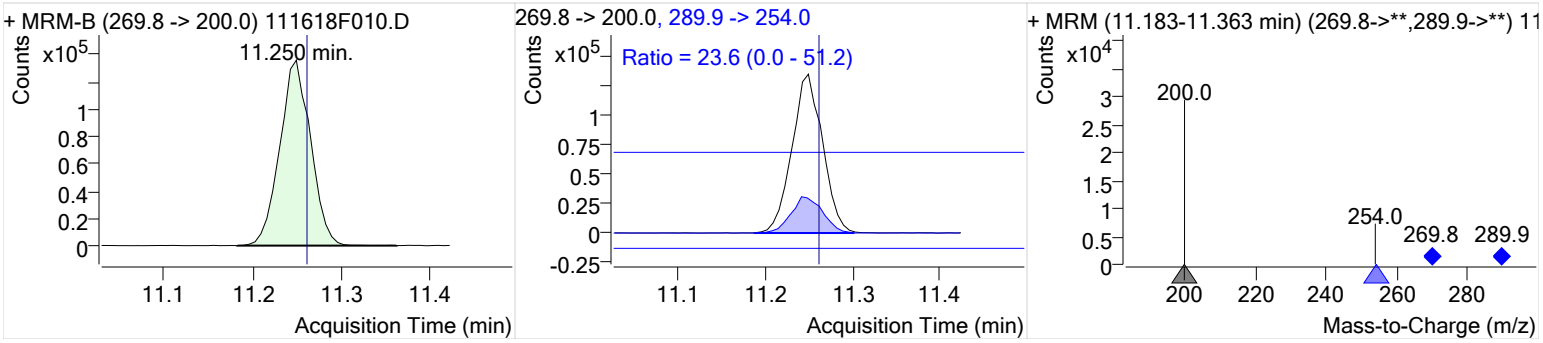


Endosulfan II

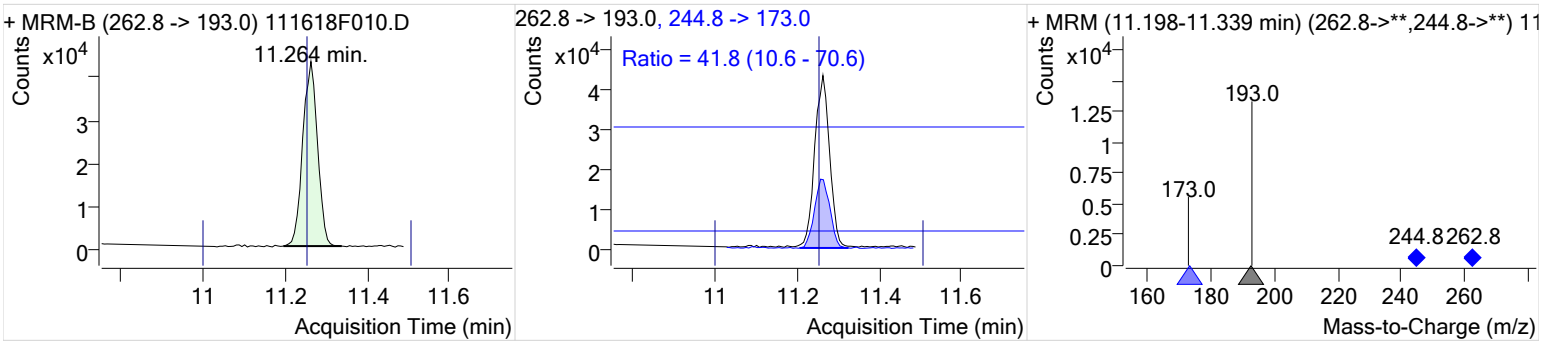


Quantitative Analysis Sample Report

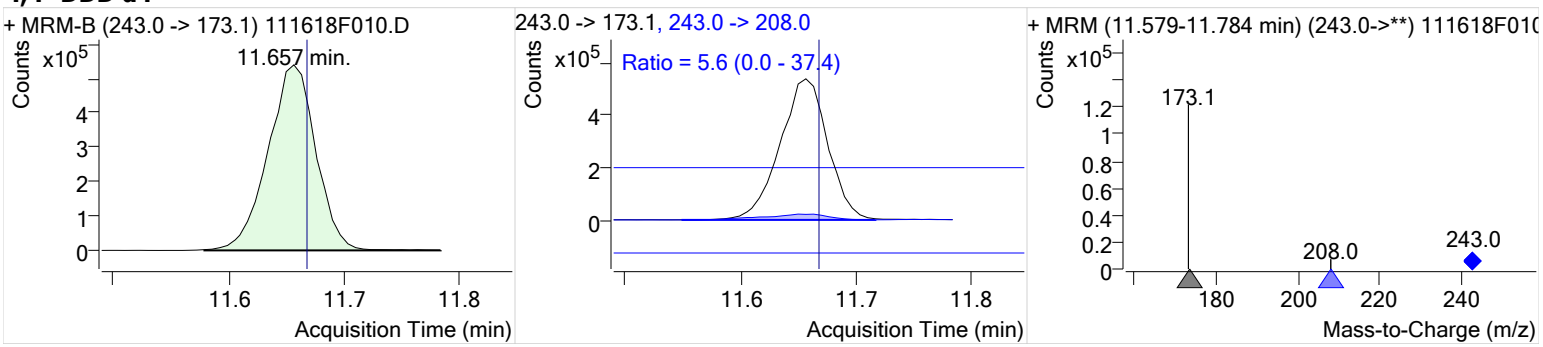
Endrin-13C12



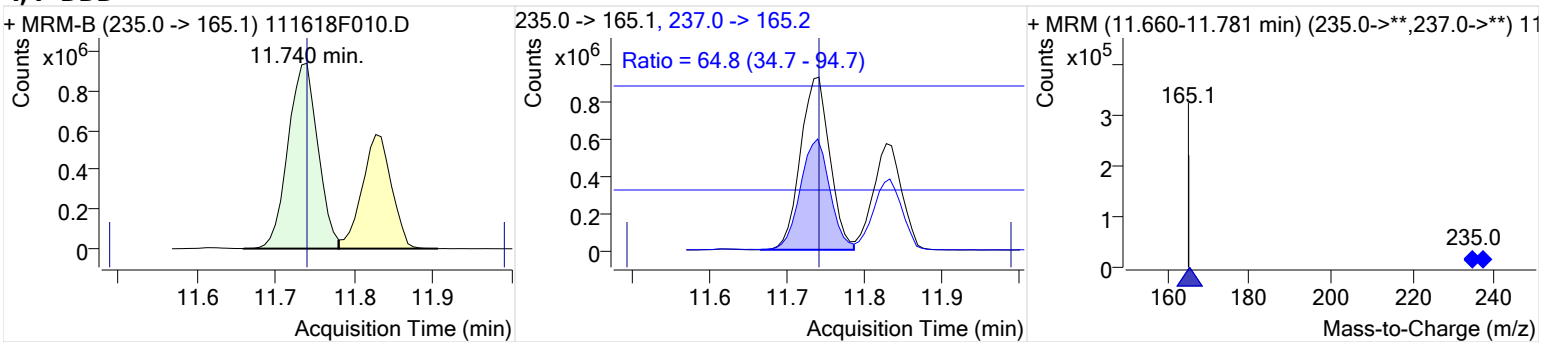
Endrin



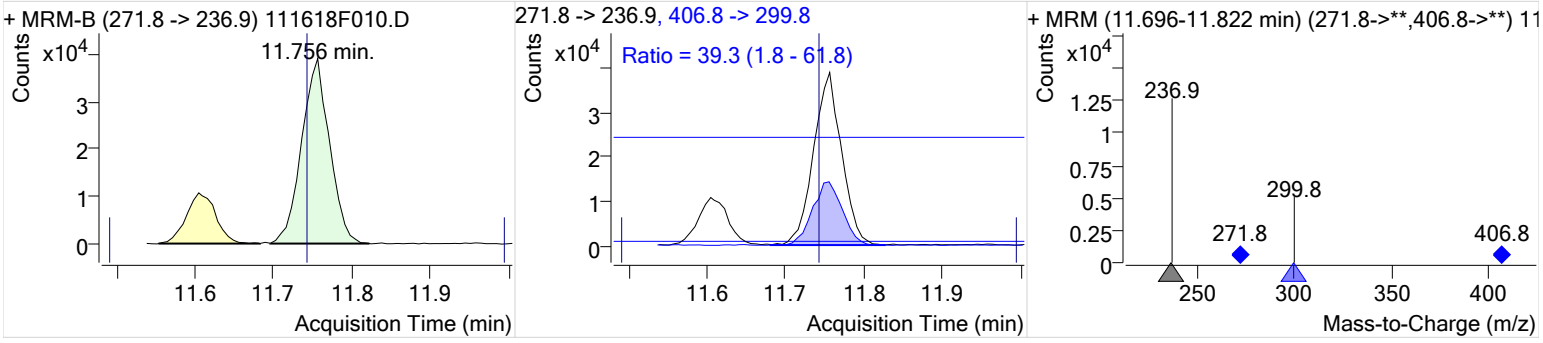
4,4'-DDD d4



4,4'-DDD

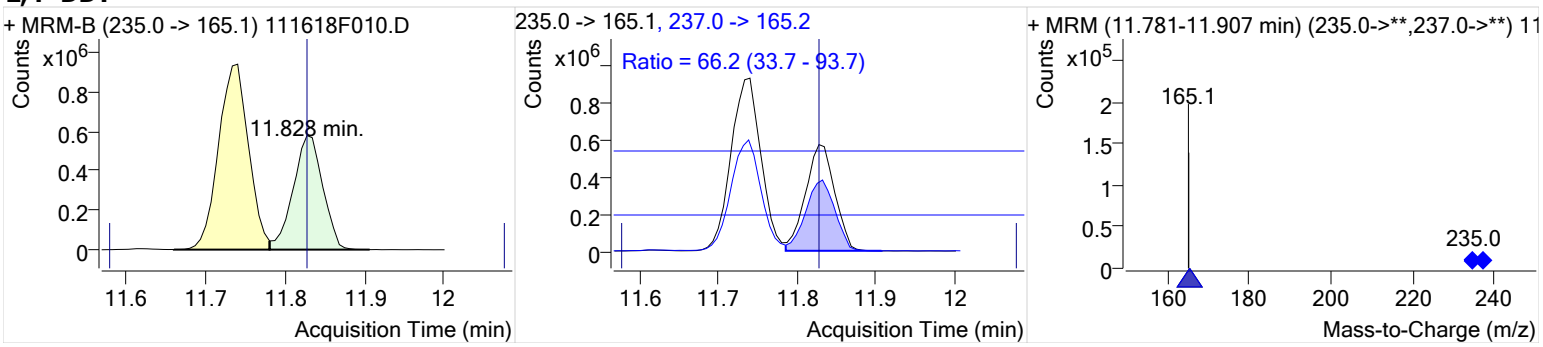


cis-Nonachlor

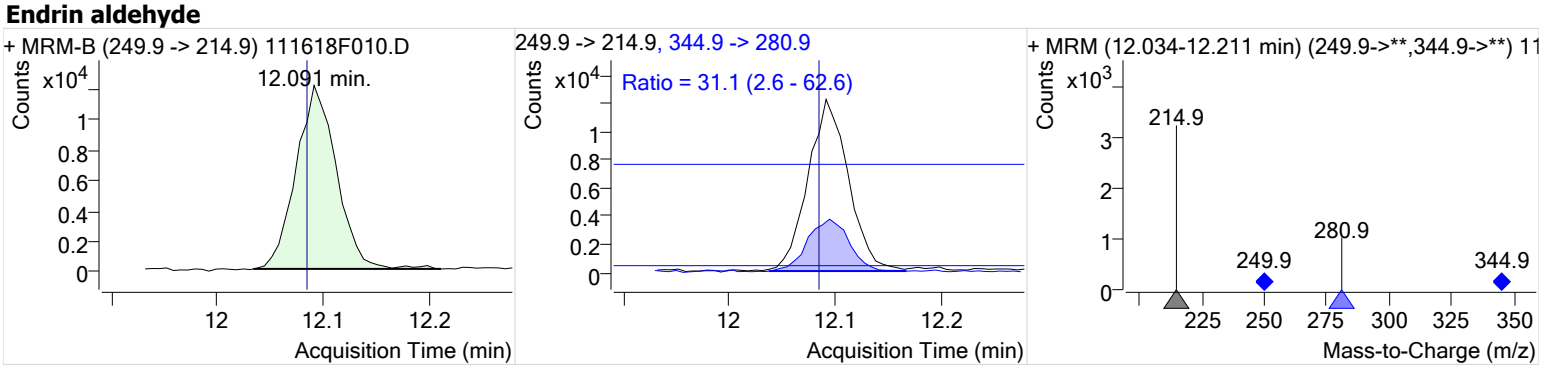


Quantitative Analysis Sample Report

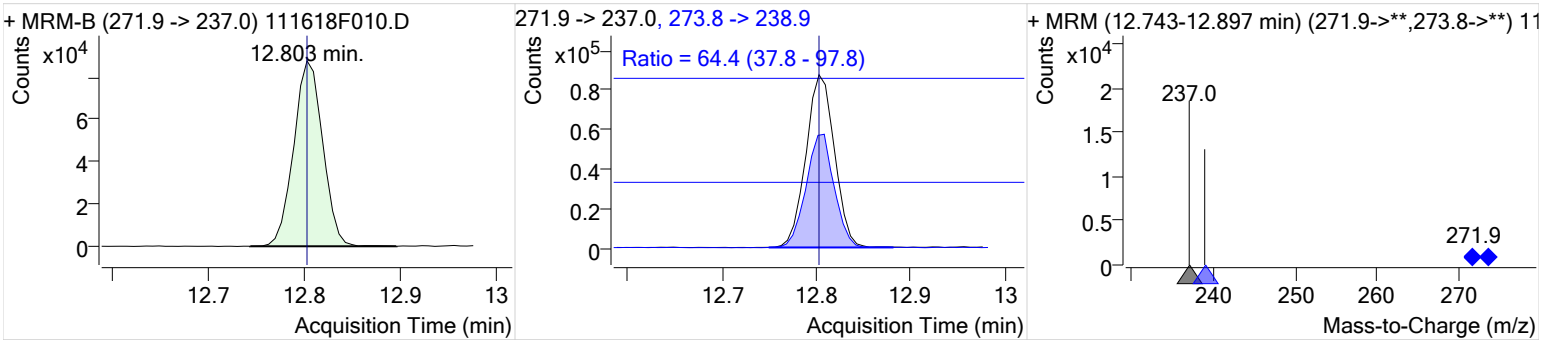
2,4'-DDT



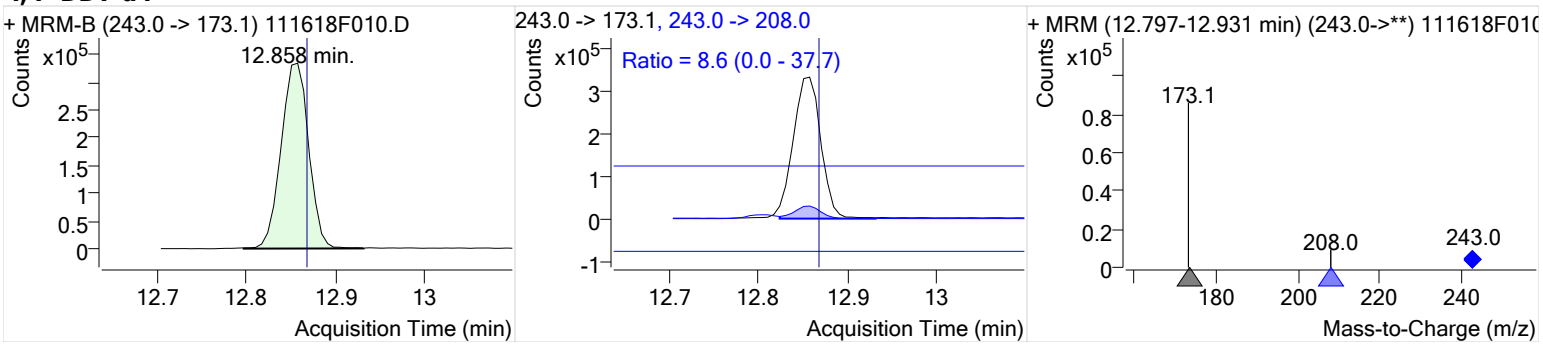
Endrin aldehyde



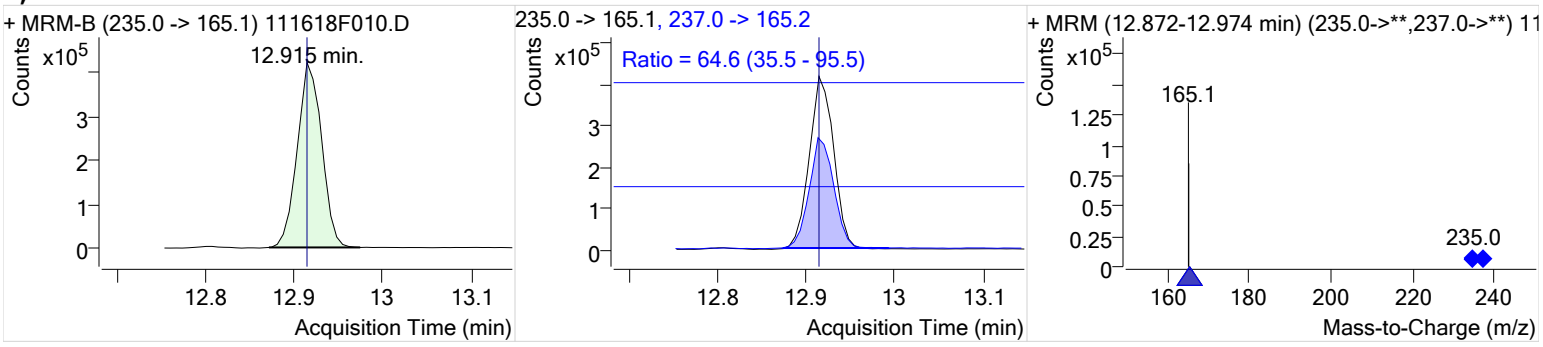
Endosulfan sulfate



4,4'-DDT-d4

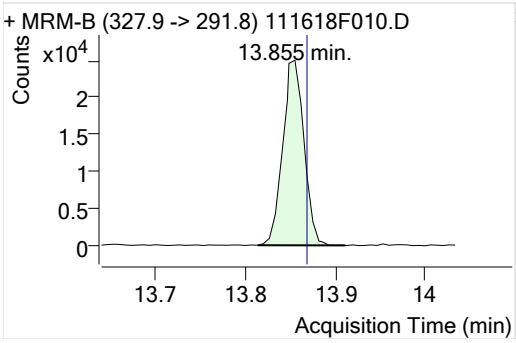


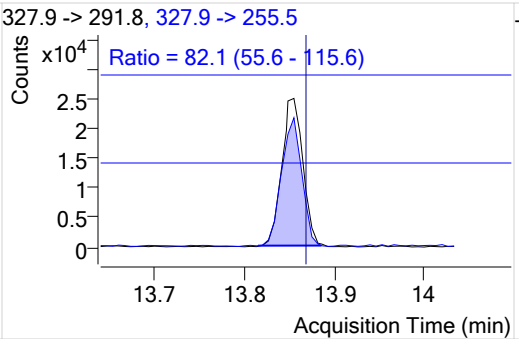
4,4'-DDT

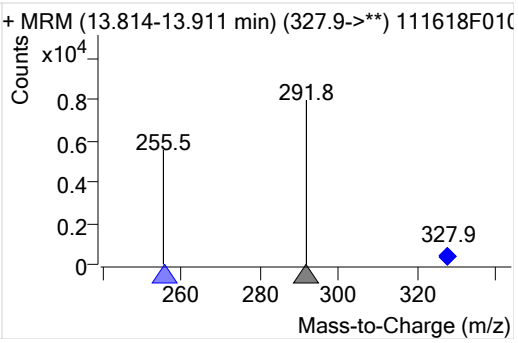


Quantitative Analysis Sample Report

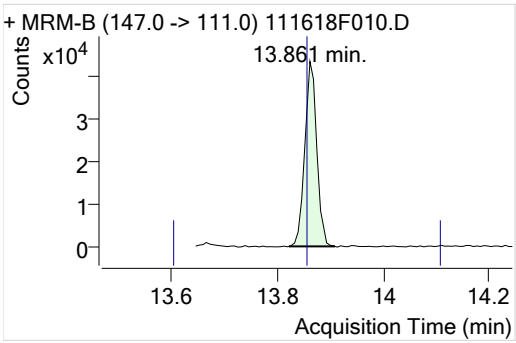
Endrin ketone-13C12

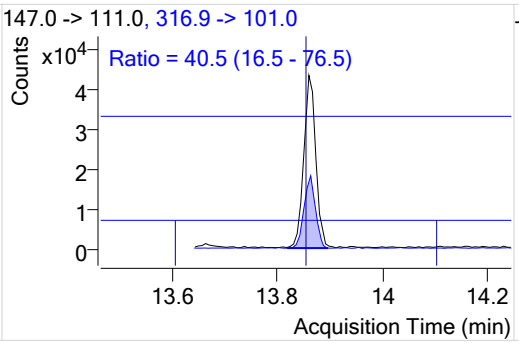


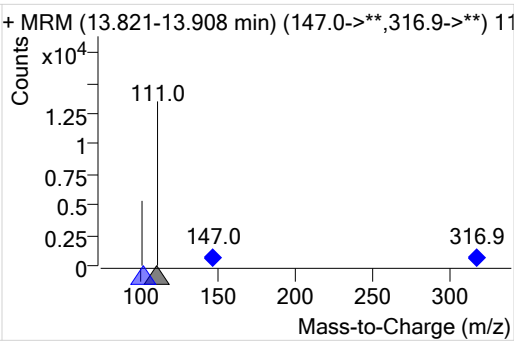




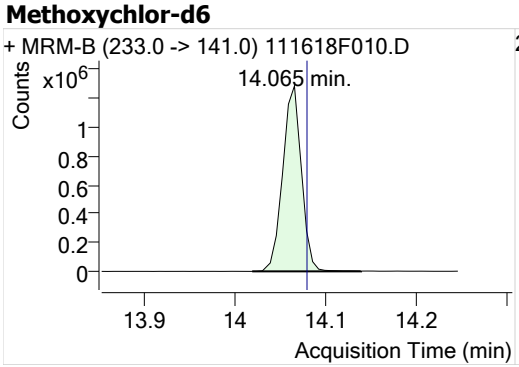
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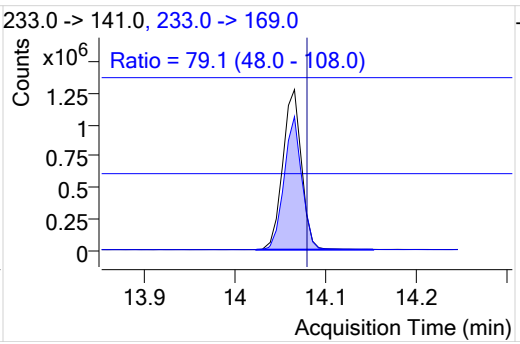


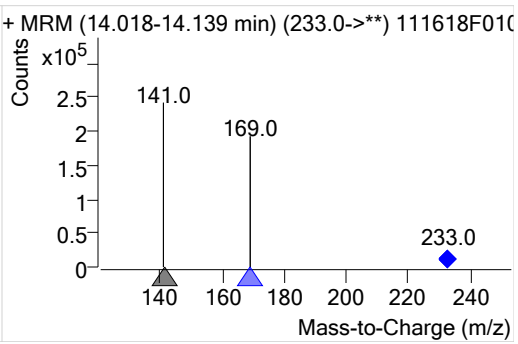




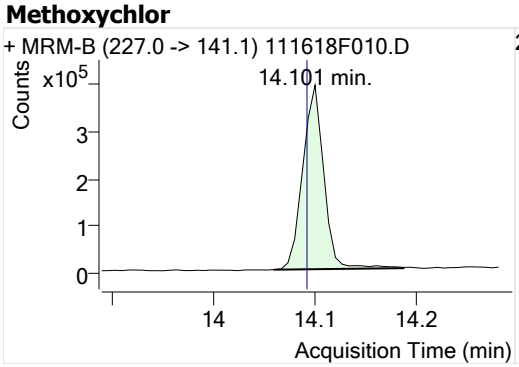
Methoxychlor-d6

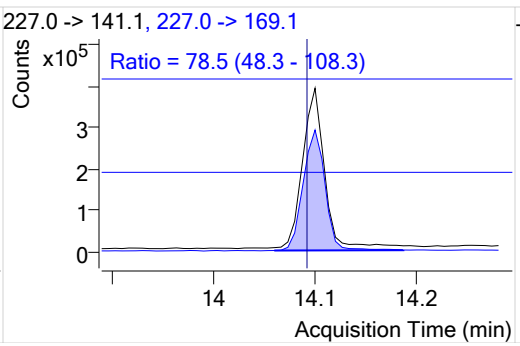


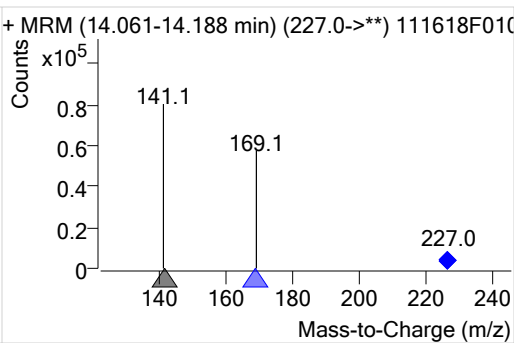




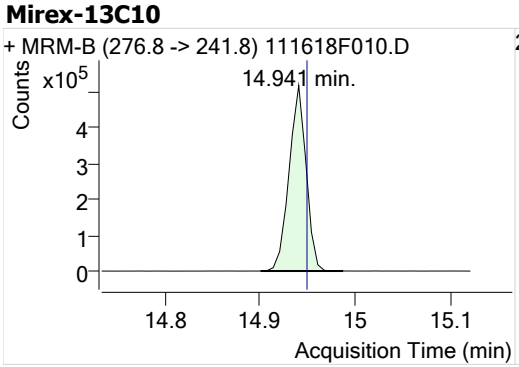
Methoxychlor

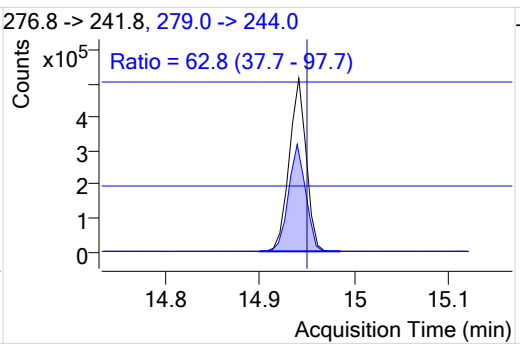


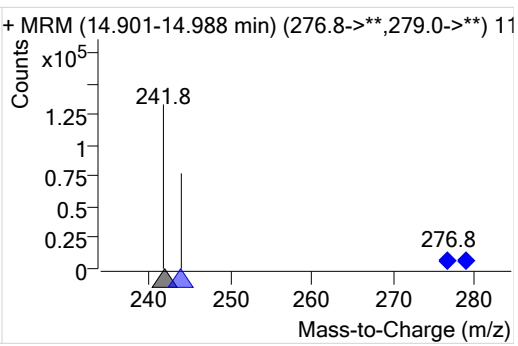




Mirex-13C10

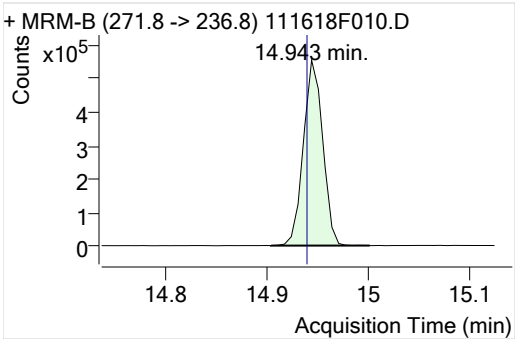


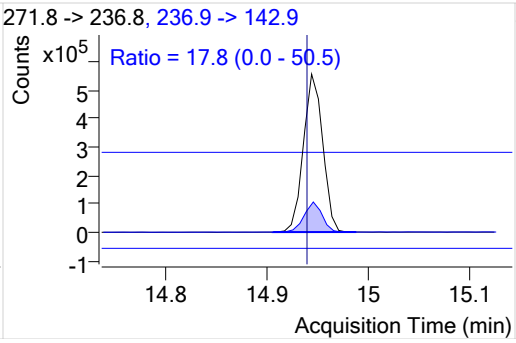


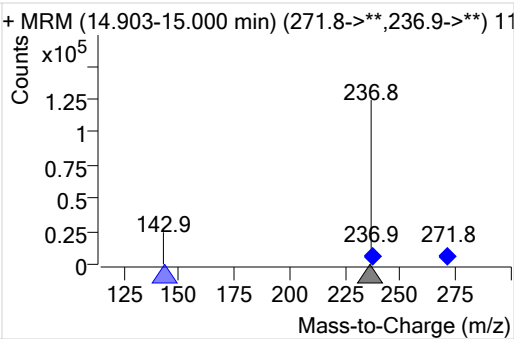


Quantitative Analysis Sample Report

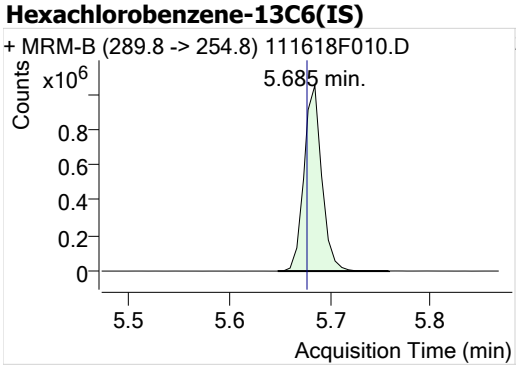
Mirex

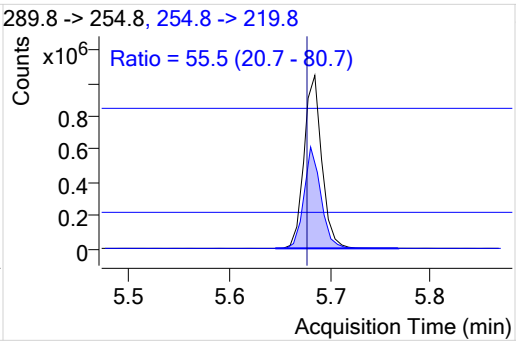


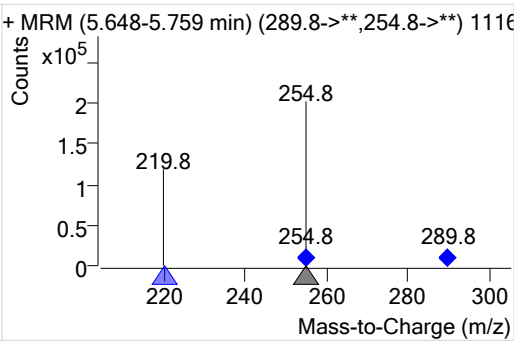




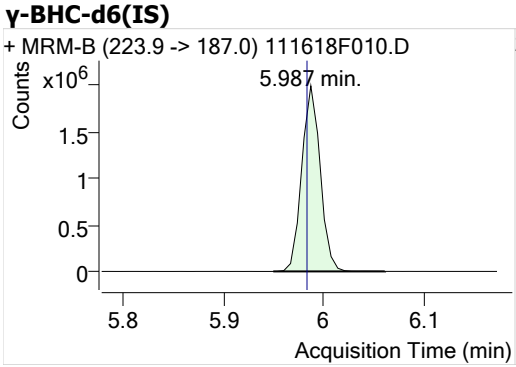
Hexachlorobenzene-13C6(IS)

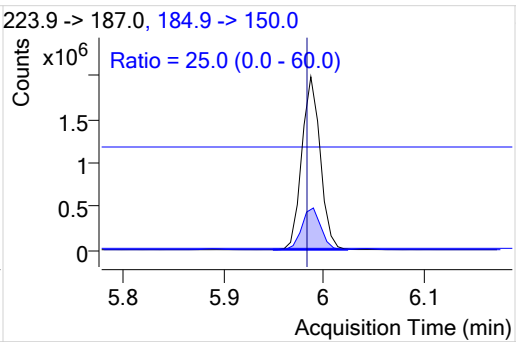


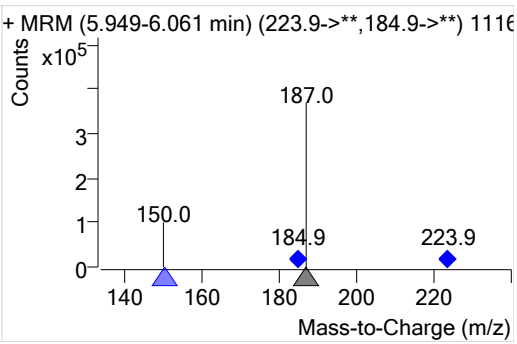




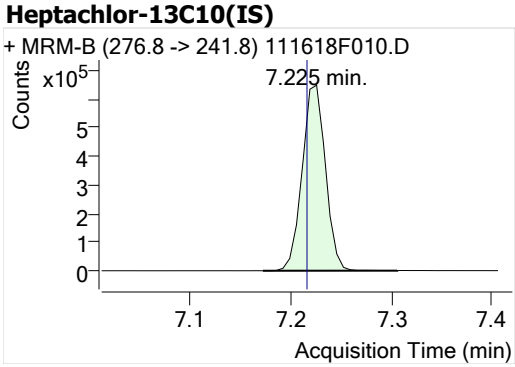
γ-BHC-d6(IS)

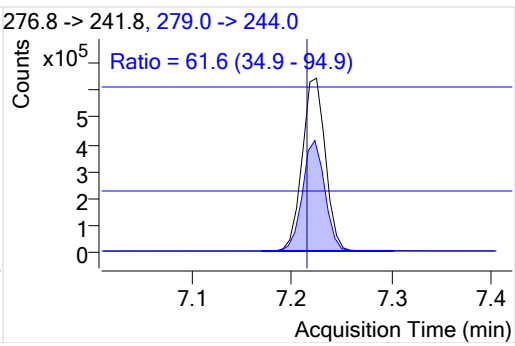


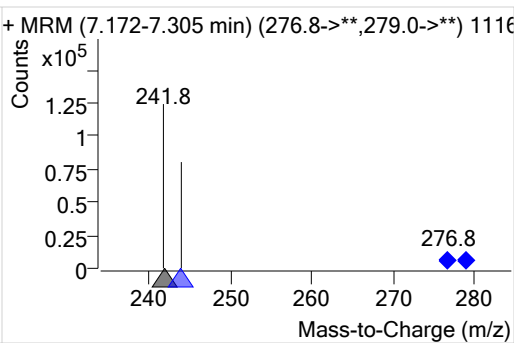




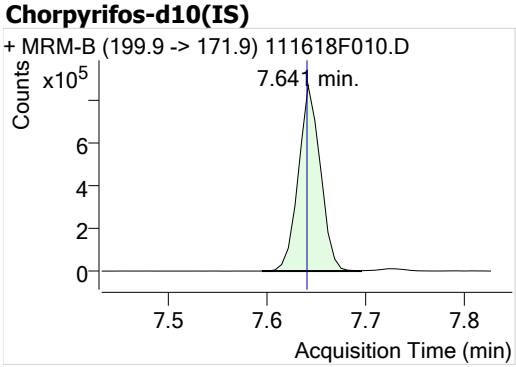
Heptachlor-13C10(IS)

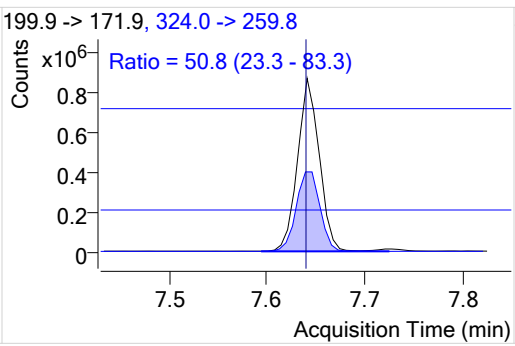


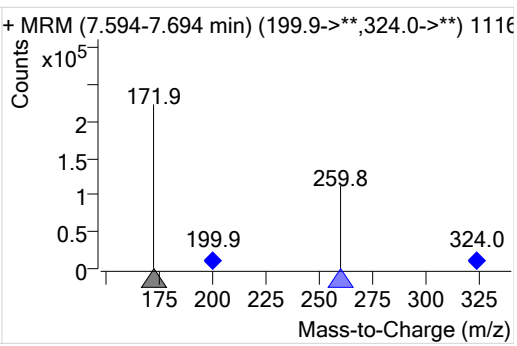




Chorpyrifos-d10(IS)

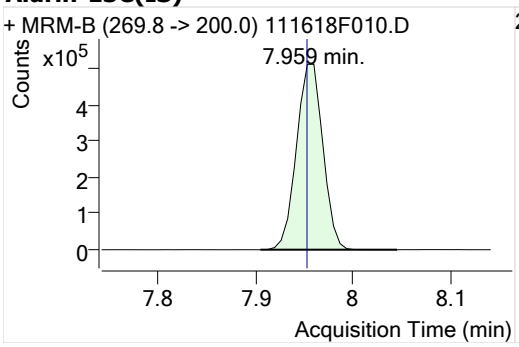


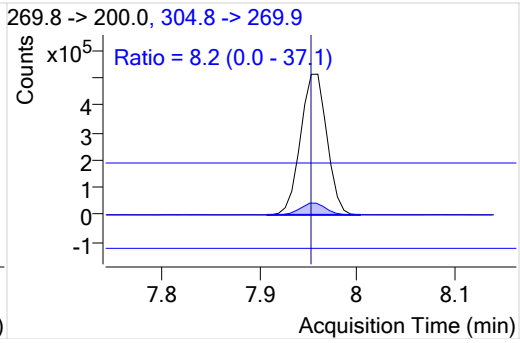


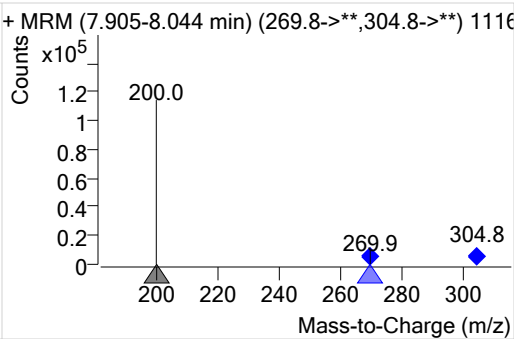


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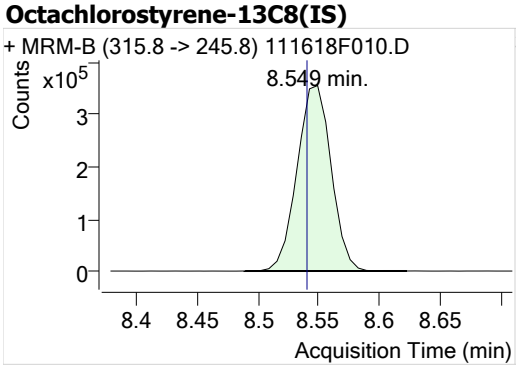
Aldrin-13C(IS)

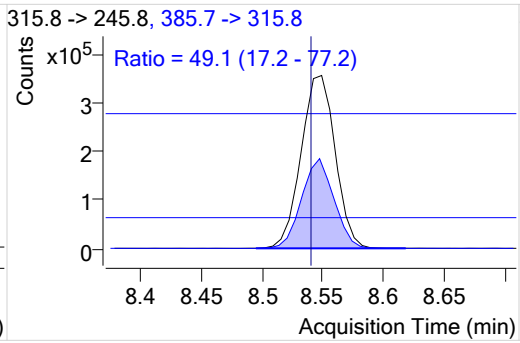


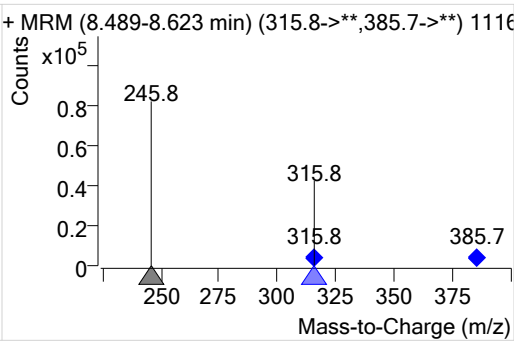




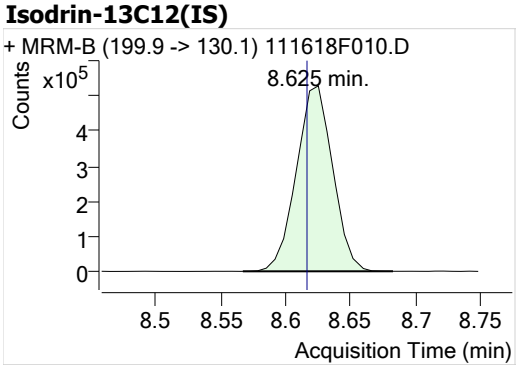
Octachlorostyrene-13C8(IS)

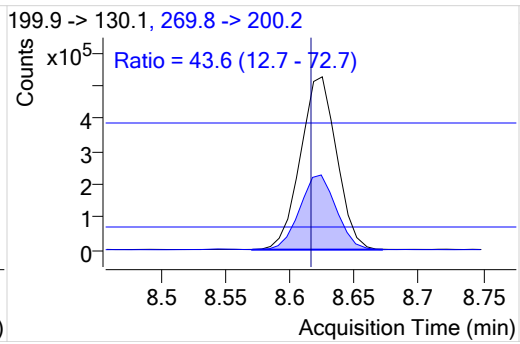


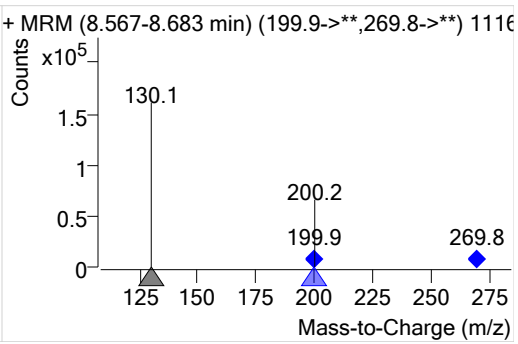




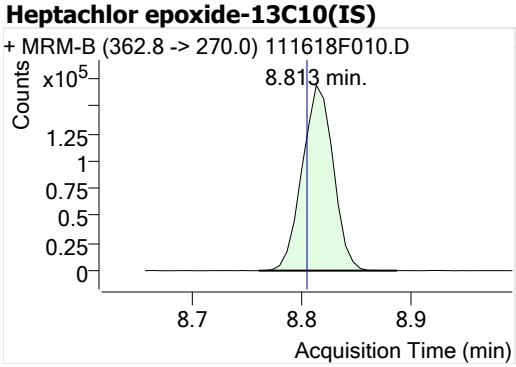
Isodrin-13C12(IS)

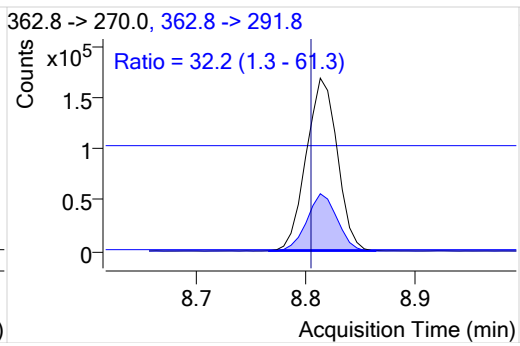


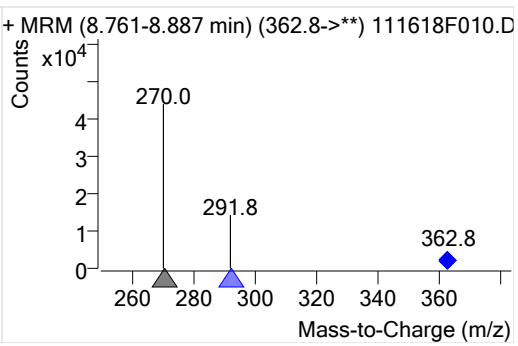




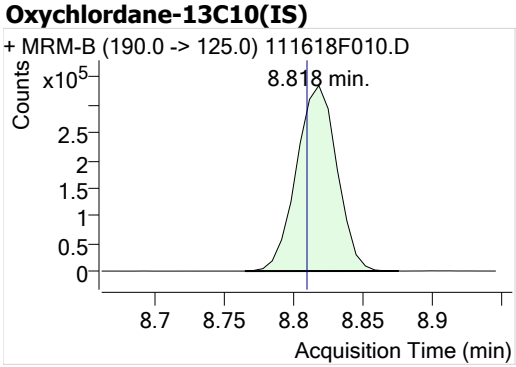
Heptachlor epoxide-13C10(IS)

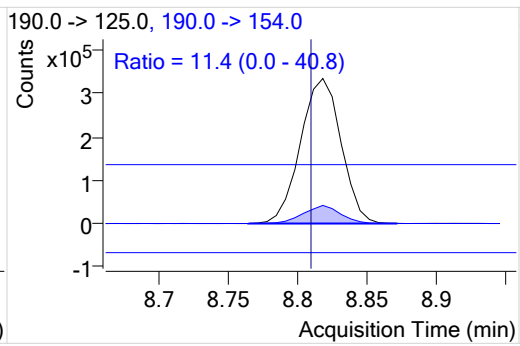


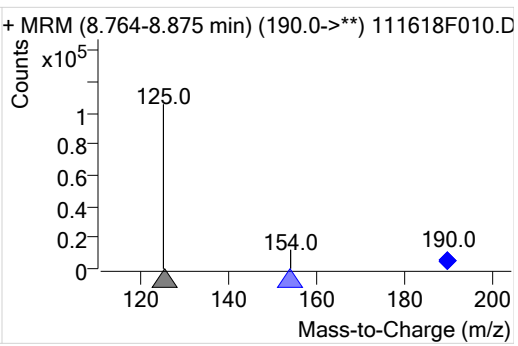




Oxychlordane-13C10(IS)

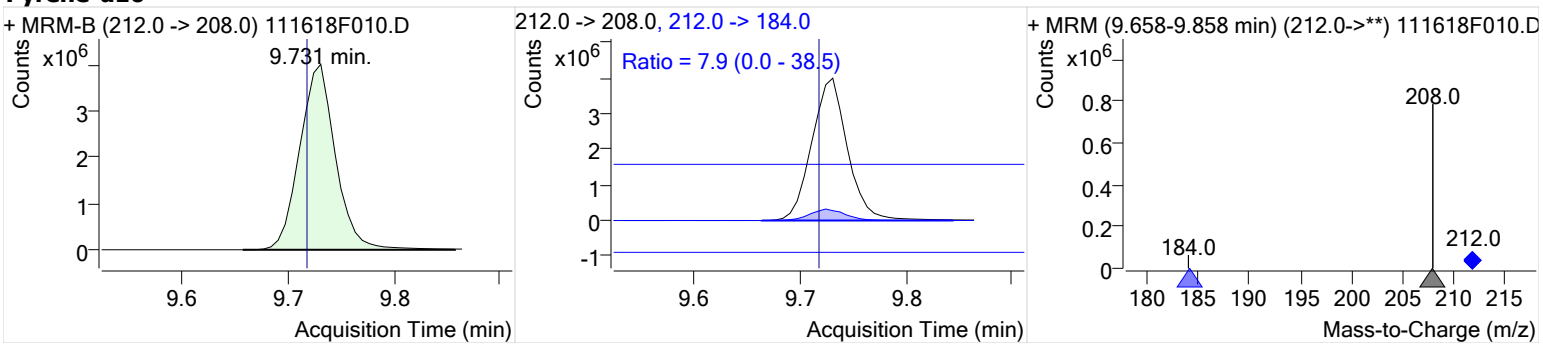




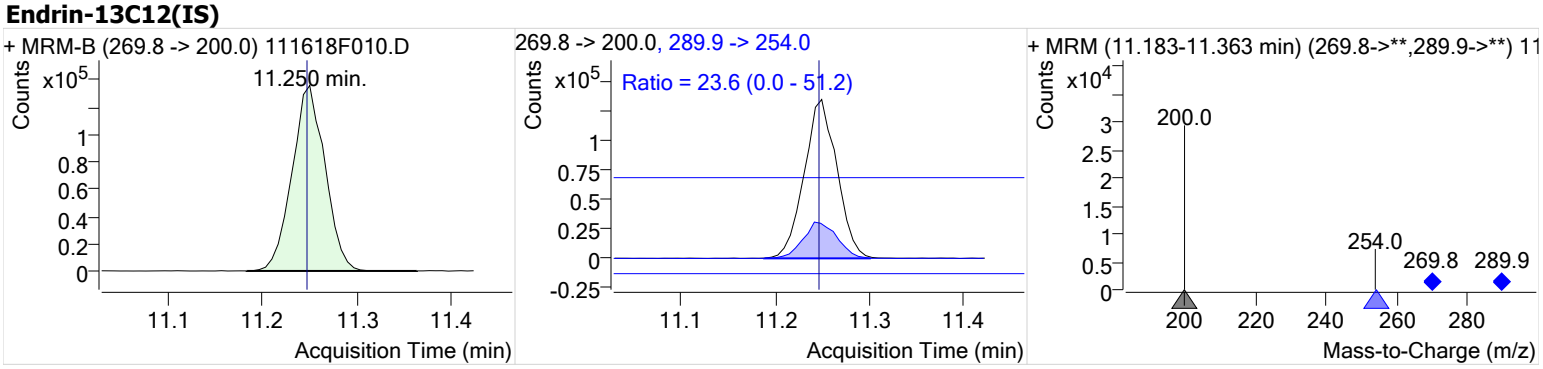


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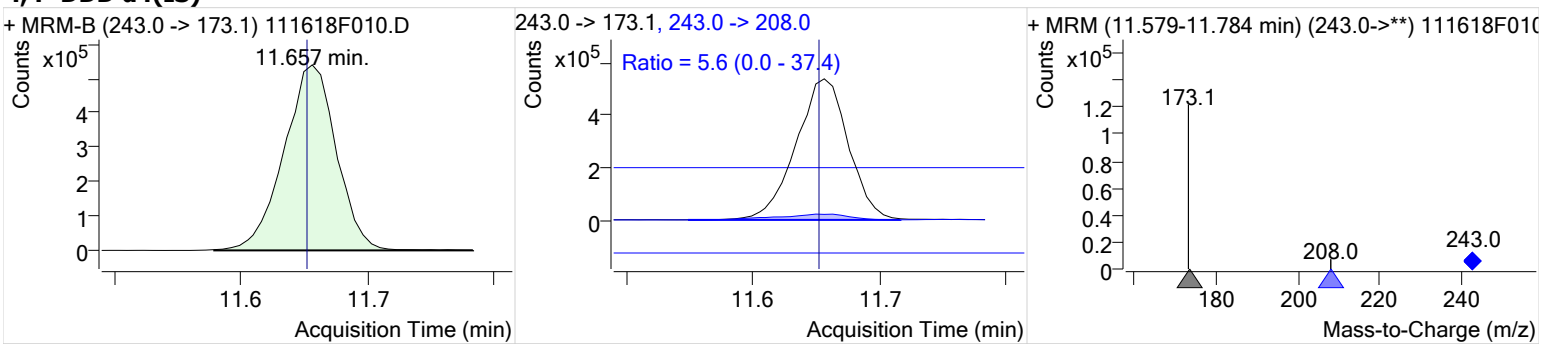
Pyrene-d10



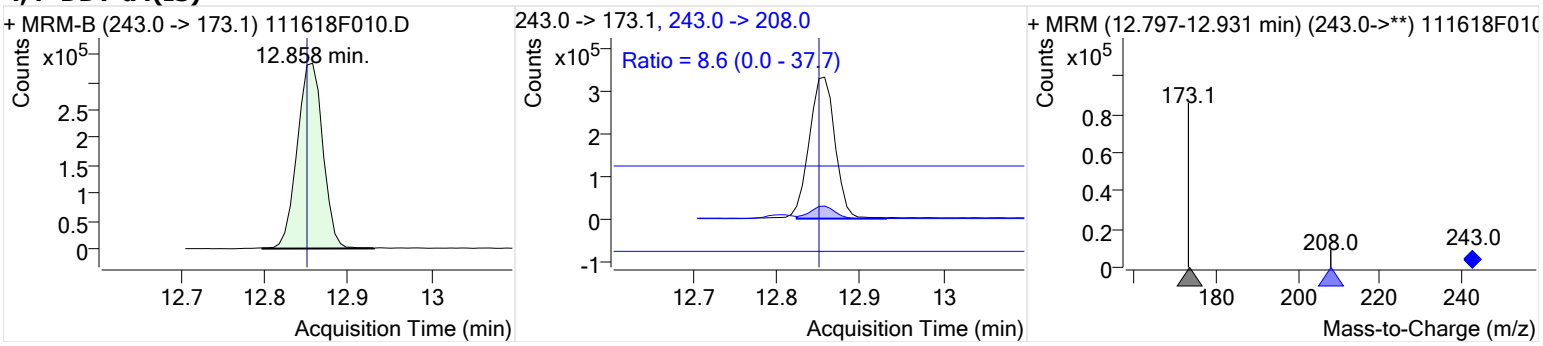
Endrin-13C12(IS)



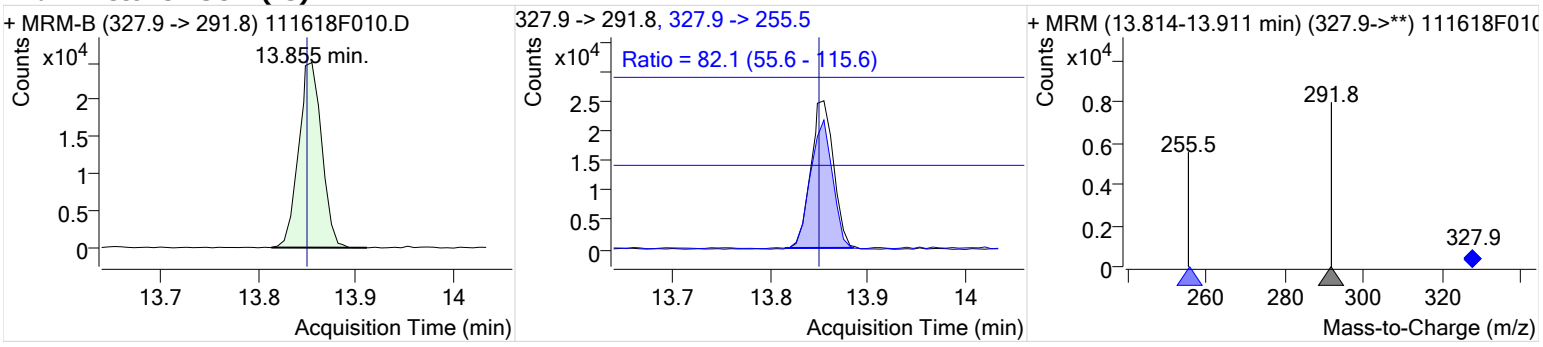
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

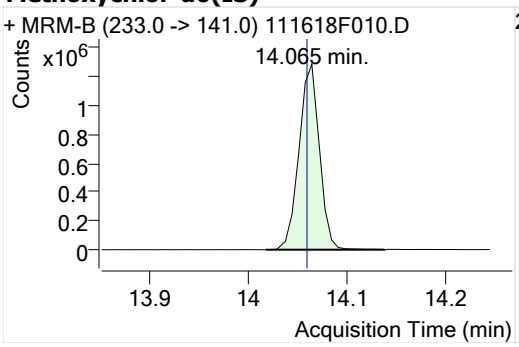


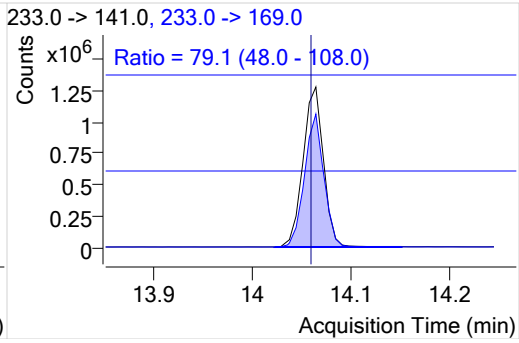
Endrin ketone-13C12(IS)

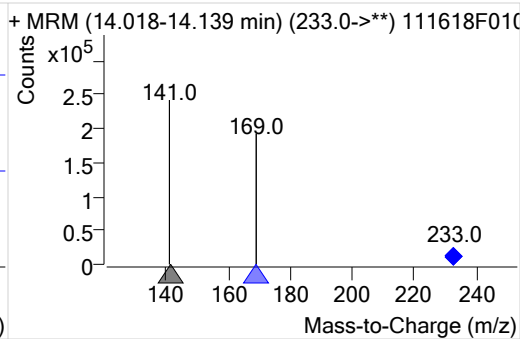


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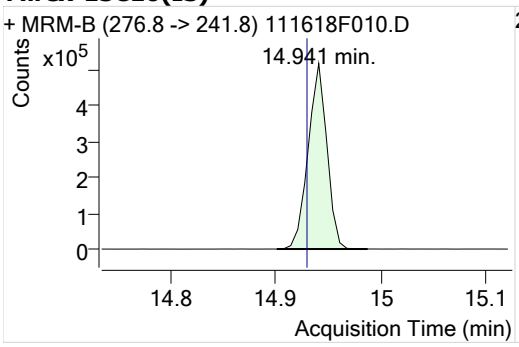
Methoxychlor-d6(IS)

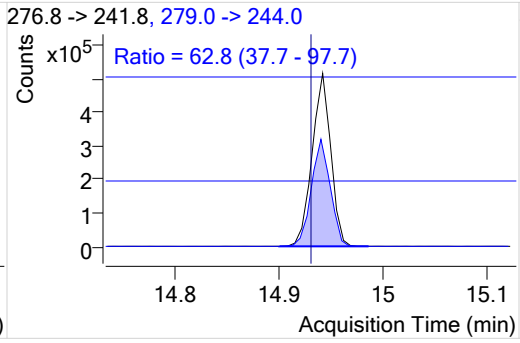


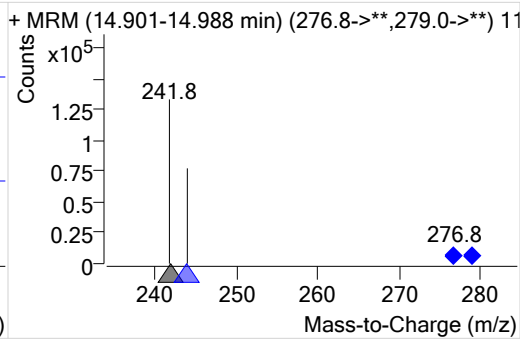




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F011.D	**Vial**	7
Acq. Date-Time	11/16/2018 2:15:21 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 10ng/mL SVM59-48E	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.686	289.8 -> 254.8	1333387	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2533370	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.220	276.8 -> 241.8	1037233	20.000 ng/ml	0.007
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1191336	20.000 ng/ml	0.000
Aldrin-13C(IS)	7.952	269.8 -> 200.0	895530	20.000 ng/ml	0.001
Octachlorostyrene-13C8(IS)	8.543	315.8 -> 245.8	680659	20.000 ng/ml	0.005
Isodrin-13C12(IS)	8.619	199.9 -> 130.1	1036043	20.000 ng/ml	0.002
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	315550	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	643125	20.000 ng/ml	0.009
Pyrene-d10	9.725	212.0 -> 208.0	8775933	100.000 ng/ml	0.007
Endrin-13C12(IS)	11.250	269.8 -> 200.0	301523	20.000 ng/ml	0.002
4,4'-DDD d4(IS)	11.656	243.0 -> 173.1	1389000	5.000 ng/ml	0.004
4,4'-DDT-d4(IS)	12.859	243.0 -> 173.1	711562	5.000 ng/ml	0.008
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	40136	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.058	233.0 -> 141.0	1864256	20.000 ng/ml	0.002
Mirex-13C10(IS)	14.941	276.8 -> 241.8	652083	5.000 ng/ml	0.011

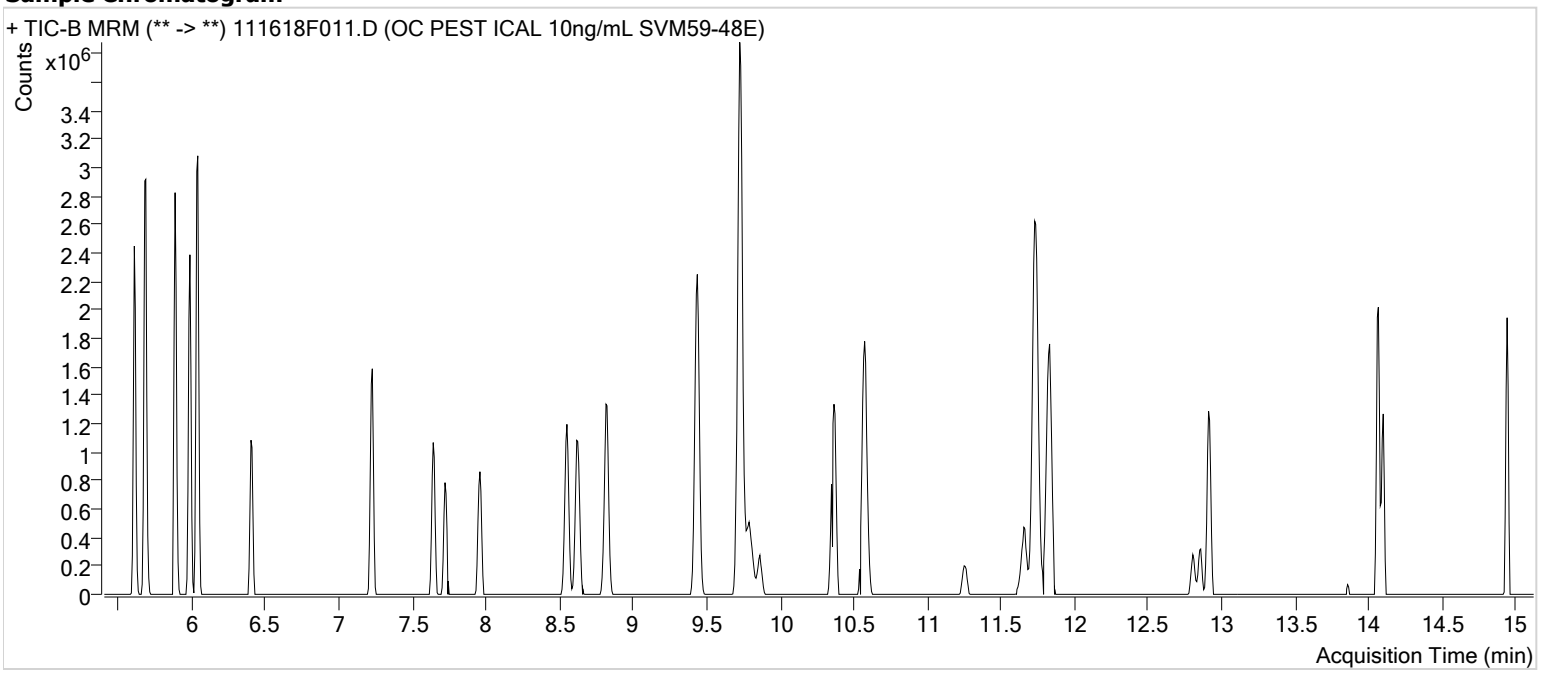
System Monitoring Compounds	RT	Transition	Response	Conc. Units
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1333387	20.641 ng/ml
		Spiked Amount =	20.0	Recovery = *103.2 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2533370	20.695 ng/ml
		Spiked Amount =	20.0	Recovery = *103.5 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1037233	20.491 ng/ml
		Spiked Amount =	20.0	Recovery = *102.5 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1191336	18.760 ng/ml
		Spiked Amount =	20.0	Recovery = *93.8 %*
Aldrin-13C	7.952	269.8 -> 200.0	897256	19.407 ng/ml
		Spiked Amount =	20.0	Recovery = *97.0 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	680659	20.562 ng/ml
		Spiked Amount =	20.0	Recovery = *102.8 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1036043	20.538 ng/ml
		Spiked Amount =	20.0	Recovery = *102.7 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	315550	19.564 ng/ml
		Spiked Amount =	20.0	Recovery = *97.8 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	643125	19.621 ng/ml
		Spiked Amount =	20.0	Recovery = *98.1 %*
Endrin-13C12	11.247	269.8 -> 200.0	301523	18.799 ng/ml
		Spiked Amount =	20.0	Recovery = *94.0 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1389000	4.456 ng/ml
		Spiked Amount =	5.0	Recovery = *89.1 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	711562	5.109 ng/ml
		Spiked Amount =	5.0	Recovery = *102.2 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	40136	20.209 ng/ml
		Spiked Amount =	20.0	Recovery = *101.0 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	1864256	20.260 ng/ml
		Spiked Amount =	20.0	Recovery = *101.3 %*
Mirex-13C10	14.930	276.8 -> 241.8	652083	4.850 ng/ml
		Spiked Amount =	5.0	Recovery = *97.0 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	1755906	9.693	ng/ml	91
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	1174567	9.731	ng/ml	98
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	2199061	9.595	ng/ml	96
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.037	181.1 -> 145.1	2555092	9.642	ng/ml	98
δ-BHC	γ-BHC-d6(IS)	6.404	181.1 -> 145.1	1013099	9.592	ng/ml	100
Heptachlor	Heptachlor-13C10(IS)	7.230	271.7 -> 236.9	568225	9.451	ng/ml	86
Chorpyrifos	Chorpyrifos-d10(IS)	7.725	196.9 -> 169.0	743256	8.838	ng/ml	100
Aldrin	Aldrin-13C(IS)	7.962	254.9 -> 220.0	365651	10.139	ng/ml	92
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.549	342.8 -> 307.8	850241	9.706	ng/ml	97
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	510155	9.597	ng/ml	93
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.823	352.8 -> 262.9	179378	9.989	ng/ml	96
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	871527	10.023	ng/ml	100
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.430	271.8 -> 236.9	297887	9.613	ng/ml	99
2,4'-DDE	4,4'-DDD d4(IS)	9.440	246.0 -> 176.2	2738381	10.370	ng/ml	95
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.788	271.8 -> 236.9	750032	9.688	ng/ml	96
Endosulfan I	Endrin-13C12(IS)	9.812	206.9 -> 172.0	182381	9.649	ng/ml	98
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	500271	10.041	ng/ml	97
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	2171922	8.972	ng/ml	96
2,4'-DDD	4,4'-DDD d4(IS)	10.577	235.0 -> 165.1	2618942	8.762	ng/ml	99
Dieldrin	Endrin-13C12(IS)	10.594	262.9 -> 193.0	211677	9.204	ng/ml	91
Endosulfan II	Endrin-13C12(IS)	11.260	206.9 -> 172.0	57807	9.956	ng/ml	96
Endrin	Endrin-13C12(IS)	11.264	262.8 -> 193.0	195177	9.432	ng/ml	98
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	4474027	9.974	ng/ml	99
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	179021	9.485	ng/ml	86
2,4'-DDT	4,4'-DDT-d4(IS)	11.834	235.0 -> 165.1	2849701	8.932	ng/ml	95
Endrin aldehyde	Endrin-13C12(IS)	12.097	249.9 -> 214.9	55756	9.552	ng/ml	99
Endosulfan sulfate	Endrin-13C12(IS)	12.804	271.9 -> 237.0	357163	10.083	ng/ml	96
4,4'-DDT	4,4'-DDT-d4(IS)	12.916	235.0 -> 165.1	1616493	9.818	ng/ml	97
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	131223	9.288	ng/ml	91
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	1079319	9.073	ng/ml	95
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	1453733	10.097	ng/ml	95

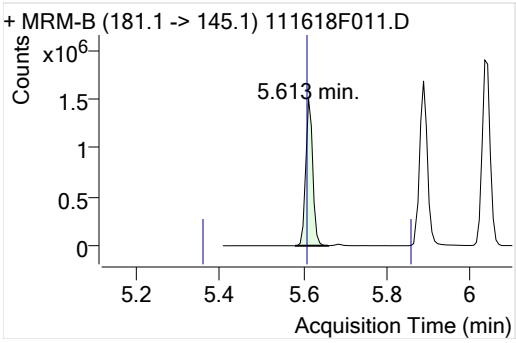
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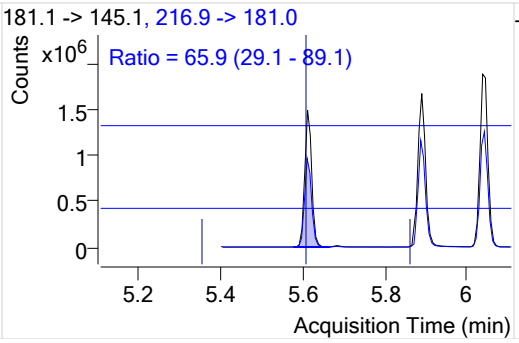
Sample Chromatogram

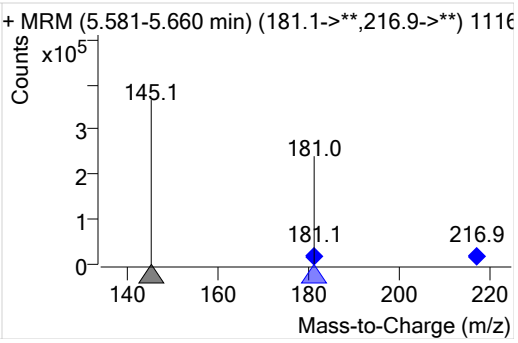


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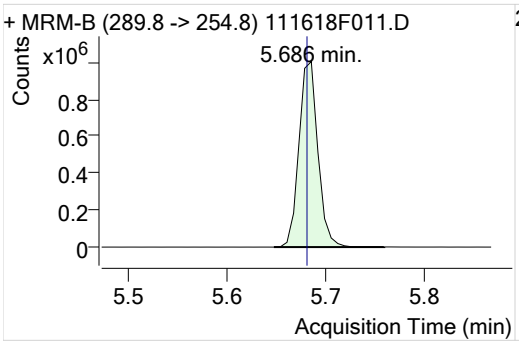
α-BHC

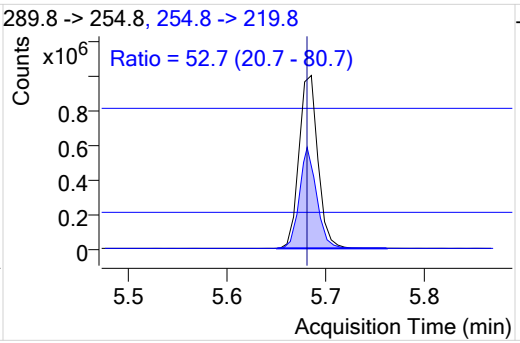


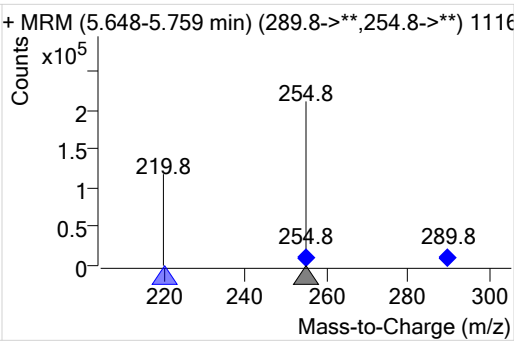




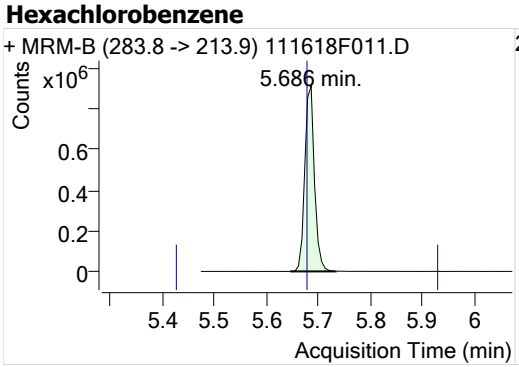
Hexachlorobenzene-13C6

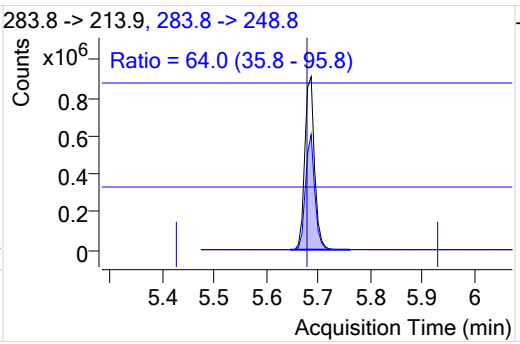


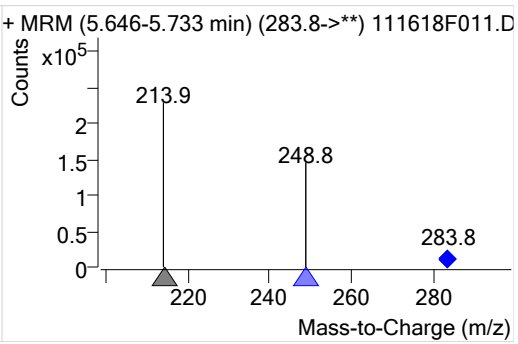




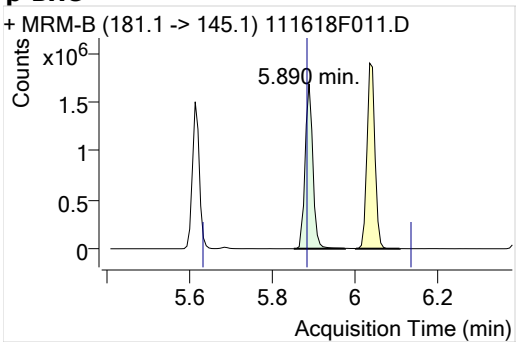
Hexachlorobenzene

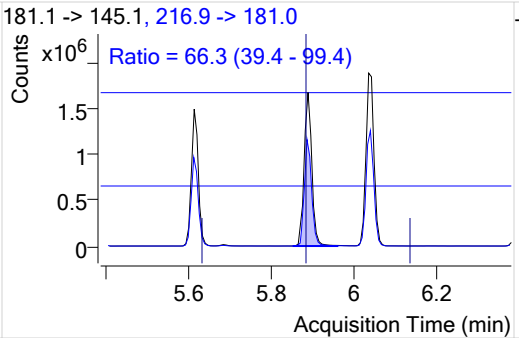


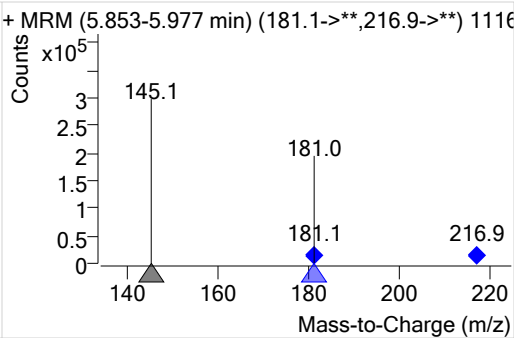




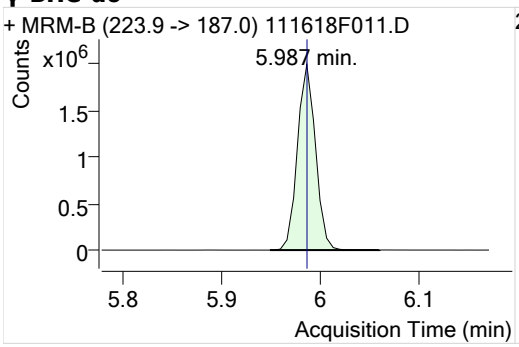
β-BHC

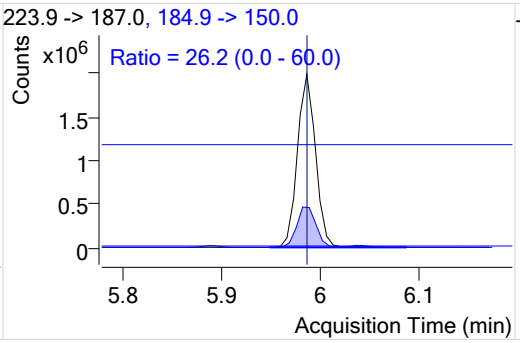


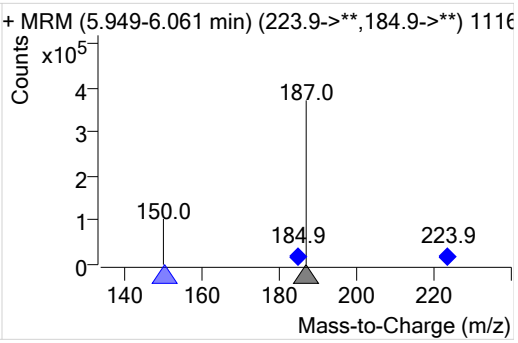




γ-BHC-d6

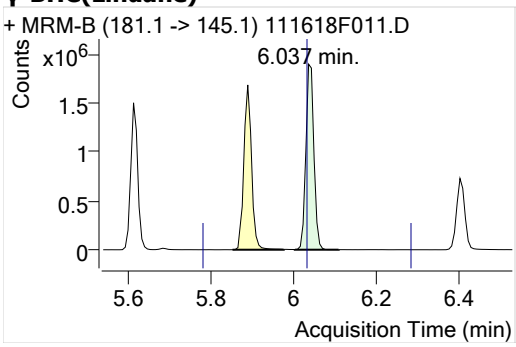


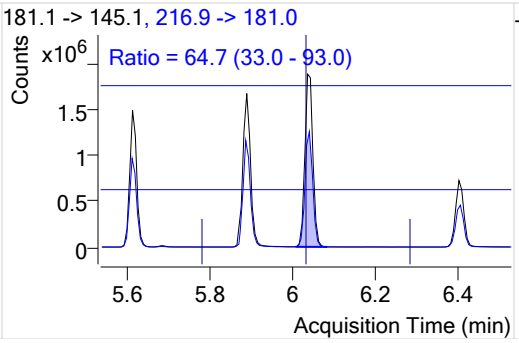


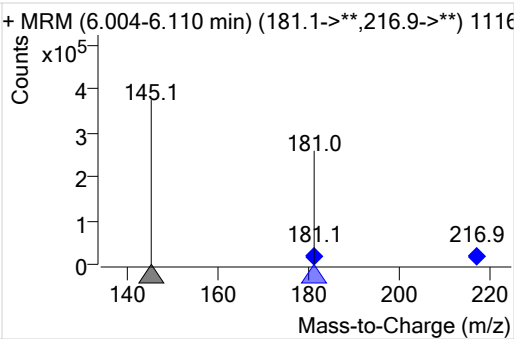


Quantitative Analysis Sample Report

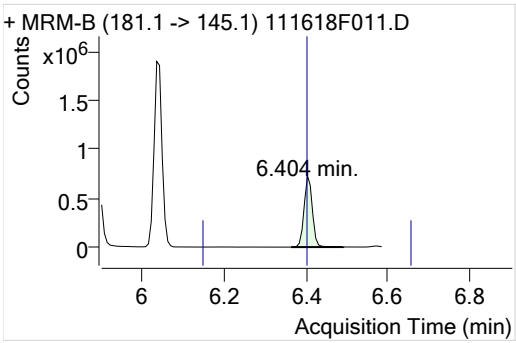
γ-BHC(Lindane)

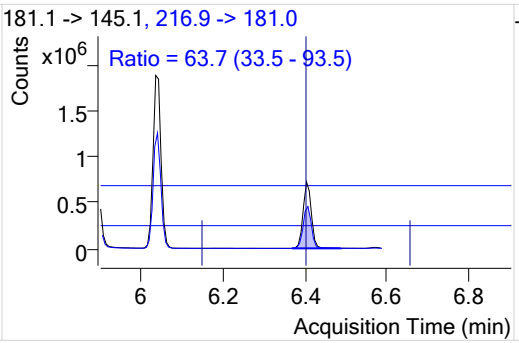


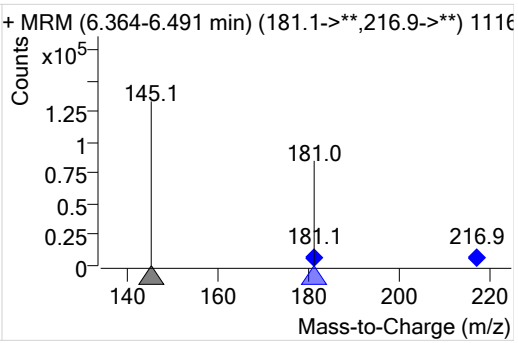




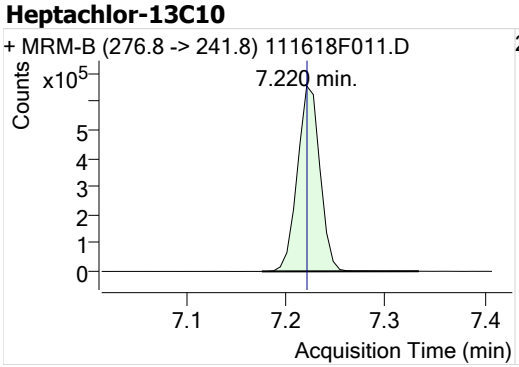
δ-BHC

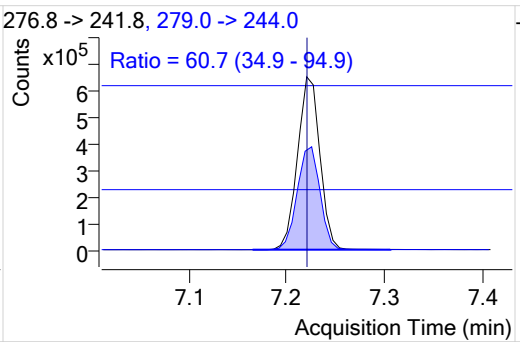


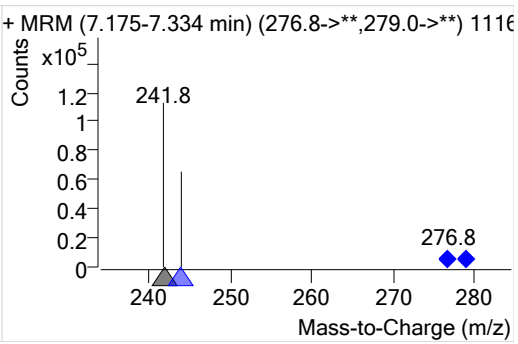




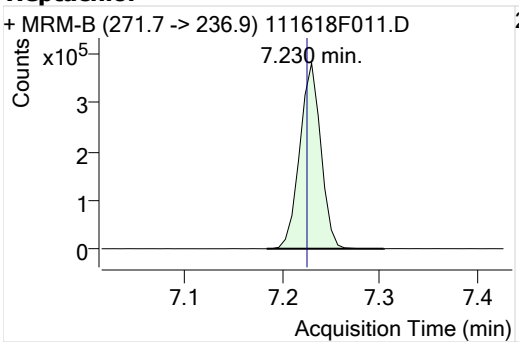
Heptachlor-13C10

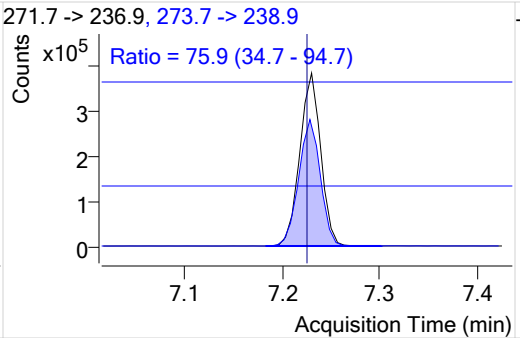


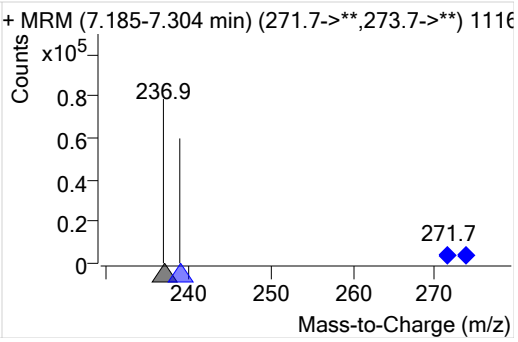




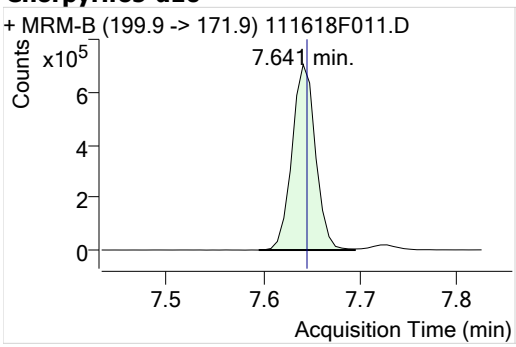
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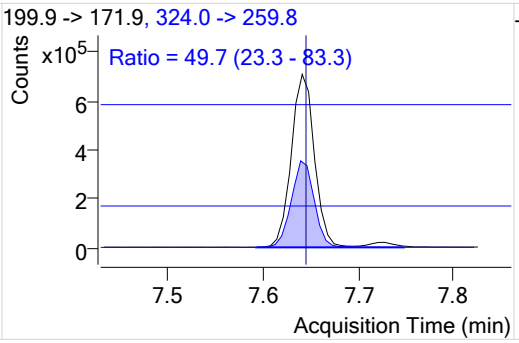


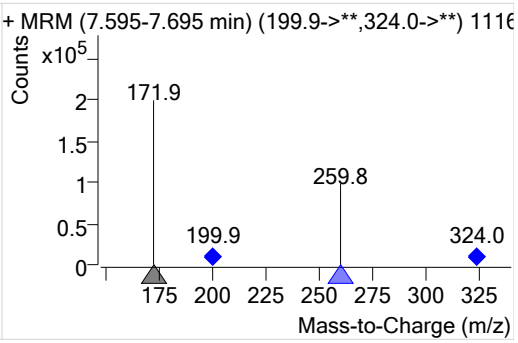




Chorpyrifos-d10

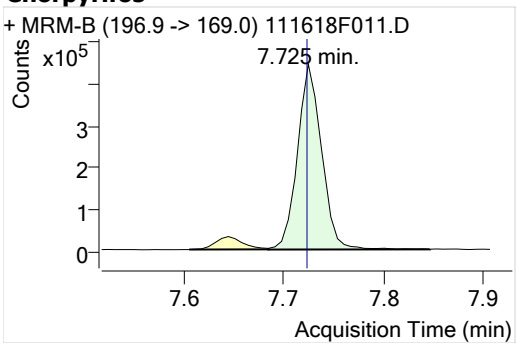


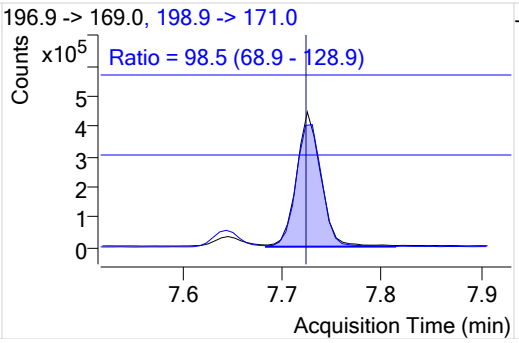


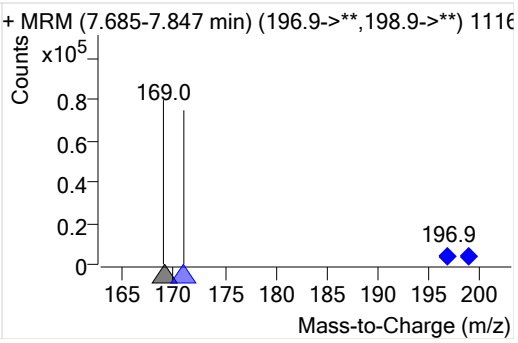


Quantitative Analysis Sample Report

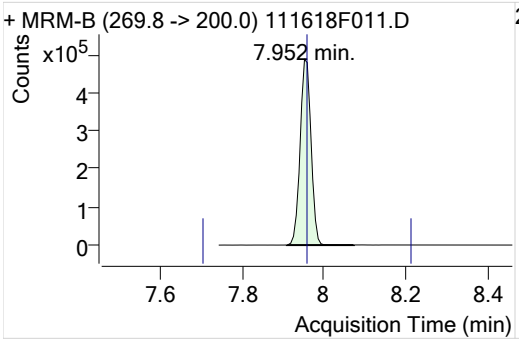
Chorpyrifos

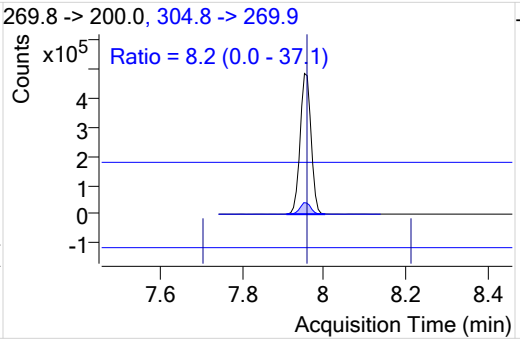


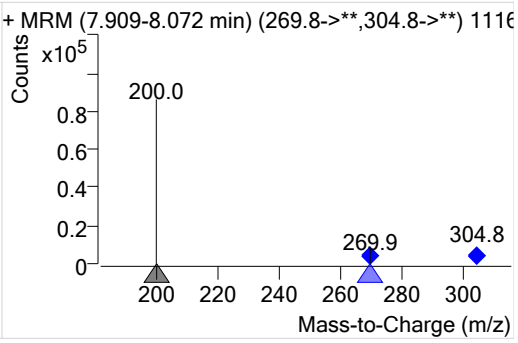




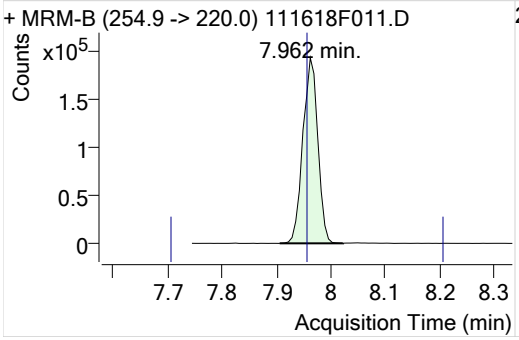
Aldrin-13C

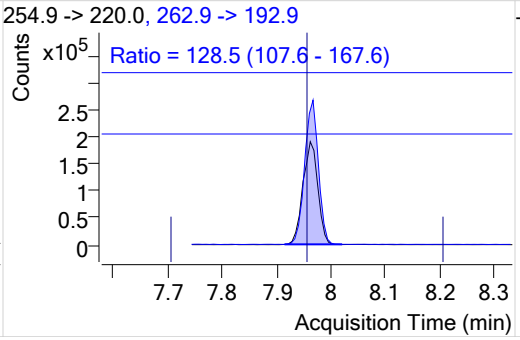


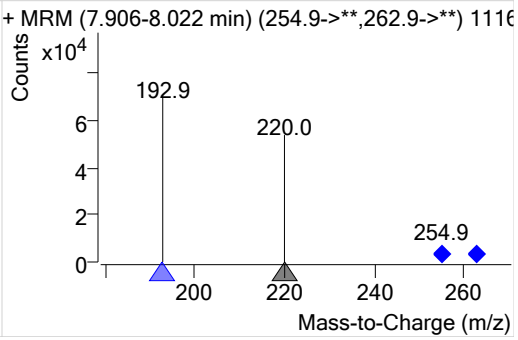




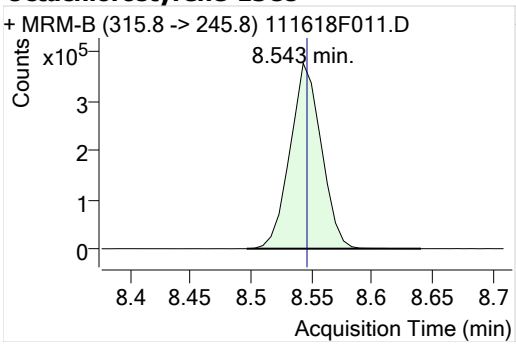
Aldrin

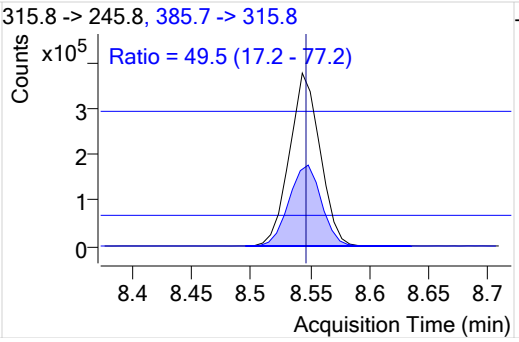


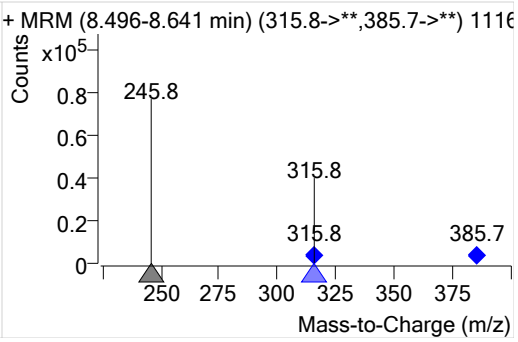




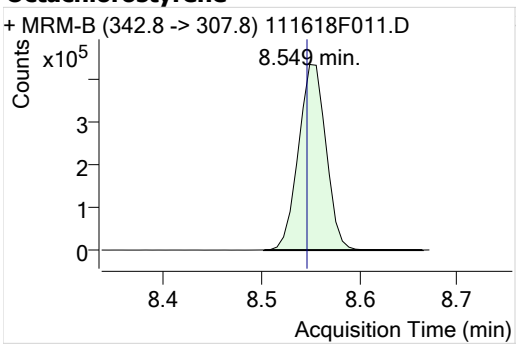
Octachlorostyrene-13C8

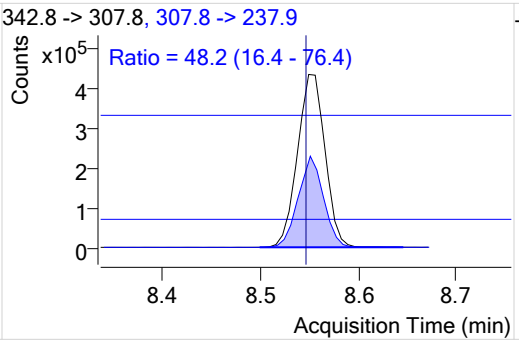


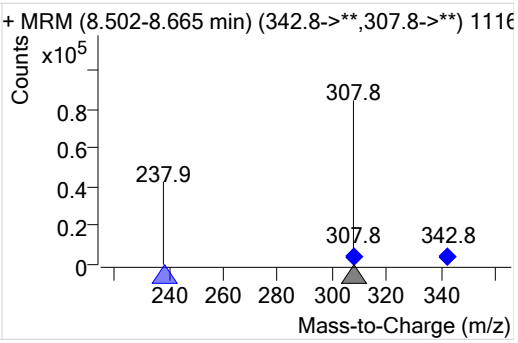




Octachlorostyrene

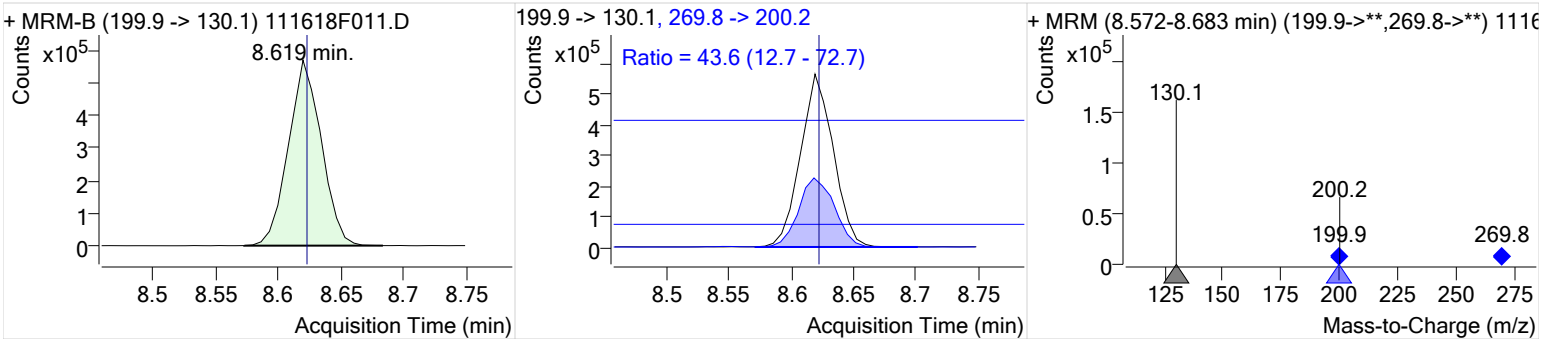




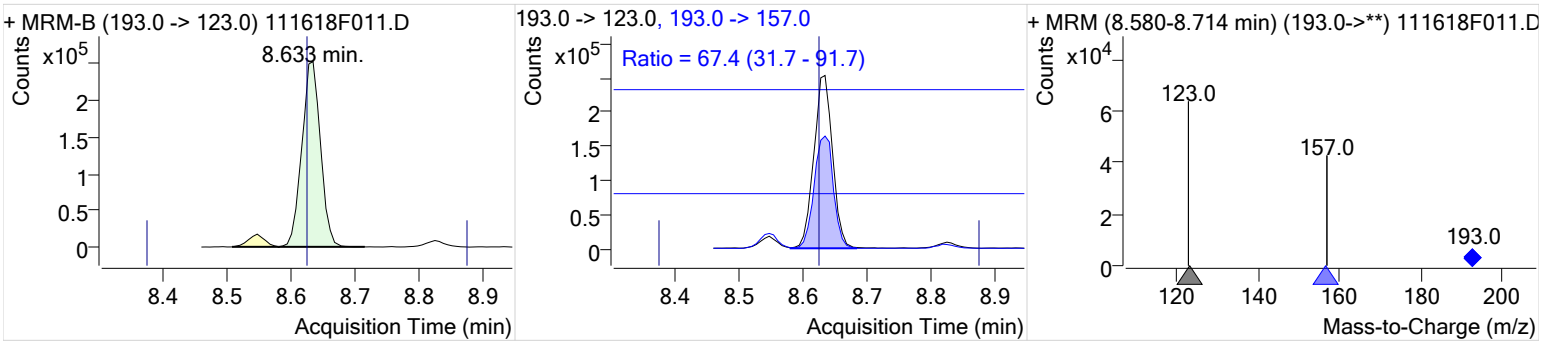


Quantitative Analysis Sample Report

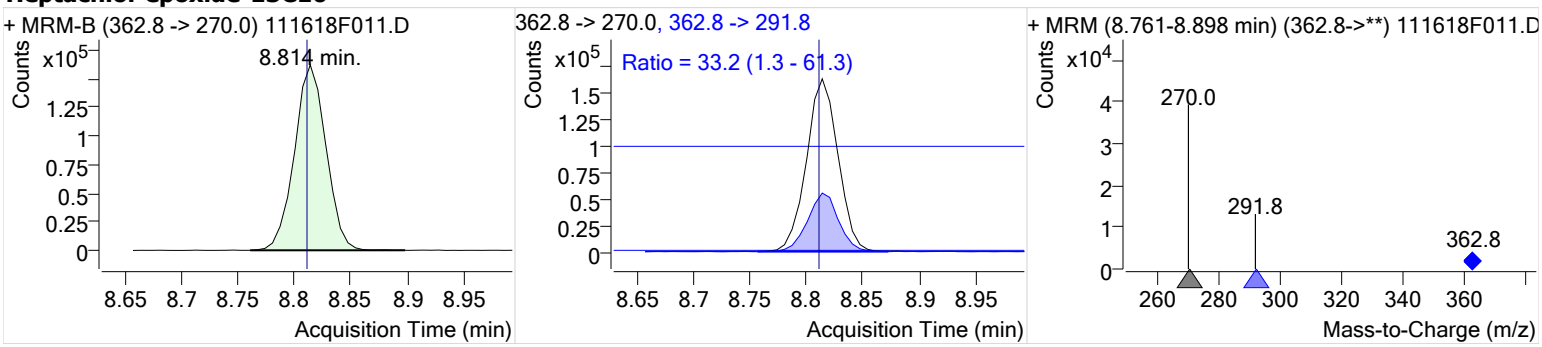
Isodrin-13C12



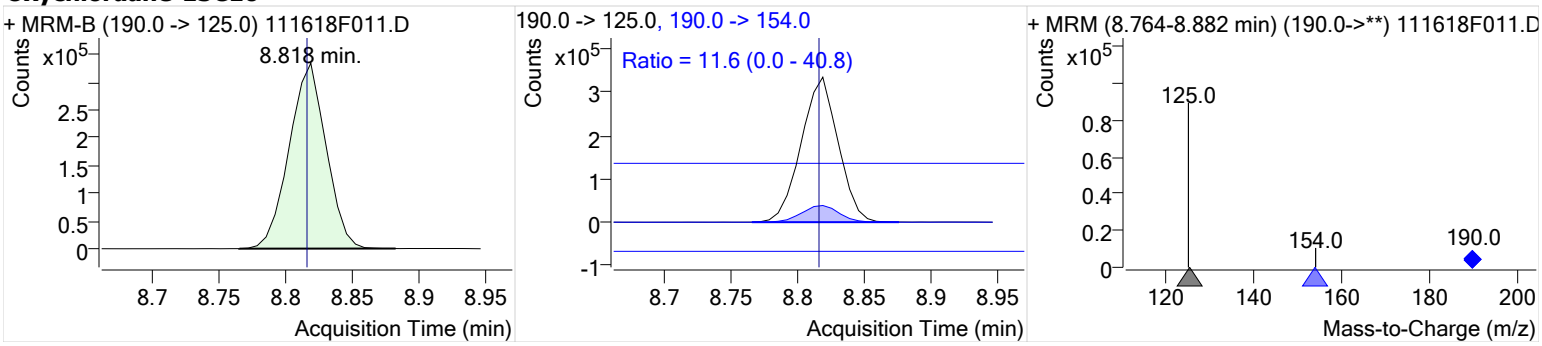
Isodrin



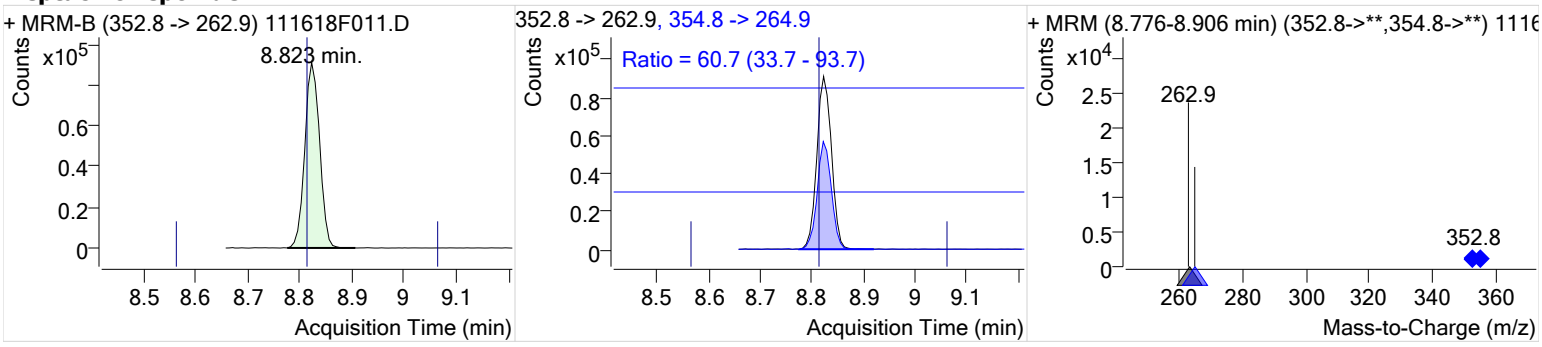
Heptachlor epoxide-13C10



Oxychlordane-13C10

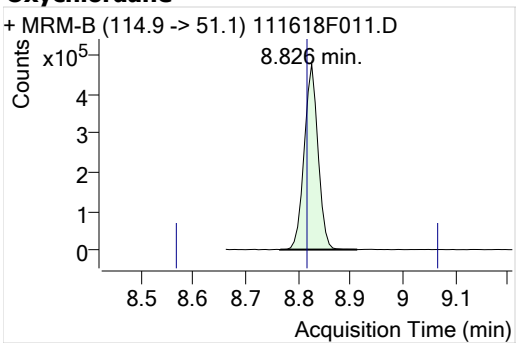


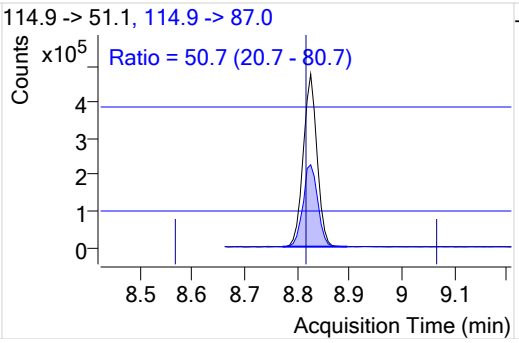
Heptachlor epoxide

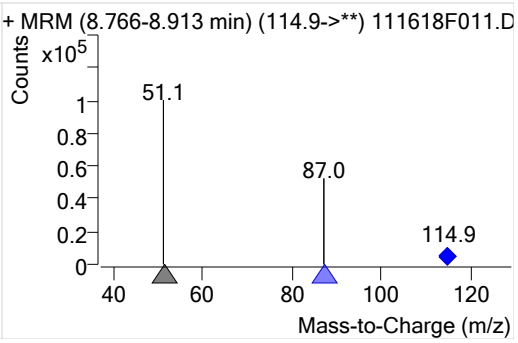


Quantitative Analysis Sample Report

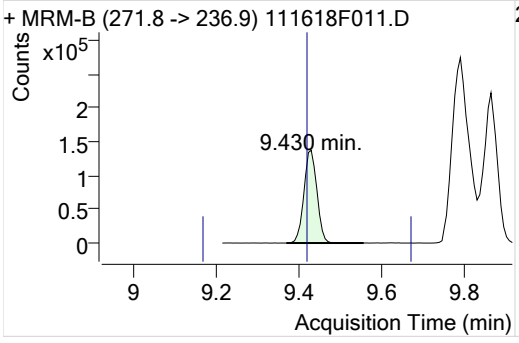
Oxychlordane

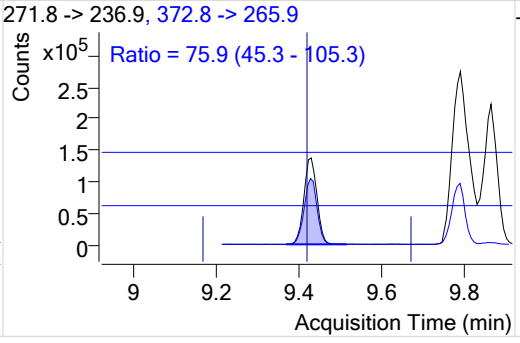


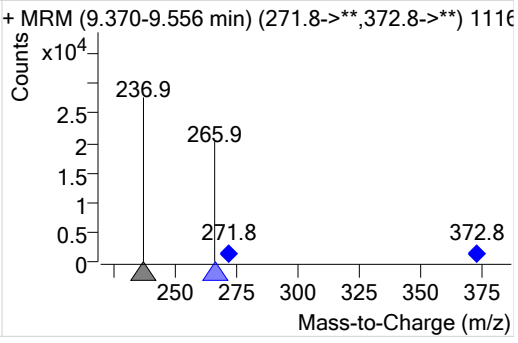




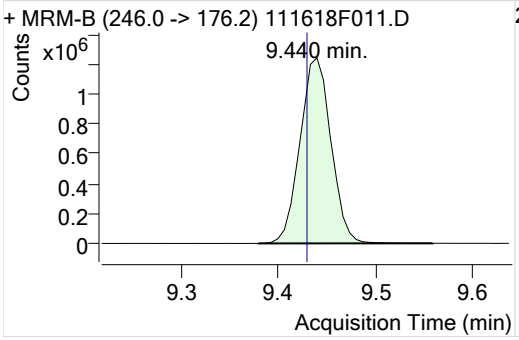
γ-Chlordane(trans)

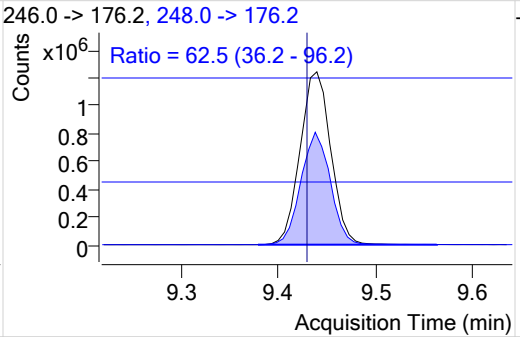


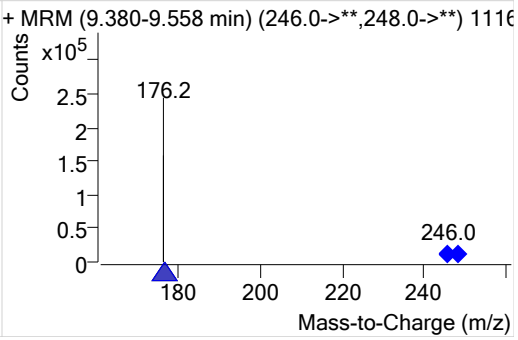




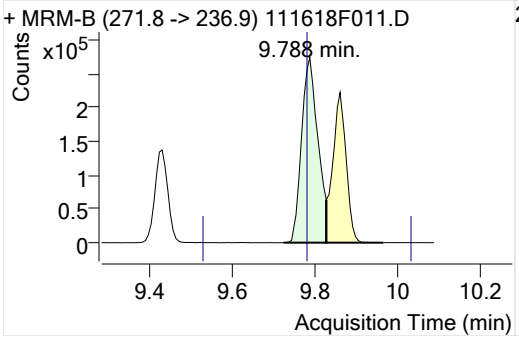
2,4'-DDE

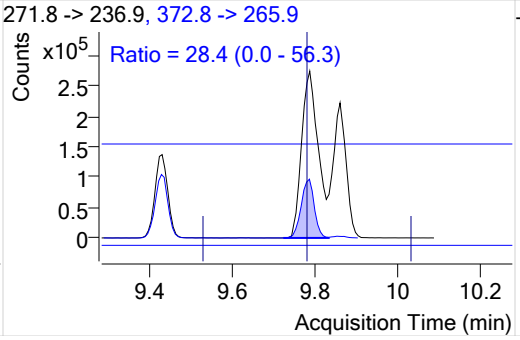


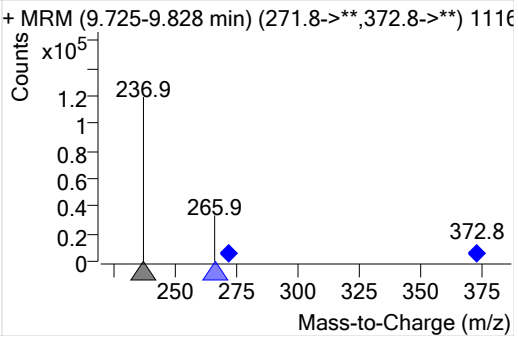




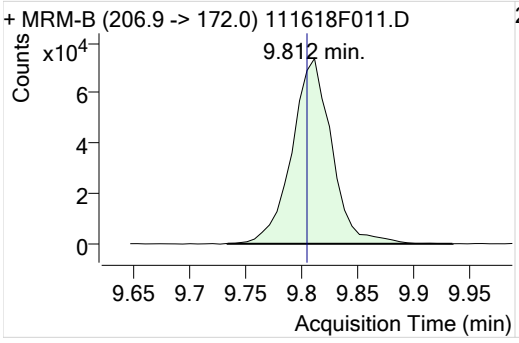
α-Chlordane(cis)

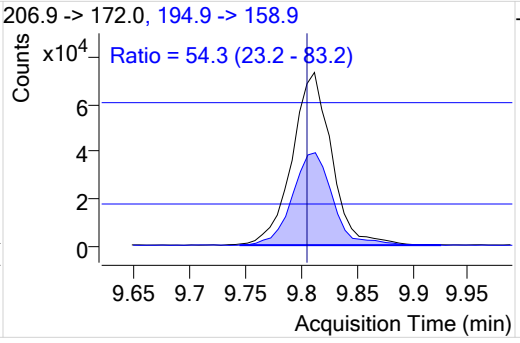


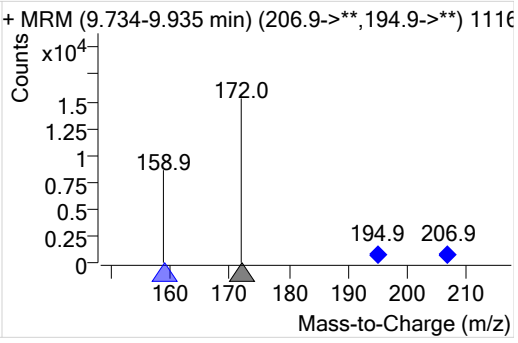




Endosulfan I

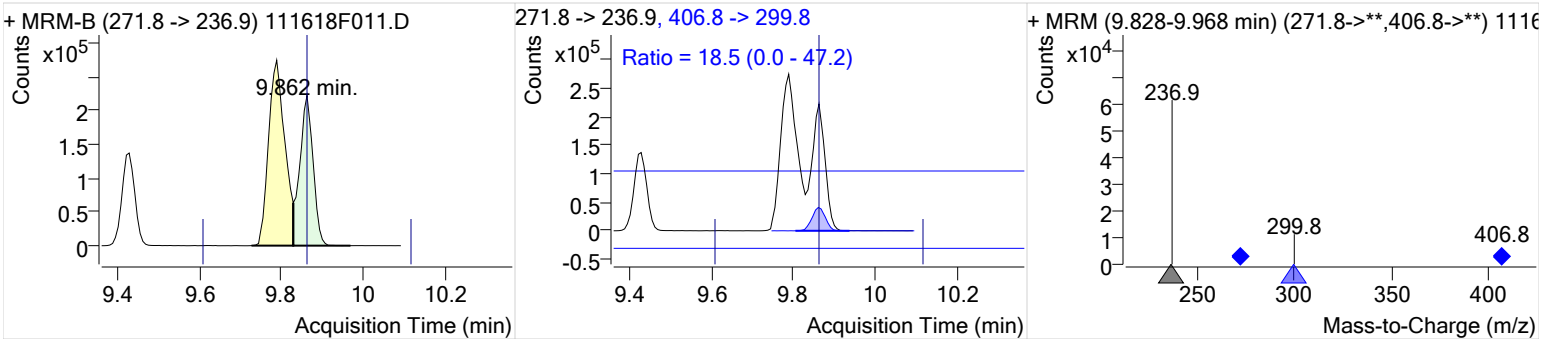




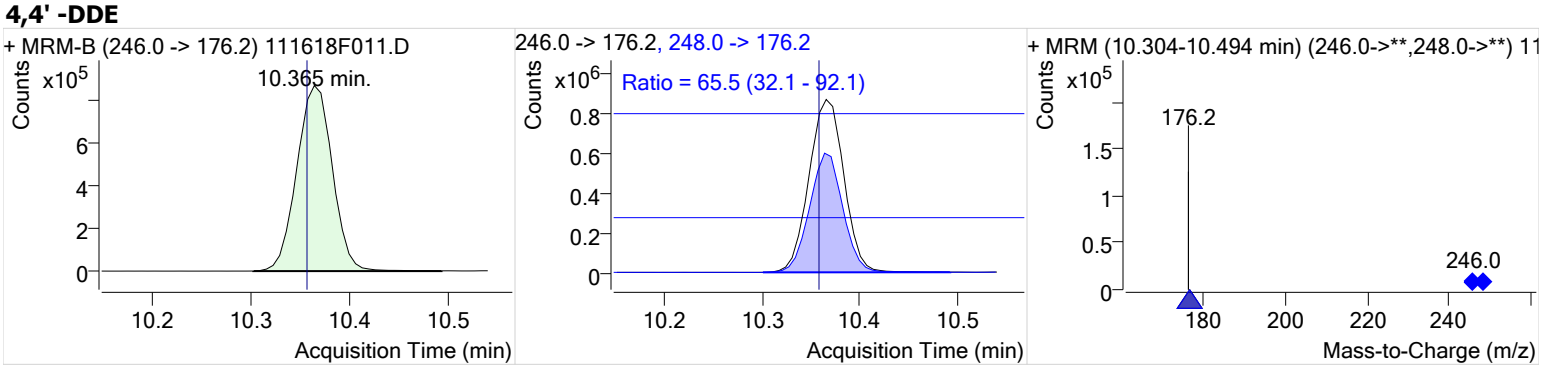


Quantitative Analysis Sample Report

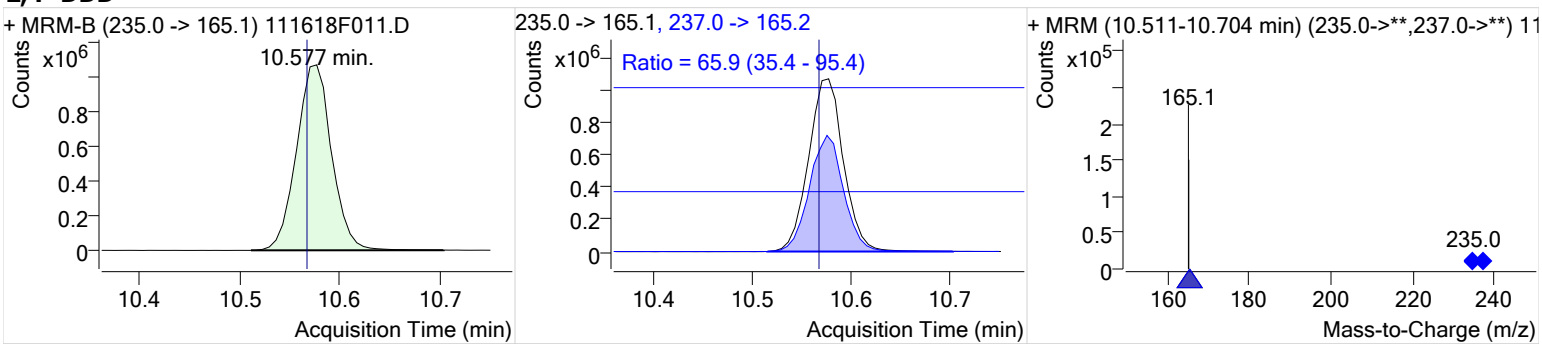
trans-Nanochlor



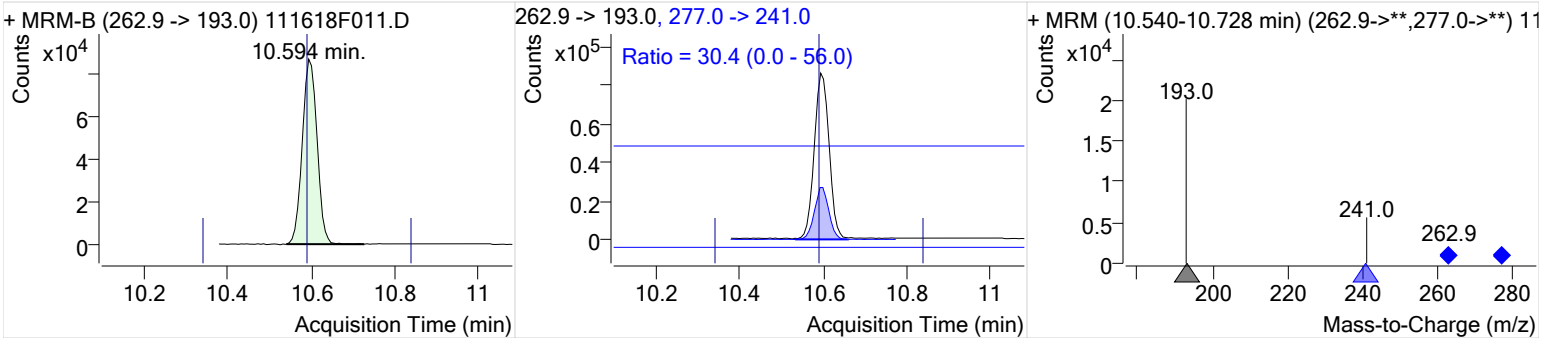
4,4' -DDE



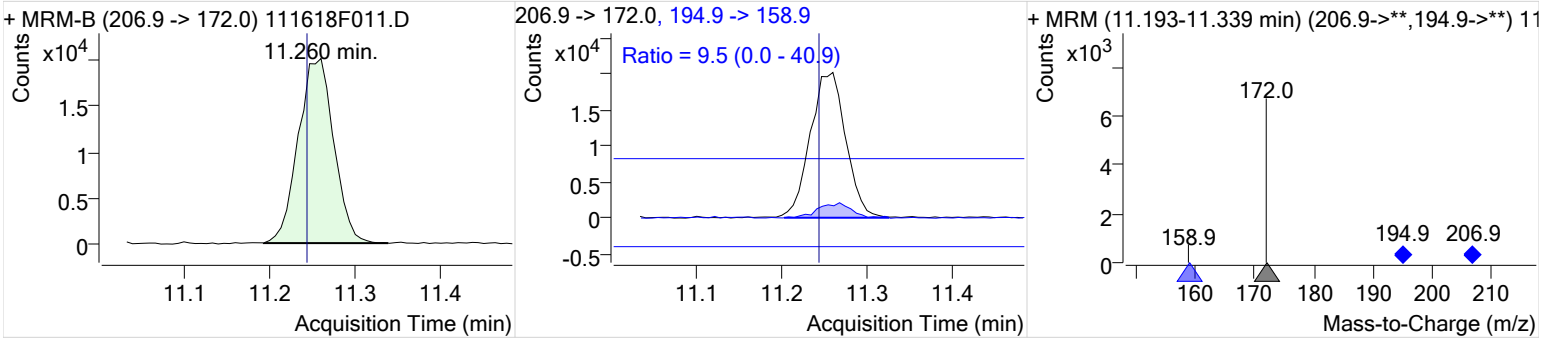
2,4'-DDD



Dieldrin

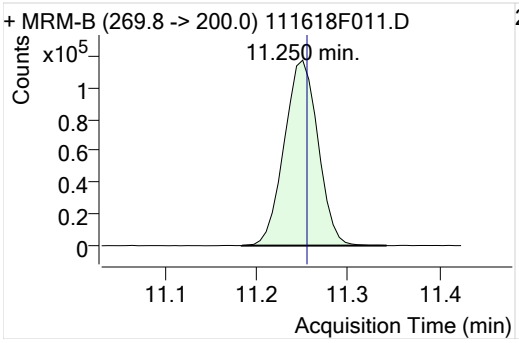


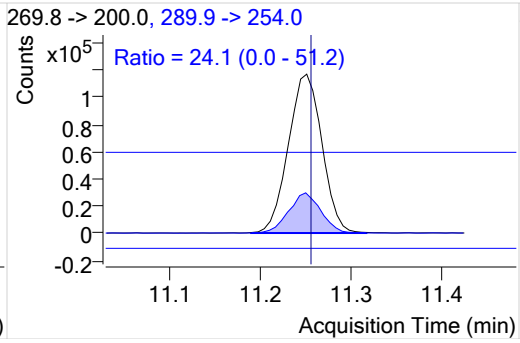
Endosulfan II

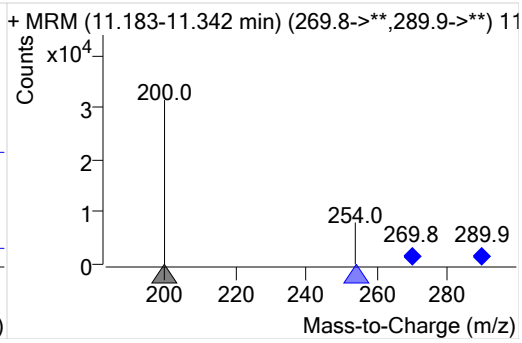


Quantitative Analysis Sample Report

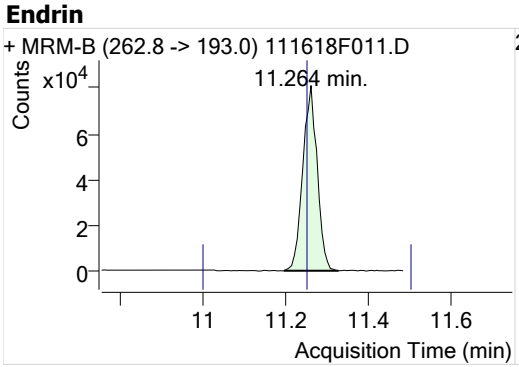
Endrin-13C12

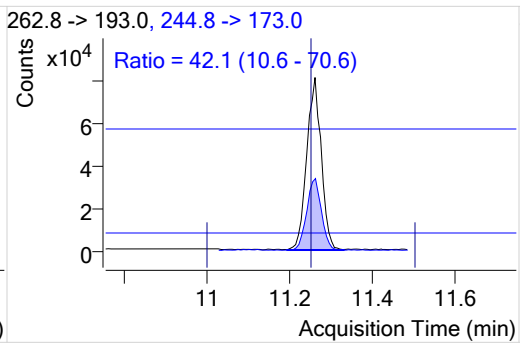


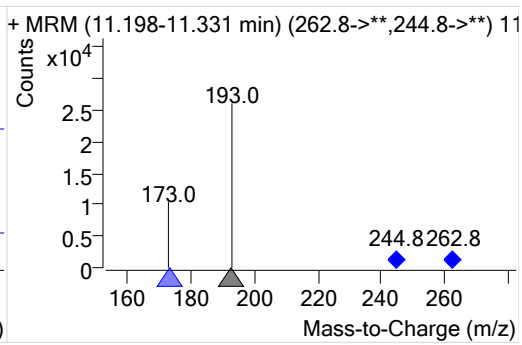




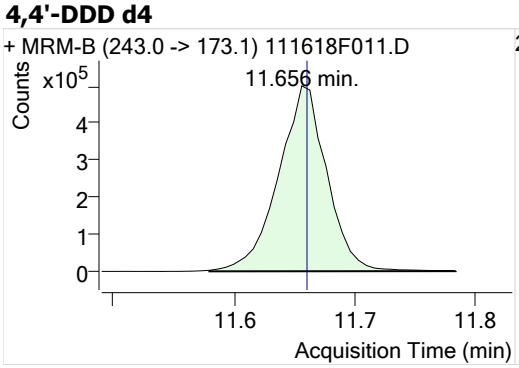
Endrin

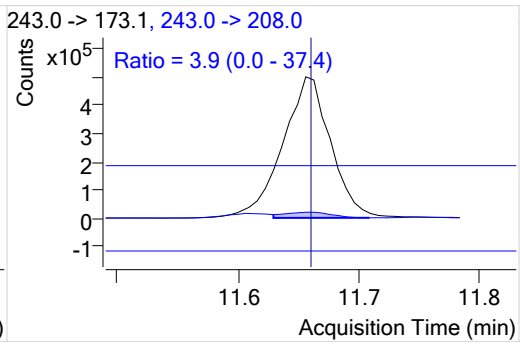


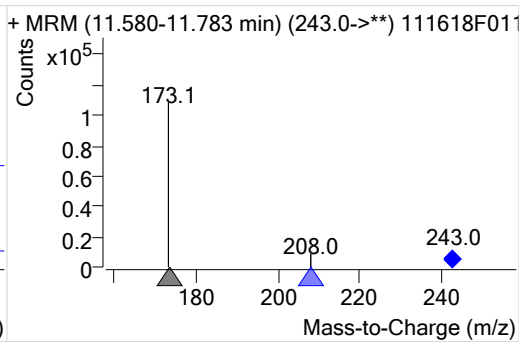




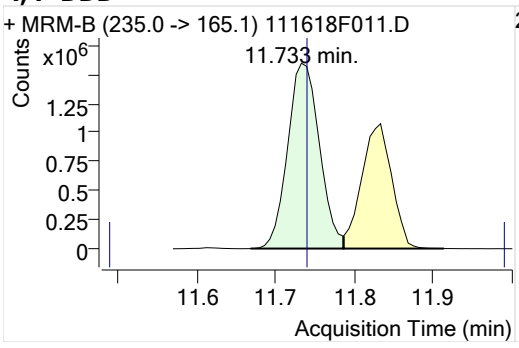
4,4'-DDD d4

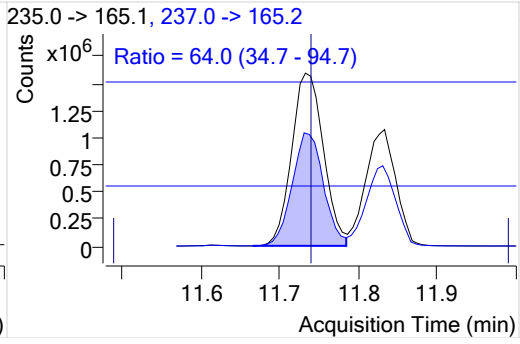


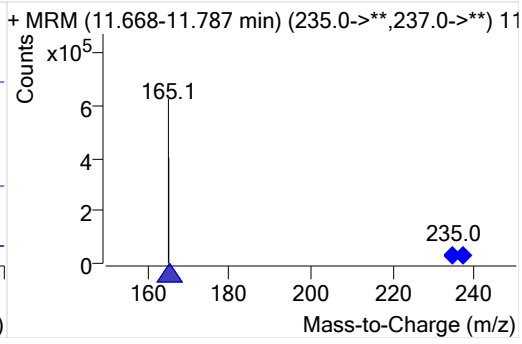




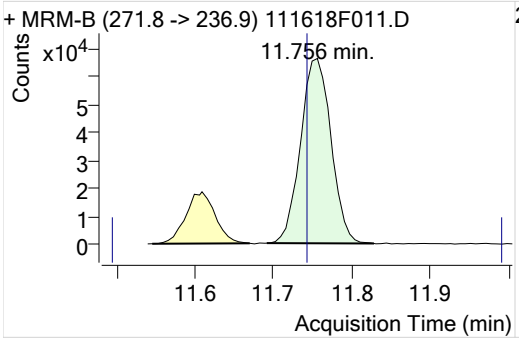
4,4'-DDD

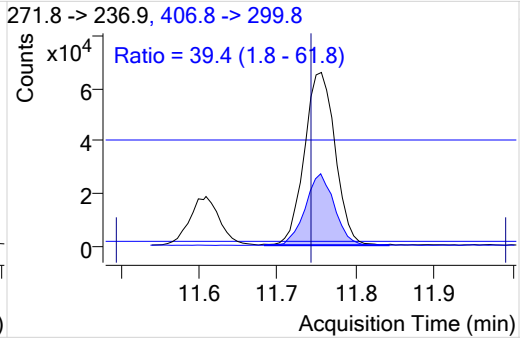


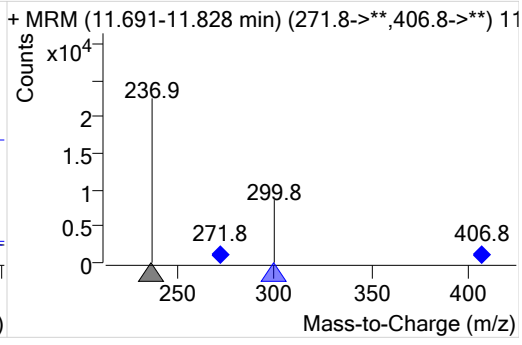




cis-Nonachlor

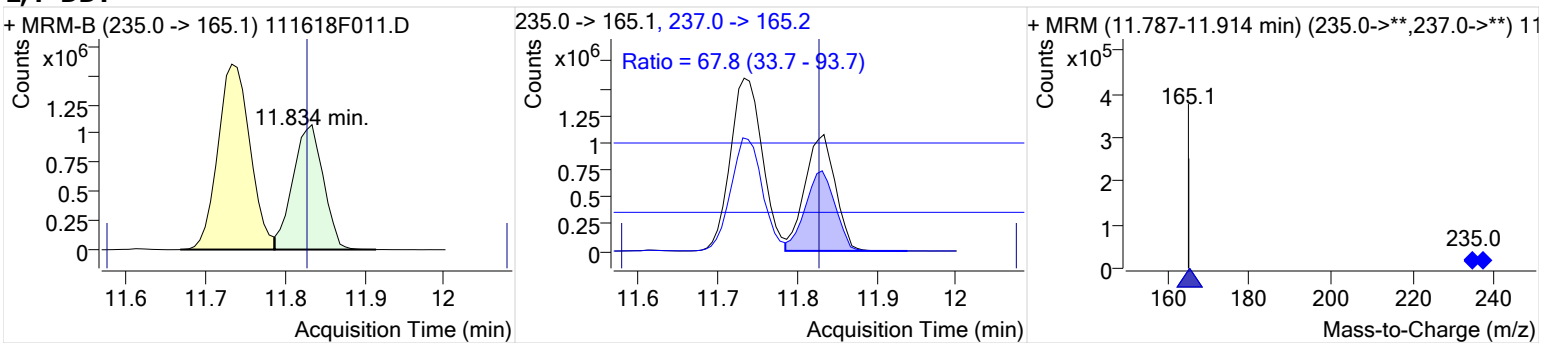




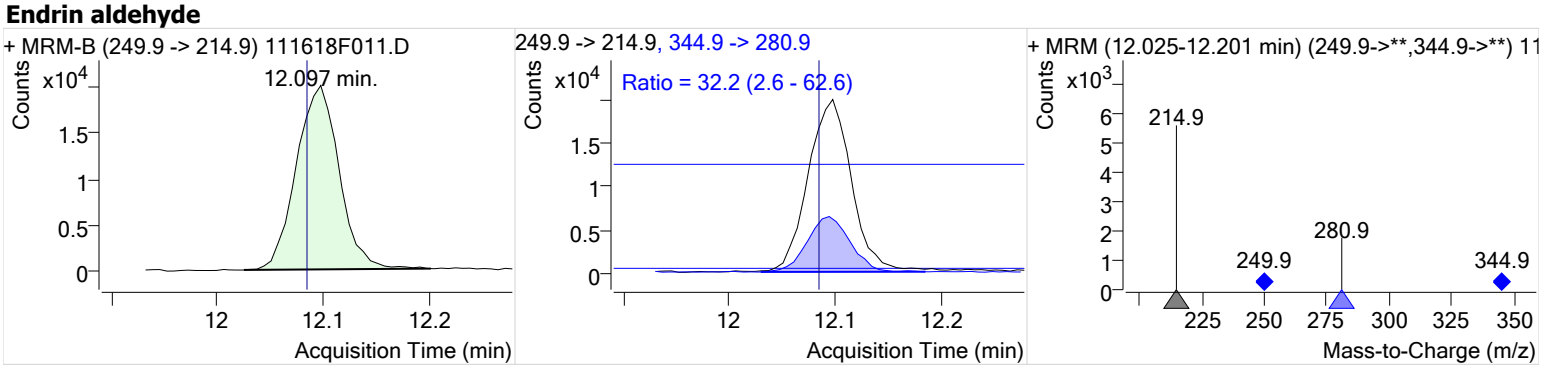


Quantitative Analysis Sample Report

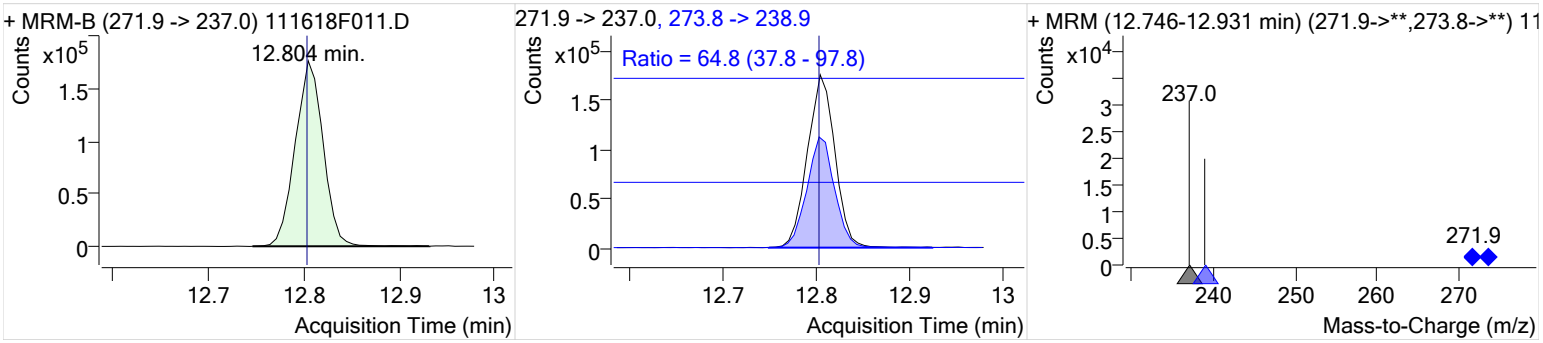
2,4'-DDT



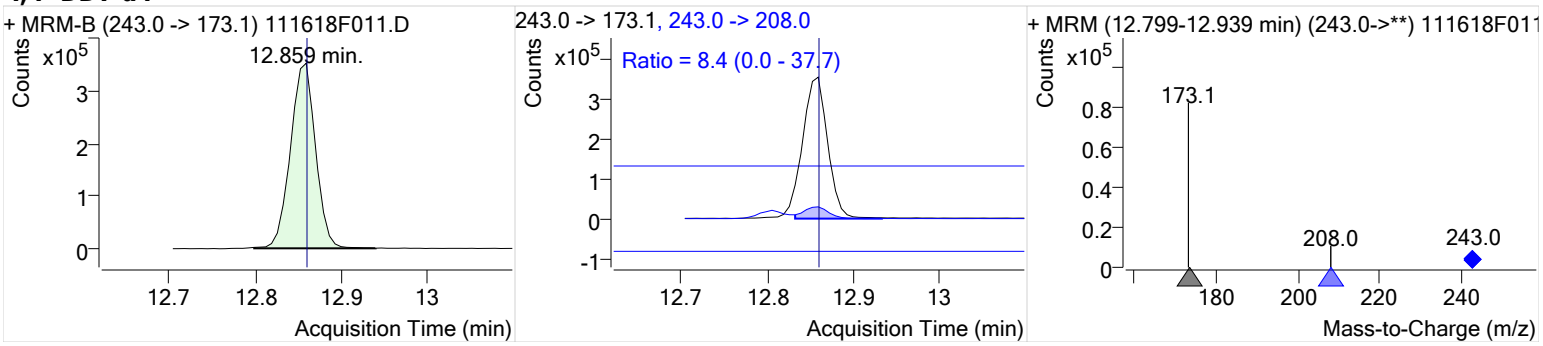
Endrin aldehyde



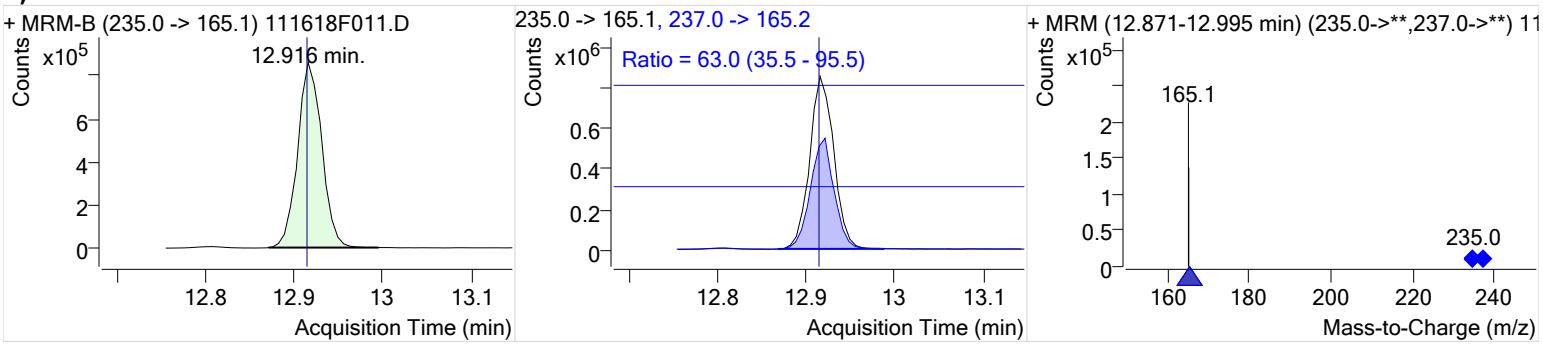
Endosulfan sulfate



4,4'-DDT-d4

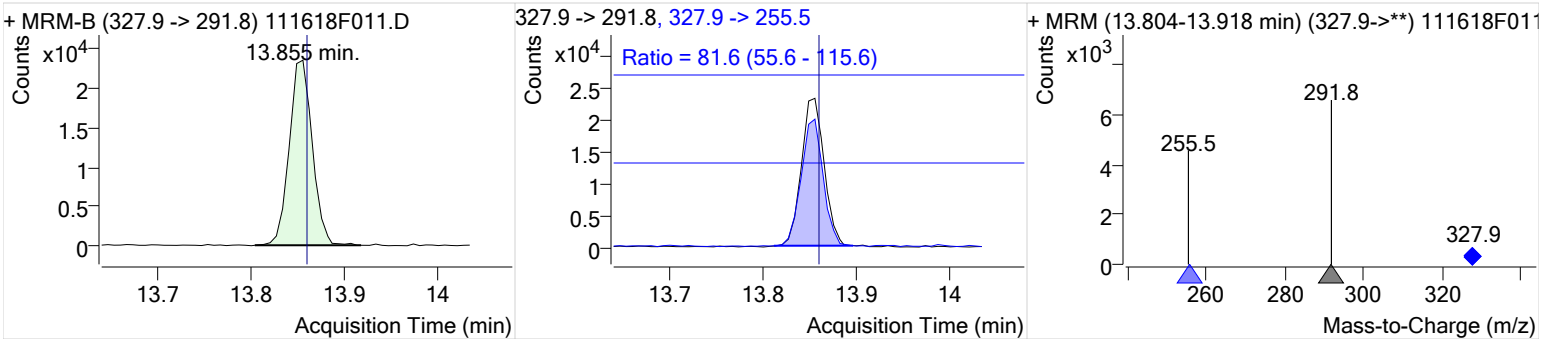


4,4'-DDT

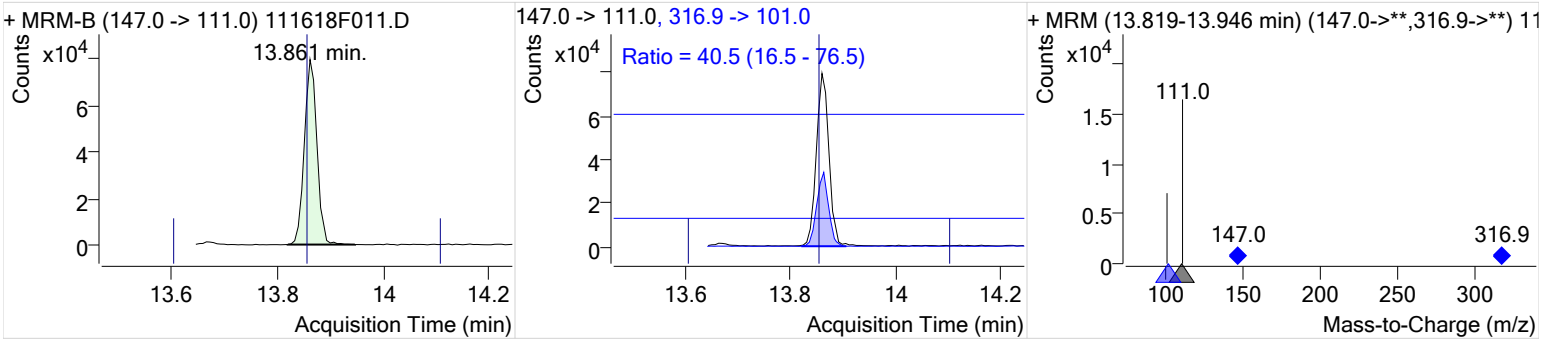


Quantitative Analysis Sample Report

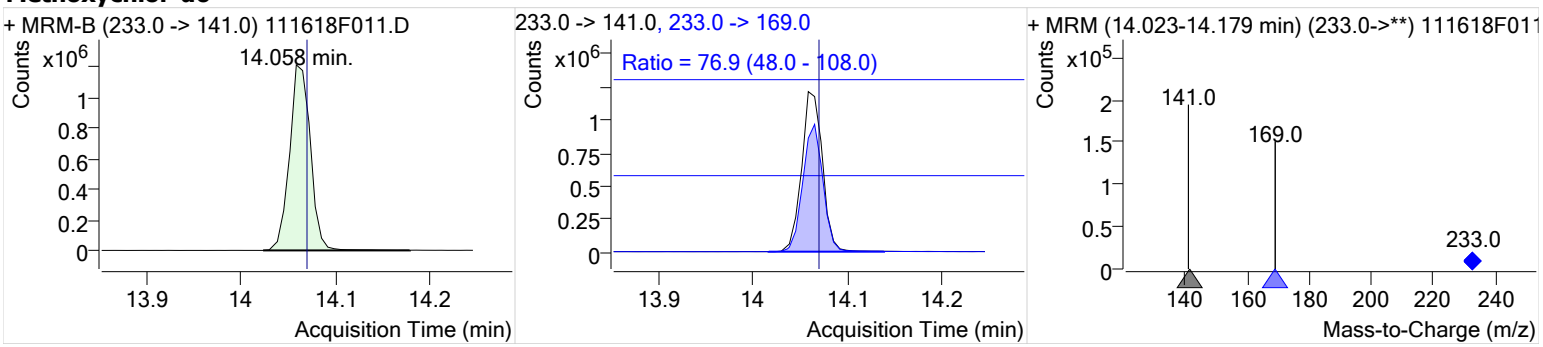
Endrin ketone-13C12



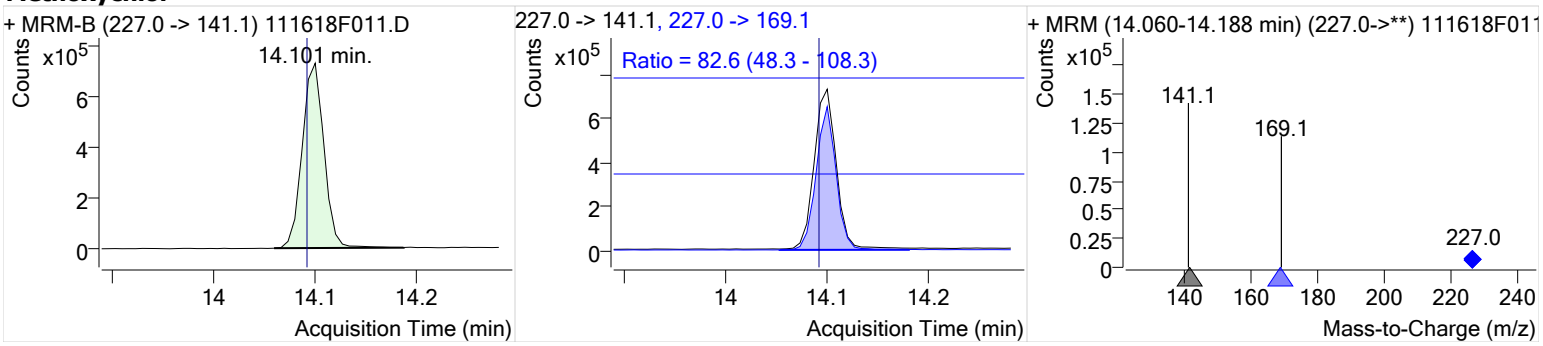
Endrin ketone



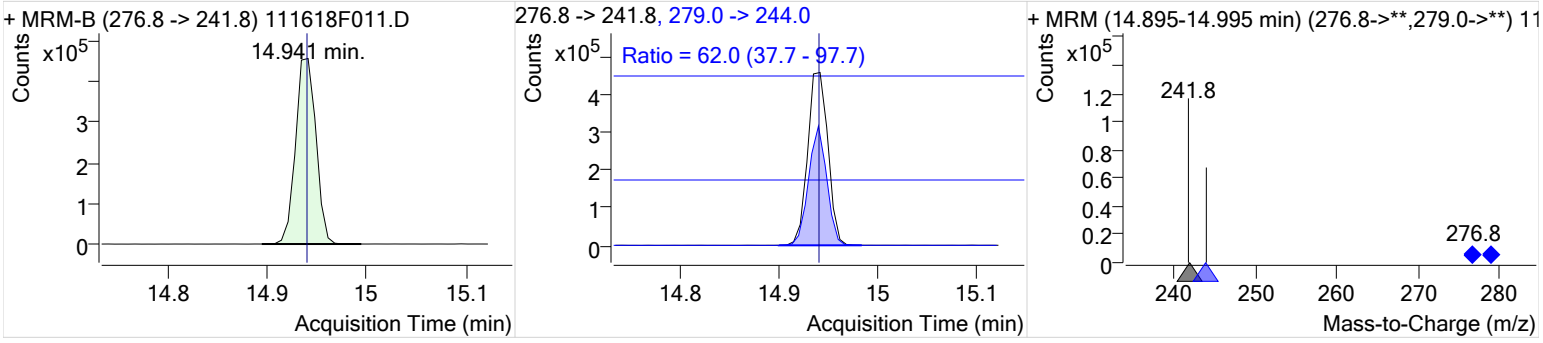
Methoxychlor-d6



Methoxychlor

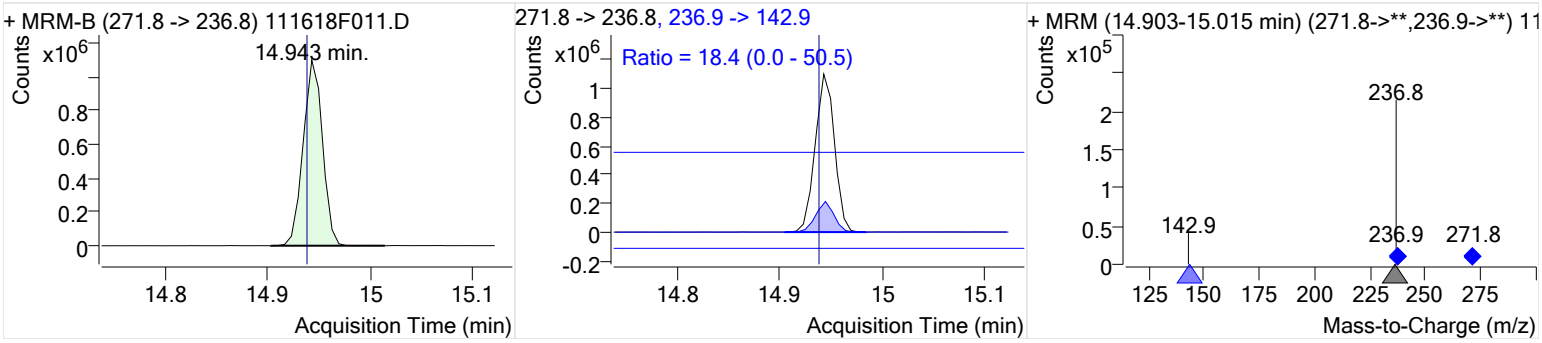


Mirex-13C10

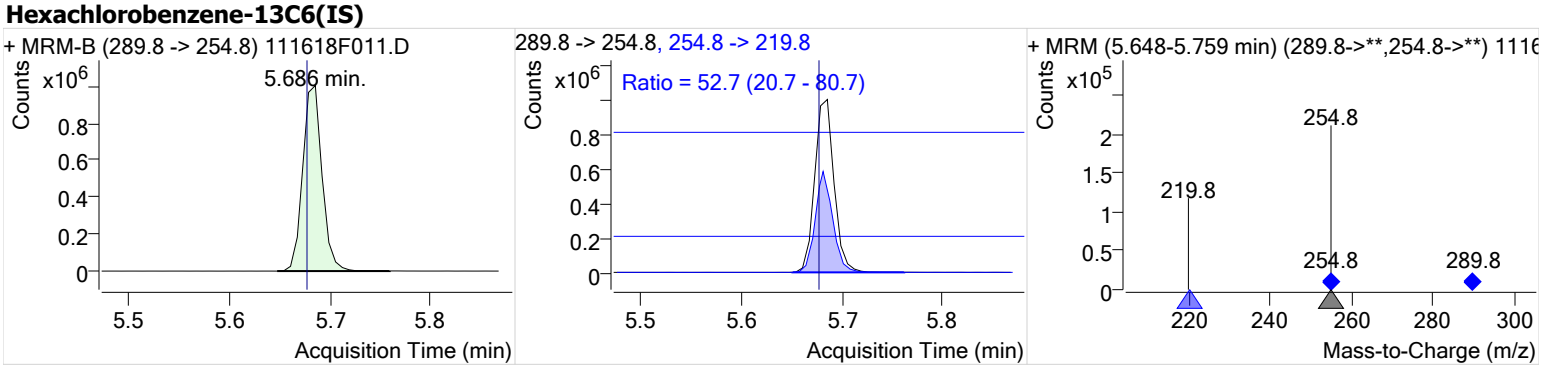


Quantitative Analysis Sample Report

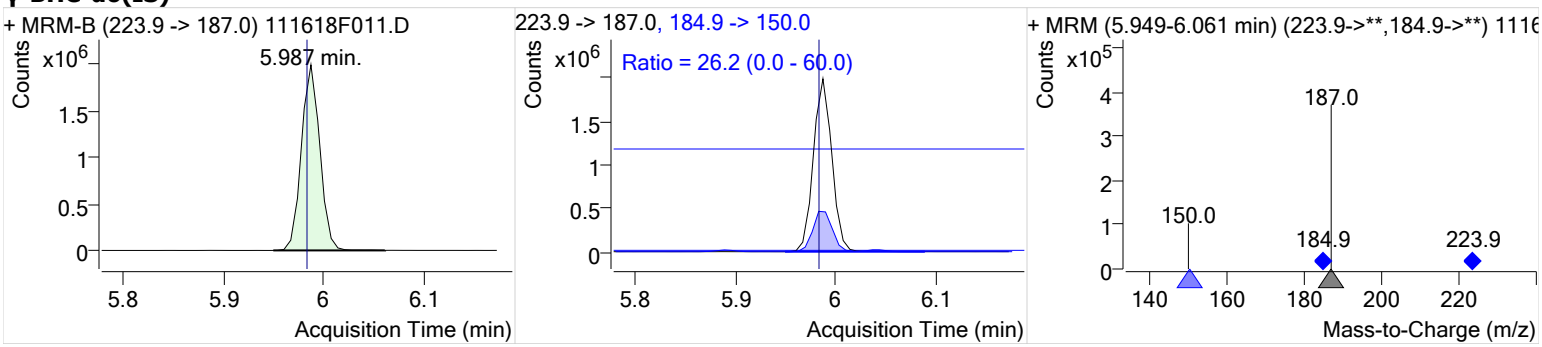
Mirex



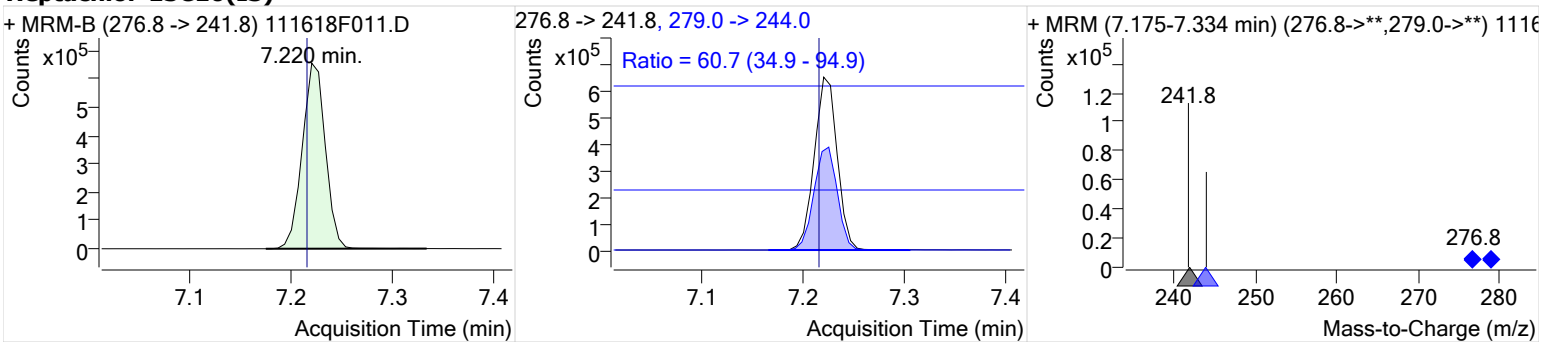
Hexachlorobenzene-13C6(IS)



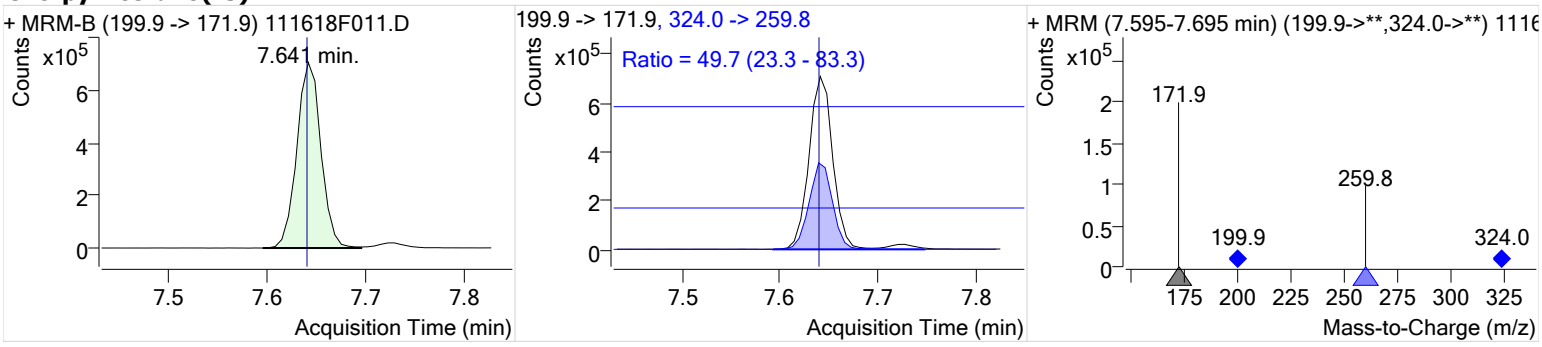
γ-BHC-d6(IS)



Heptachlor-13C10(IS)

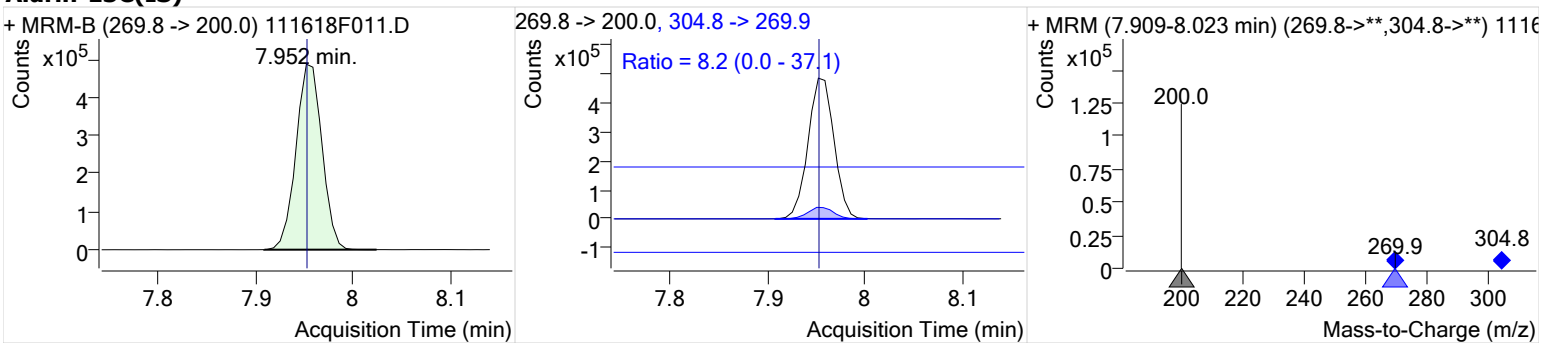


Chorpyrifos-d10(IS)

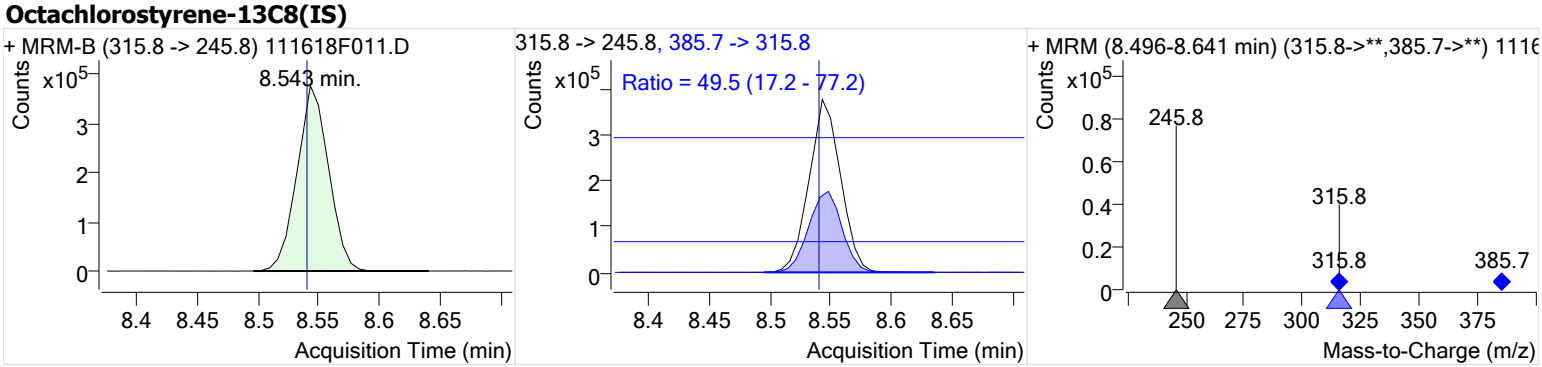


Quantitative Analysis Sample Report

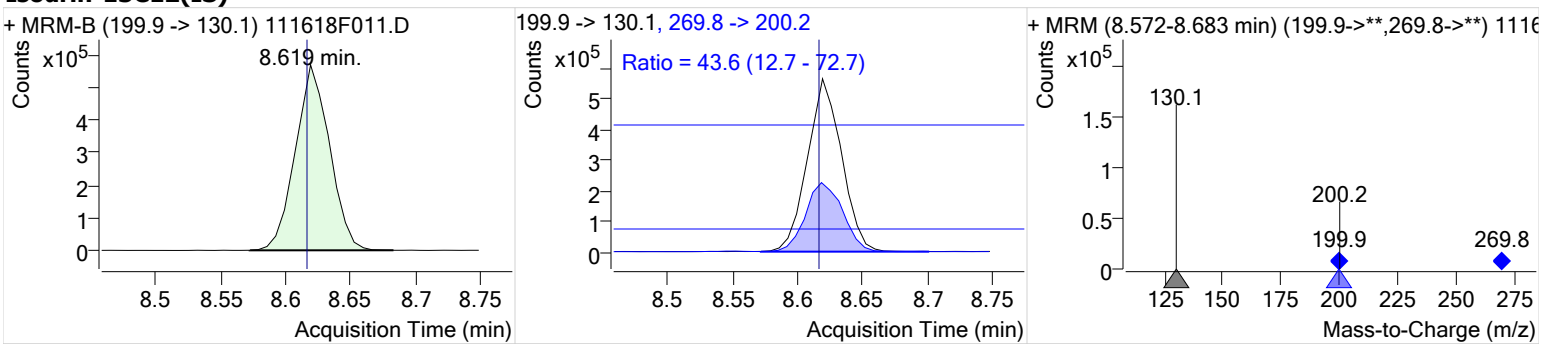
Aldrin-13C(IS)



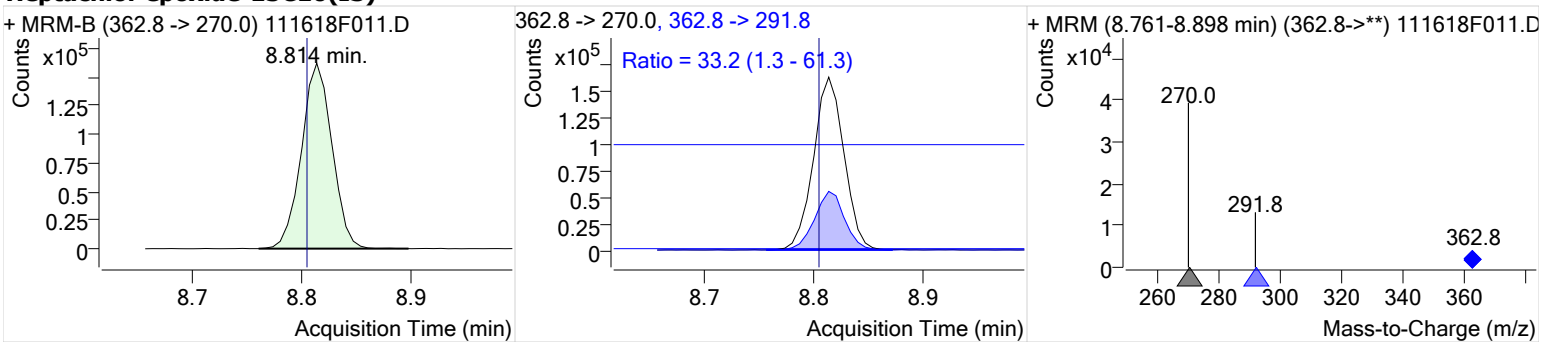
Octachlorostyrene-13C8(IS)



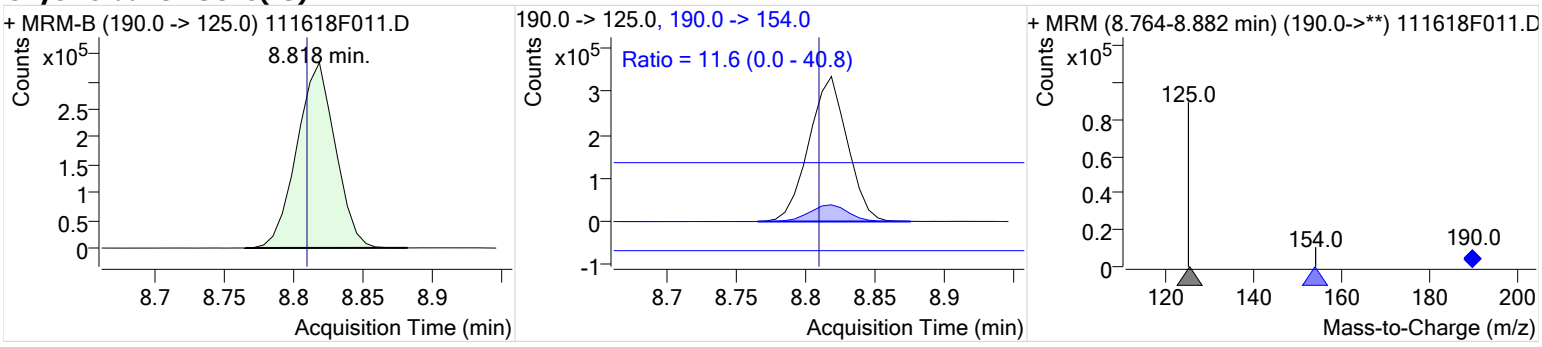
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

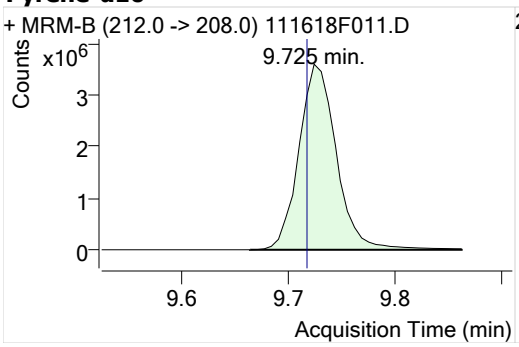


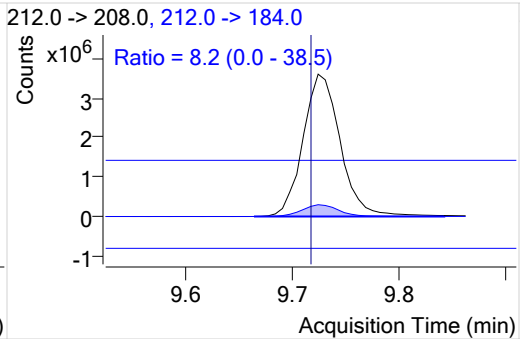
Oxychlordane-13C10(IS)

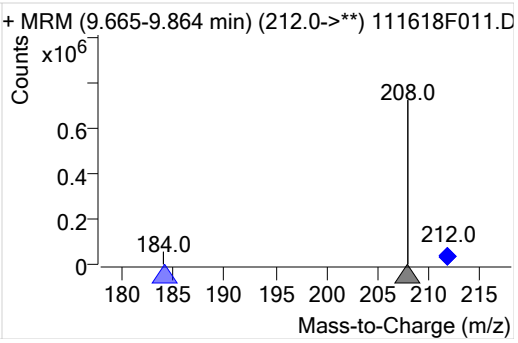


Quantitative Analysis Sample Report

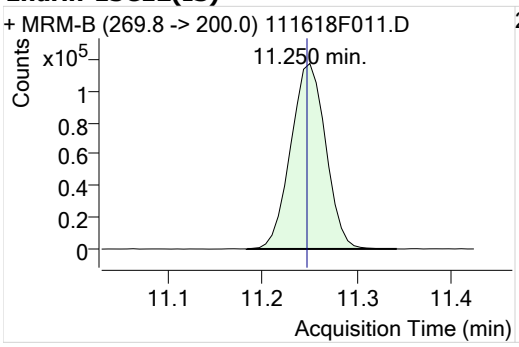
Pyrene-d10

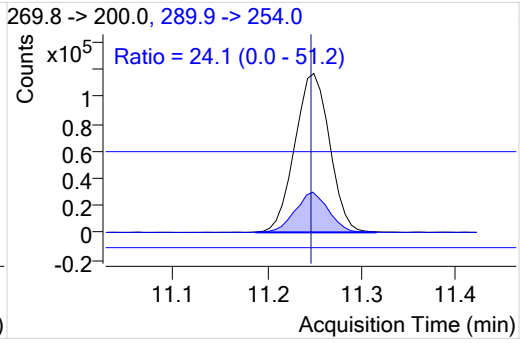


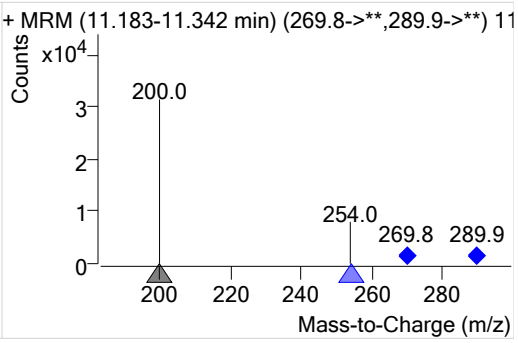




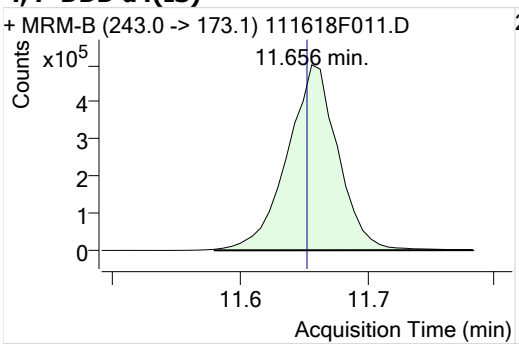
Endrin-13C12(IS)

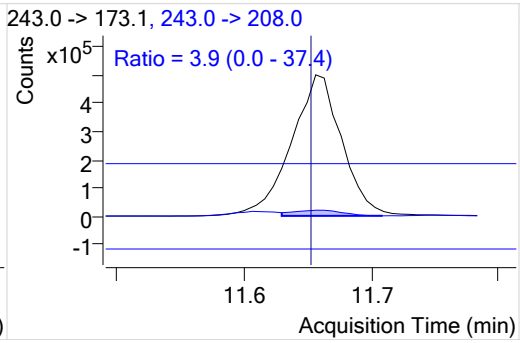


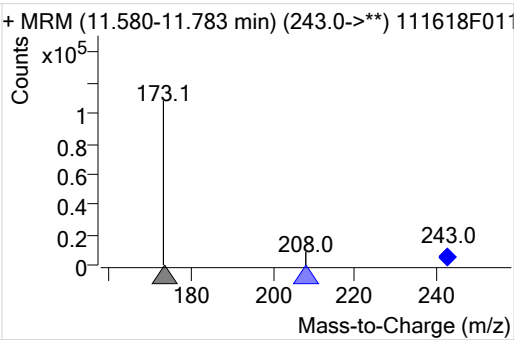




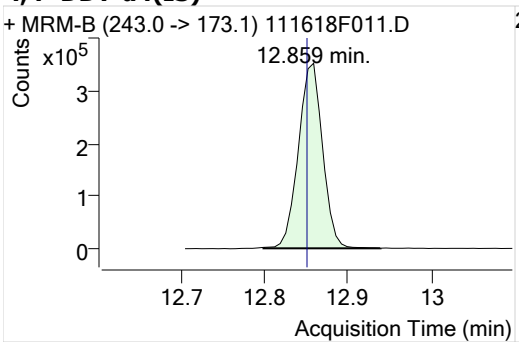
4,4'-DDD d4(IS)

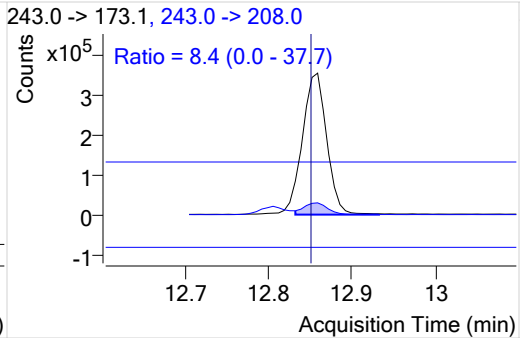


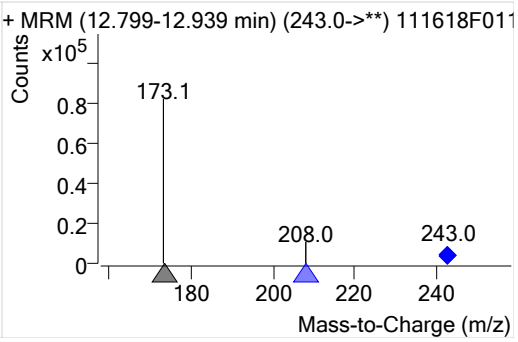




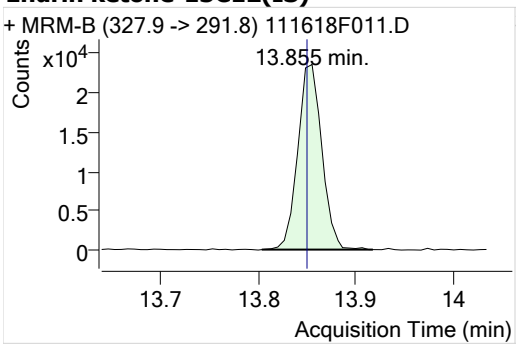
4,4'-DDT-d4(IS)

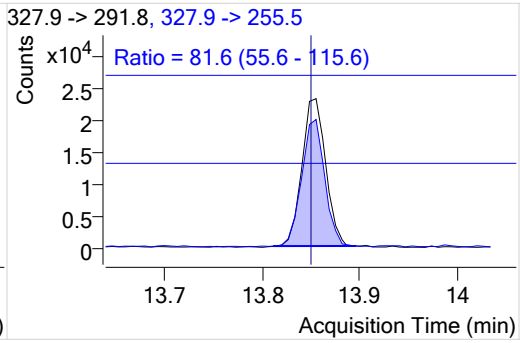


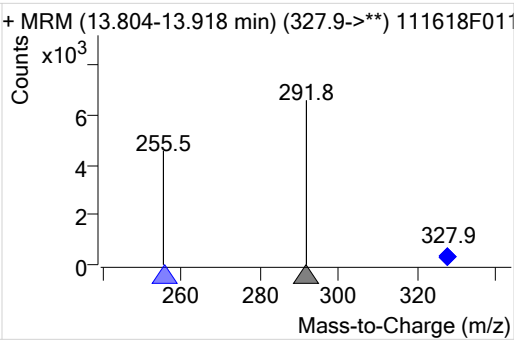




Endrin ketone-13C12(IS)

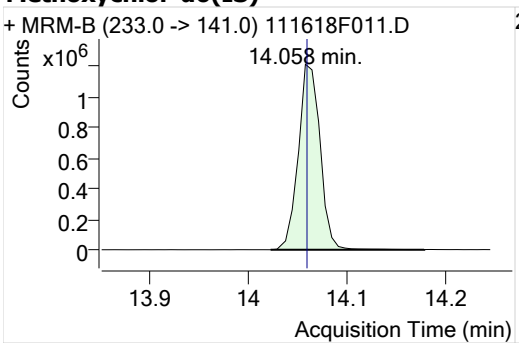


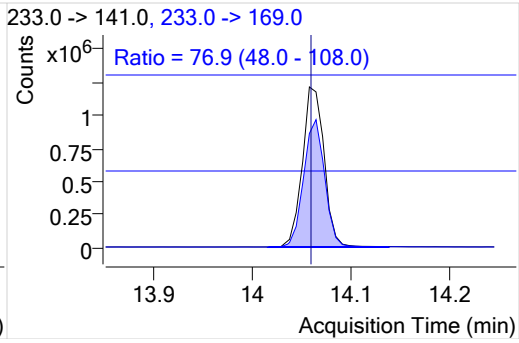


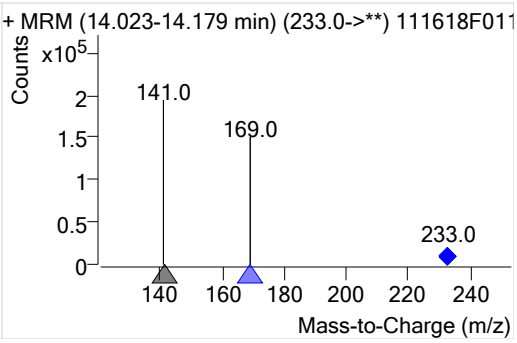


Quantitative Analysis Sample Report

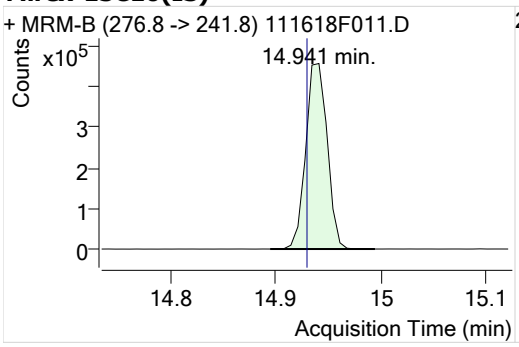
Methoxychlor-d6(IS)

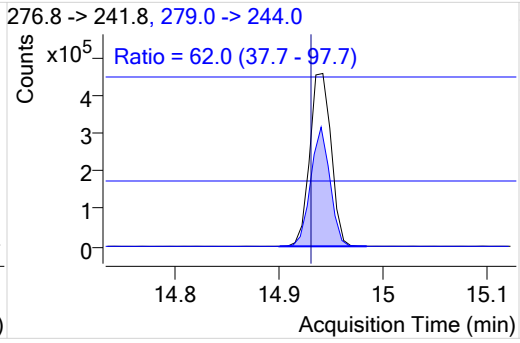


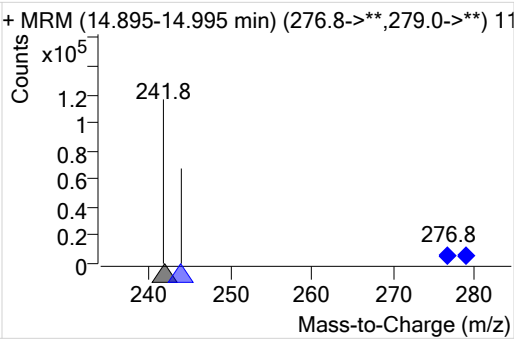




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F012.D	**Vial**	8
Acq. Date-Time	11/16/2018 2:32:59 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 20ng/mL SVM59-48F	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.685	289.8 -> 254.8	1328746	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2472969	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.225	276.8 -> 241.8	998843	20.000 ng/ml	0.009
Chorpyrifos-d10(IS)	7.639	199.9 -> 171.9	1178797	20.000 ng/ml	0.002
Aldrin-13C(IS)	7.959	269.8 -> 200.0	902138	20.000 ng/ml	0.006
Octachlorostyrene-13C8(IS)	8.542	315.8 -> 245.8	665970	20.000 ng/ml	0.005
Isodrin-13C12(IS)	8.619	199.9 -> 130.1	1042222	20.000 ng/ml	0.005
Heptachlor epoxide-13C10(IS)	8.813	362.8 -> 270.0	323122	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	653398	20.000 ng/ml	0.009
Pyrene-d10	9.725	212.0 -> 208.0	7910853	100.000 ng/ml	0.006
Endrin-13C12(IS)	11.250	269.8 -> 200.0	303277	20.000 ng/ml	0.002
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1375852	5.000 ng/ml	0.004
4,4'-DDT-d4(IS)	12.858	243.0 -> 173.1	623244	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.849	327.9 -> 291.8	36655	20.000 ng/ml	0.002
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	1724136	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	661279	5.000 ng/ml	0.010

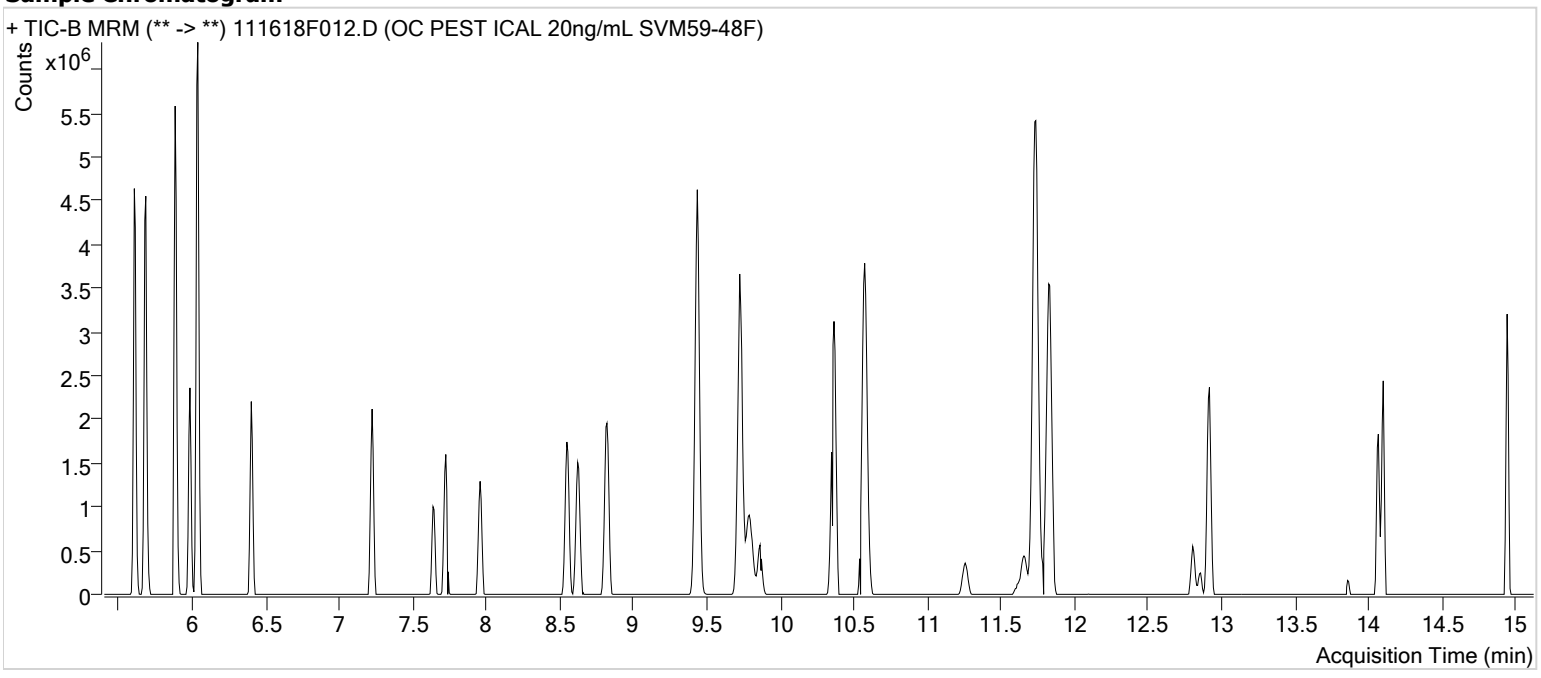
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1328746	22.818 ng/ml	
		Spiked Amount =	20.0	Recovery =	*114.1 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2472969	22.410 ng/ml	
		Spiked Amount =	20.0	Recovery =	*112.1 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	998843	21.890 ng/ml	
		Spiked Amount =	20.0	Recovery =	*109.5 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1178797	20.592 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.0 %*
Aldrin-13C	7.952	269.8 -> 200.0	902138	21.647 ng/ml	
		Spiked Amount =	20.0	Recovery =	*108.2 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	665970	22.318 ng/ml	
		Spiked Amount =	20.0	Recovery =	*111.6 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1042222	22.920 ng/ml	
		Spiked Amount =	20.0	Recovery =	*114.6 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	323122	22.225 ng/ml	
		Spiked Amount =	20.0	Recovery =	*111.1 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	653398	22.114 ng/ml	
		Spiked Amount =	20.0	Recovery =	*110.6 %*
Endrin-13C12	11.247	269.8 -> 200.0	303277	20.977 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.9 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1375852	4.897 ng/ml	
		Spiked Amount =	5.0	Recovery =	*97.9 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	623244	4.965 ng/ml	
		Spiked Amount =	5.0	Recovery =	*99.3 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	36655	20.474 ng/ml	
		Spiked Amount =	20.0	Recovery =	*102.4 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	1724136	20.786 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.9 %*
Mirex-13C10	14.930	276.8 -> 241.8	661279	5.456 ng/ml	
		Spiked Amount =	5.0	Recovery =	*109.1 %*

Quantitative Analysis Sample Report

Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	3513798	19.871	ng/ml	96
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	2391265	19.881	ng/ml	97
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	4419696	19.755	ng/ml	95
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.037	181.1 -> 145.1	5109774	19.754	ng/ml	98
δ-BHC	γ-BHC-d6(IS)	6.405	181.1 -> 145.1	1965470	19.064	ng/ml	100
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	1123152	19.400	ng/ml	98
Chorpyrifos	Chorpyrifos-d10(IS)	7.730	196.9 -> 169.0	1469170	17.656	ng/ml	96
Aldrin	Aldrin-13C(IS)	7.963	254.9 -> 220.0	655265	20.458	ng/ml	98
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.555	342.8 -> 307.8	1648054	19.229	ng/ml	93
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	1053927	19.709	ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.829	352.8 -> 262.9	360776	19.620	ng/ml	98
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	1700598	19.250	ng/ml	100
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	590863	18.768	ng/ml	99
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	5328324	20.370	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	1516587	19.281	ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.812	206.9 -> 172.0	366003	19.252	ng/ml	98
trans-Nanochlor	Oxychlordane-13C10(IS)	9.863	271.8 -> 236.9	946955	18.707	ng/ml	94
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	4741914	19.777	ng/ml	98
2,4'-DDD	4,4'-DDD d4(IS)	10.577	235.0 -> 165.1	5596626	18.904	ng/ml	99
Dieldrin	Endrin-13C12(IS)	10.600	262.9 -> 193.0	451297	19.509	ng/ml	91
Endosulfan II	Endrin-13C12(IS)	11.253	206.9 -> 172.0	83463	20.088	ng/ml	99
Endrin	Endrin-13C12(IS)	11.264	262.8 -> 193.0	393821	18.922	ng/ml	99
4,4'-DDD	4,4'-DDD d4(IS)	11.740	235.0 -> 165.1	8872208 ***m***	19.968	ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	370712	19.333	ng/ml	89
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	5766524 ***m***	20.635	ng/ml	100
Endrin aldehyde	Endrin-13C12(IS)	12.098	249.9 -> 214.9	108216	18.431	ng/ml	98
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	675747	18.967	ng/ml	97
4,4'-DDT	4,4'-DDT-d4(IS)	12.921	235.0 -> 165.1	2927244	20.298	ng/ml	100
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	242152	18.768	ng/ml	92
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	2070335	18.818	ng/ml	99
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	2873549	20.369	ng/ml	95

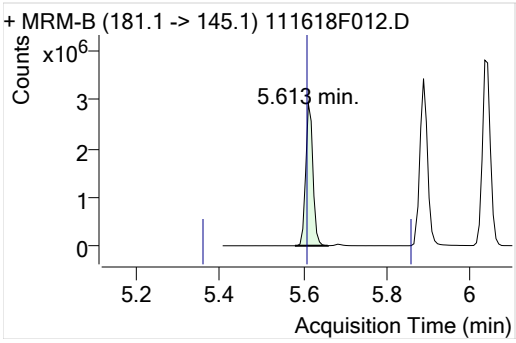
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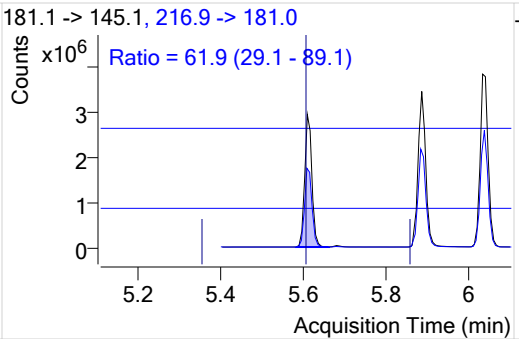
Sample Chromatogram

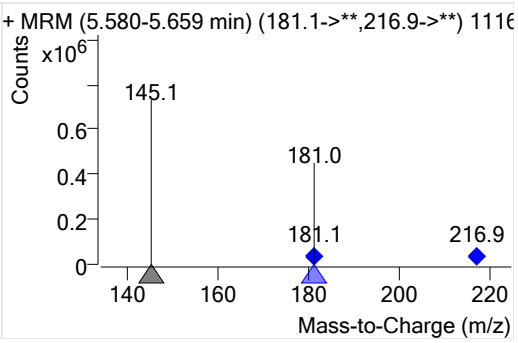


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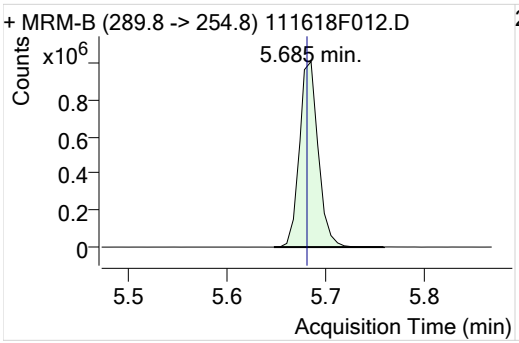
α-BHC

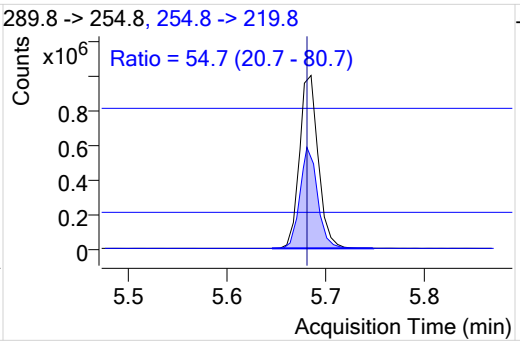


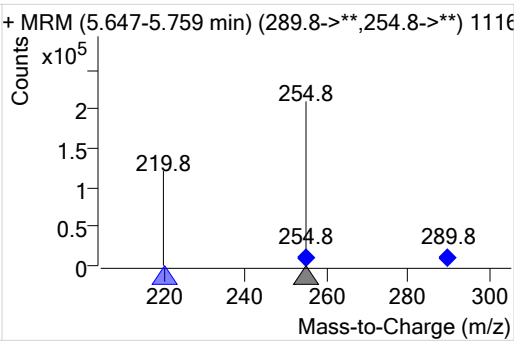




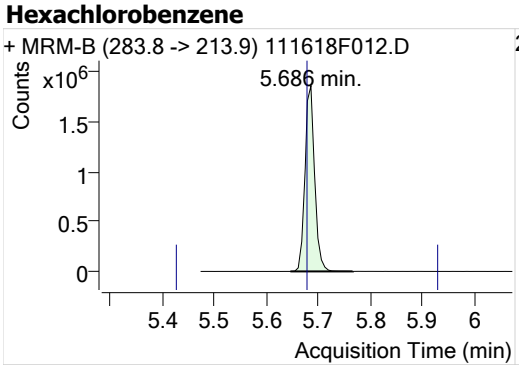
Hexachlorobenzene-13C6

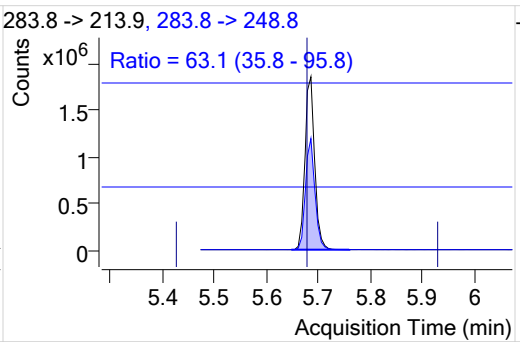


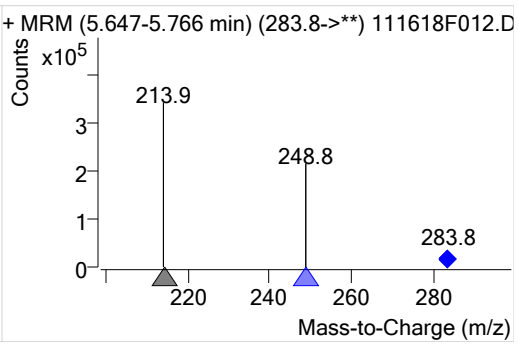




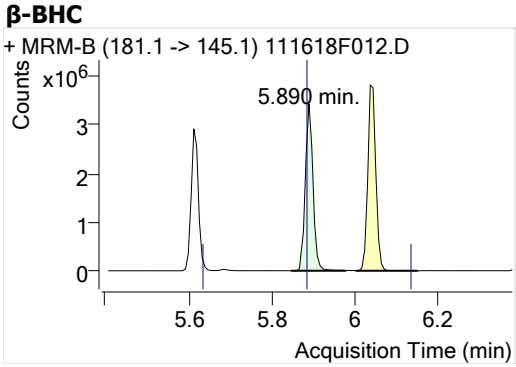
Hexachlorobenzene

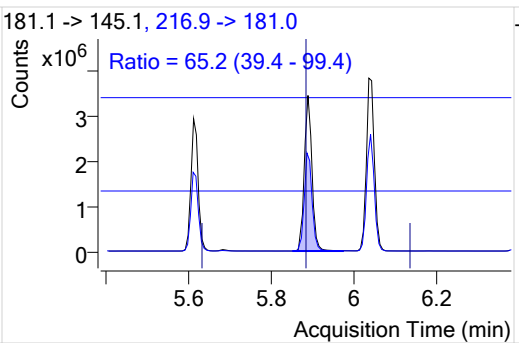


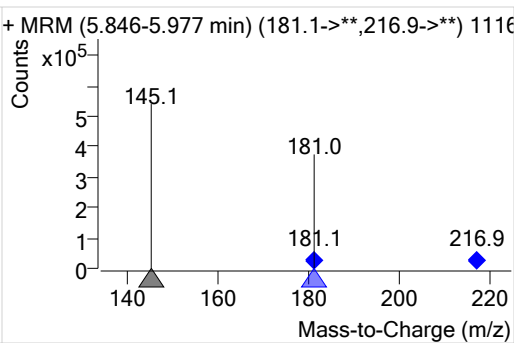




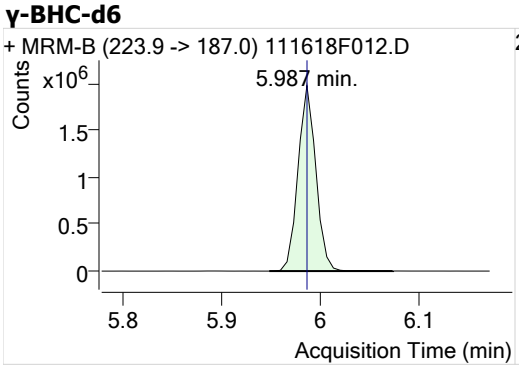
β-BHC

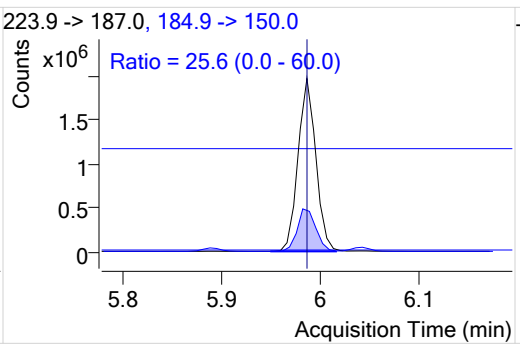


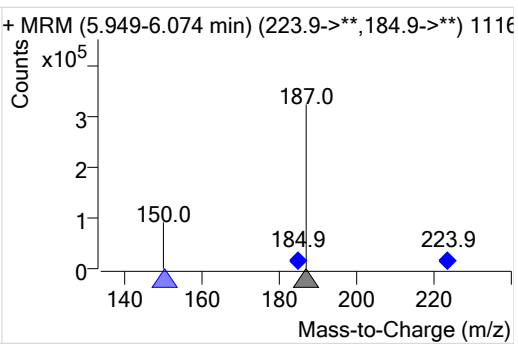




γ-BHC-d6

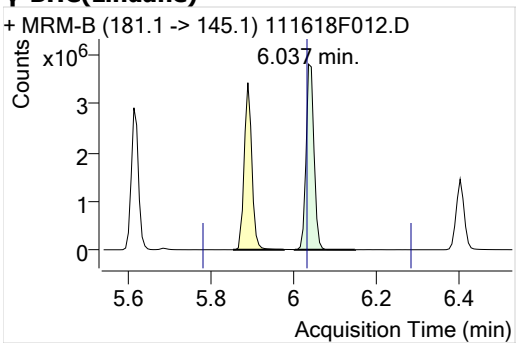


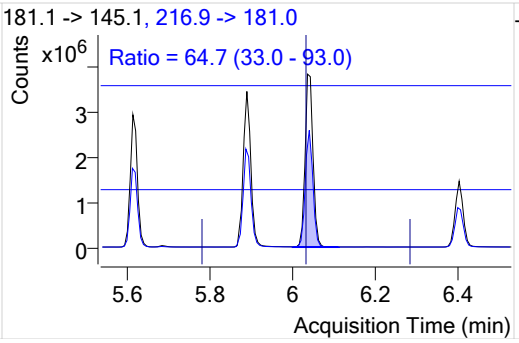


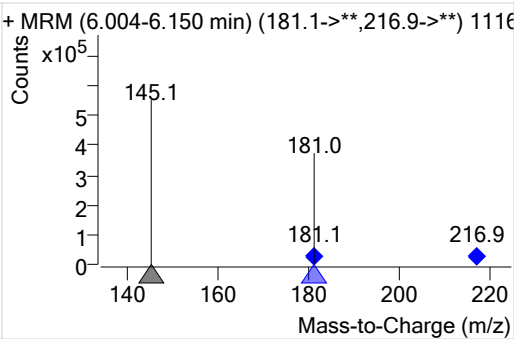


Quantitative Analysis Sample Report

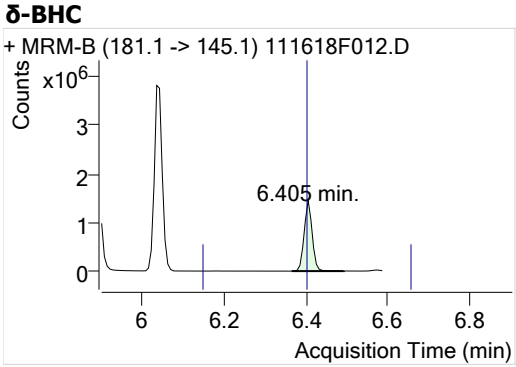
γ-BHC(Lindane)

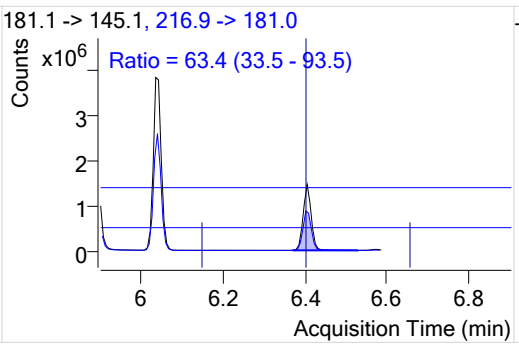


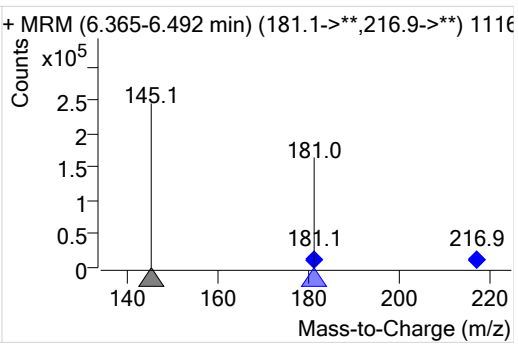




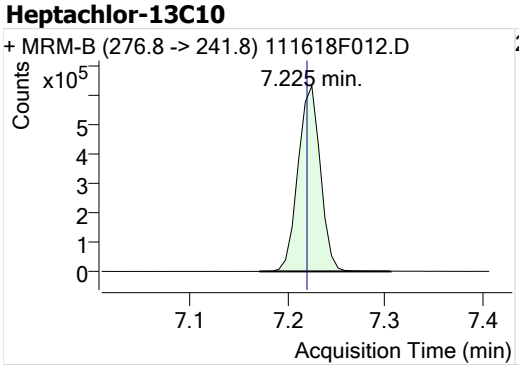
δ-BHC

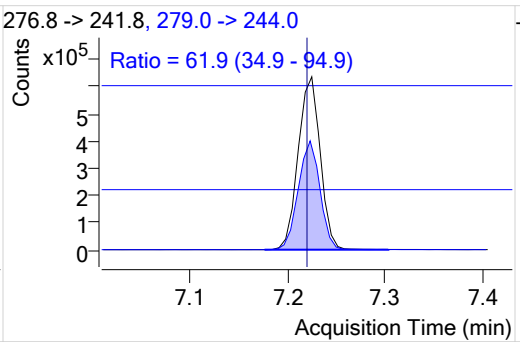


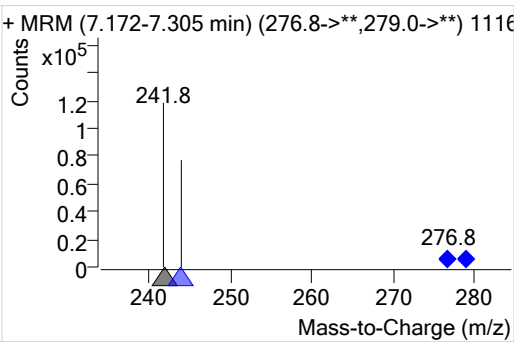




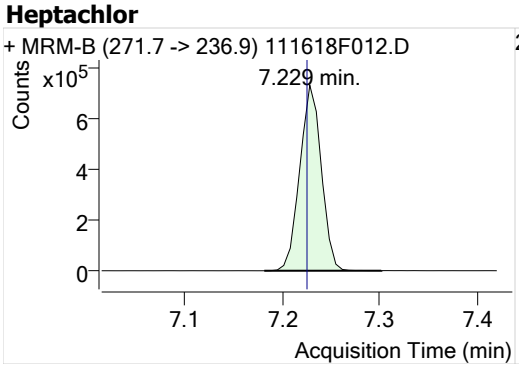
Heptachlor-13C10

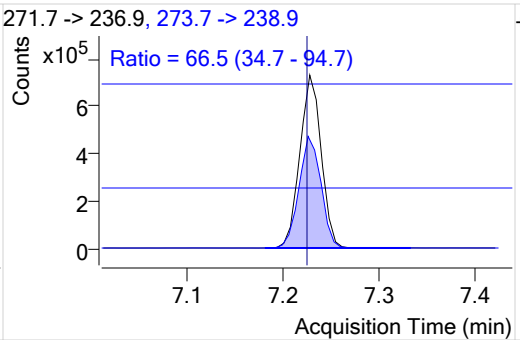


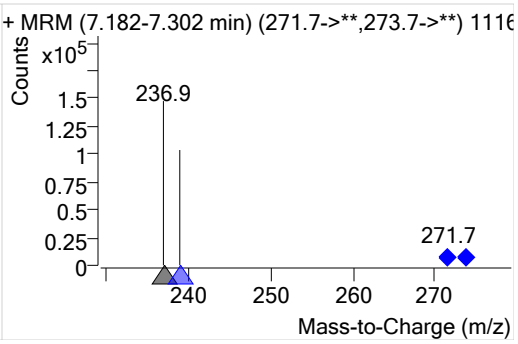




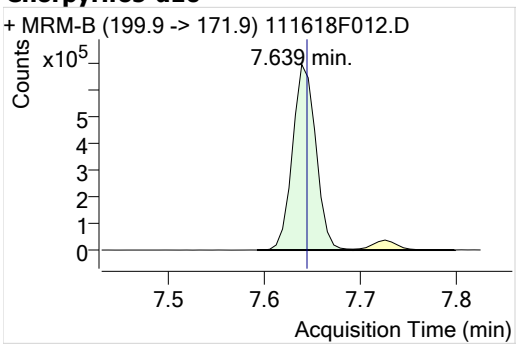
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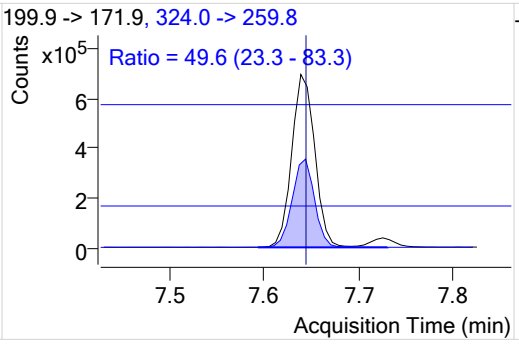


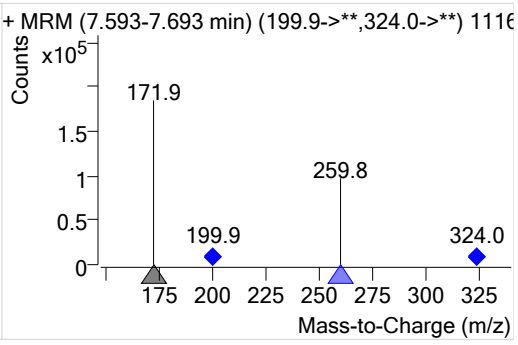




Chorpyrifos-d10

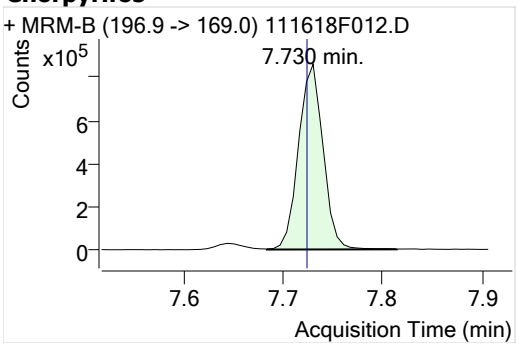


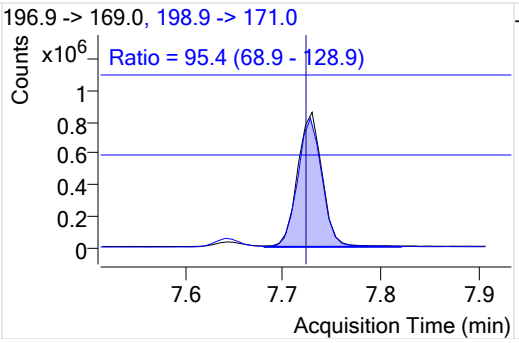


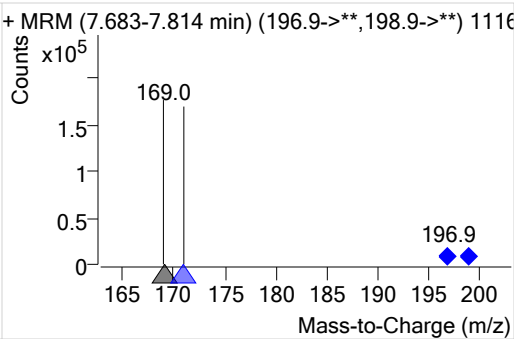


Quantitative Analysis Sample Report

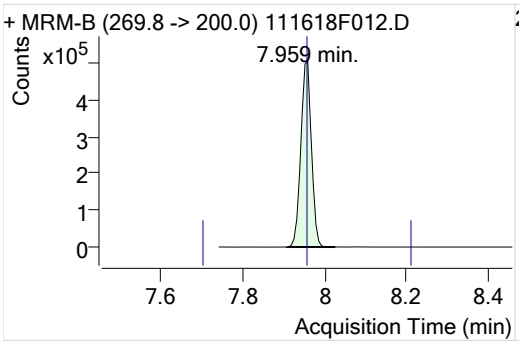
Chorpyrifos

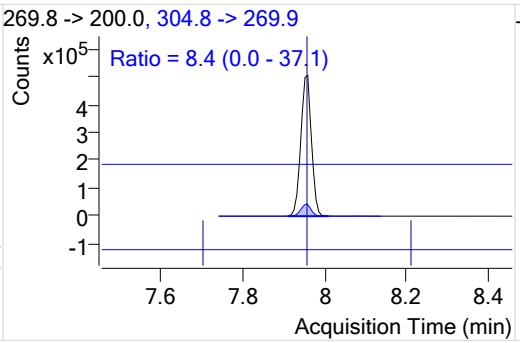


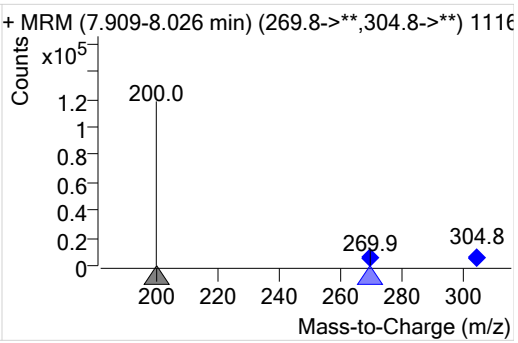




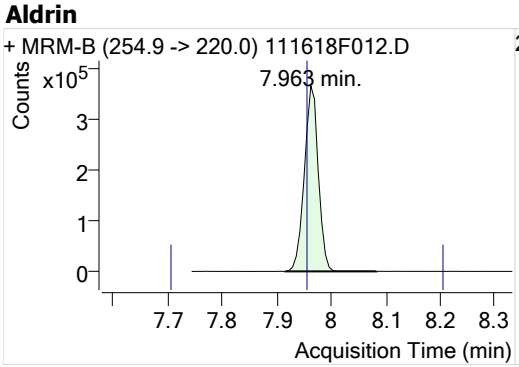
Aldrin-13C

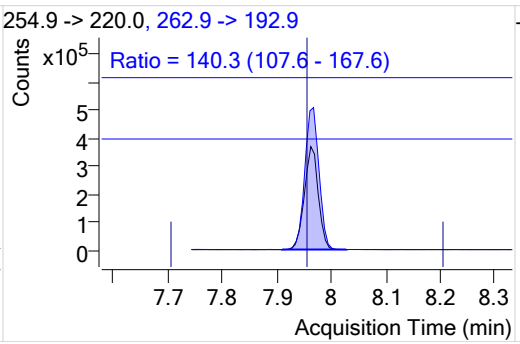


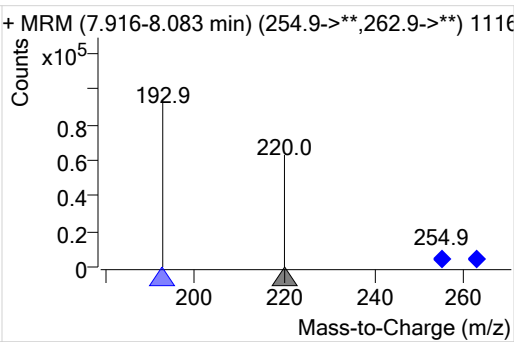




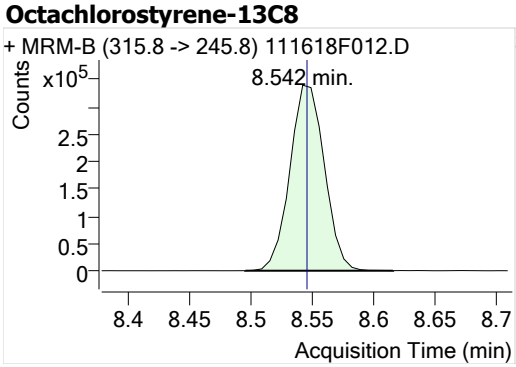
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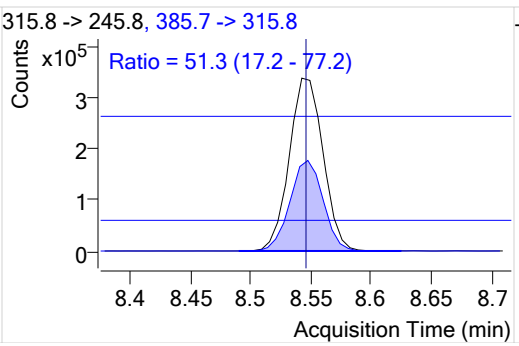


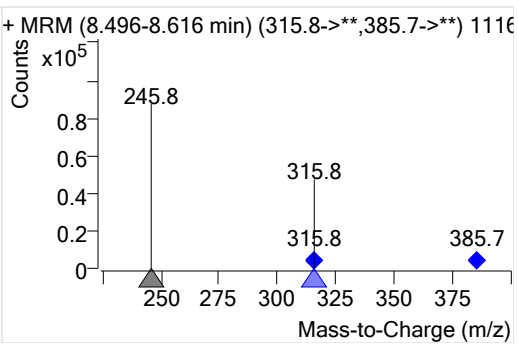




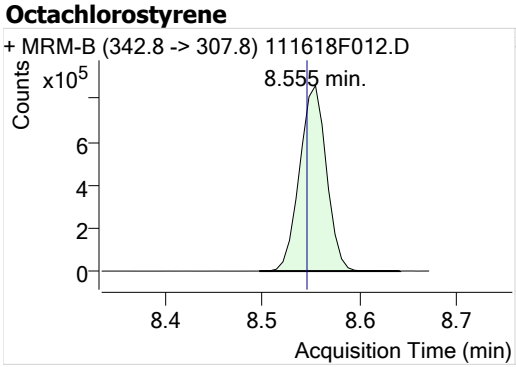
Octachlorostyrene-13C8

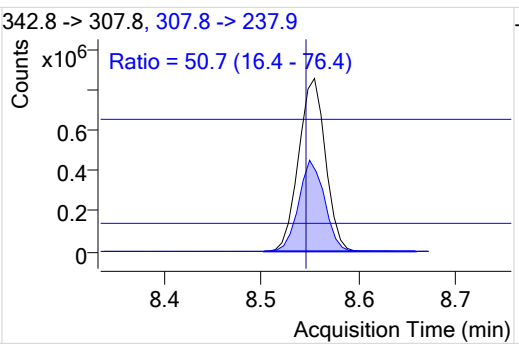


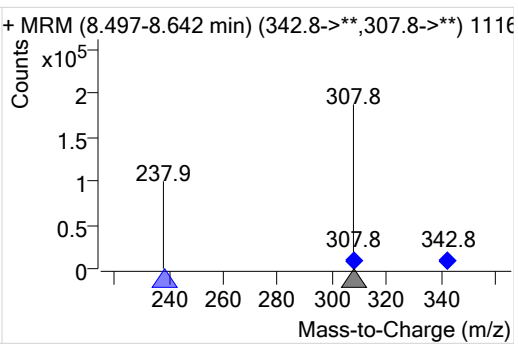




Octachlorostyrene

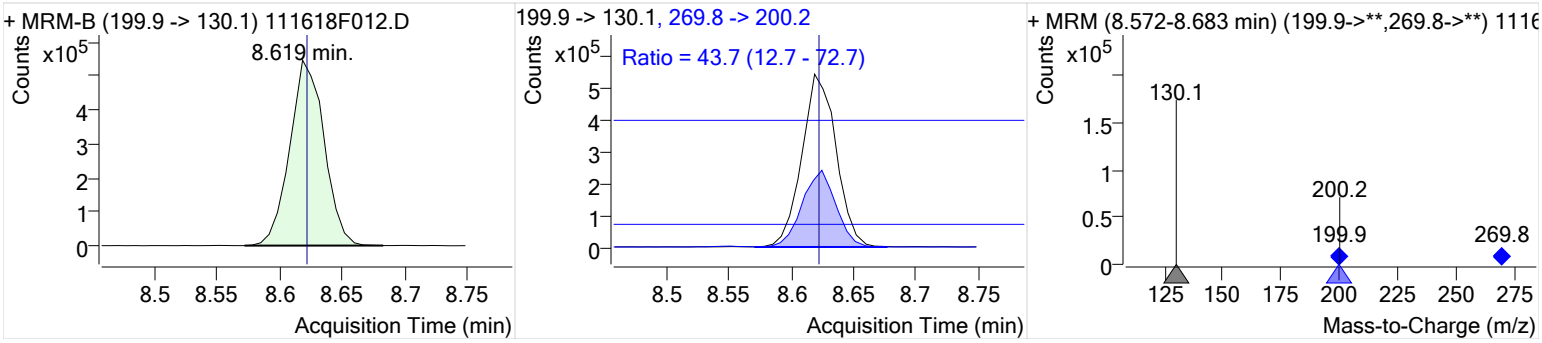




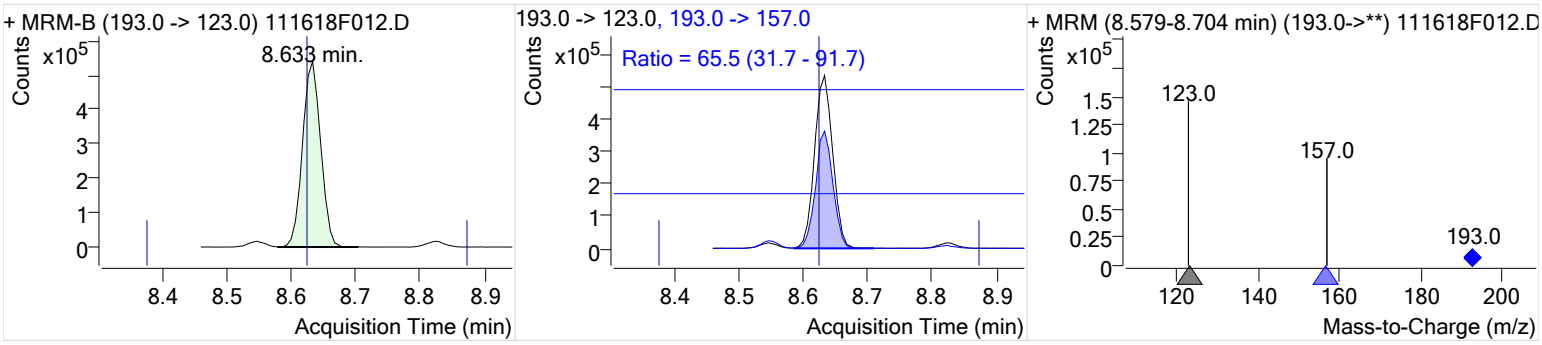


Quantitative Analysis Sample Report

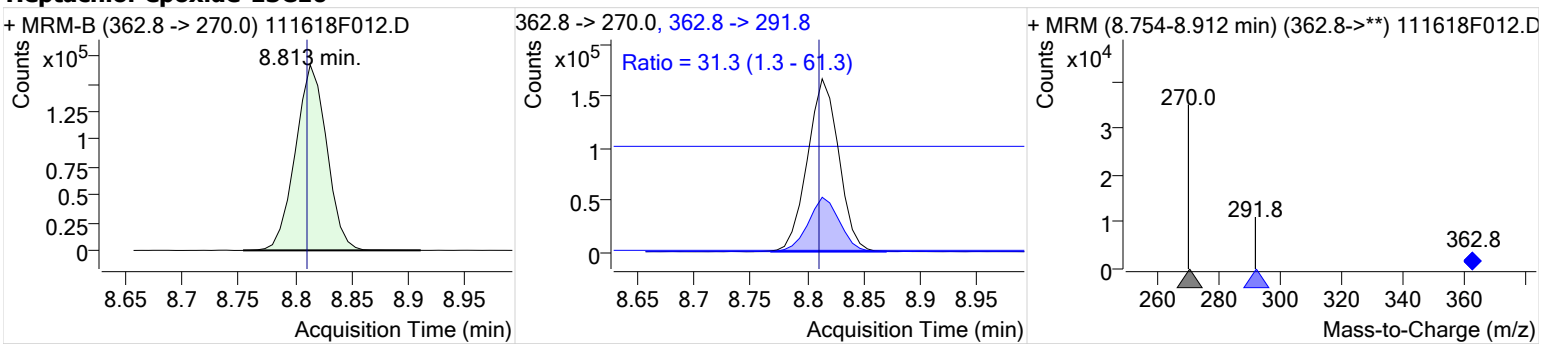
Isodrin-13C12



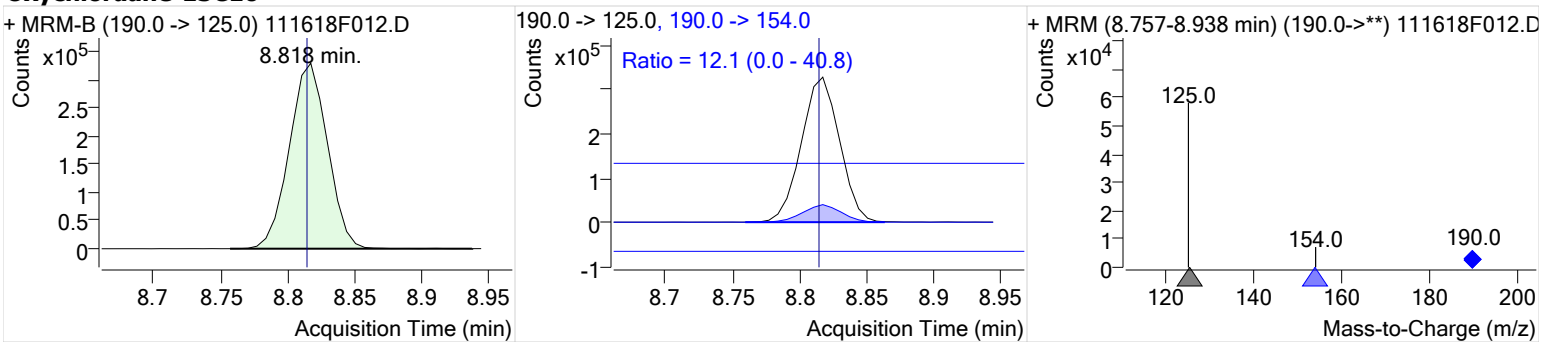
Isodrin



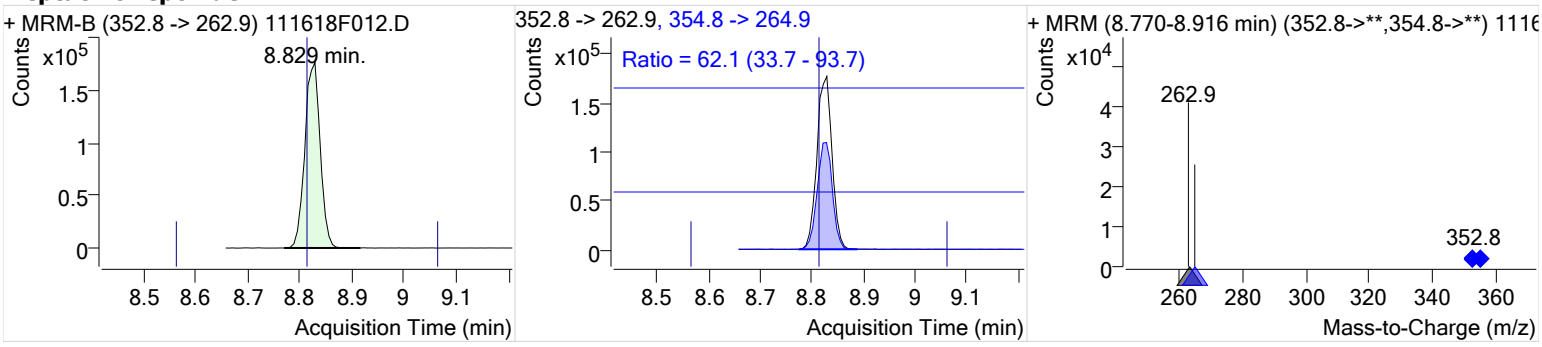
Heptachlor epoxide-13C10



Oxychlordane-13C10

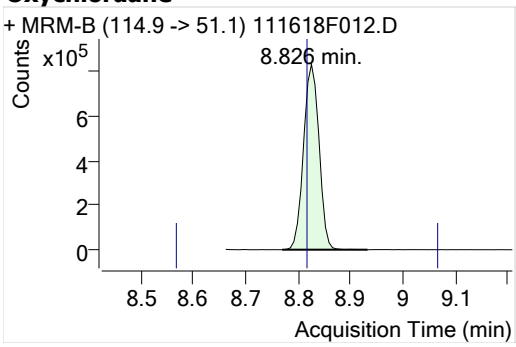


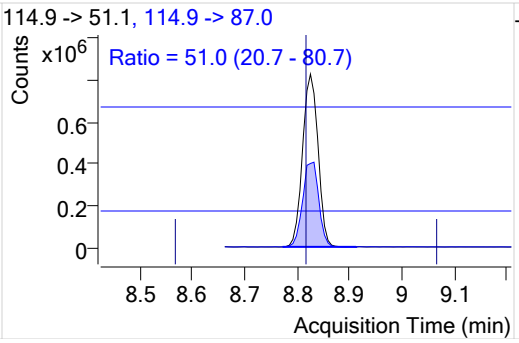
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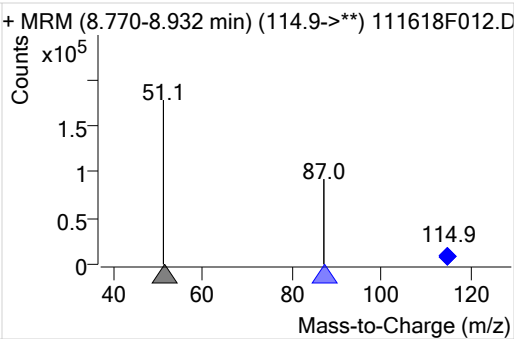


Quantitative Analysis Sample Report

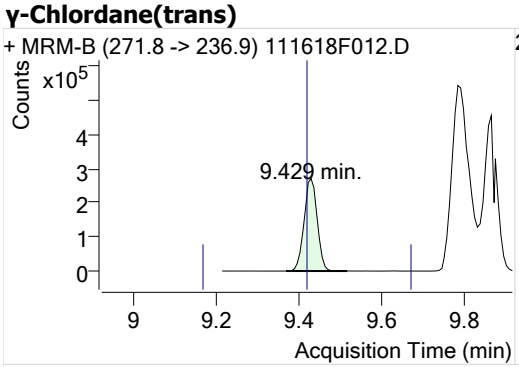
Oxychlordane

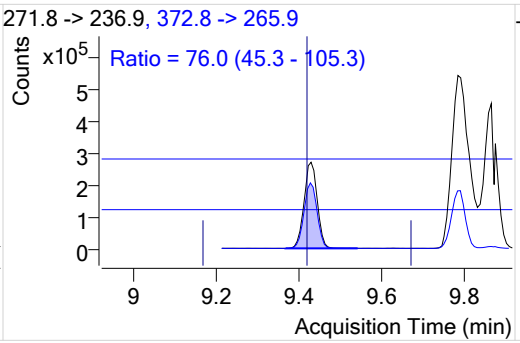


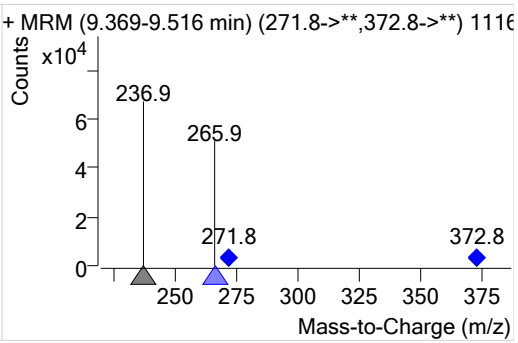




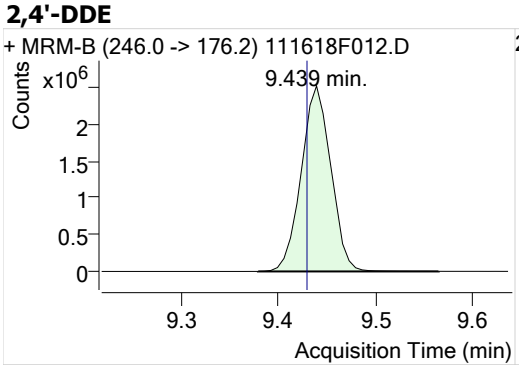
γ-Chlordane(trans)

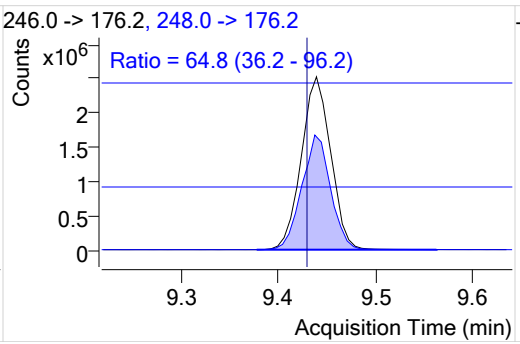


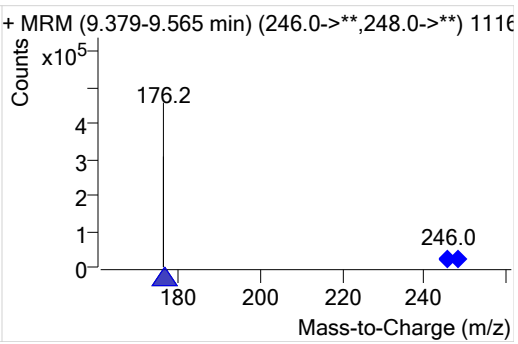




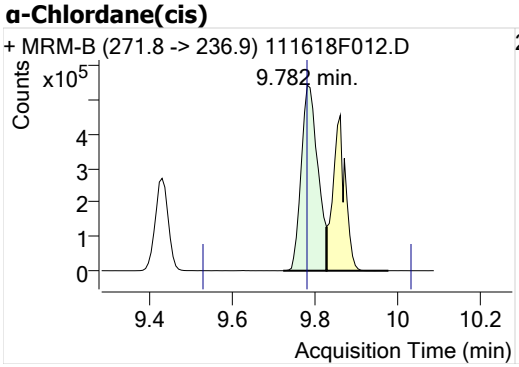
2,4'-DDE

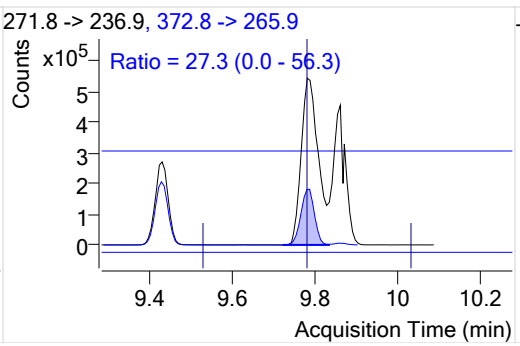


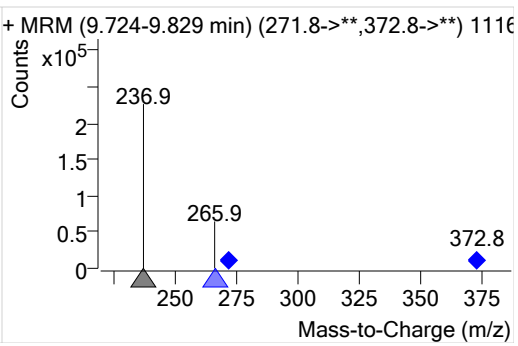




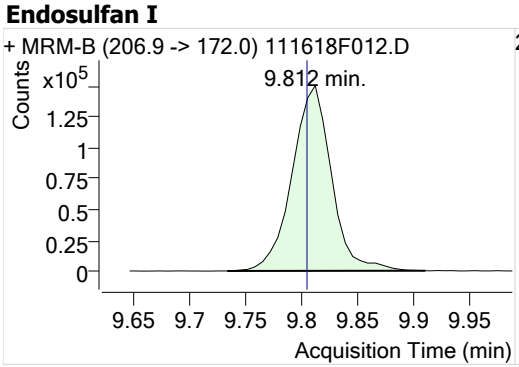
α-Chlordane(cis)

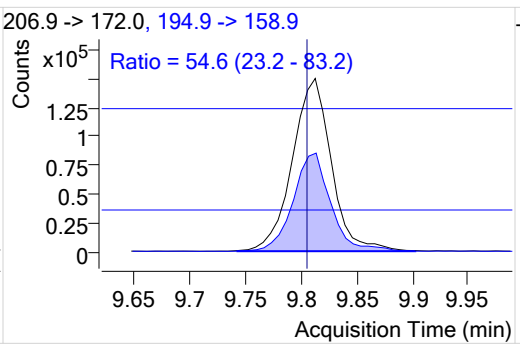


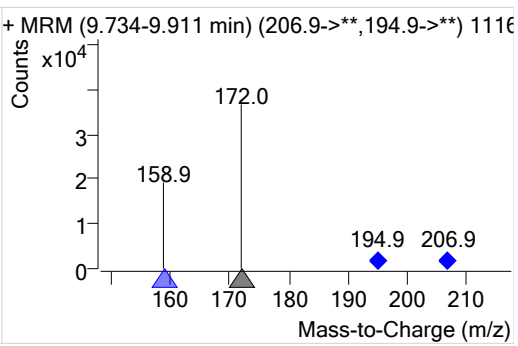




Endosulfan I

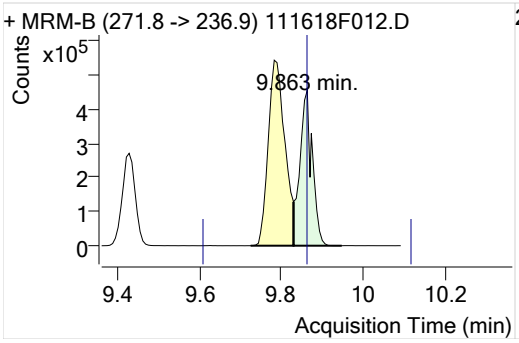


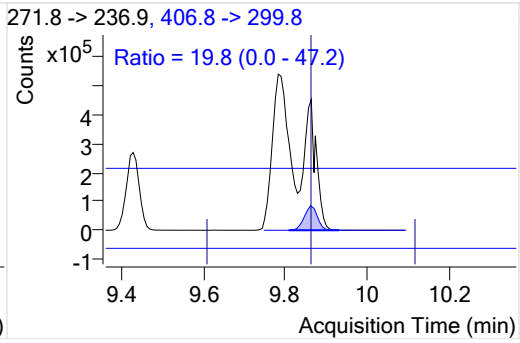


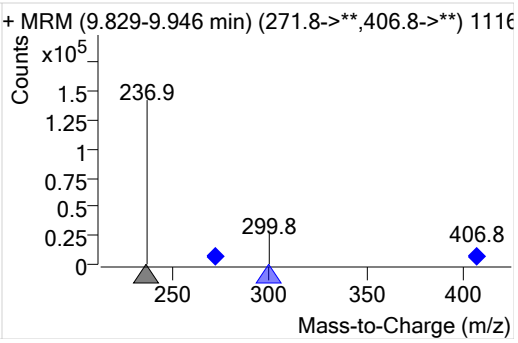


Quantitative Analysis Sample Report

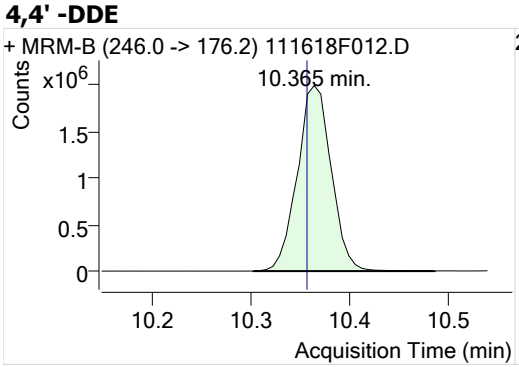
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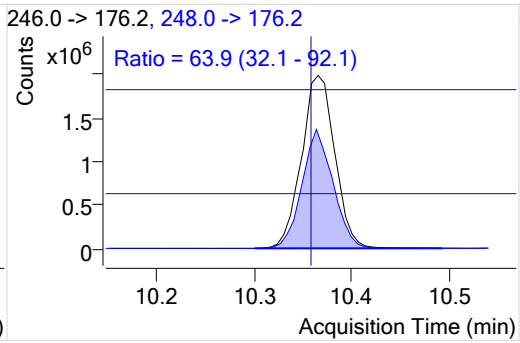


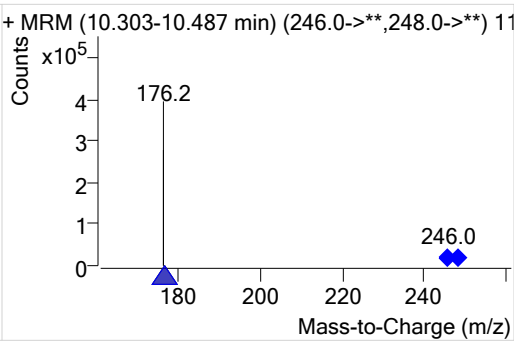




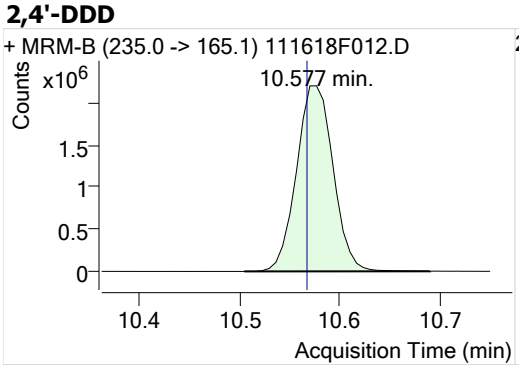
4,4' -DDE

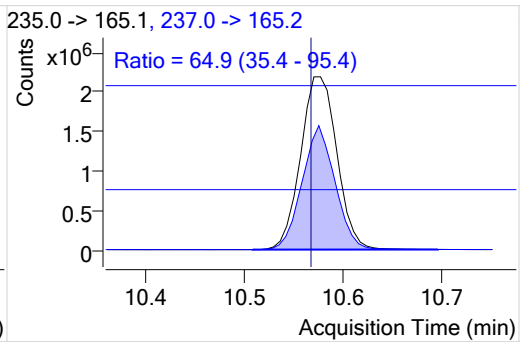


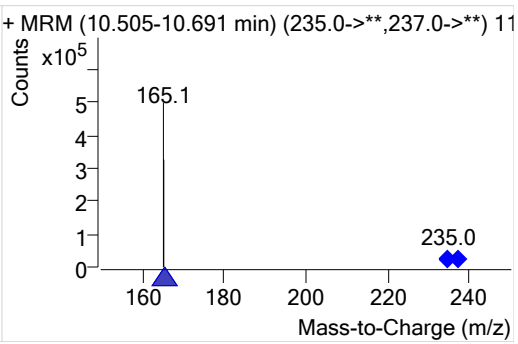




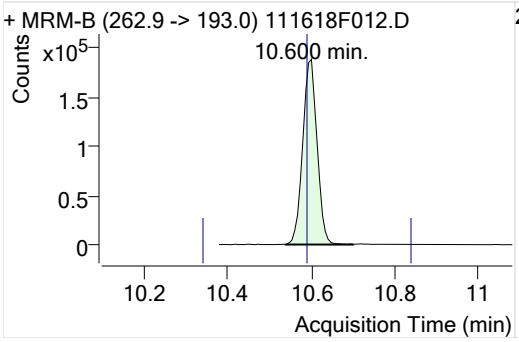
2,4'-DDD

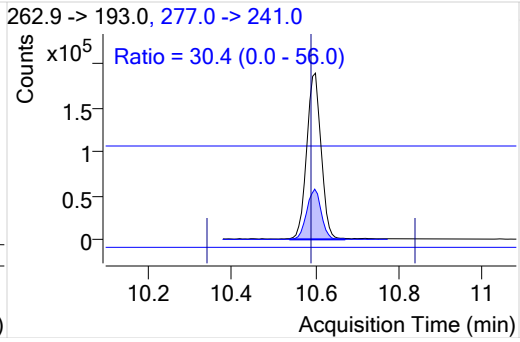


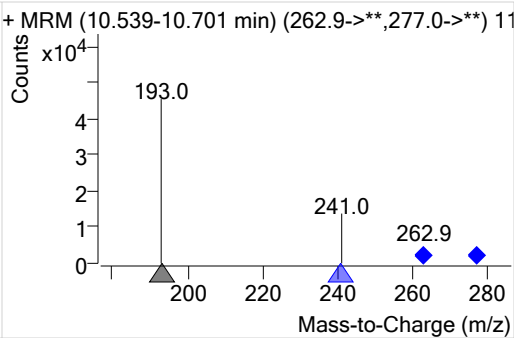




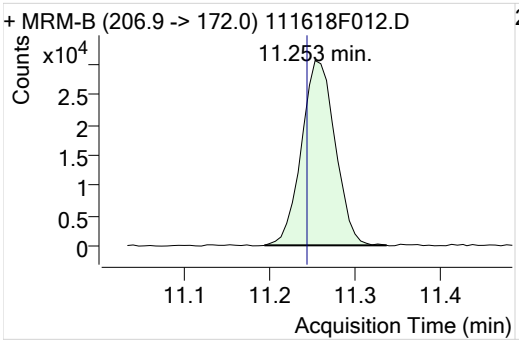
Dieldrin

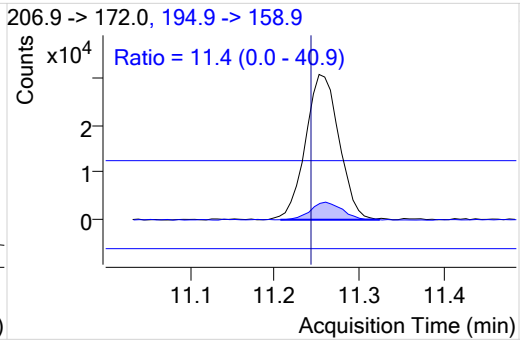


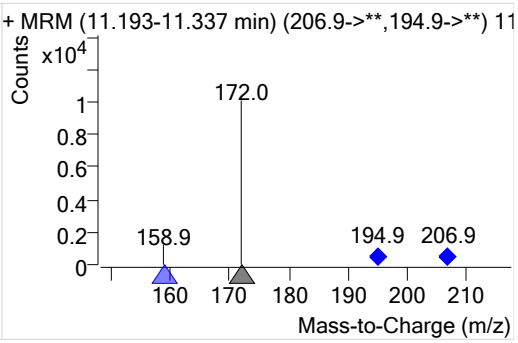




Endosulfan II

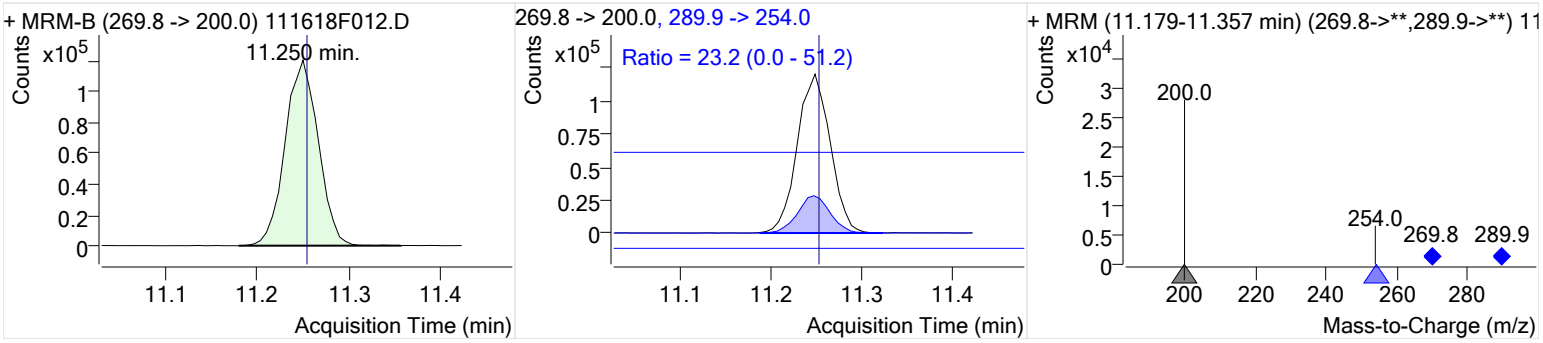




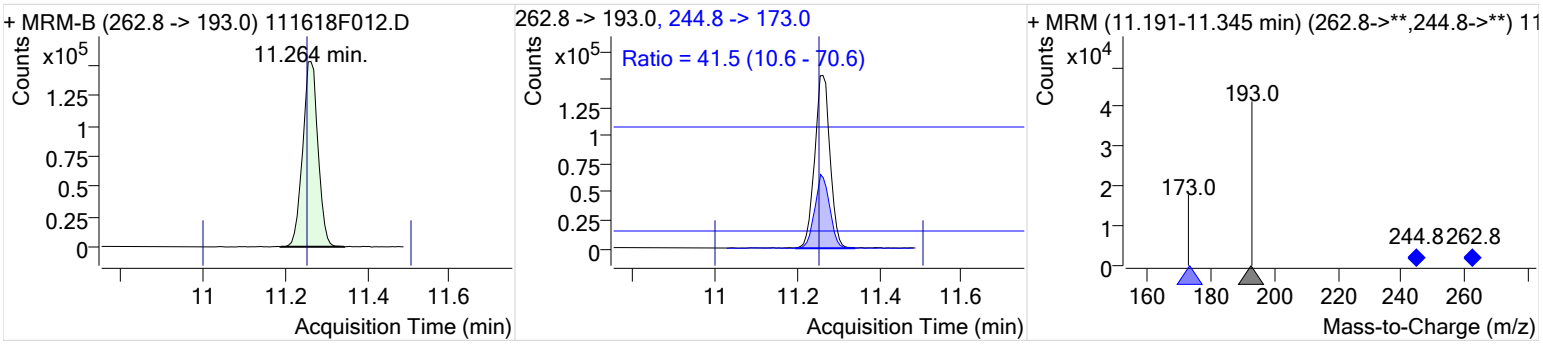


Quantitative Analysis Sample Report

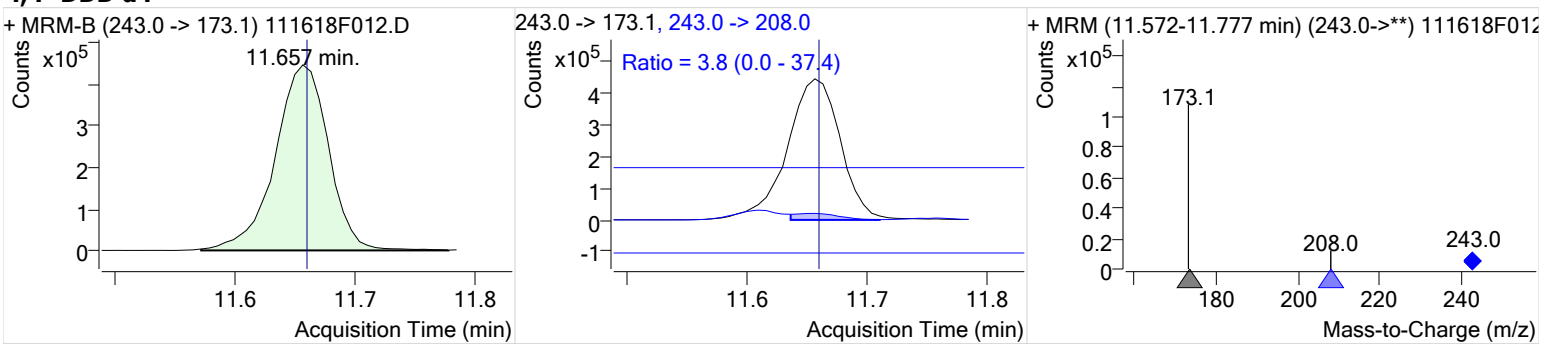
Endrin-13C12



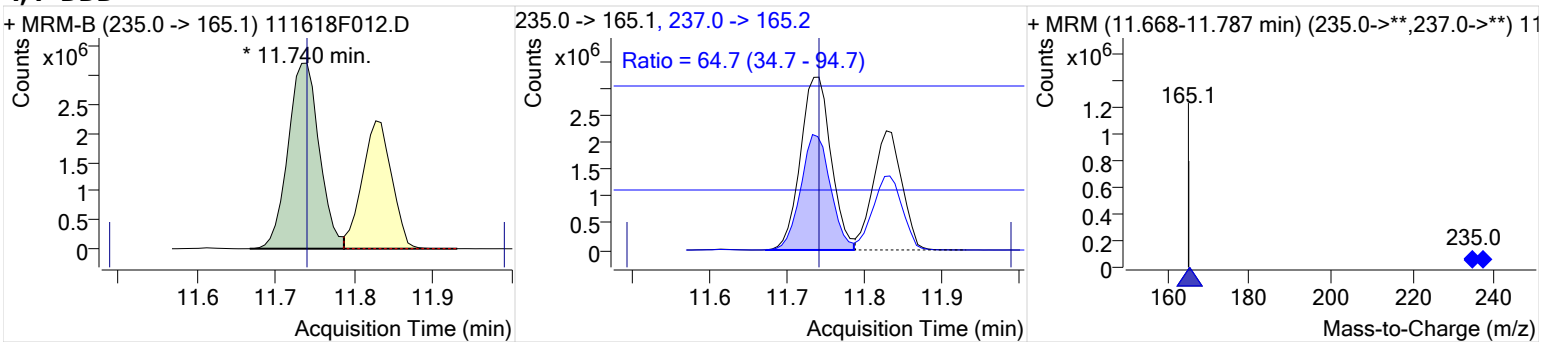
Endrin



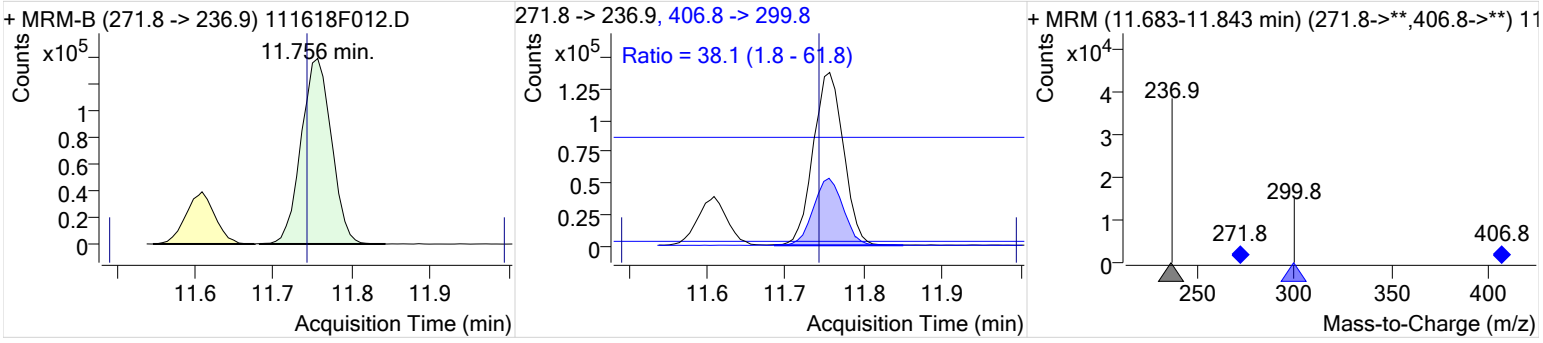
4,4'-DDD d4



4,4'-DDD

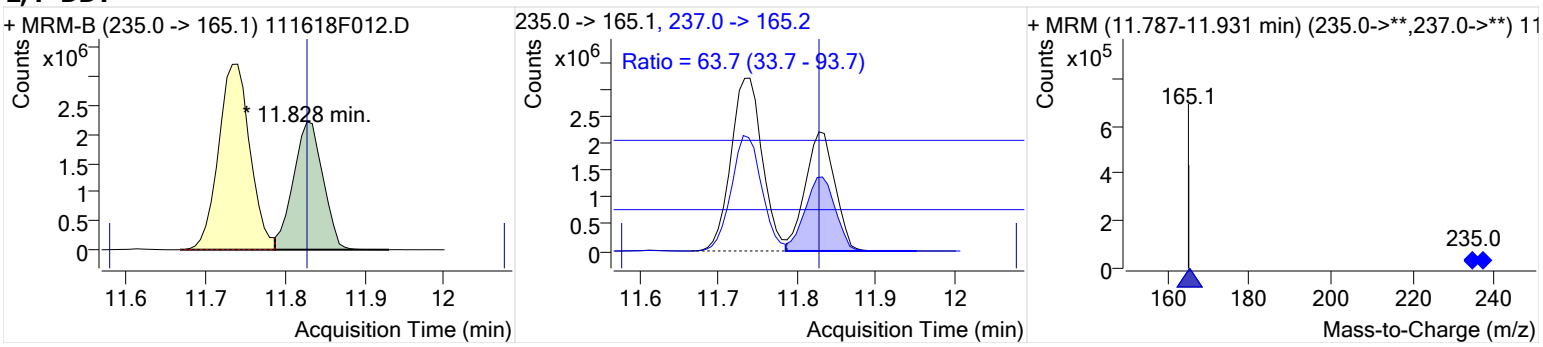


cis-Nonachlor

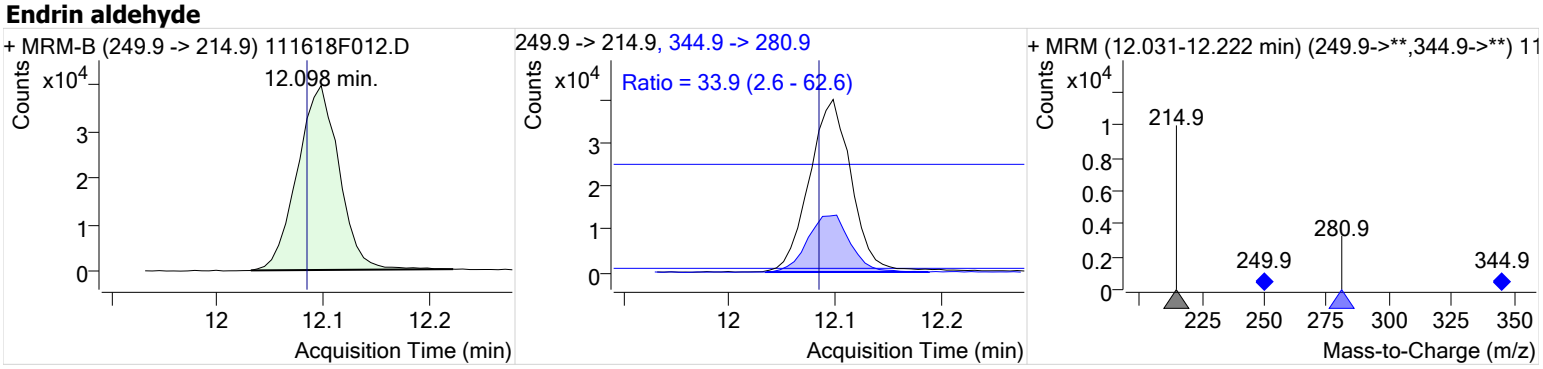


Quantitative Analysis Sample Report

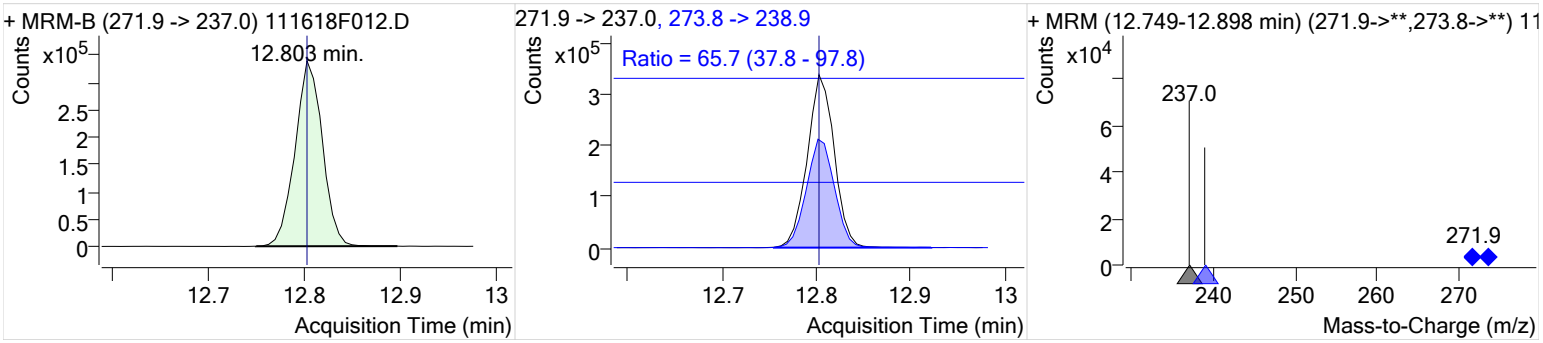
2,4'-DDT



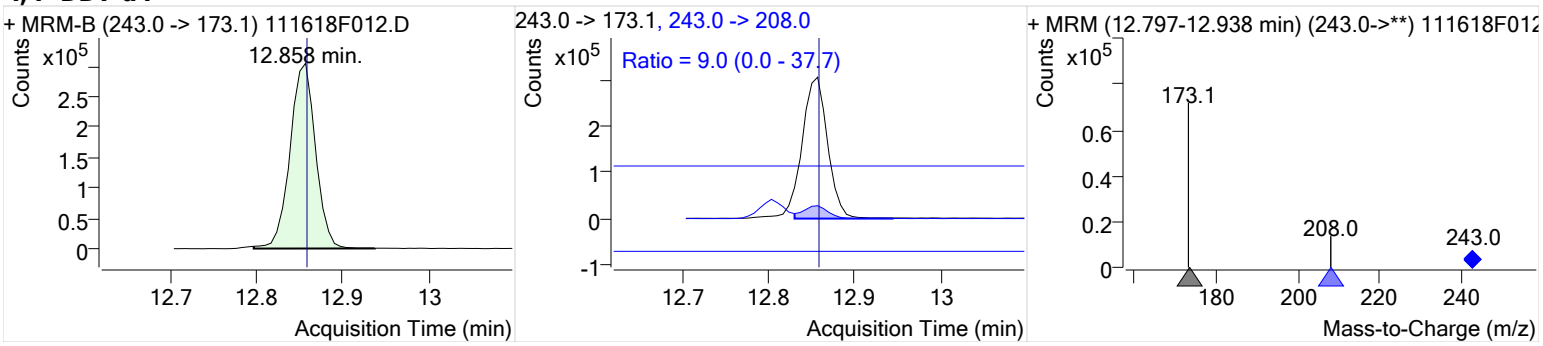
Endrin aldehyde



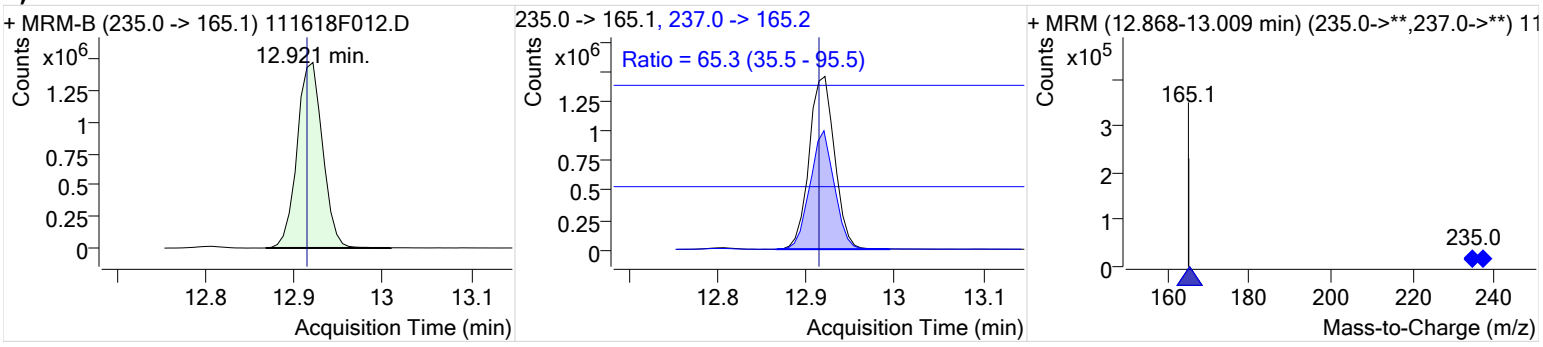
Endosulfan sulfate



4,4'-DDT-d4

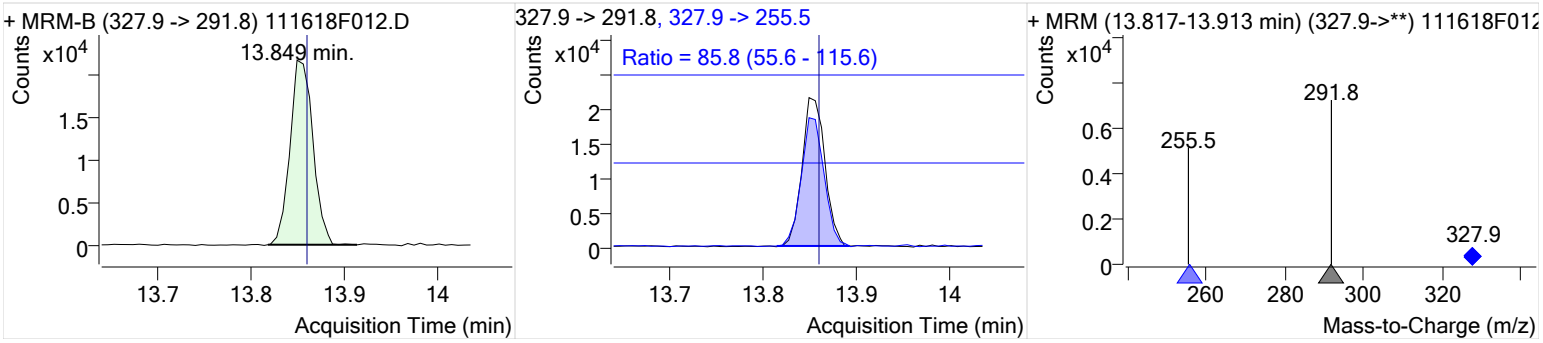


4,4'-DDT

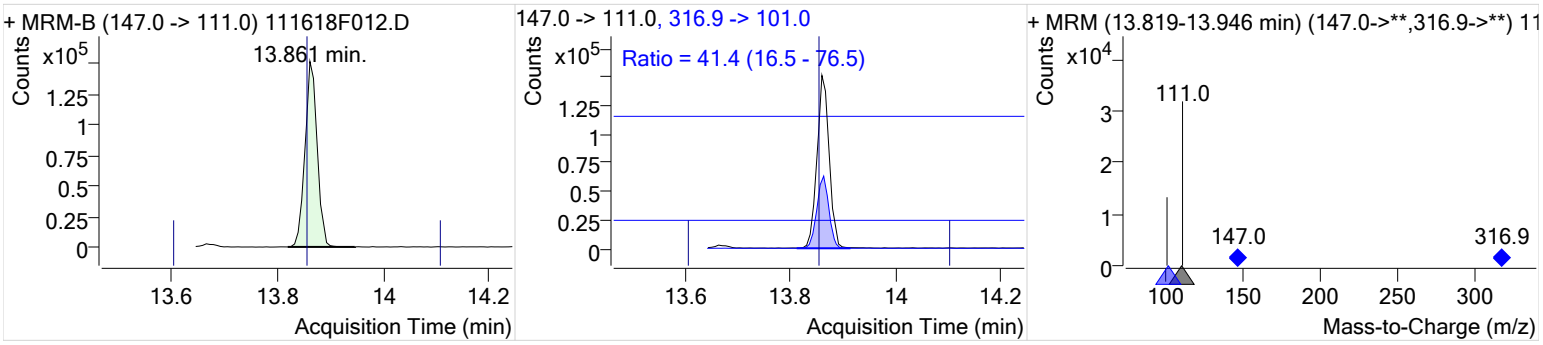


Quantitative Analysis Sample Report

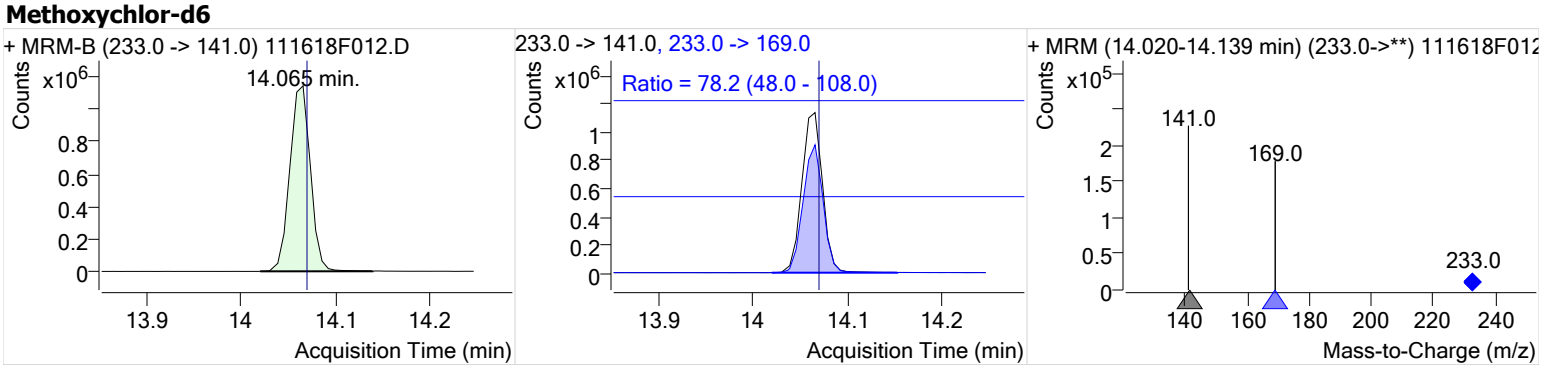
Endrin ketone-13C12



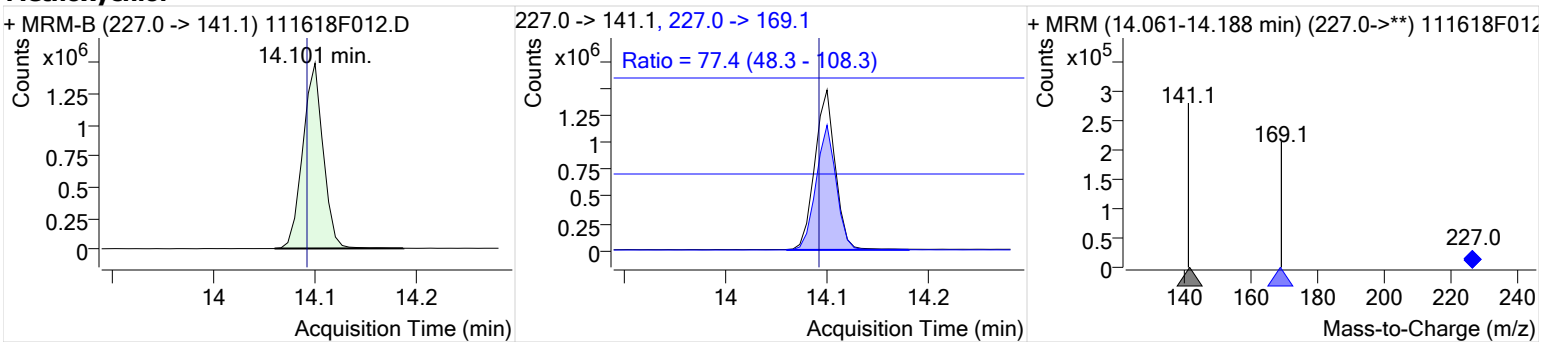
Endrin ketone



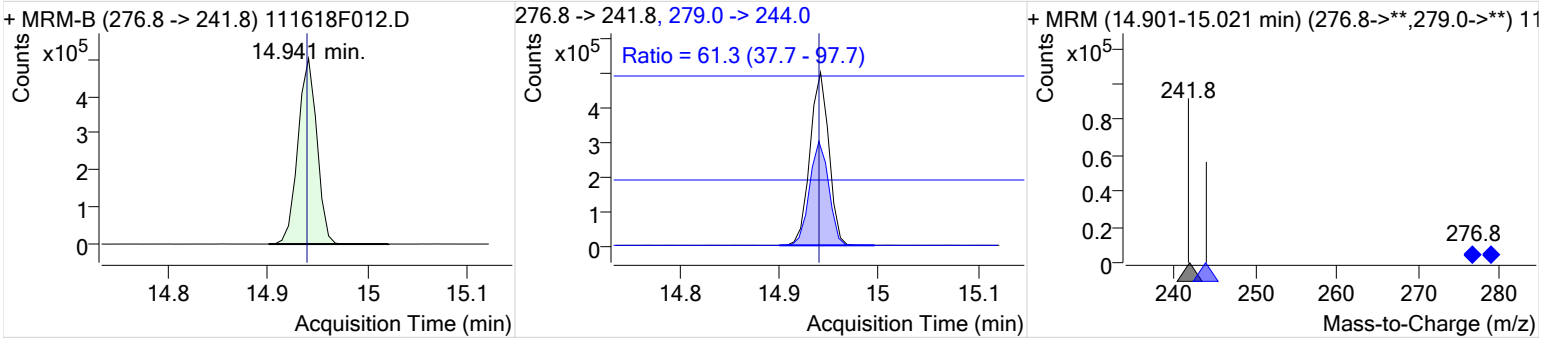
Methoxychlor-d6



Methoxychlor

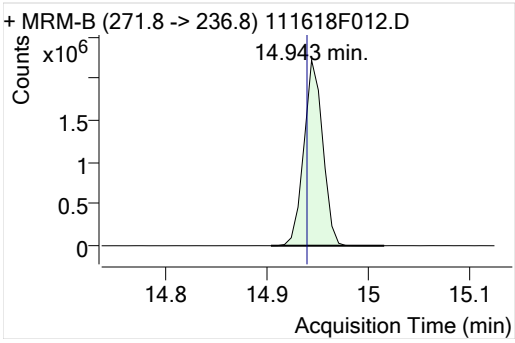


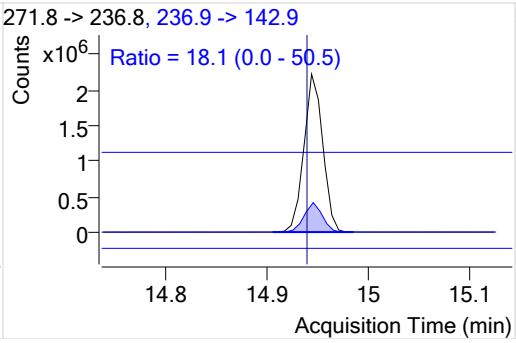
Mirex-13C10

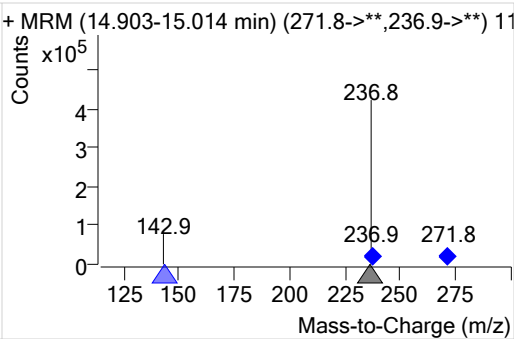


Quantitative Analysis Sample Report

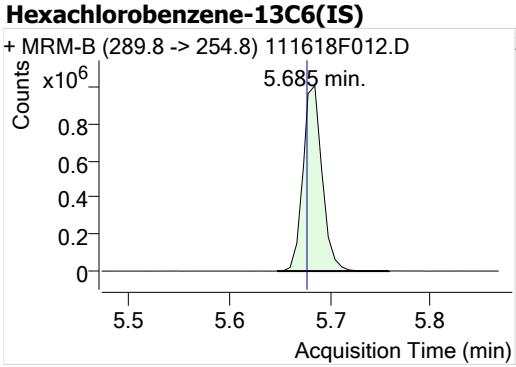
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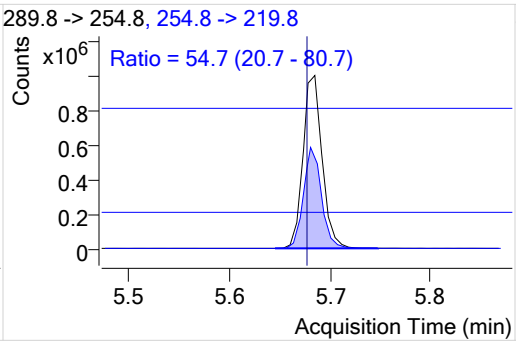


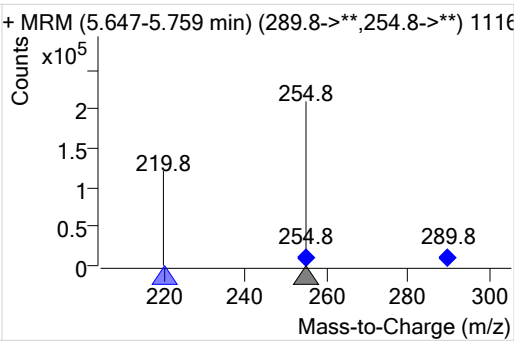




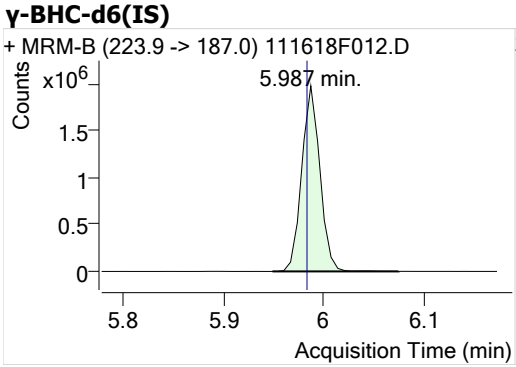
Hexachlorobenzene-13C6(IS)

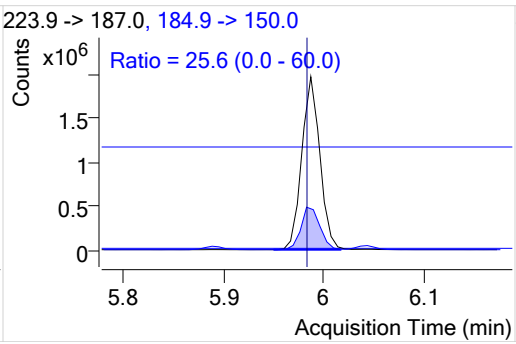


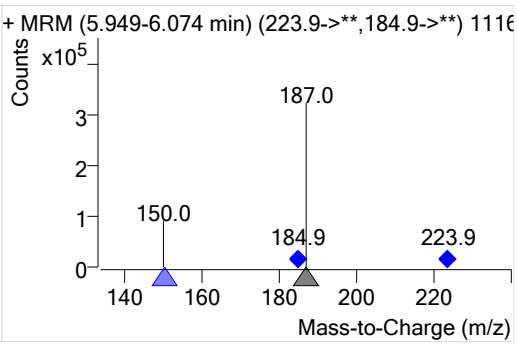




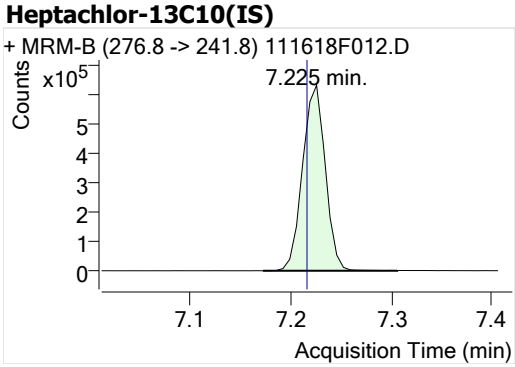
γ-BHC-d6(IS)

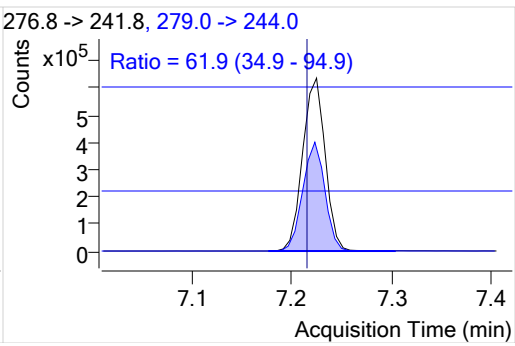


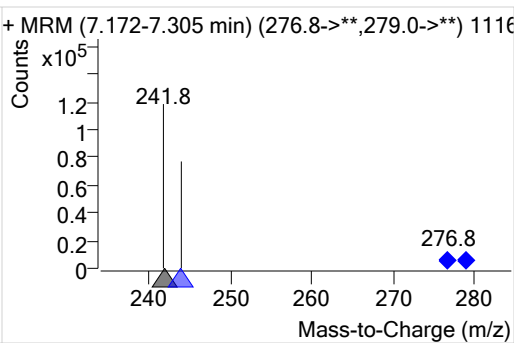




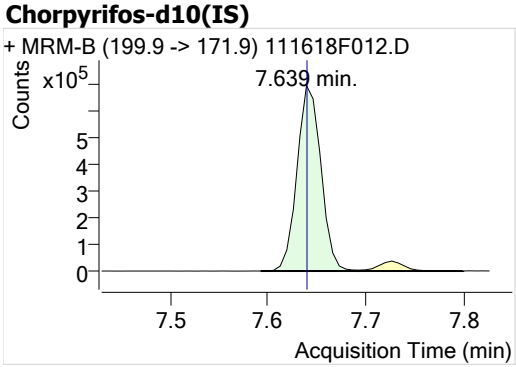
Heptachlor-13C10(IS)

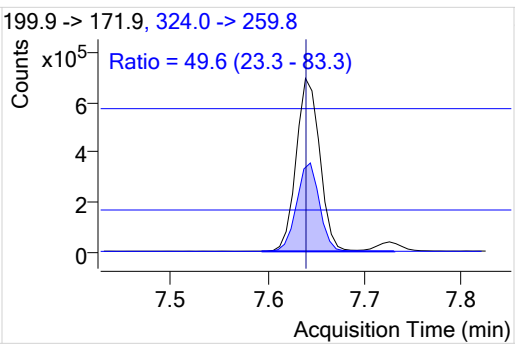


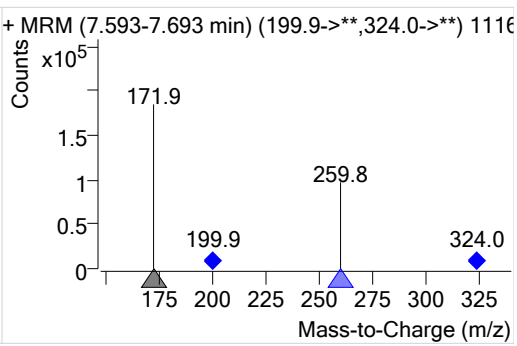




Chorpyrifos-d10(IS)

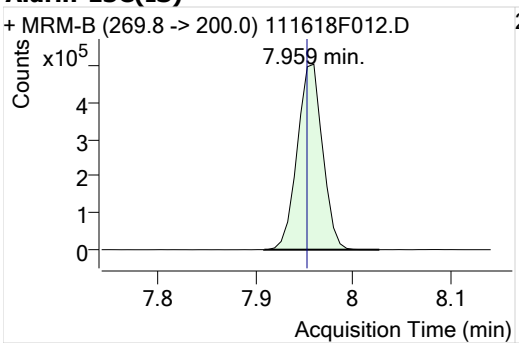


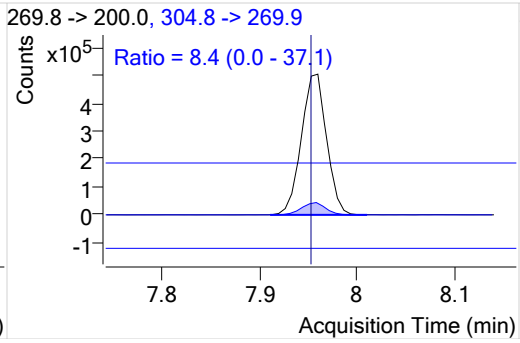


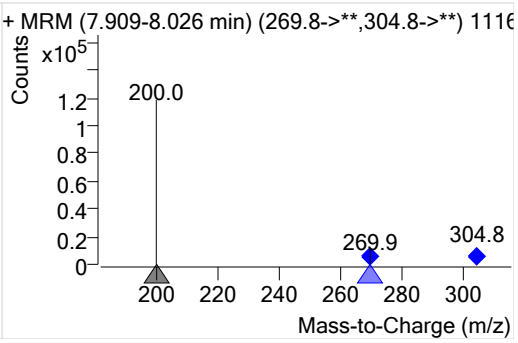


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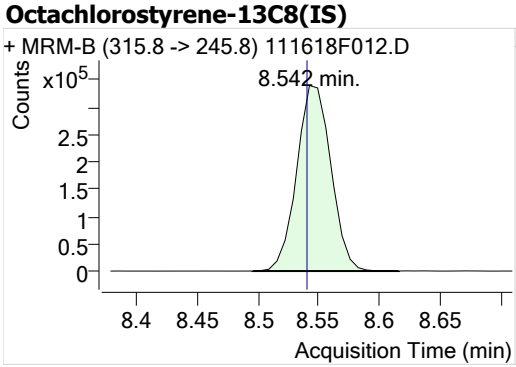
Aldrin-13C(IS)

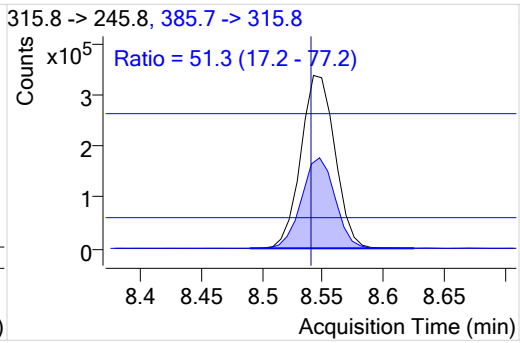


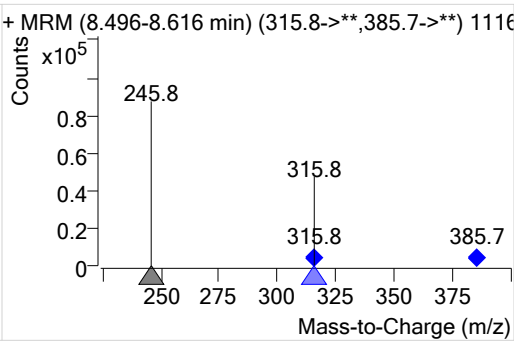




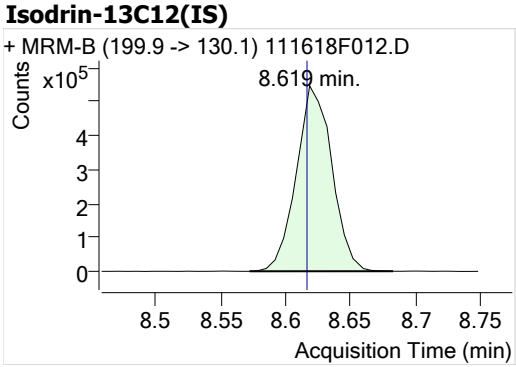
Octachlorostyrene-13C8(IS)

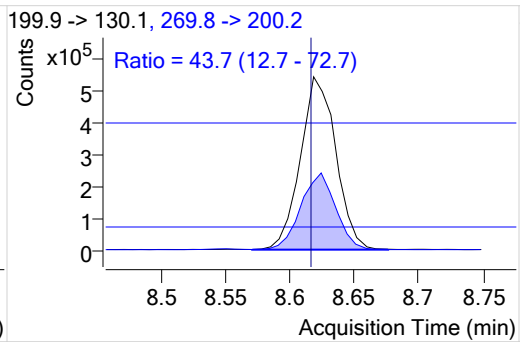


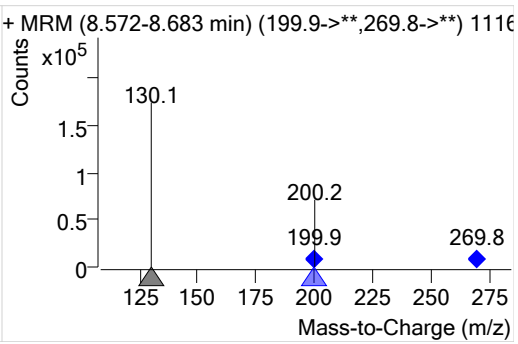




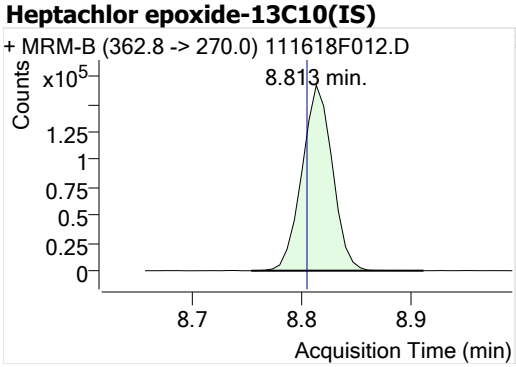
Isodrin-13C12(IS)

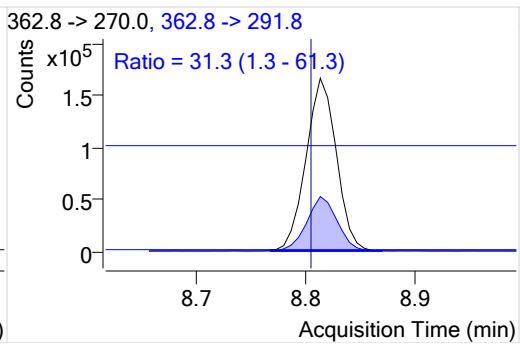


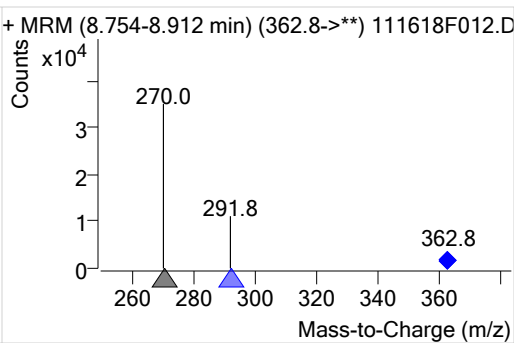




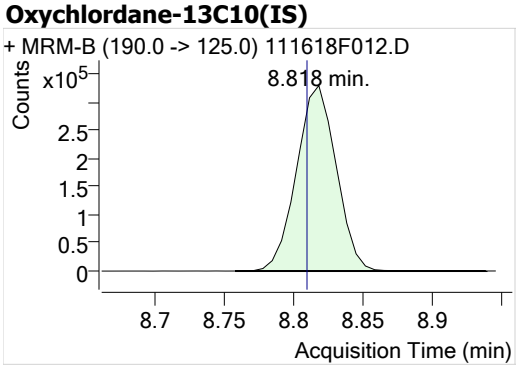
Heptachlor epoxide-13C10(IS)

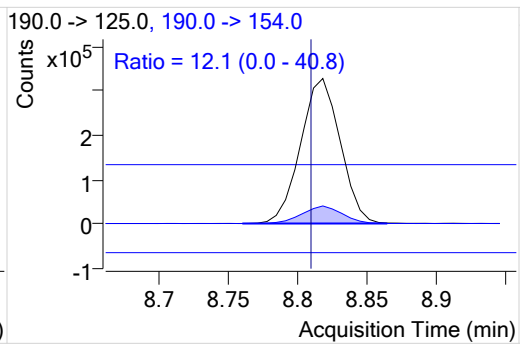


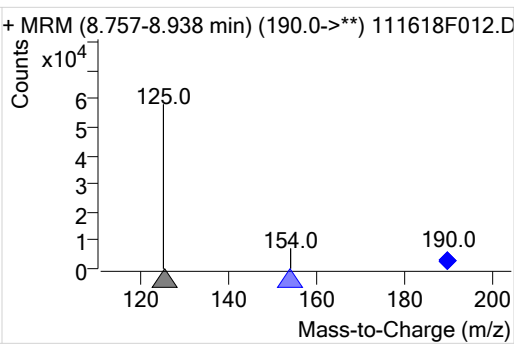




Oxychlordane-13C10(IS)

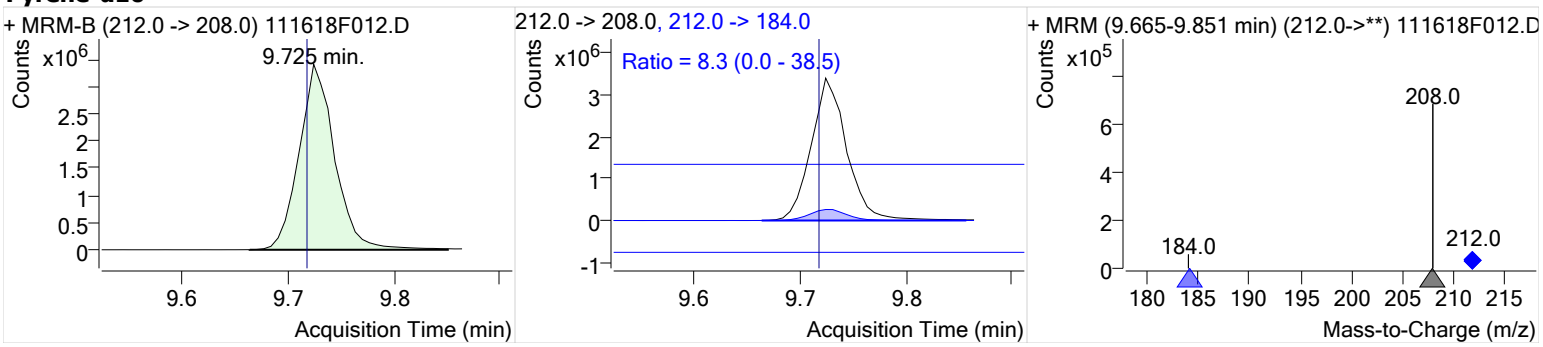




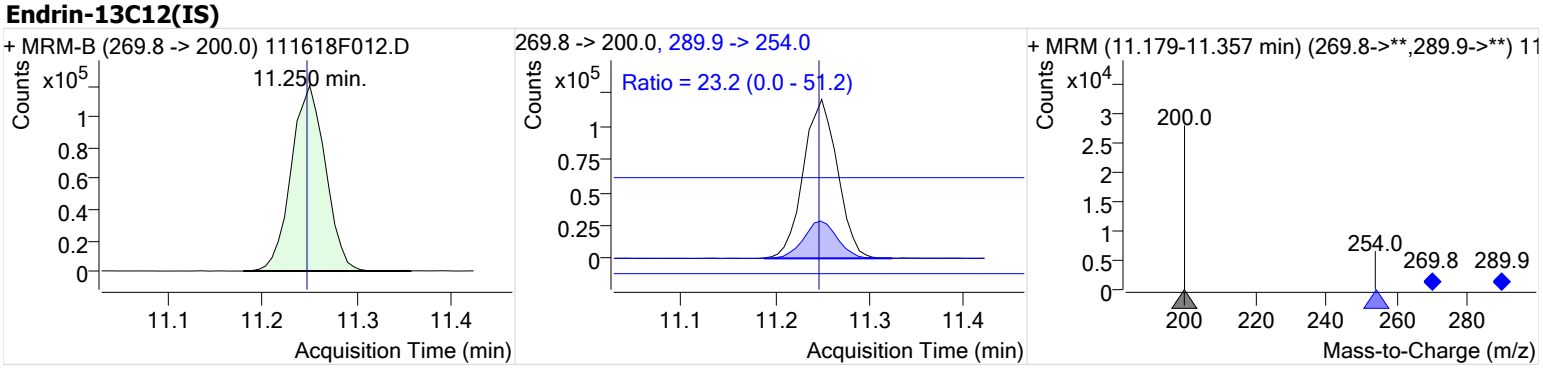


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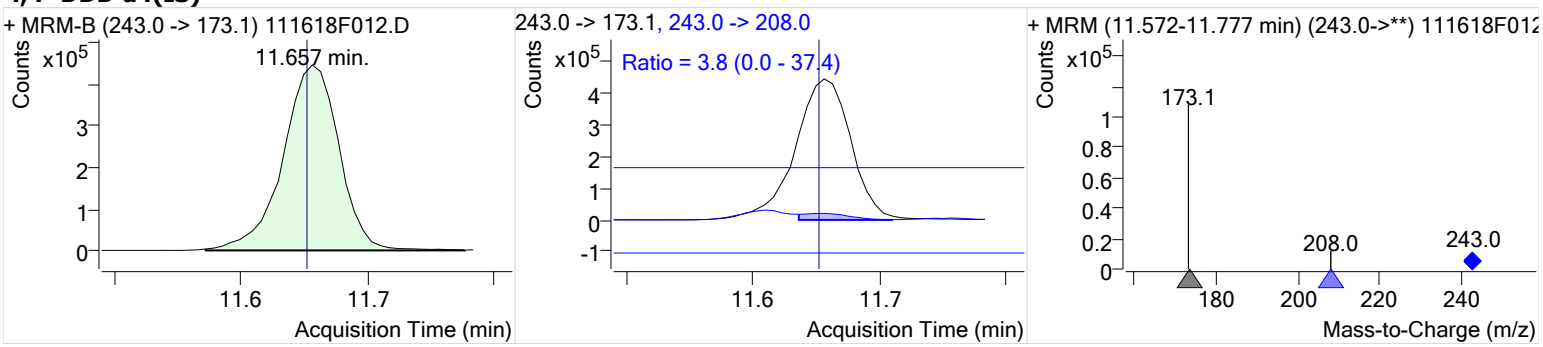
Pyrene-d10



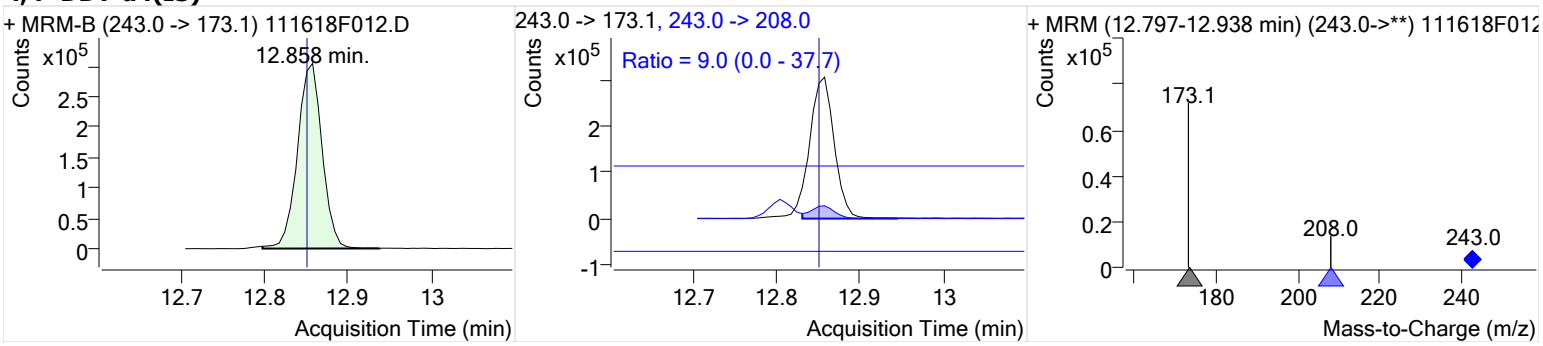
Endrin-13C12(IS)



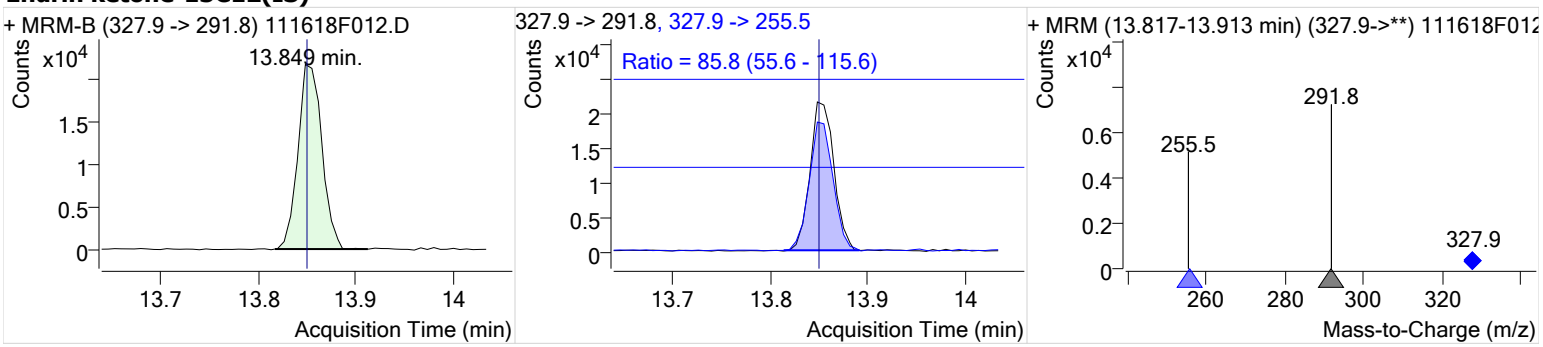
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

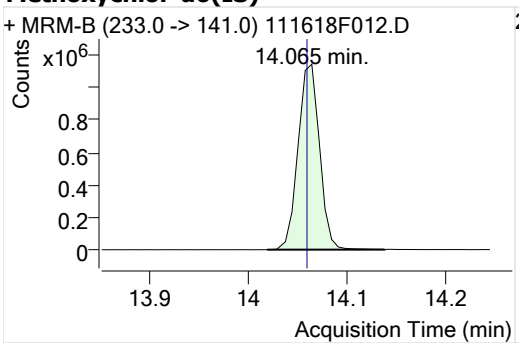


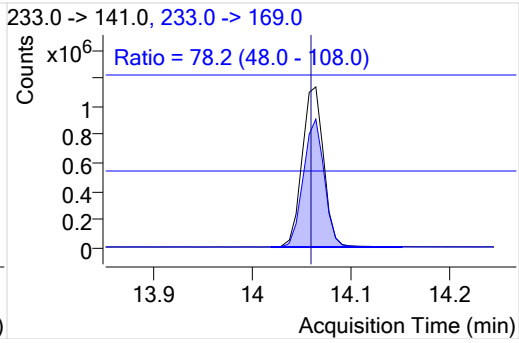
Endrin ketone-13C12(IS)

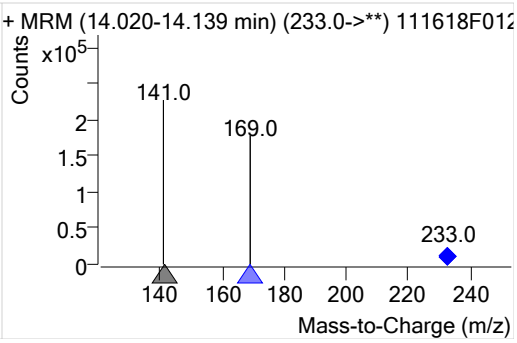


Quantitative Analysis Sample Report

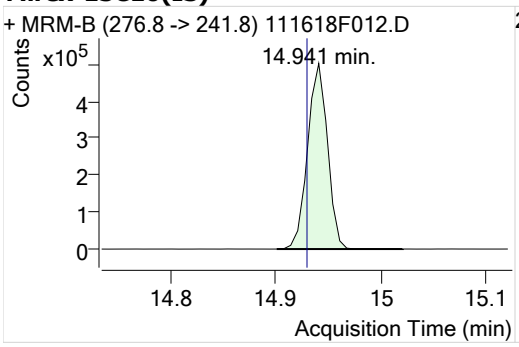
Methoxychlor-d6(IS)

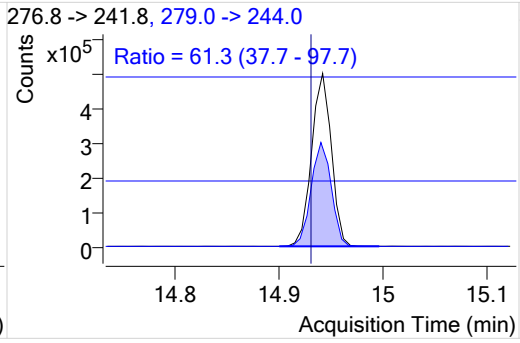


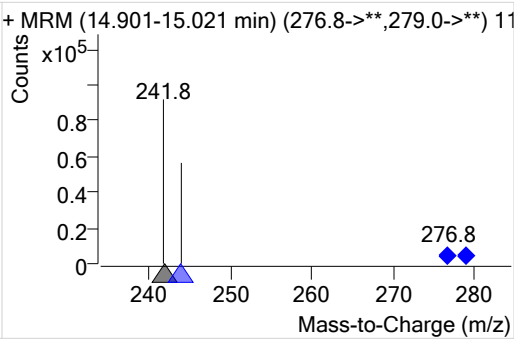




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F013.D	**Vial**	9
Acq. Date-Time	11/16/2018 2:50:39 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 40ng/mL SVM59-48G	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.679	289.8 -> 254.8	1296270	20.000 ng/ml	0.003
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2484079	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.220	276.8 -> 241.8	1067437	20.000 ng/ml	0.004
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1449412	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.959	269.8 -> 200.0	963207	20.000 ng/ml	0.005
Octachlorostyrene-13C8(IS)	8.550	315.8 -> 245.8	669396	20.000 ng/ml	0.009
Isodrin-13C12(IS)	8.626	199.9 -> 130.1	1049237	20.000 ng/ml	0.006
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	326569	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	664805	20.000 ng/ml	0.009
Pyrene-d10	9.732	212.0 -> 208.0	9159869	100.000 ng/ml	0.010
Endrin-13C12(IS)	11.250	269.8 -> 200.0	341729	20.000 ng/ml	0.003
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1695870	5.000 ng/ml	0.021
4,4'-DDT-d4(IS)	12.858	243.0 -> 173.1	759221	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	44033	20.000 ng/ml	0.002
Methoxychlor-d6(IS)	14.058	233.0 -> 141.0	2019650	20.000 ng/ml	0.002
Mirex-13C10(IS)	14.941	276.8 -> 241.8	755843	5.000 ng/ml	0.010

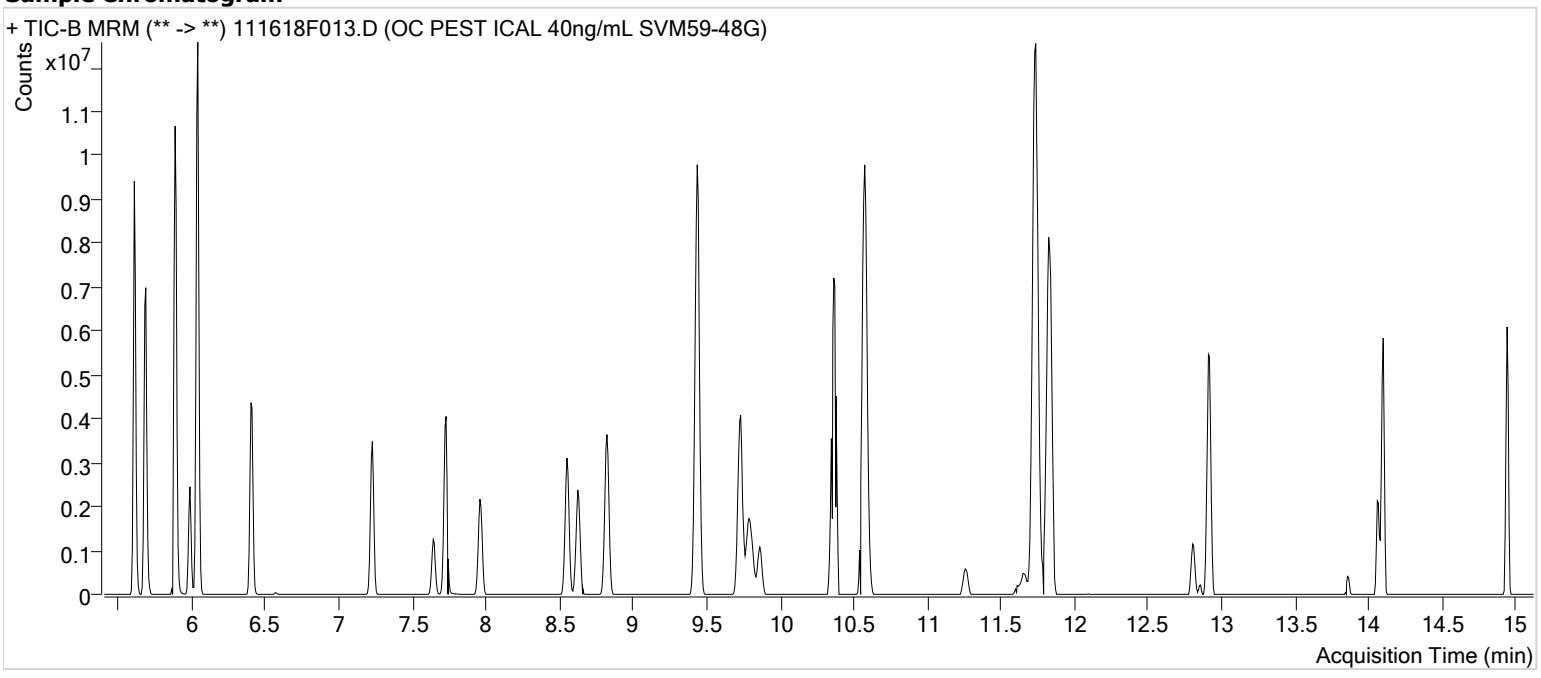
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1296270	19.225 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.1 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2484079	19.442 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.2 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1067437	20.204 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.0 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1449412	21.867 ng/ml	
		Spiked Amount =	20.0	Recovery =	*109.3 %*
Aldrin-13C	7.952	269.8 -> 200.0	963028	19.957 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.8 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	669396	19.374 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.9 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1049237	19.928 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.6 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	326569	19.399 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.0 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	664805	19.432 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.2 %*
Endrin-13C12	11.247	269.8 -> 200.0	341729	20.413 ng/ml	
		Spiked Amount =	20.0	Recovery =	*102.1 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1695870	5.213 ng/ml	
		Spiked Amount =	5.0	Recovery =	*104.3 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	759221	5.223 ng/ml	
		Spiked Amount =	5.0	Recovery =	*104.5 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	44033	21.242 ng/ml	
		Spiked Amount =	20.0	Recovery =	*106.2 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	2019650	21.028 ng/ml	
		Spiked Amount =	20.0	Recovery =	*105.1 %*
Mirex-13C10	14.930	276.8 -> 241.8	755843	5.386 ng/ml	
		Spiked Amount =	5.0	Recovery =	*107.7 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	6669112	37.545	ng/ml	98
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	4339323	36.981	ng/ml	99
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	8475281	37.713	ng/ml	98
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	9692094	37.301	ng/ml	96
δ-BHC	γ-BHC-d6(IS)	6.404	181.1 -> 145.1	4014836	38.768	ng/ml	99
Heptachlor	Heptachlor-13C10(IS)	7.230	271.7 -> 236.9	2331961	37.691	ng/ml	98
Chorpyrifos	Chorpyrifos-d10(IS)	7.731	196.9 -> 169.0	3310703	32.358	ng/ml	97
Aldrin	Aldrin-13C(IS)	7.962	254.9 -> 220.0	1217467	37.995	ng/ml	88
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.549	342.8 -> 307.8	3305184	38.367	ng/ml	96
Isodrin	Isodrin-13C12(IS)	8.634	193.0 -> 123.0	1949428	36.212	ng/ml	91
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.822	352.8 -> 262.9	716870	38.574	ng/ml	96
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	3354571	37.321	ng/ml	100
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	1213672	37.888	ng/ml	96
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	11281394	34.990	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.788	271.8 -> 236.9	3006107	37.563	ng/ml	96
Endosulfan I	Endrin-13C12(IS)	9.811	206.9 -> 172.0	745260	34.790	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	2060627	40.009	ng/ml	96
4,4' -DDE	4,4'-DDD d4(IS)	10.364	246.0 -> 176.2	11249650	38.064	ng/ml	100
2,4'-DDD	4,4'-DDD d4(IS)	10.578	235.0 -> 165.1	14206324	38.930	ng/ml	97
Dieldrin	Endrin-13C12(IS)	10.594	262.9 -> 193.0	979853	37.592	ng/ml	92
Endosulfan II	Endrin-13C12(IS)	11.260	206.9 -> 172.0	149296	39.425	ng/ml	93
Endrin	Endrin-13C12(IS)	11.265	262.8 -> 193.0	867099	36.974	ng/ml	98
4,4'-DDD	4,4'-DDD d4(IS)	11.736	235.0 -> 165.1	20224672	36.928	ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	778575	39.906	ng/ml	85
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	13076908	38.413	ng/ml	98
Endrin aldehyde	Endrin-13C12(IS)	12.098	249.9 -> 214.9	245712	37.140	ng/ml	98
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	1532788	38.181	ng/ml	96
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	6593071	37.529	ng/ml	100
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	541800	34.956	ng/ml	93
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	4754362	36.891	ng/ml	98
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	5951226	38.736	ng/ml	95

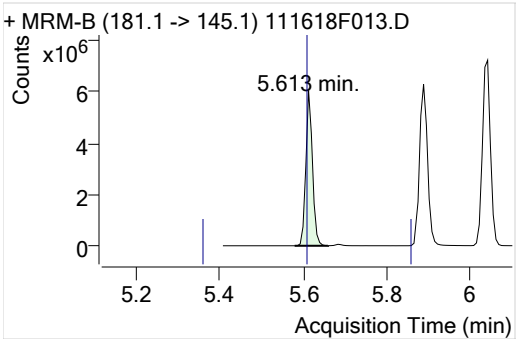
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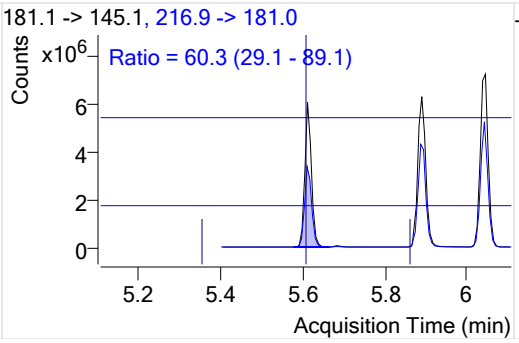
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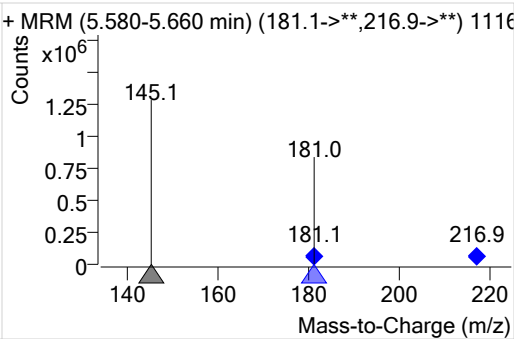


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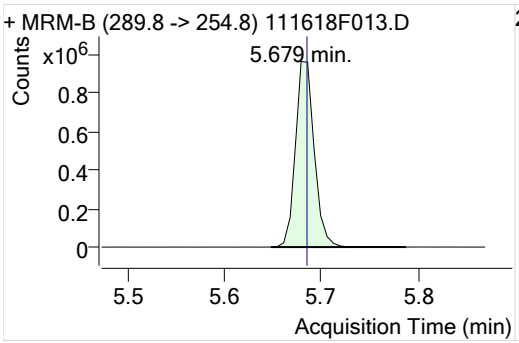
α-BHC

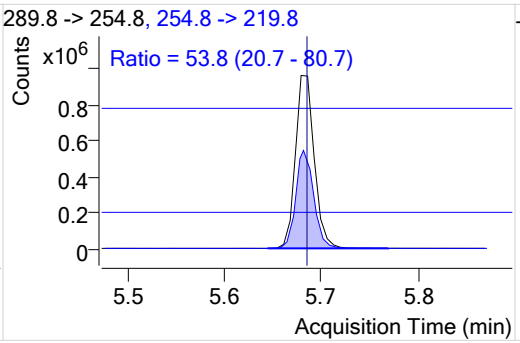


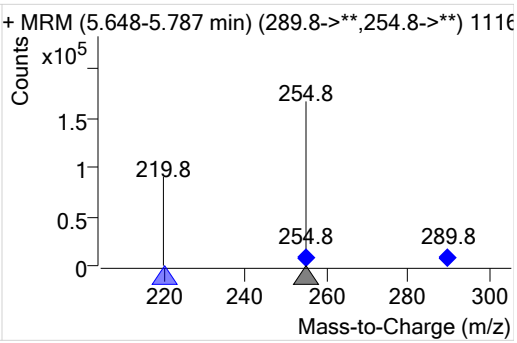




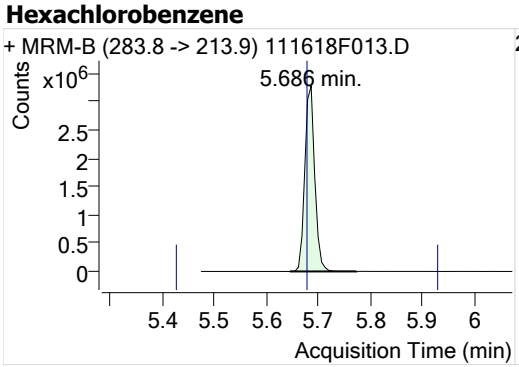
Hexachlorobenzene-13C6

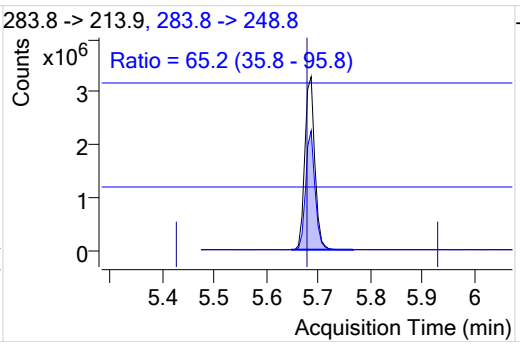


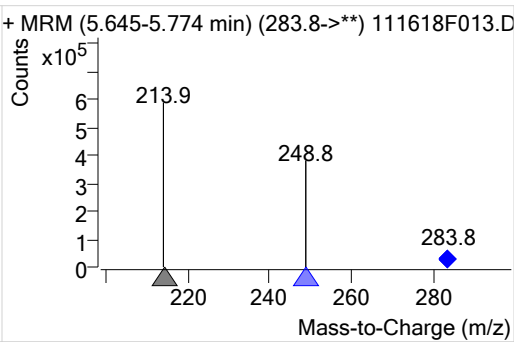




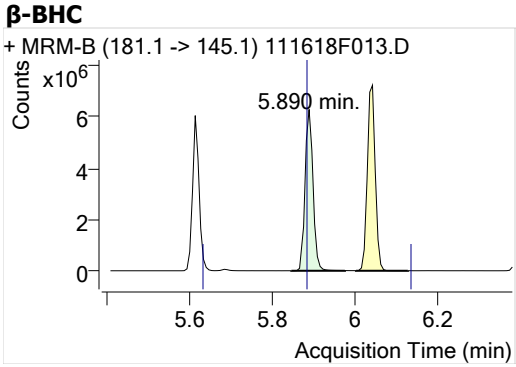
Hexachlorobenzene

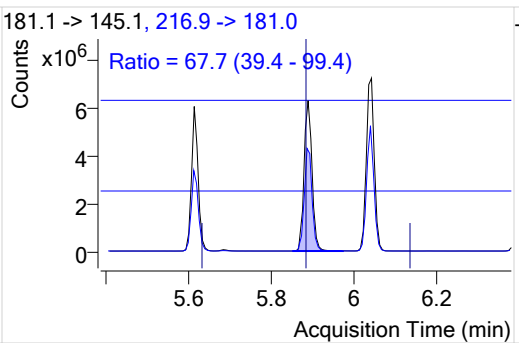


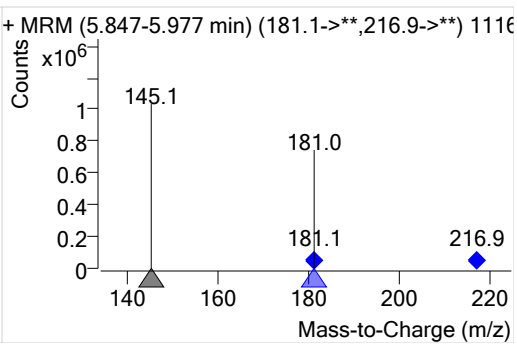




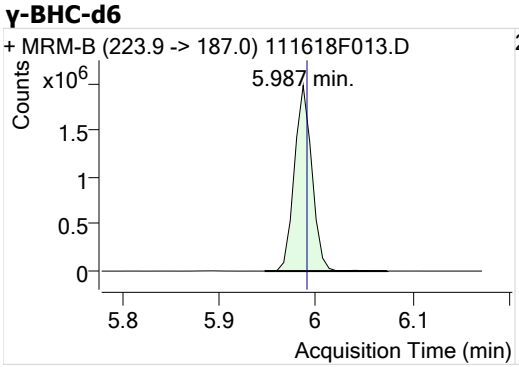
β-BHC

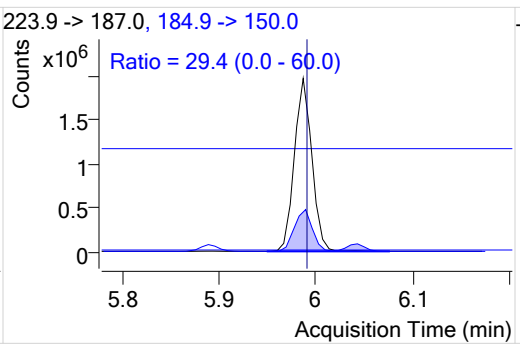


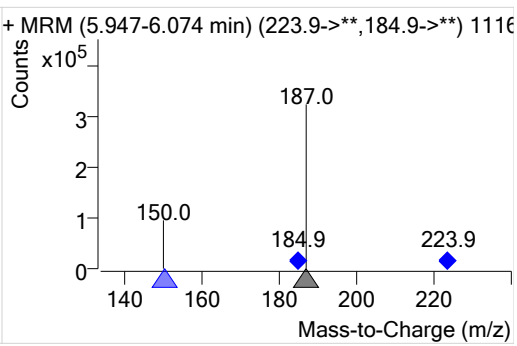




γ-BHC-d6

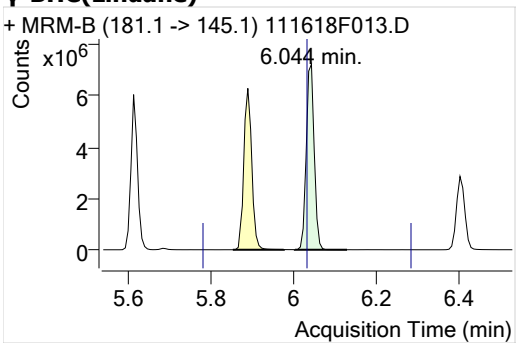


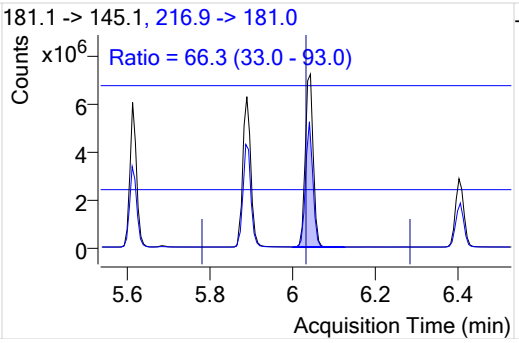


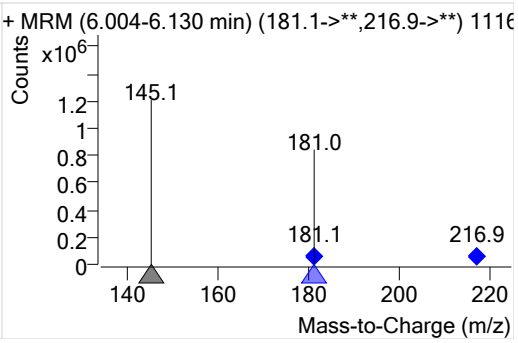


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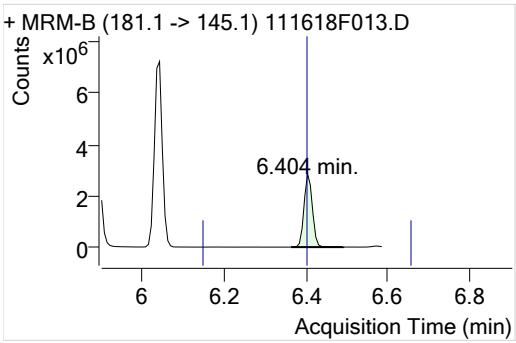
γ-BHC(Lindane)

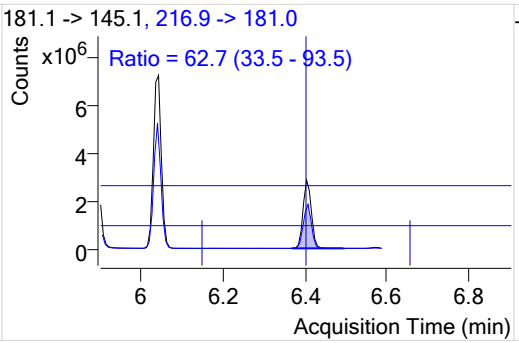


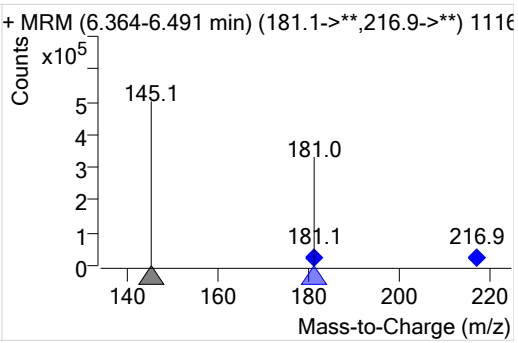




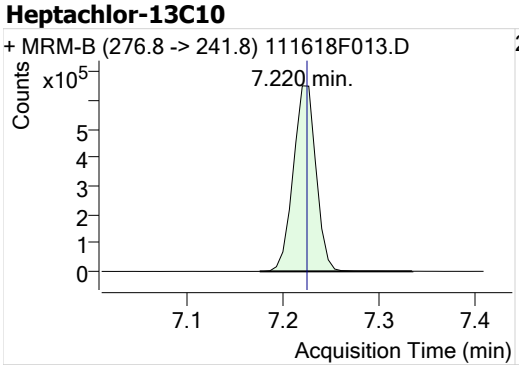
δ-BHC

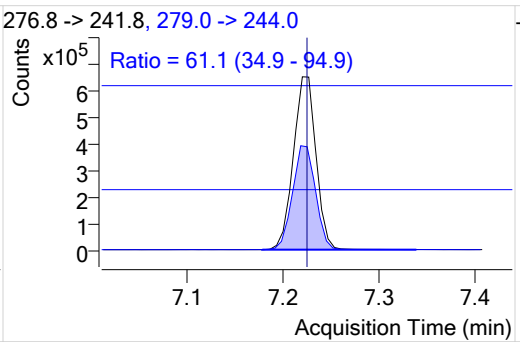


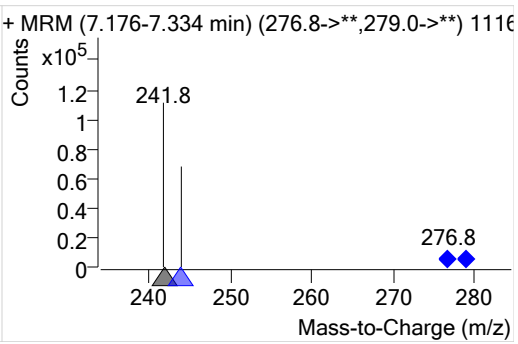




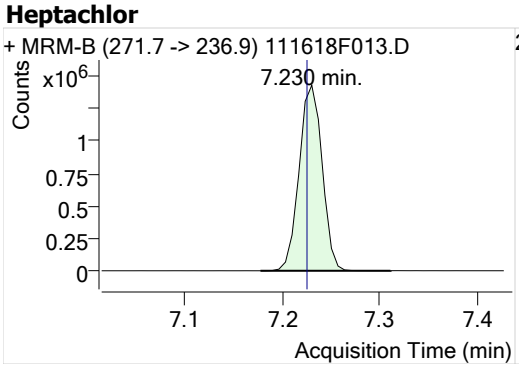
Heptachlor-13C10

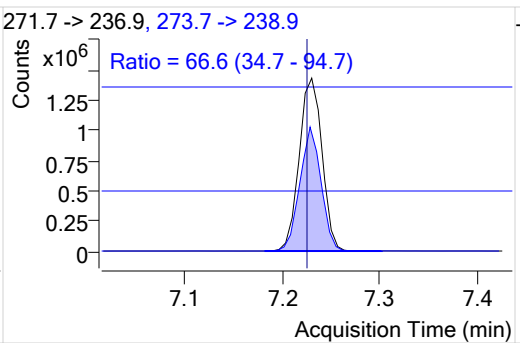


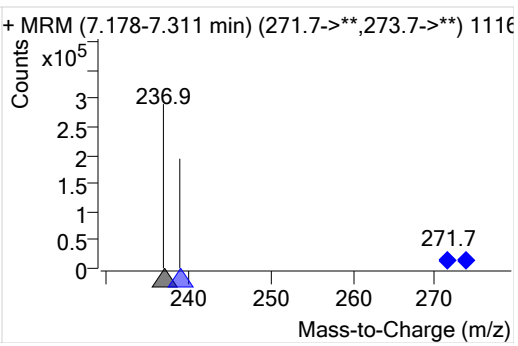




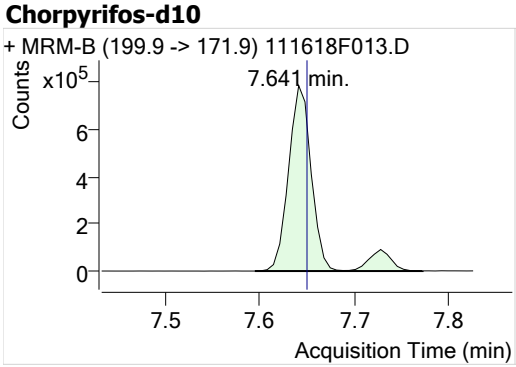
Heptachlor

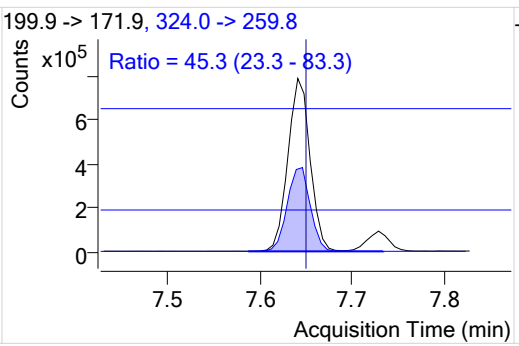


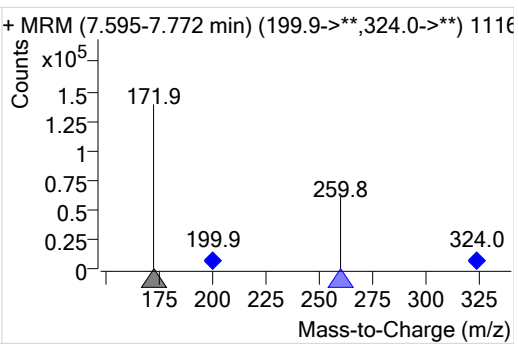




Chorpyrifos-d10

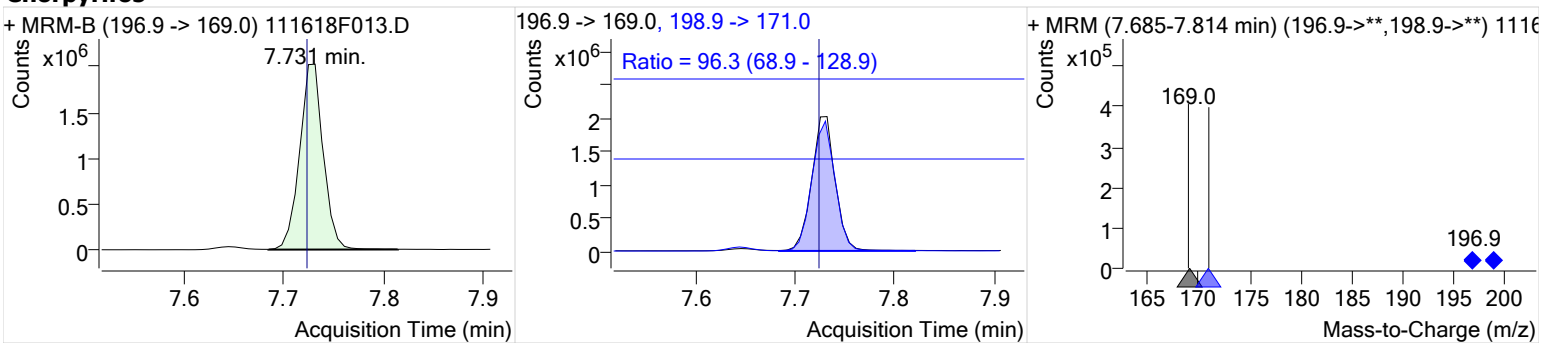




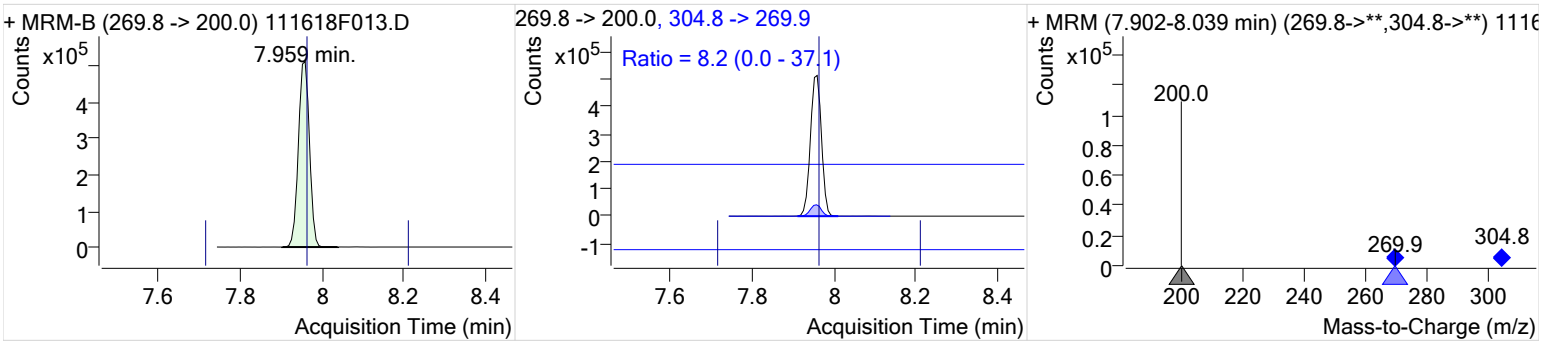


Quantitative Analysis Sample Report

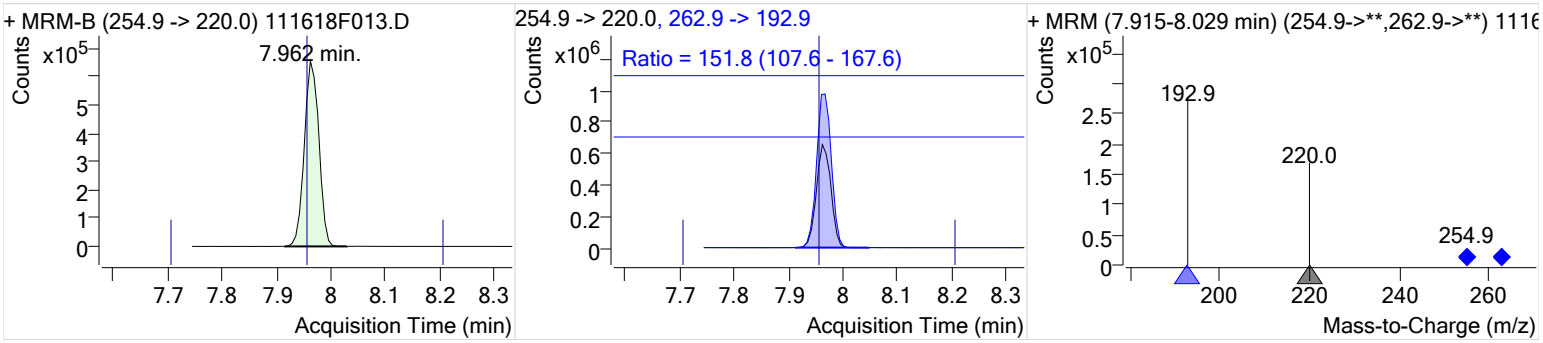
Chorpyrifos



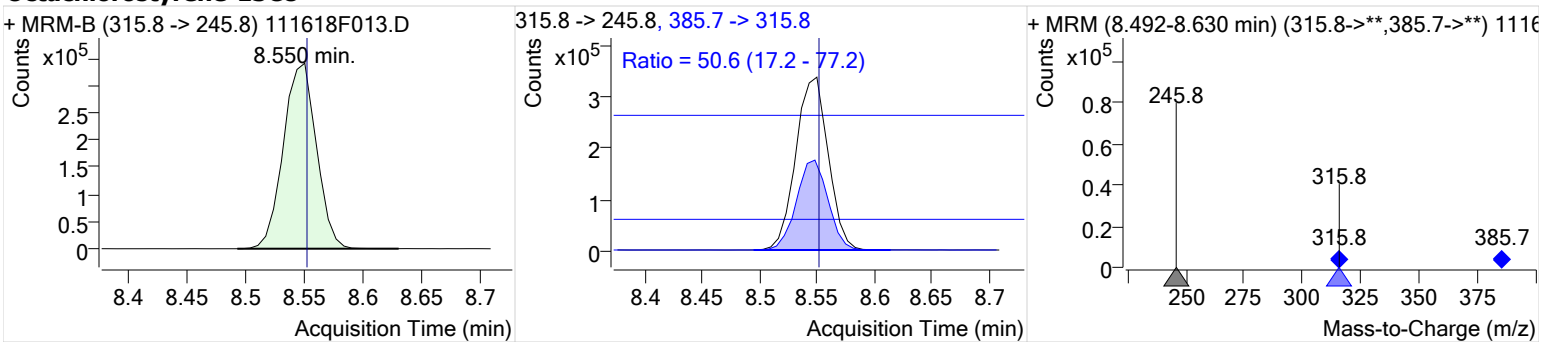
Aldrin-13C



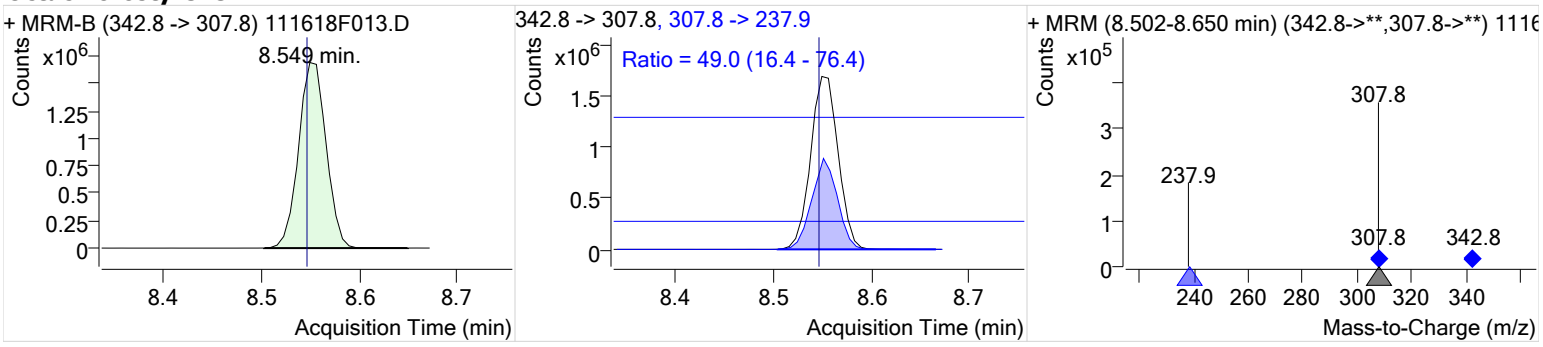
Aldrin



Octachlorostyrene-13C8

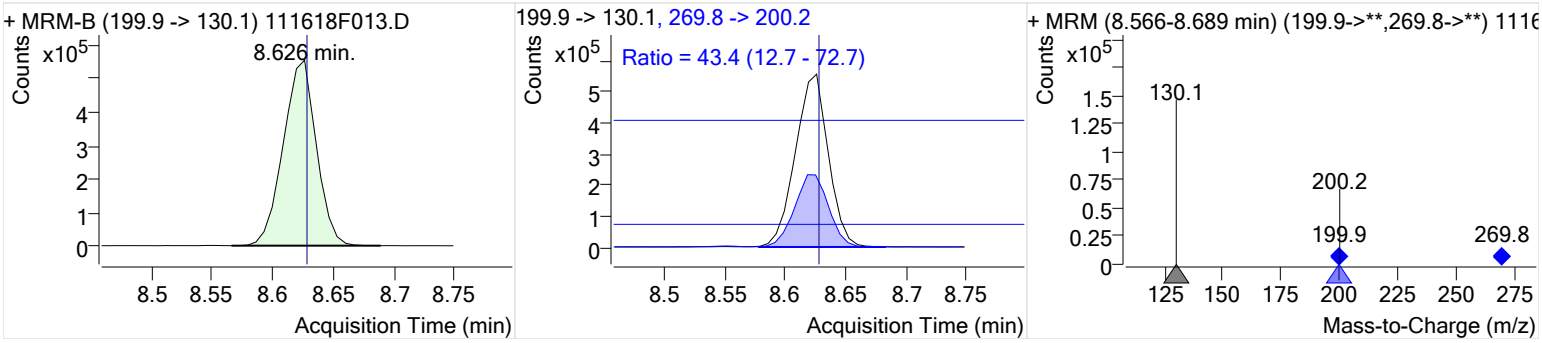


Octachlorostyrene

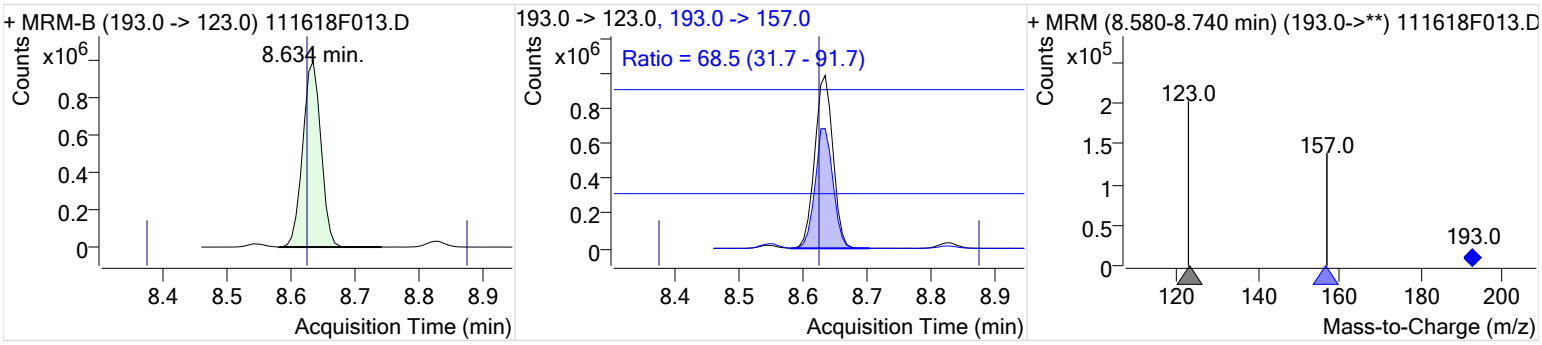


Quantitative Analysis Sample Report

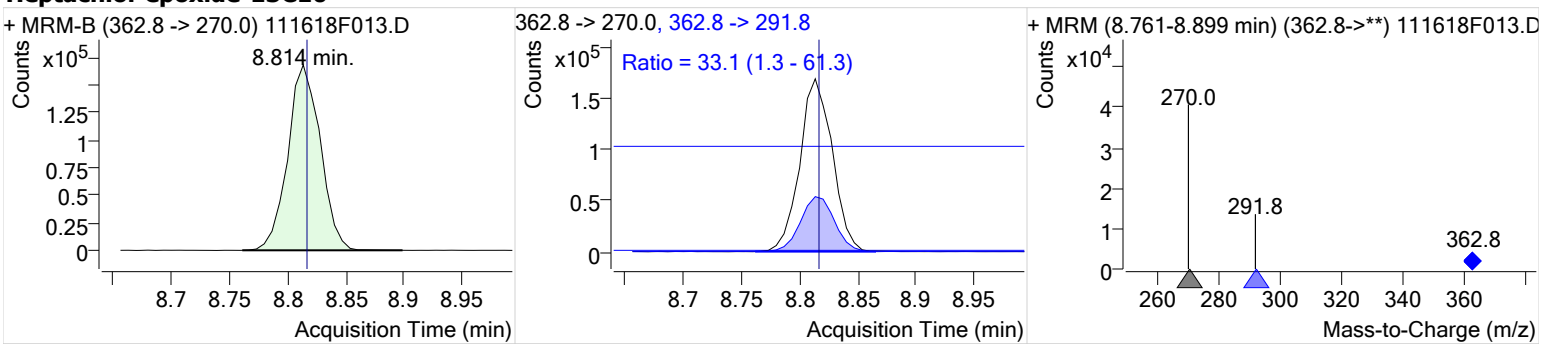
Isodrin-13C12



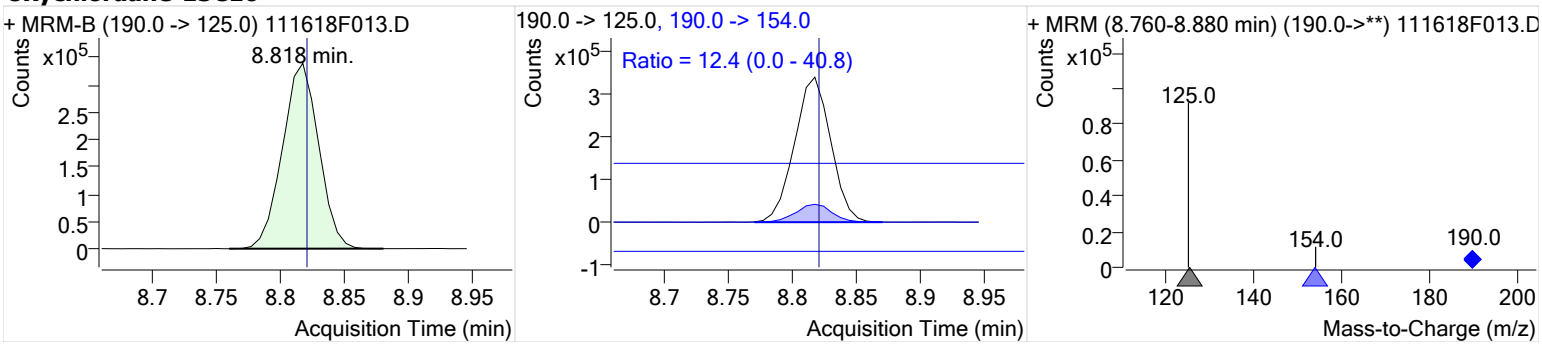
Isodrin



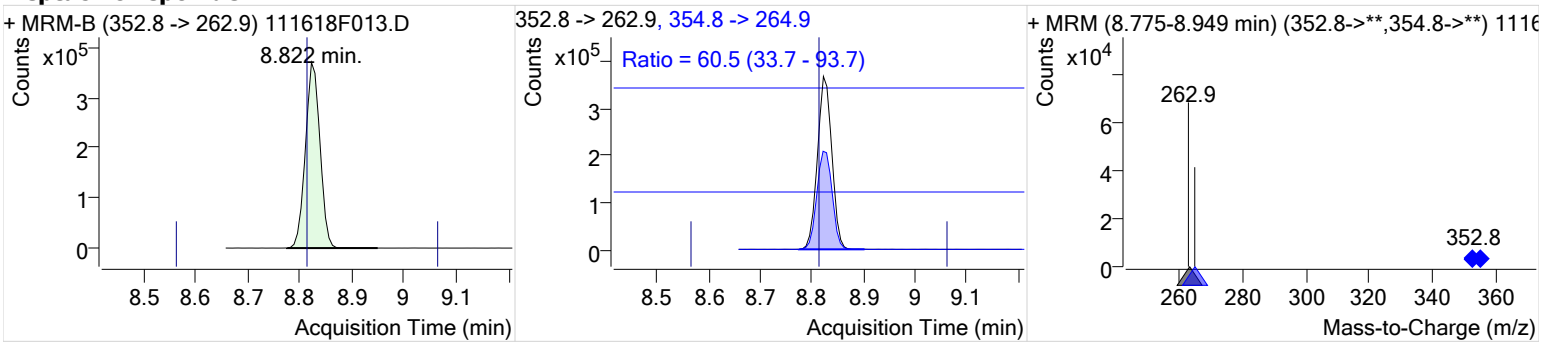
Heptachlor epoxide-13C10



Oxychlordane-13C10

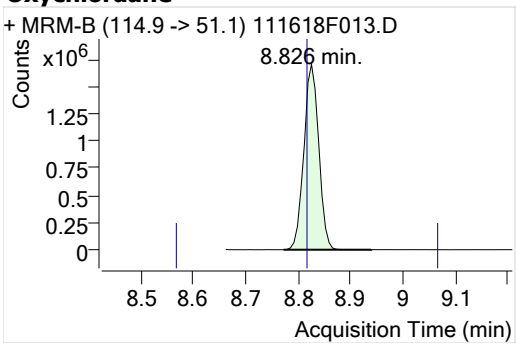


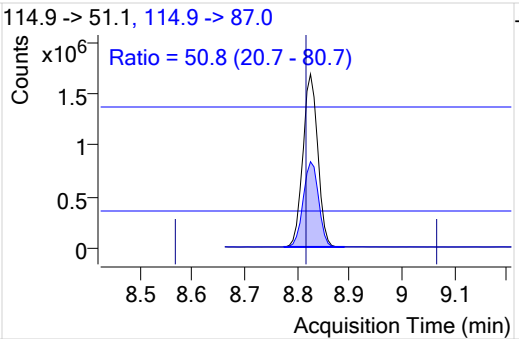
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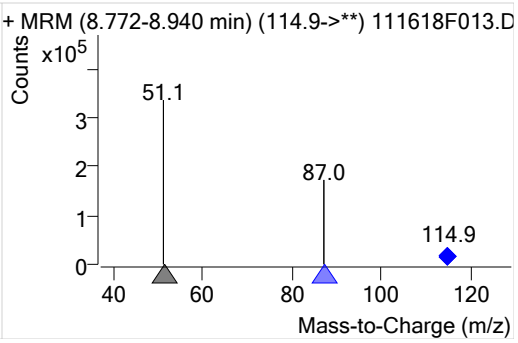


Quantitative Analysis Sample Report

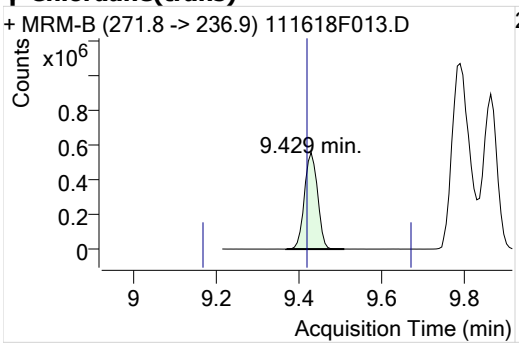
Oxychlordane

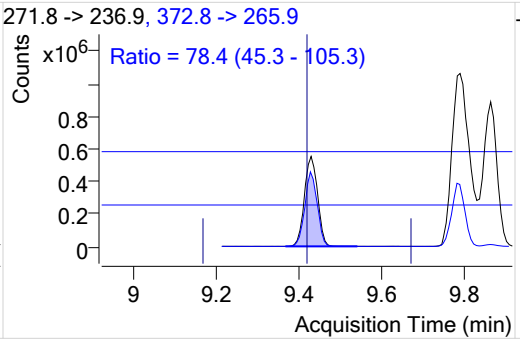


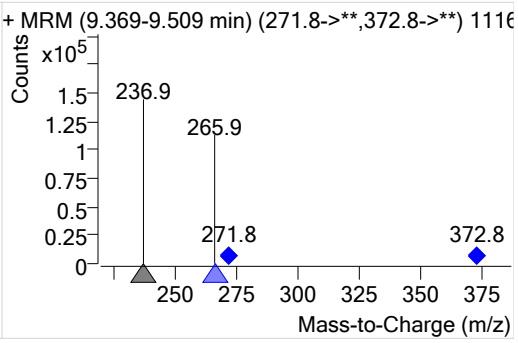




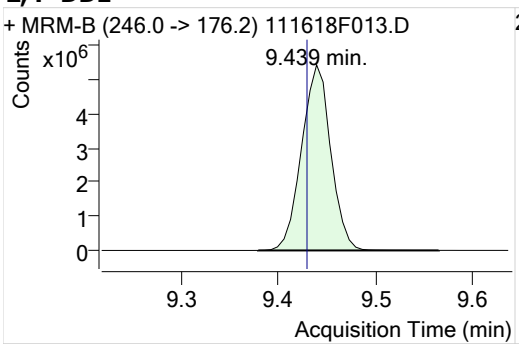
γ-Chlordane(trans)

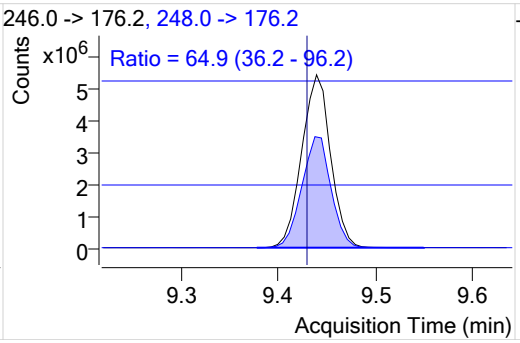


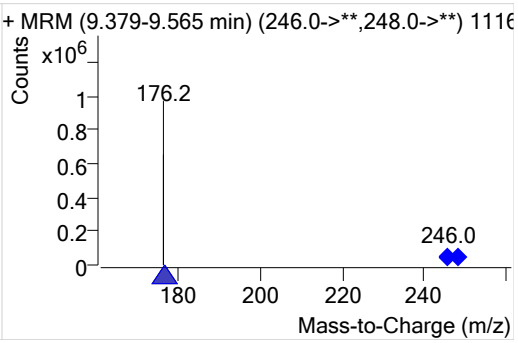




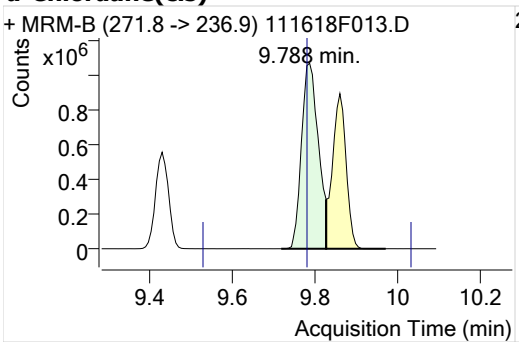
2,4'-DDE

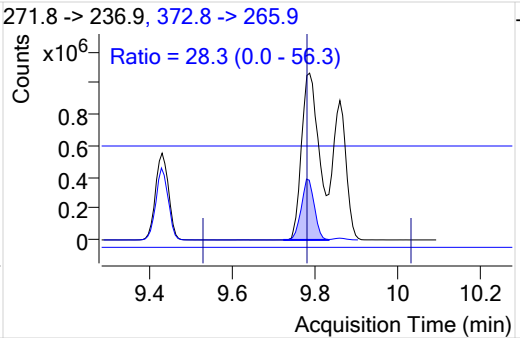


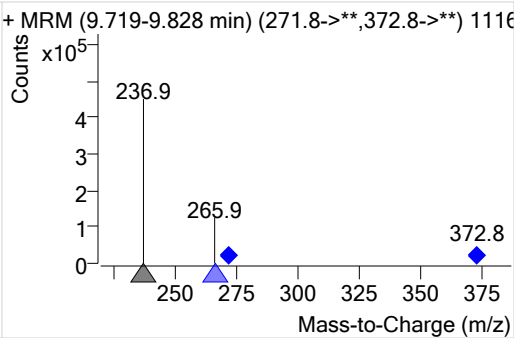




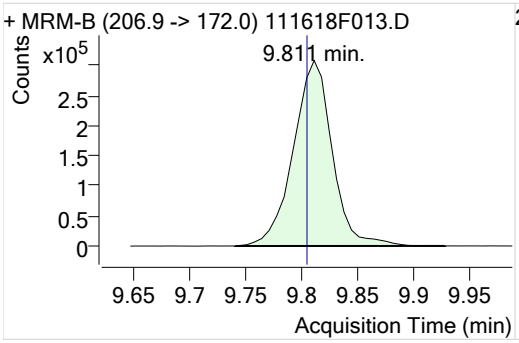
α-Chlordane(cis)

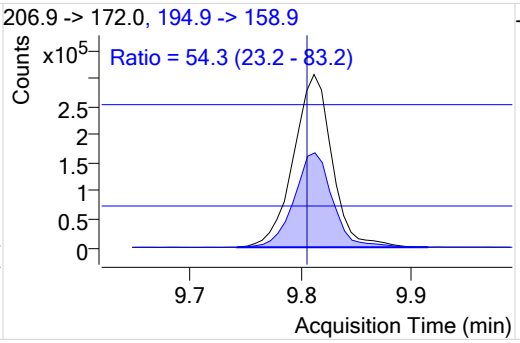


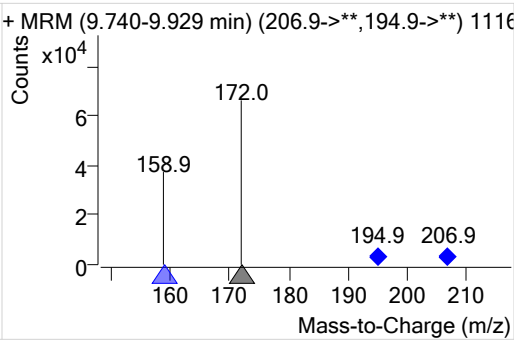




Endosulfan I

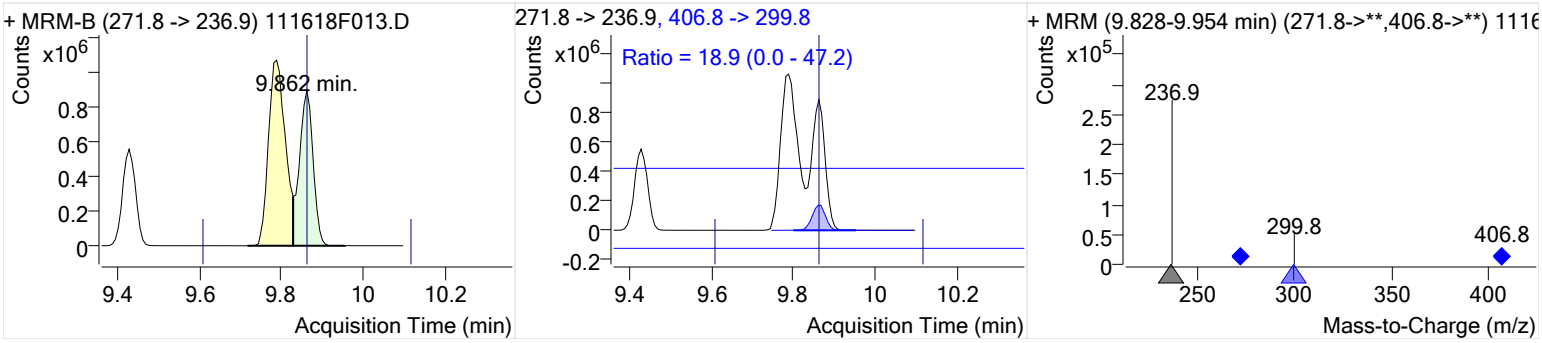




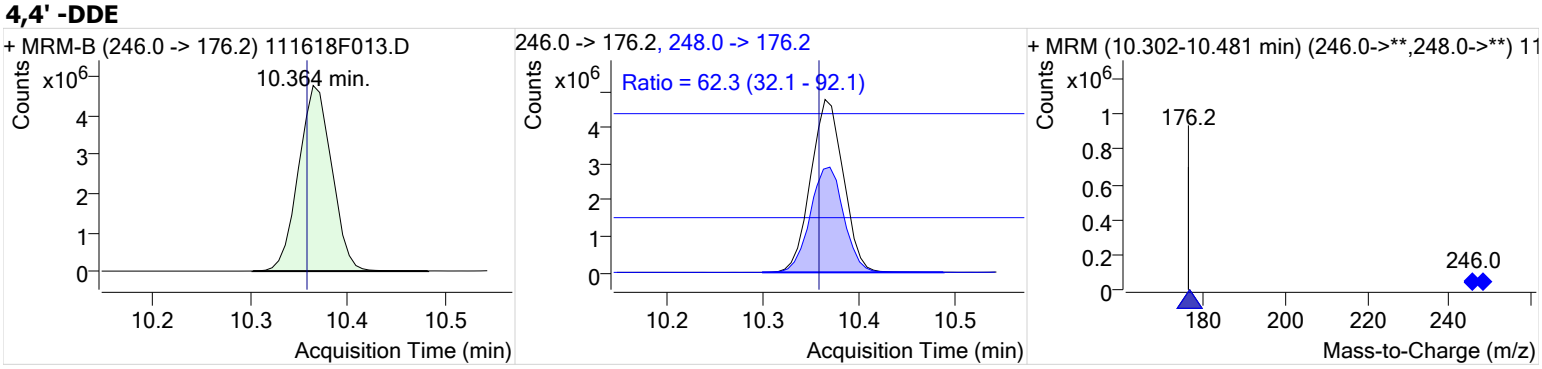


Quantitative Analysis Sample Report

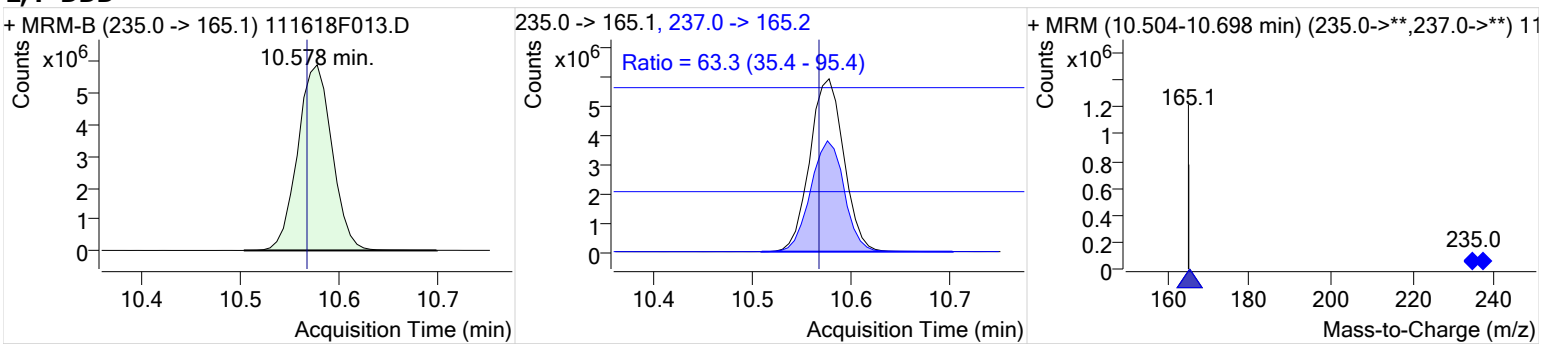
trans-Nanochlor



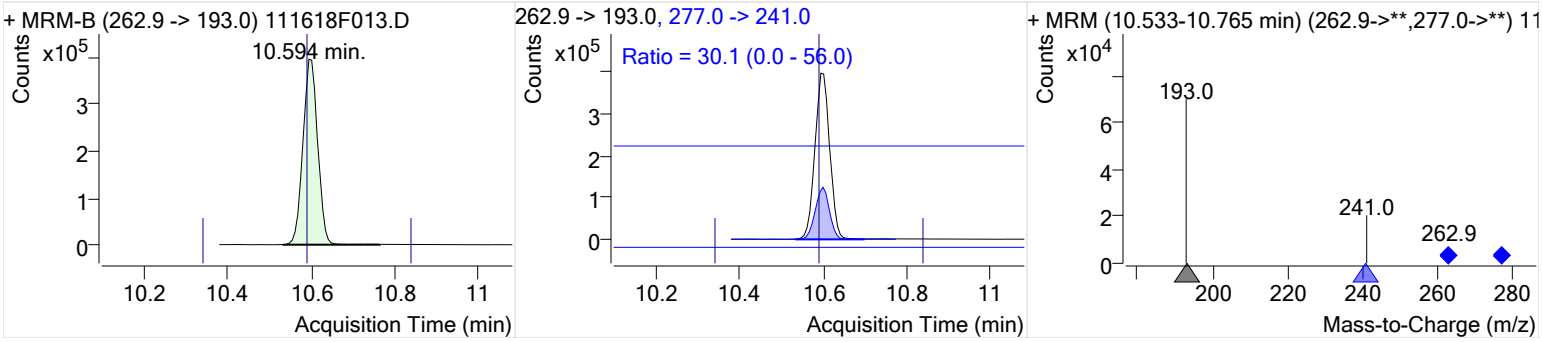
4,4' -DDE



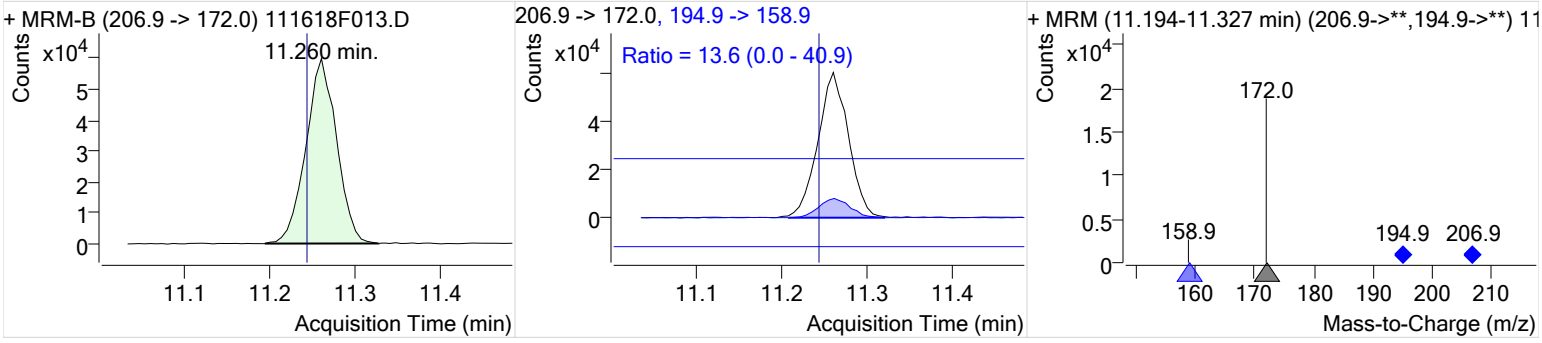
2,4'-DDD



Dieldrin

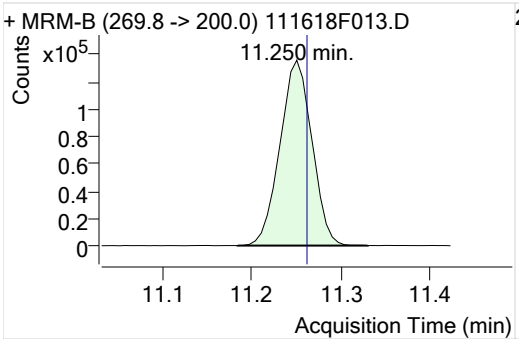


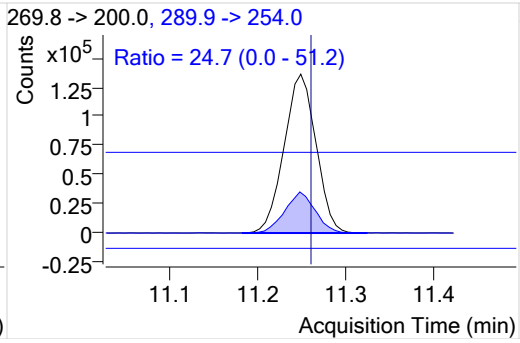
Endosulfan II

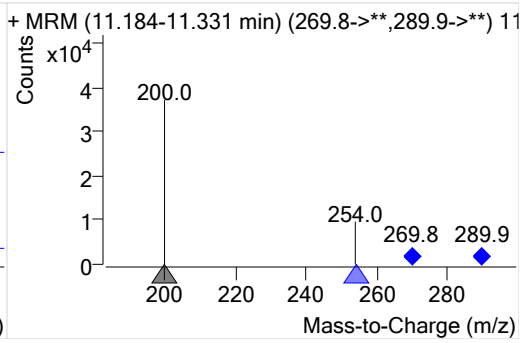


Quantitative Analysis Sample Report

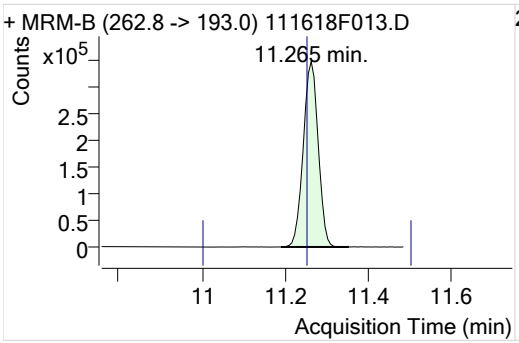
Endrin-13C12

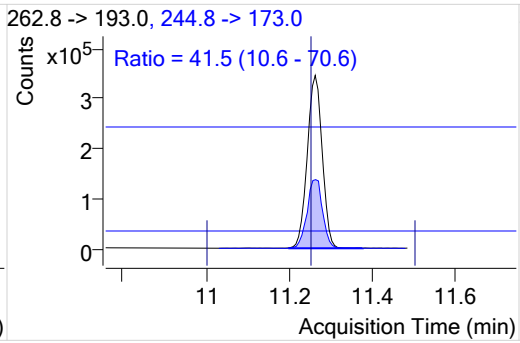


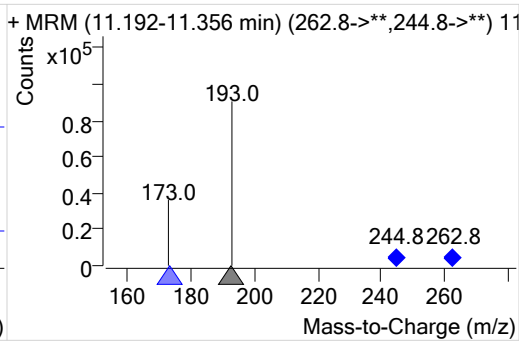




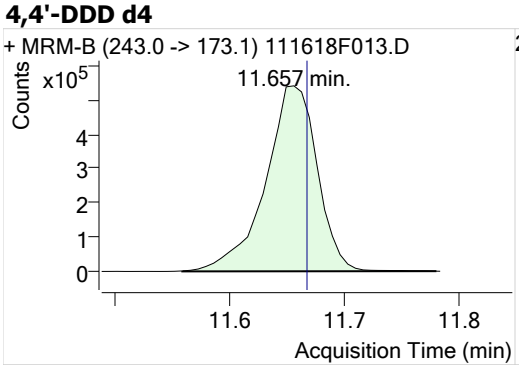
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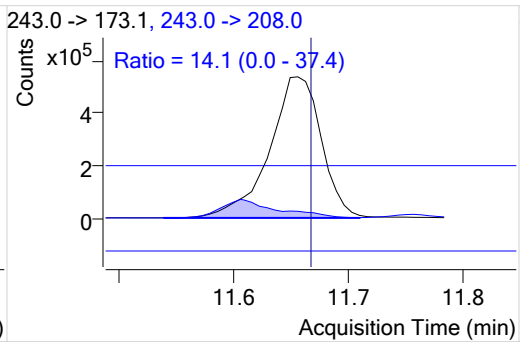


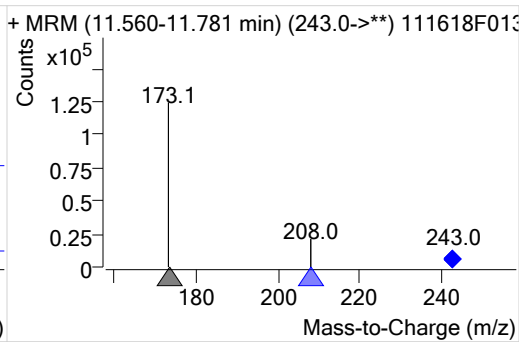




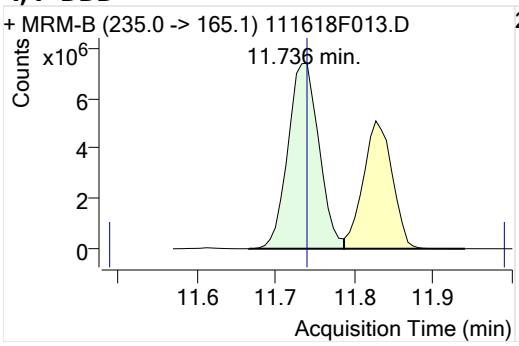
4,4'-DDD d4

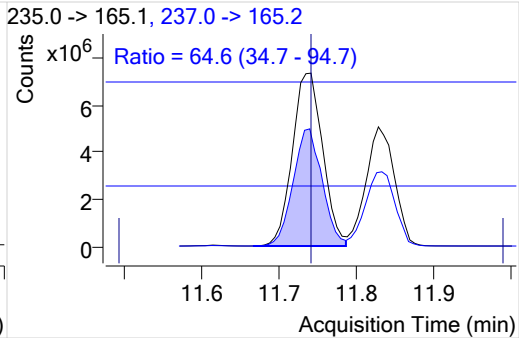


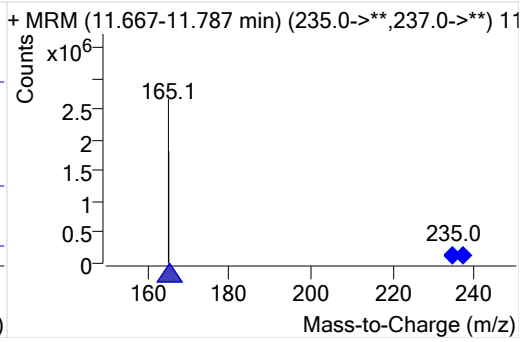




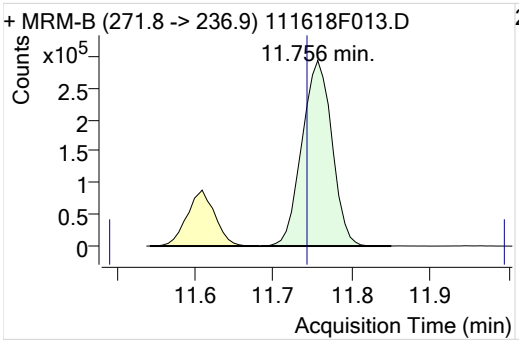
4,4'-DDD

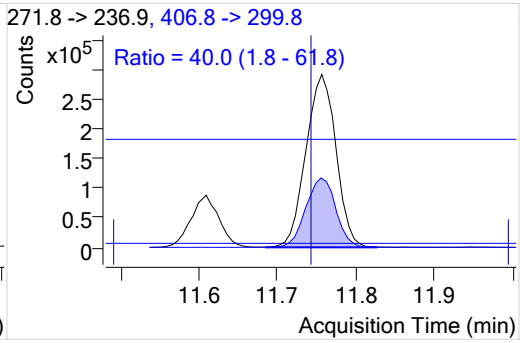


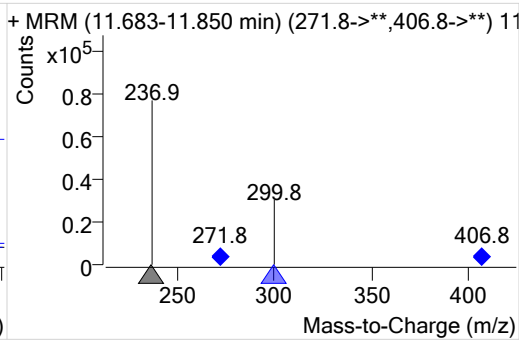




cis-Nonachlor

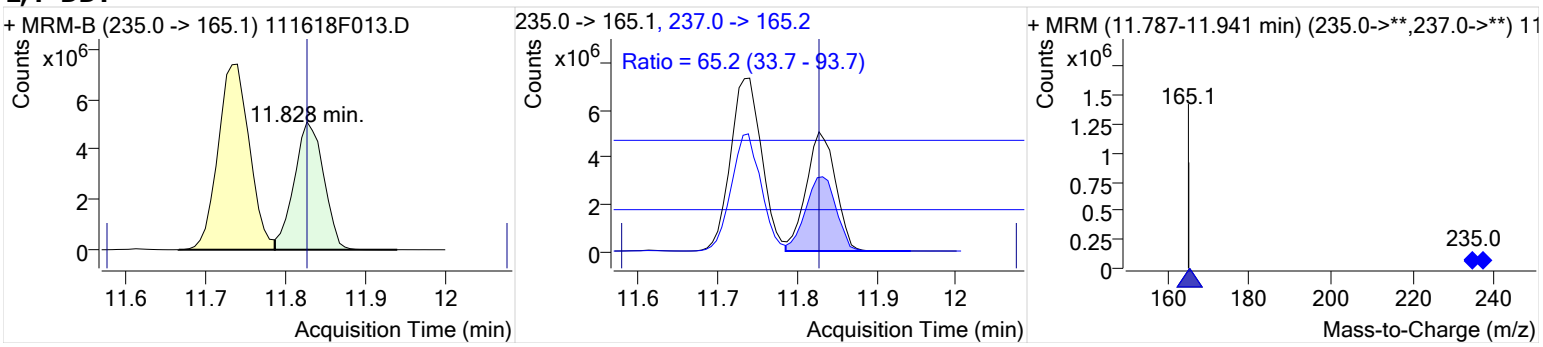




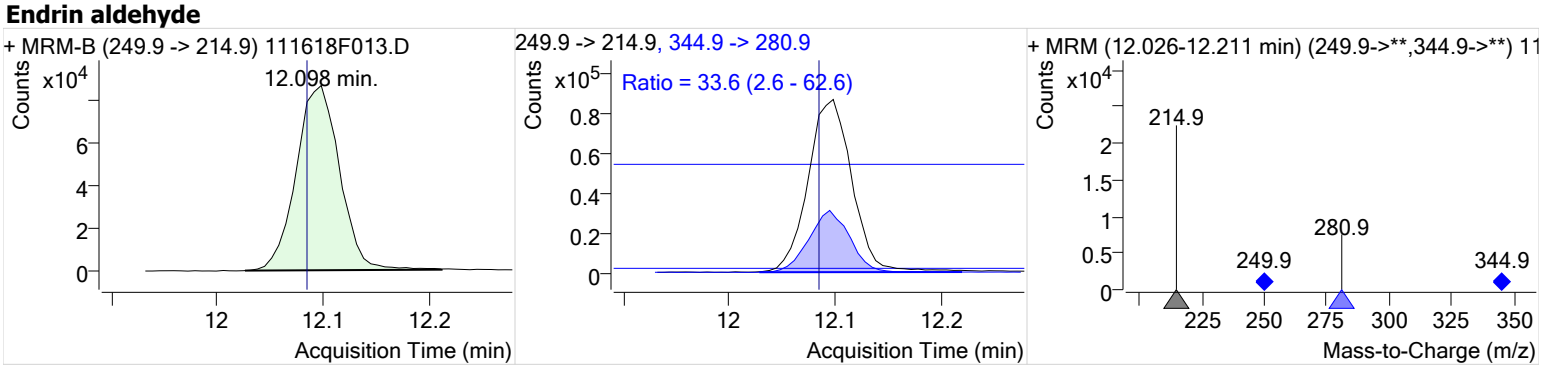


Quantitative Analysis Sample Report

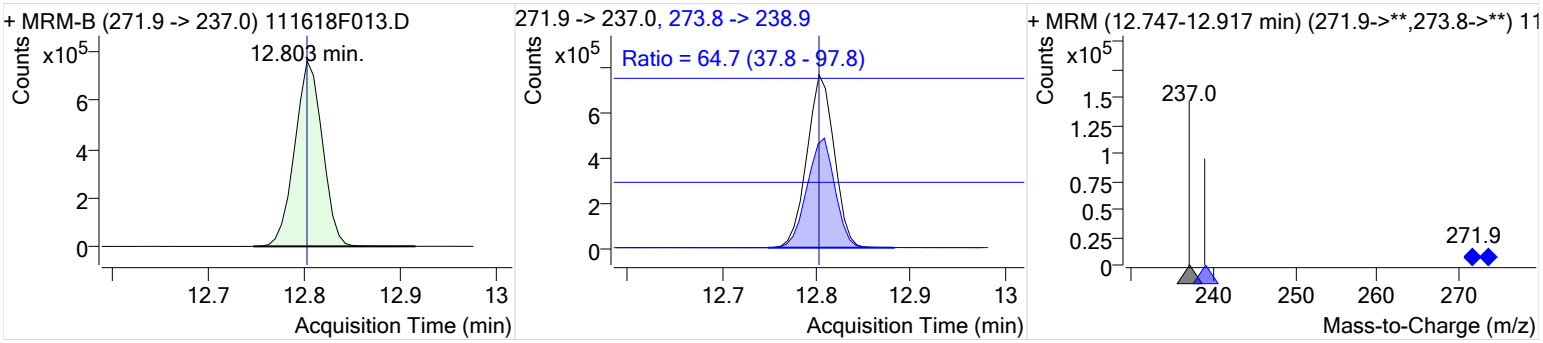
2,4'-DDT



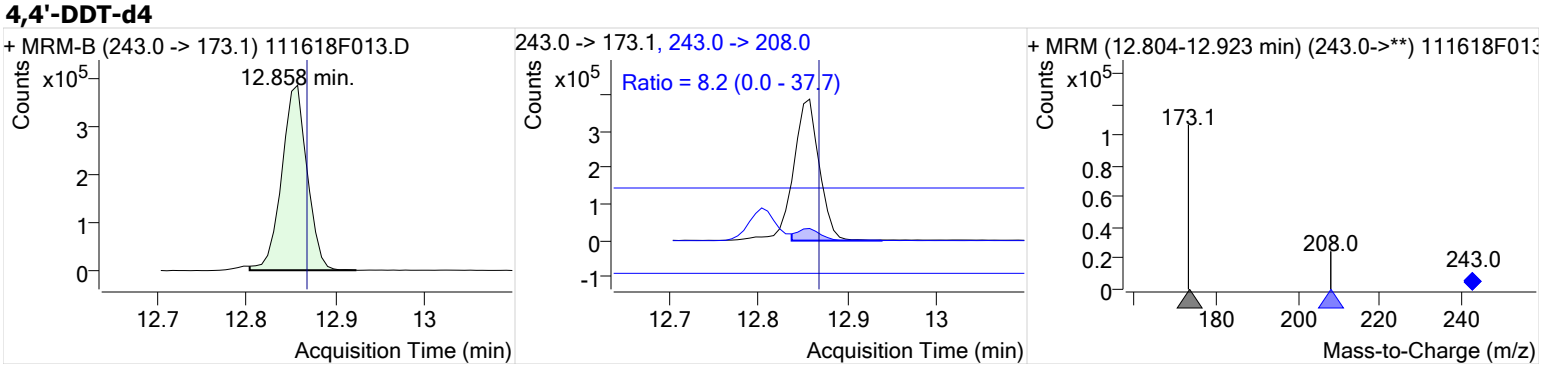
Endrin aldehyde



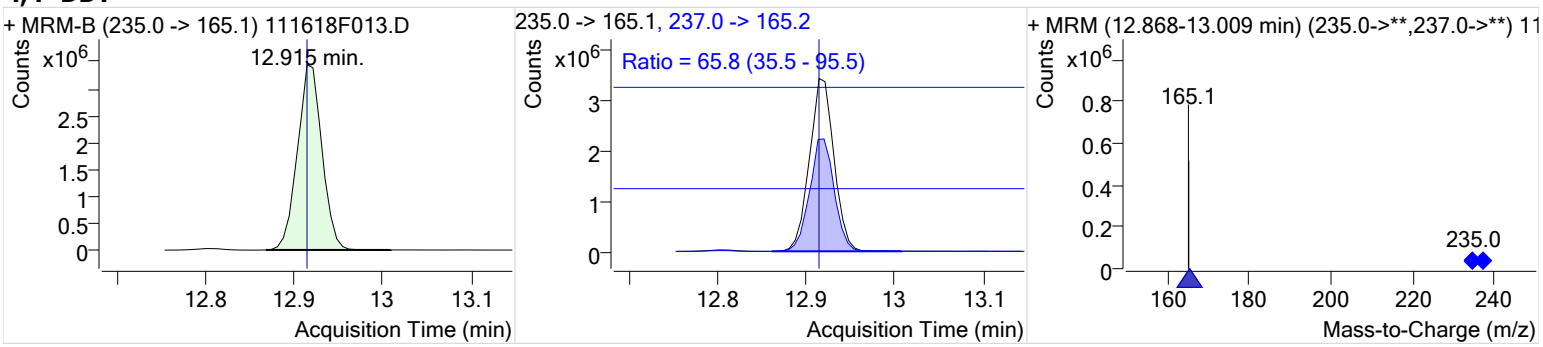
Endosulfan sulfate



4,4'-DDT-d4

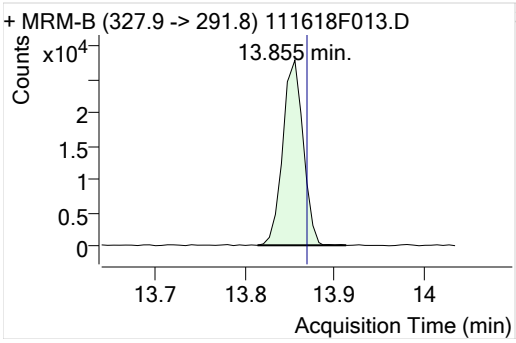


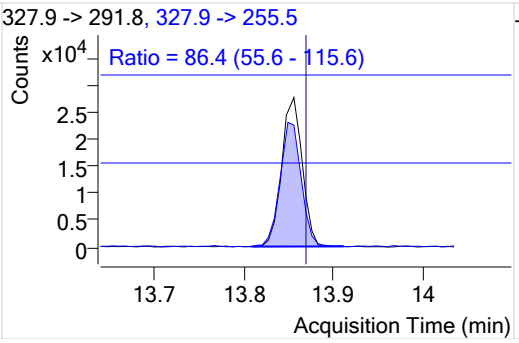
4,4'-DDT

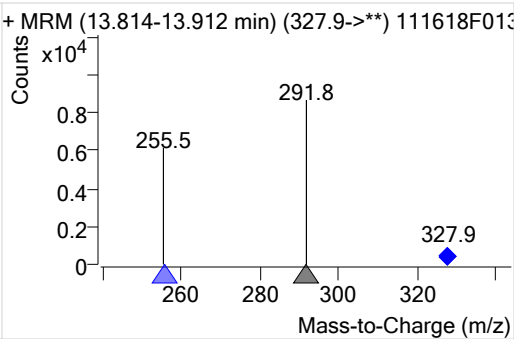


Quantitative Analysis Sample Report

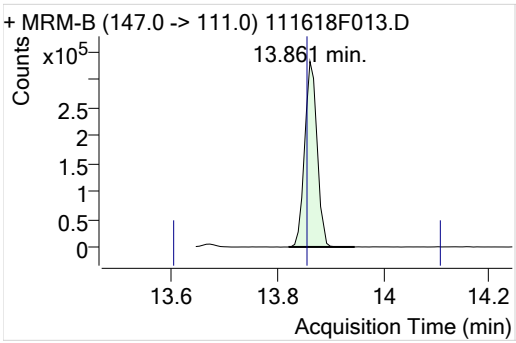
Endrin ketone-13C12

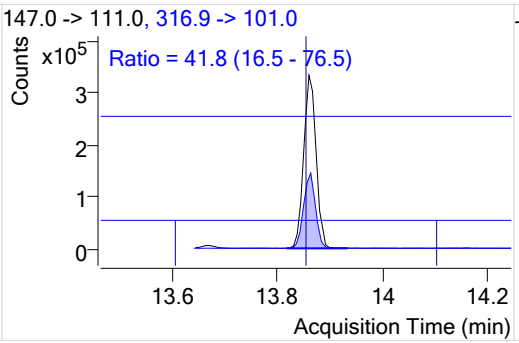


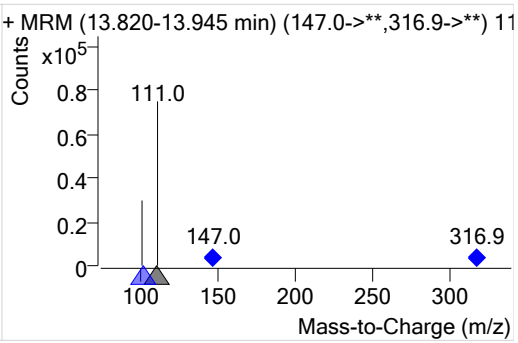




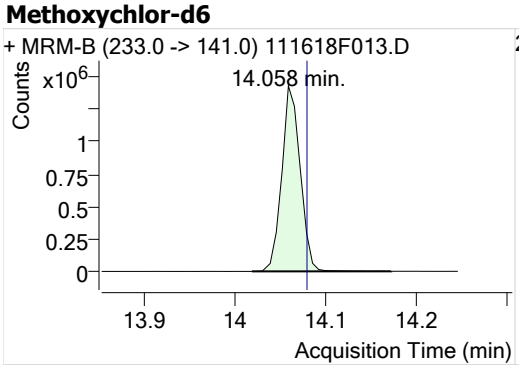
Endrin ketone

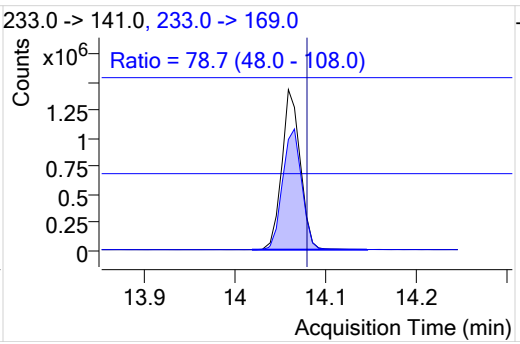


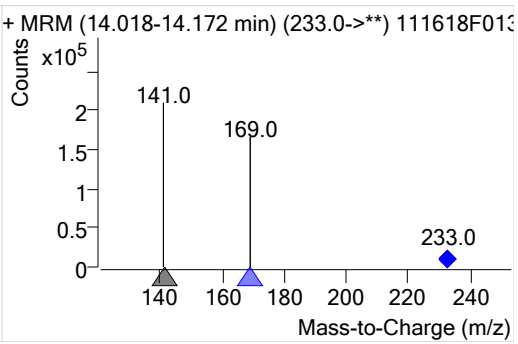




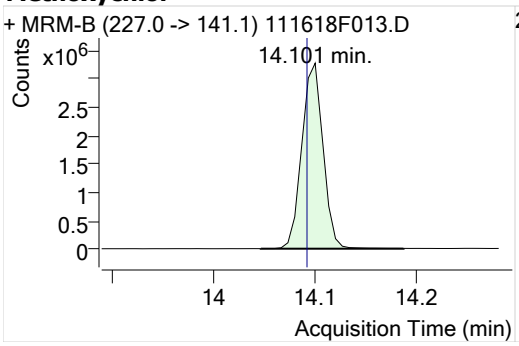
Methoxychlor-d6

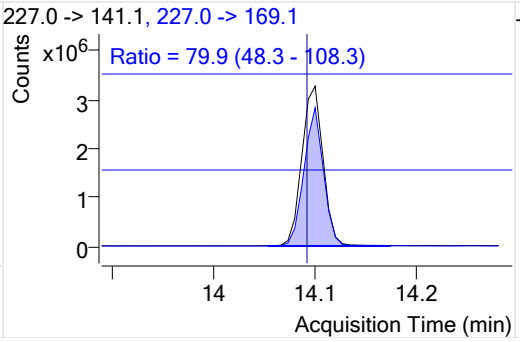


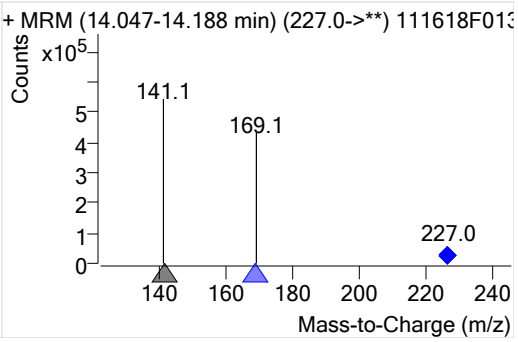




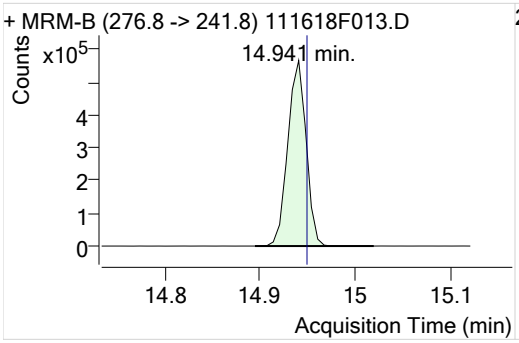
Methoxychlor

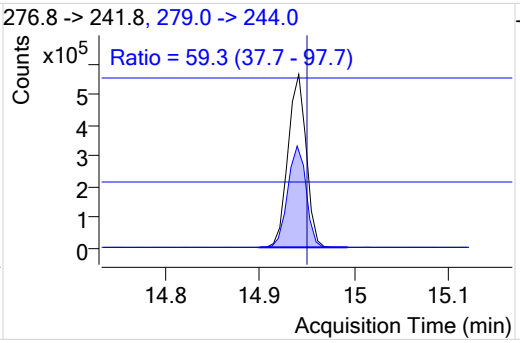


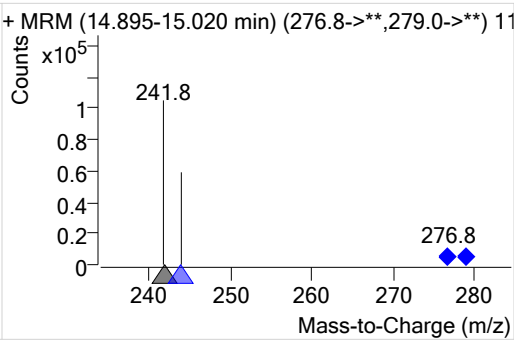




Mirex-13C10

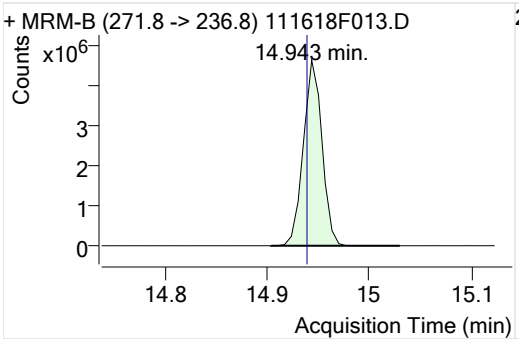


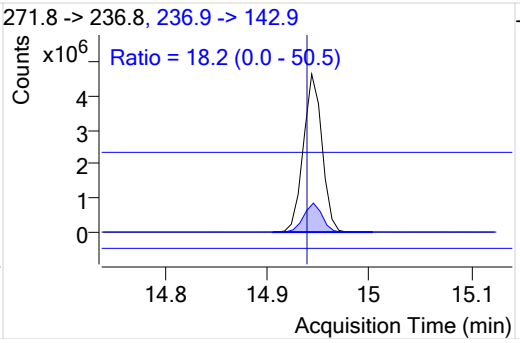


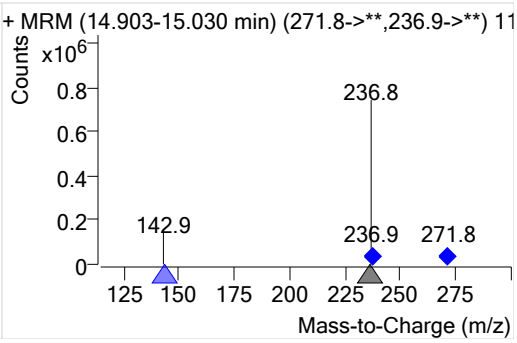


Quantitative Analysis Sample Report

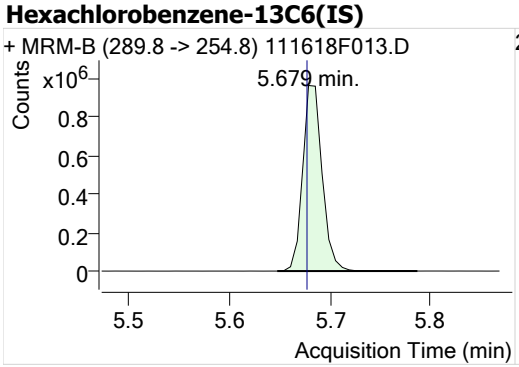
Mirex

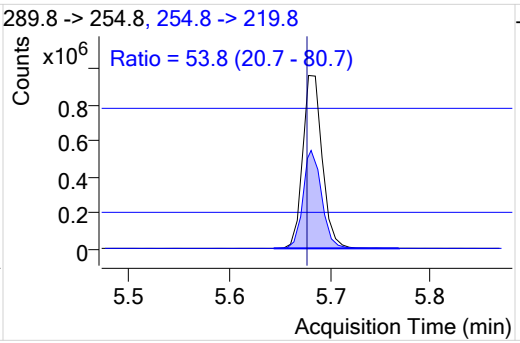


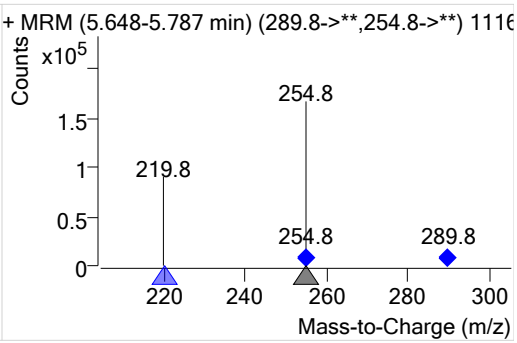




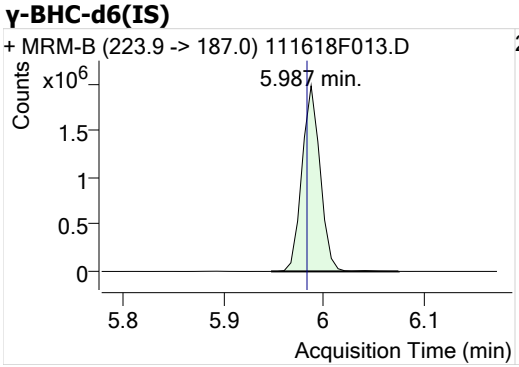
Hexachlorobenzene-13C6(IS)

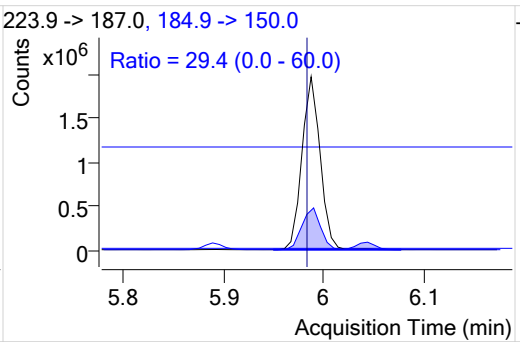


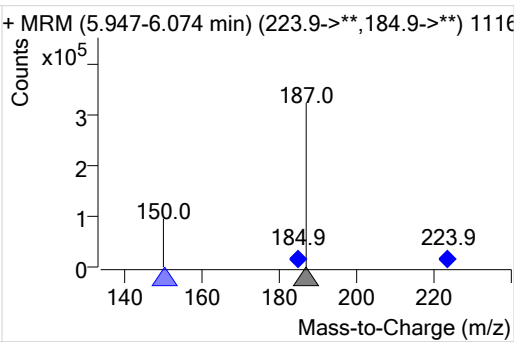




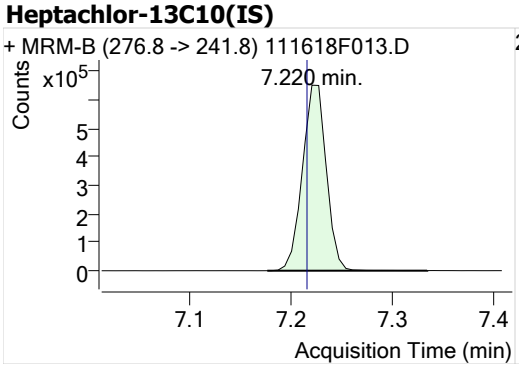
γ-BHC-d6(IS)

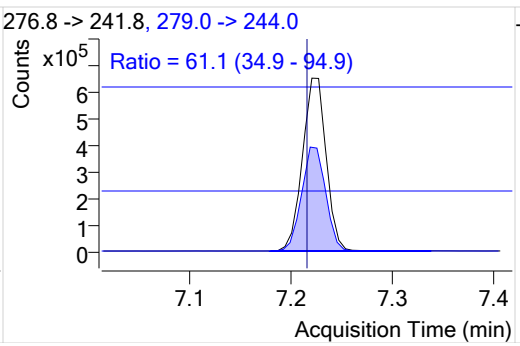


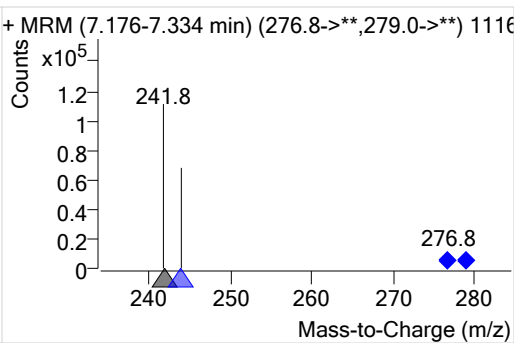




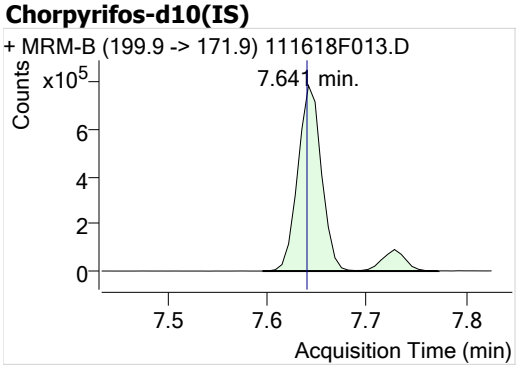
Heptachlor-13C10(IS)

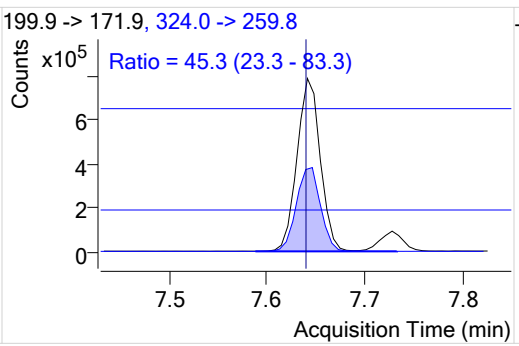


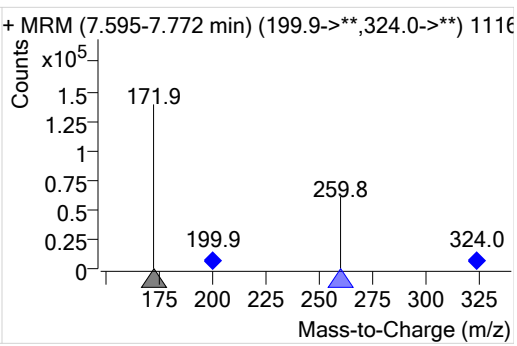




Chorpyrifos-d10(IS)

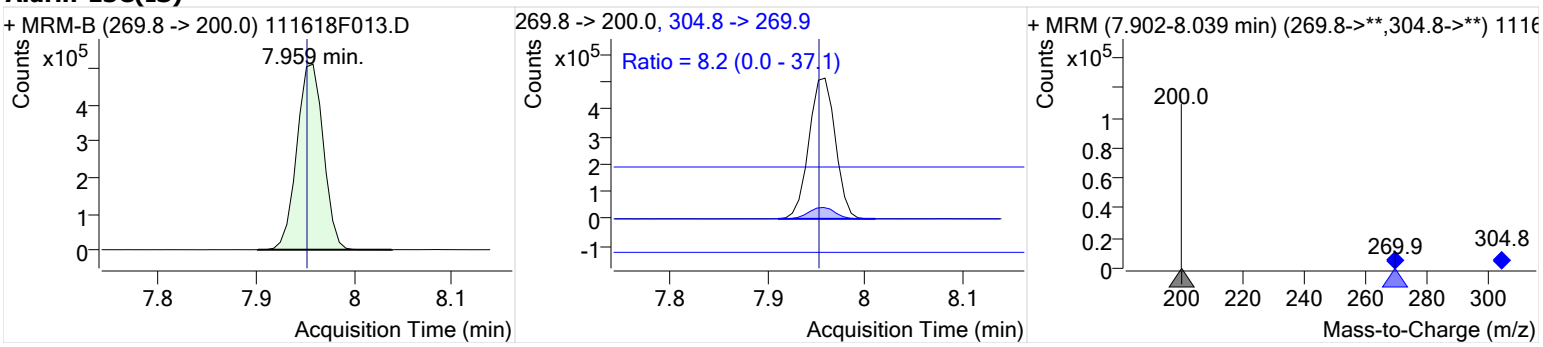




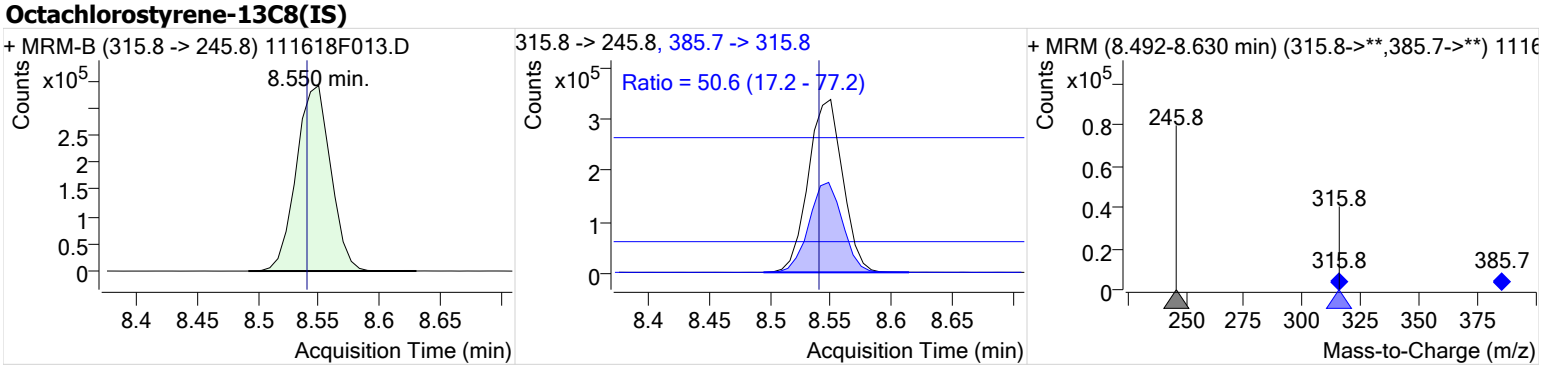


Quantitative Analysis Sample Report

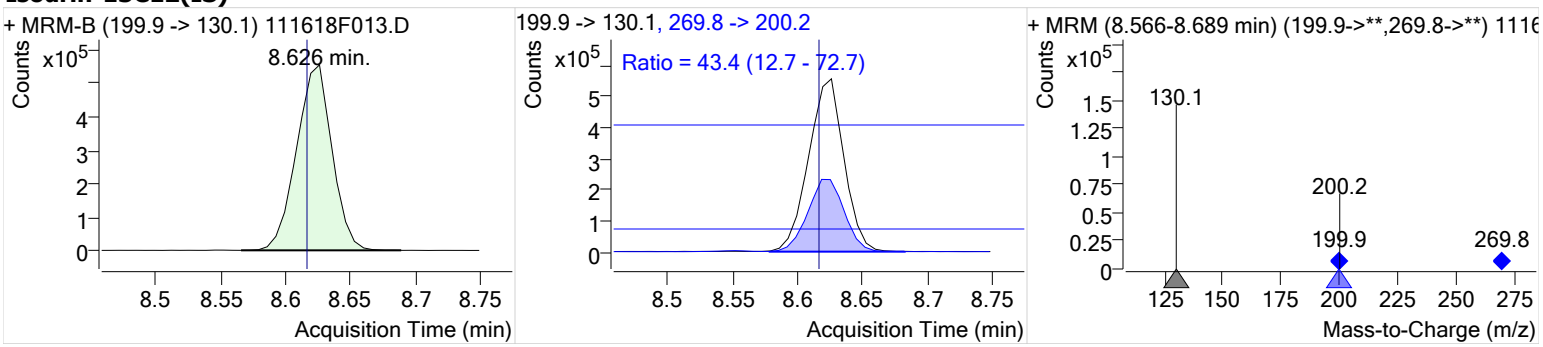
Aldrin-13C(IS)



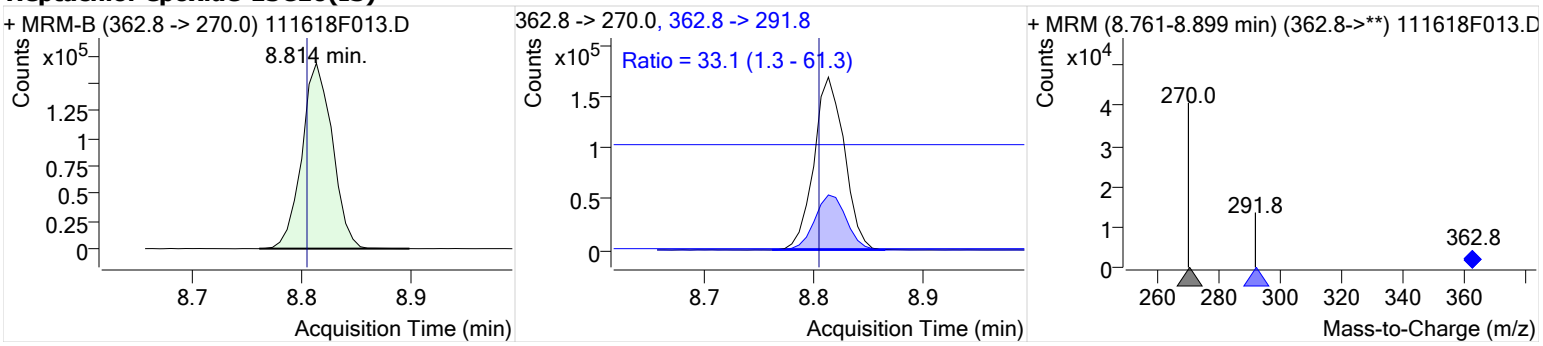
Octachlorostyrene-13C8(IS)



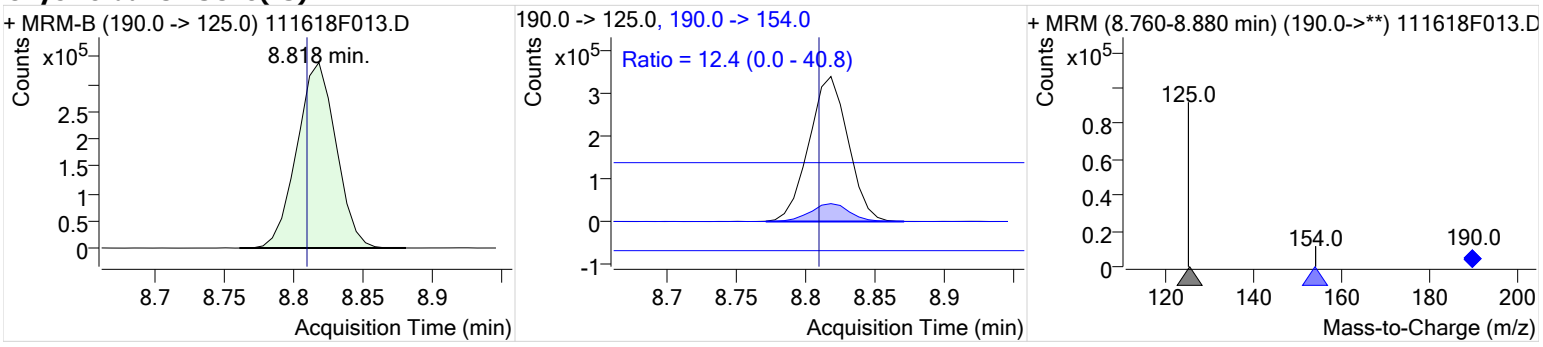
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

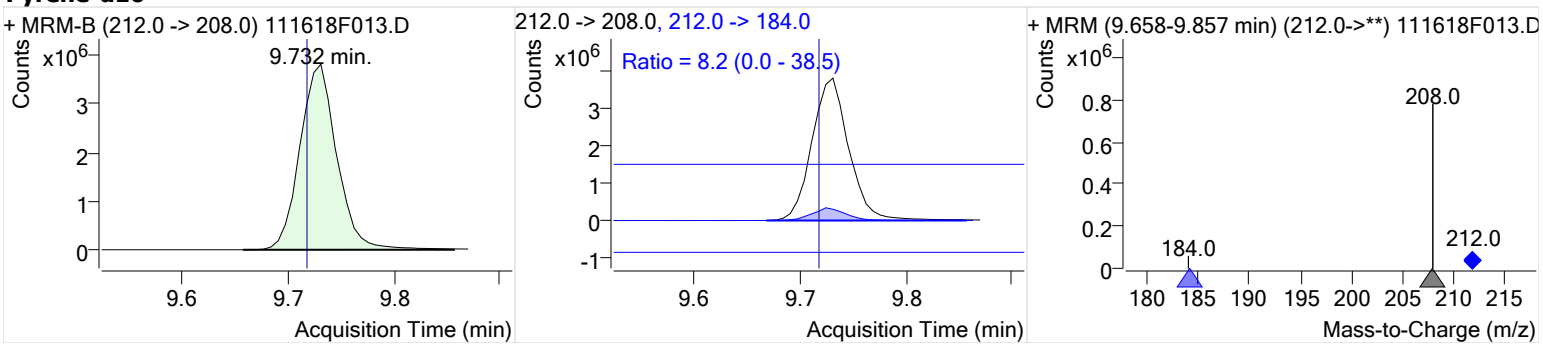


Oxychlordane-13C10(IS)

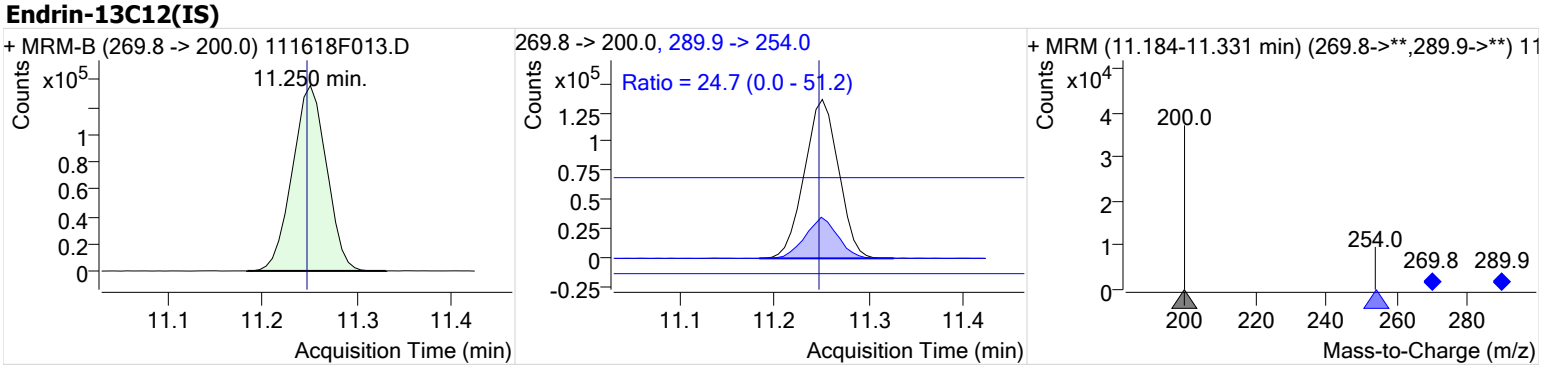


Quantitative Analysis Sample Report

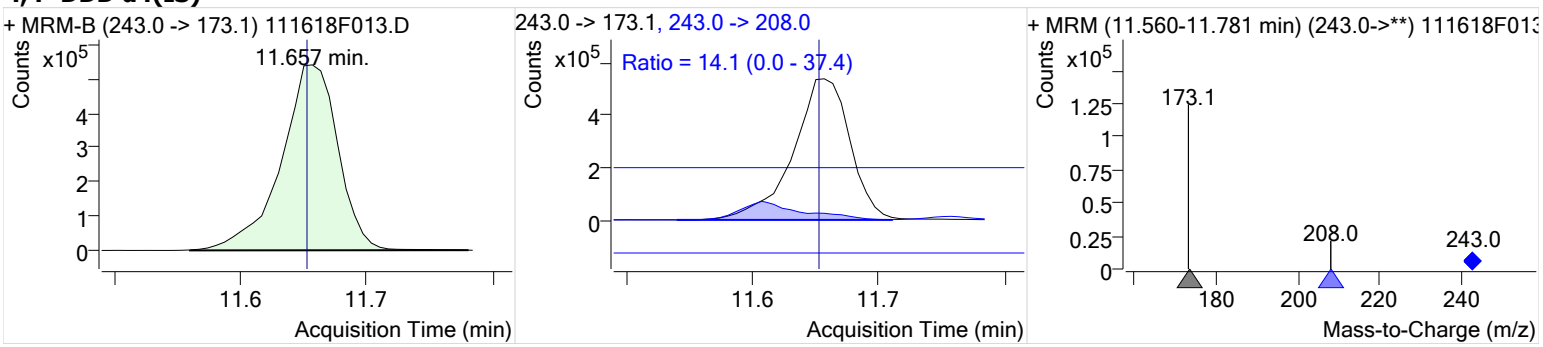
Pyrene-d10



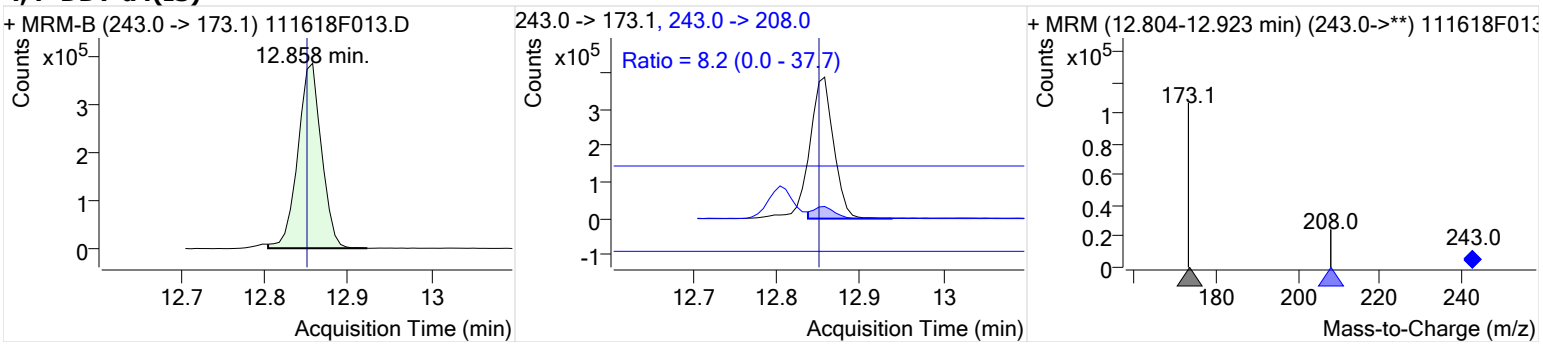
Endrin-13C12(IS)



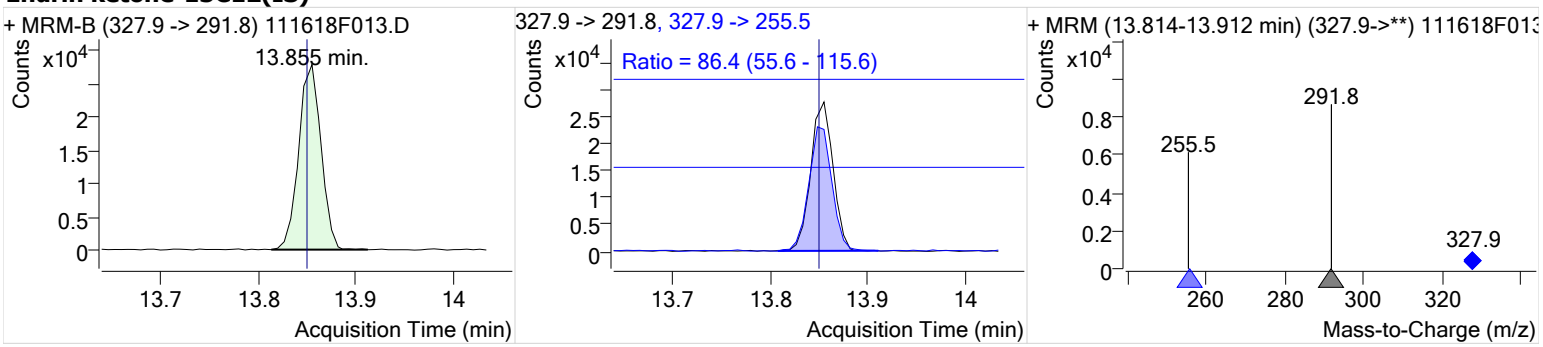
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

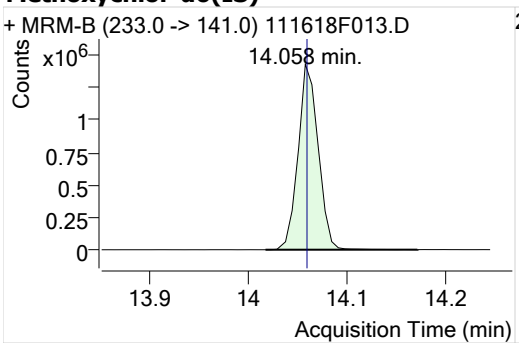


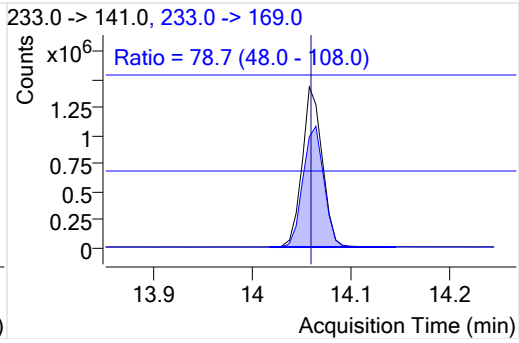
Endrin ketone-13C12(IS)

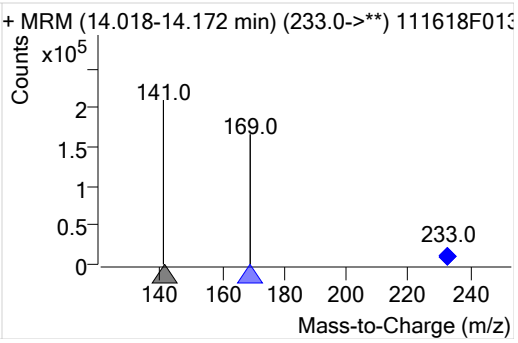


Quantitative Analysis Sample Report

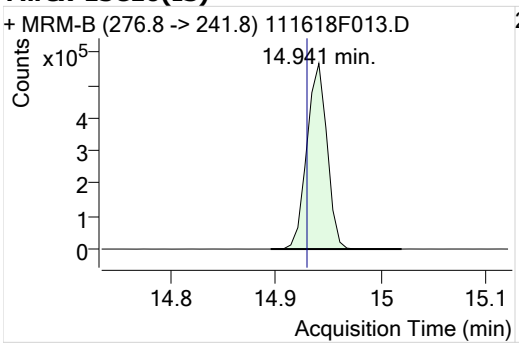
Methoxychlor-d6(IS)

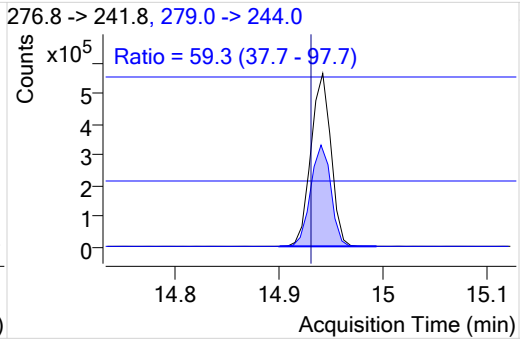


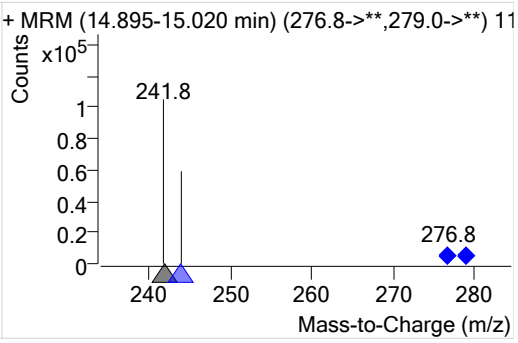




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F014.D	**Vial**	10
Acq. Date-Time	11/16/2018 3:08:17 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 60ng/mL SVM59-48H	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.685	289.8 -> 254.8	1451437	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2690535	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.225	276.8 -> 241.8	1135689	20.000 ng/ml	0.009
Chorpyrifos-d10(IS)	7.646	199.9 -> 171.9	1363733	20.000 ng/ml	0.005
Aldrin-13C(IS)	7.953	269.8 -> 200.0	1013719	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.549	315.8 -> 245.8	712079	20.000 ng/ml	0.008
Isodrin-13C12(IS)	8.619	199.9 -> 130.1	1121537	20.000 ng/ml	0.005
Heptachlor epoxide-13C10(IS)	8.813	362.8 -> 270.0	357188	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	722129	20.000 ng/ml	0.009
Pyrene-d10	9.725	212.0 -> 208.0	9546758	100.000 ng/ml	0.006
Endrin-13C12(IS)	11.250	269.8 -> 200.0	354760	20.000 ng/ml	0.002
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1822137	5.000 ng/ml	0.021
4,4'-DDT-d4(IS)	12.851	243.0 -> 173.1	821516	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	45579	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	2061509	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	778479	5.000 ng/ml	0.010

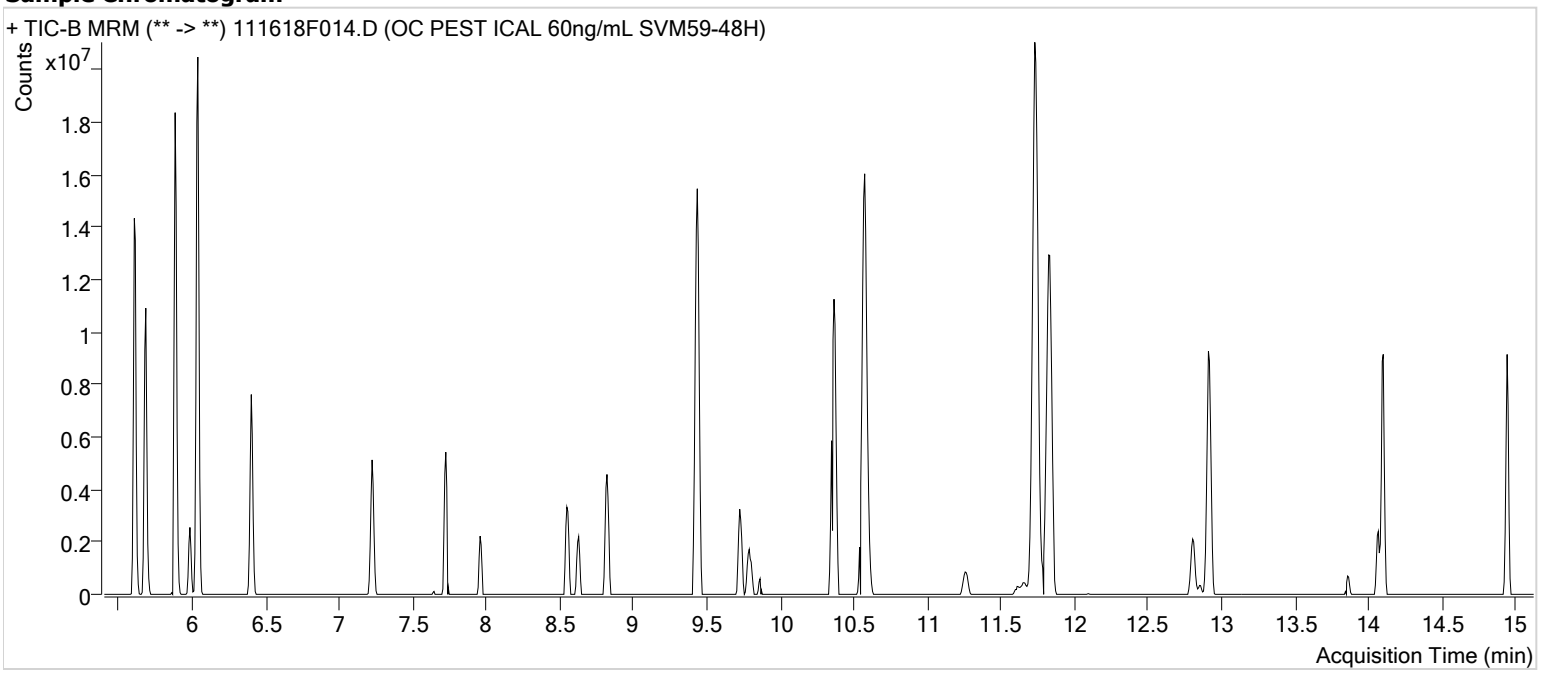
System Monitoring Compounds	RT	Transition	Response	Conc. Units
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1451437	20.654 ng/ml
		Spiked Amount =	20.0	Recovery = *103.3 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2690535	20.204 ng/ml
		Spiked Amount =	20.0	Recovery = *101.0 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1135689	20.624 ng/ml
		Spiked Amount =	20.0	Recovery = *103.1 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1363733	19.741 ng/ml
		Spiked Amount =	20.0	Recovery = *98.7 %*
Aldrin-13C	7.952	269.8 -> 200.0	1014323	20.168 ng/ml
		Spiked Amount =	20.0	Recovery = *100.8 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	712079	19.774 ng/ml
		Spiked Amount =	20.0	Recovery = *98.9 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1121537	20.438 ng/ml
		Spiked Amount =	20.0	Recovery = *102.2 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	357188	20.358 ng/ml
		Spiked Amount =	20.0	Recovery = *101.8 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	722129	20.252 ng/ml
		Spiked Amount =	20.0	Recovery = *101.3 %*
Endrin-13C12	11.247	269.8 -> 200.0	354760	20.333 ng/ml
		Spiked Amount =	20.0	Recovery = *101.7 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1822137	5.374 ng/ml
		Spiked Amount =	5.0	Recovery = *107.5 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	821516	5.423 ng/ml
		Spiked Amount =	5.0	Recovery = *108.5 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	45579	21.096 ng/ml
		Spiked Amount =	20.0	Recovery = *105.5 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	2061509	20.594 ng/ml
		Spiked Amount =	20.0	Recovery = *103.0 %*
Mirex-13C10	14.930	276.8 -> 241.8	778479	5.323 ng/ml
		Spiked Amount =	5.0	Recovery = *106.5 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	11319561	58.836	ng/ml	99
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	7096577	54.013	ng/ml	100
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	13957224	57.341	ng/ml	97
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	16315814	57.975	ng/ml	98
δ-BHC	γ-BHC-d6(IS)	6.405	181.1 -> 145.1	6450745	57.510	ng/ml	98
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	3738676	56.795	ng/ml	100
Chorpyrifos	Chorpyrifos-d10(IS)	7.730	196.9 -> 169.0	5602991	58.203	ng/ml	96
Aldrin	Aldrin-13C(IS)	7.963	254.9 -> 220.0	1987037	60.883	ng/ml	85
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.552	342.8 -> 307.8	5277356	57.588	ng/ml	95
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	3273111	56.880	ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.829	352.8 -> 262.9	1173703	57.741	ng/ml	100
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	5508786	56.423	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	1997205	57.399	ng/ml	96
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	18979371	54.787	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.789	271.8 -> 236.9	5064719	58.262	ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.812	206.9 -> 172.0	1227605	55.201	ng/ml	98
trans-Nanochlor	Oxychlordane-13C10(IS)	9.863	271.8 -> 236.9	3165317	56.580	ng/ml	92
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	17565151	55.315	ng/ml	97
2,4'-DDD	4,4'-DDD d4(IS)	10.570	235.0 -> 165.1	22515001	57.423	ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.600	262.9 -> 193.0	1631559	60.295	ng/ml	94
Endosulfan II	Endrin-13C12(IS)	11.260	206.9 -> 172.0	220937	61.222	ng/ml	90
Endrin	Endrin-13C12(IS)	11.264	262.8 -> 193.0	1374666	56.464	ng/ml	99
4,4'-DDD	4,4'-DDD d4(IS)	11.734	235.0 -> 165.1	32786974	55.718	ng/ml	99
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	1263975	59.643	ng/ml	86
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	20794530	56.451	ng/ml	99
Endrin aldehyde	Endrin-13C12(IS)	12.098	249.9 -> 214.9	390587	56.870	ng/ml	97
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	2509988	60.226	ng/ml	96
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	11020191	57.972	ng/ml	98
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	854116	53.237	ng/ml	96
Methoxychlor	Methoxychlor-d6(IS)	14.094	227.0 -> 141.1	7621860	57.940	ng/ml	96
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	9011815	60.168	ng/ml	97

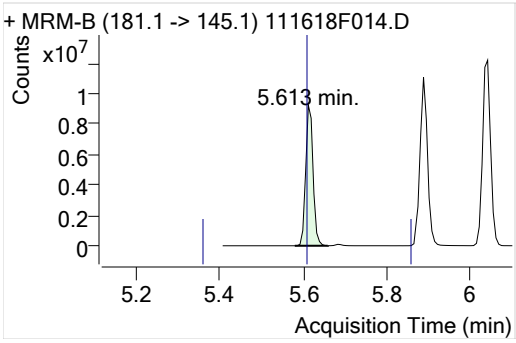
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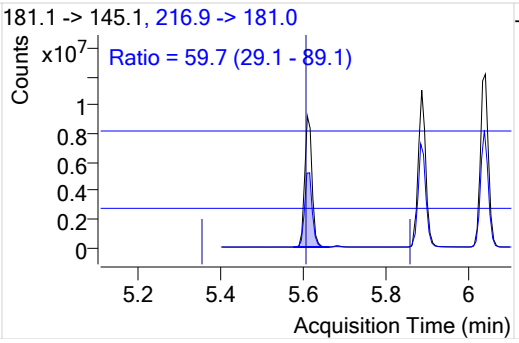
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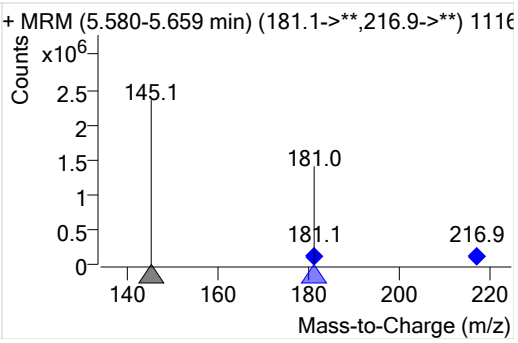


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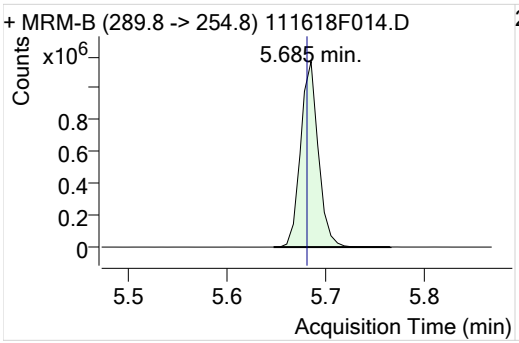
α-BHC

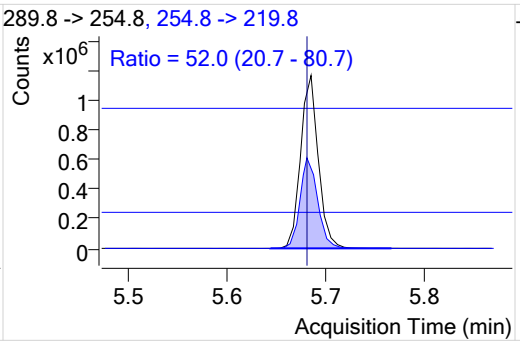


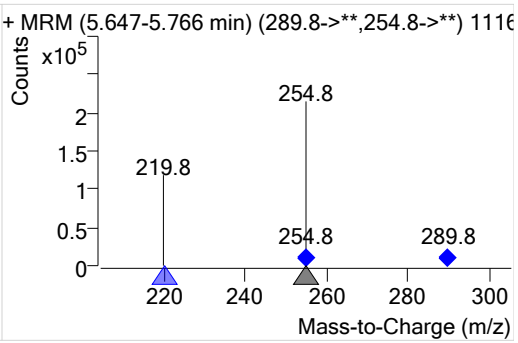




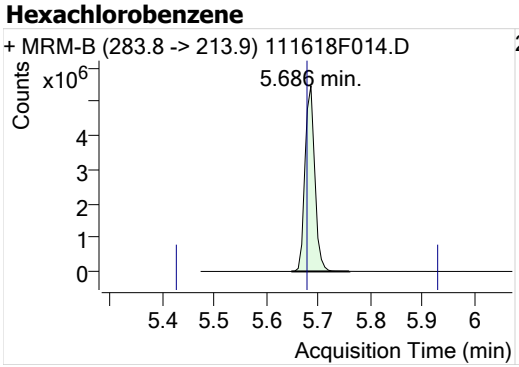
Hexachlorobenzene-13C6

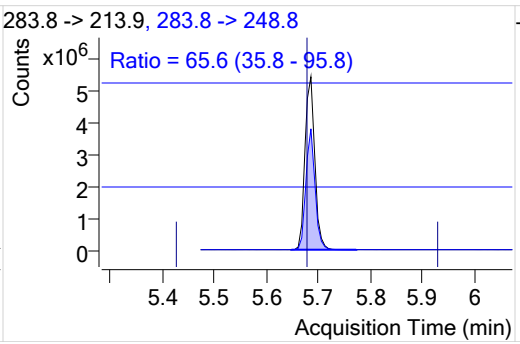


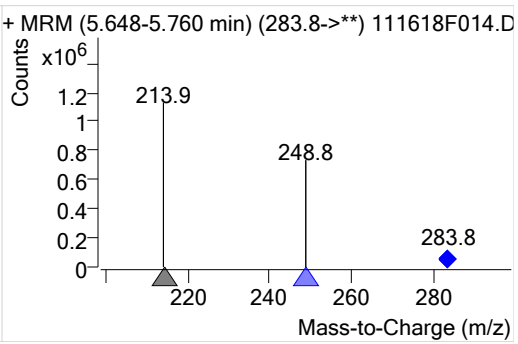




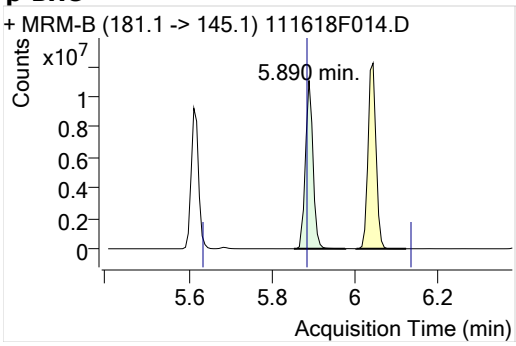
Hexachlorobenzene

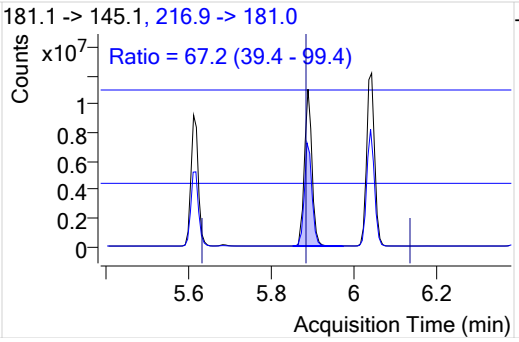


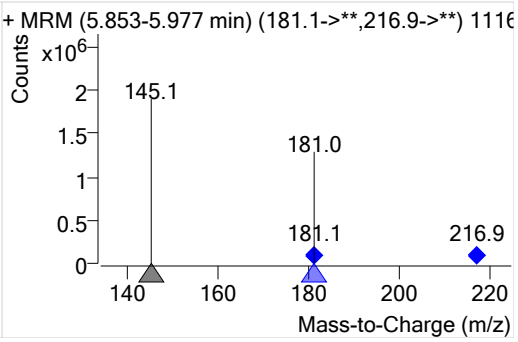




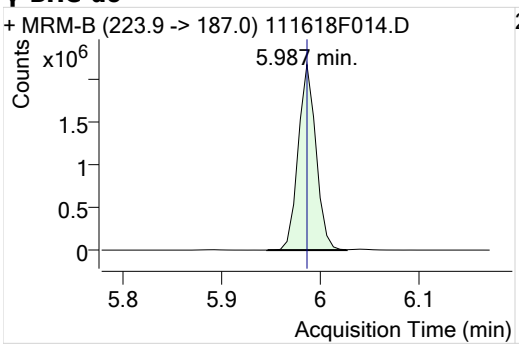
β-BHC

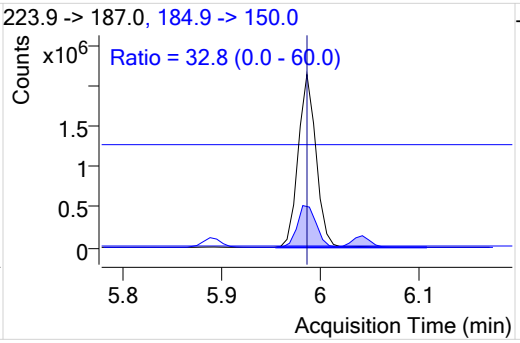


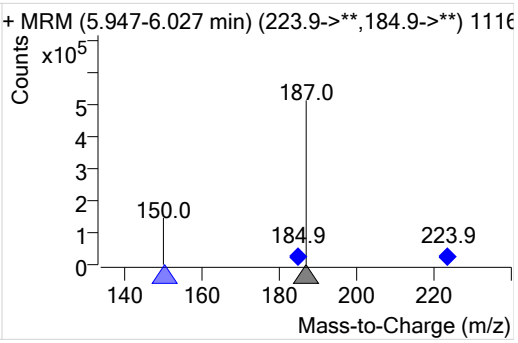




γ-BHC-d6

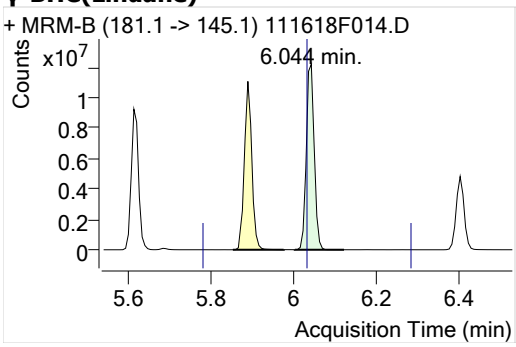


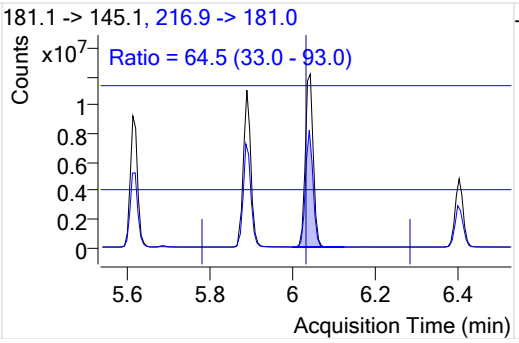


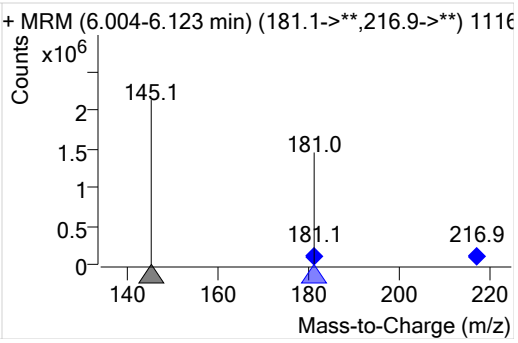


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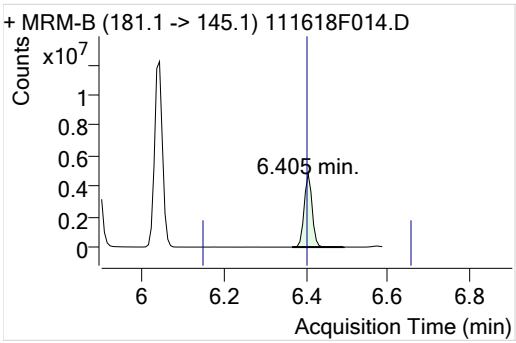
γ-BHC(Lindane)

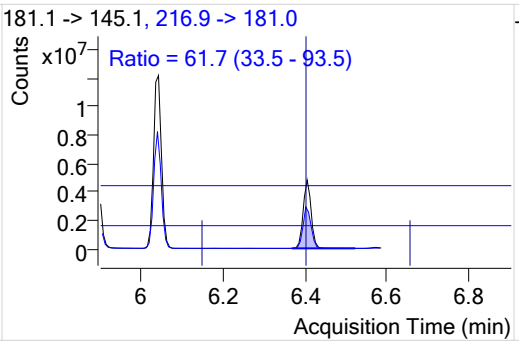


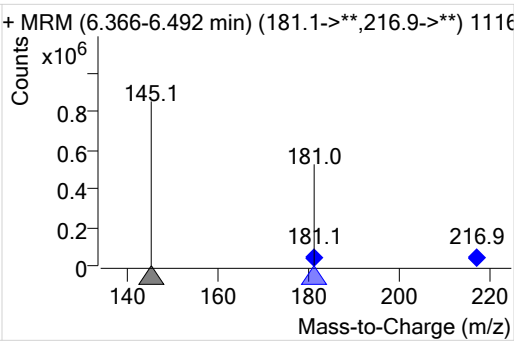




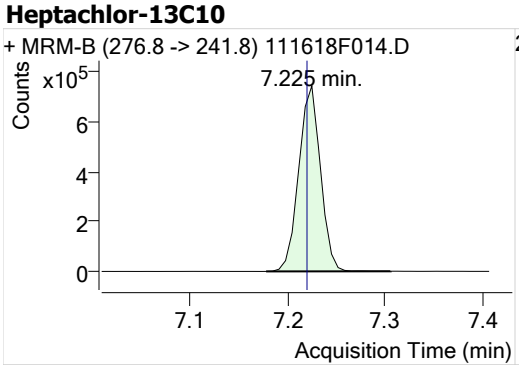
δ-BHC

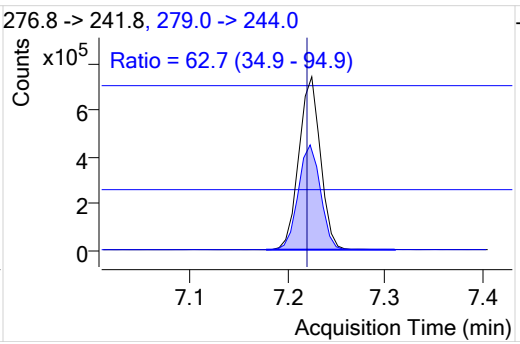


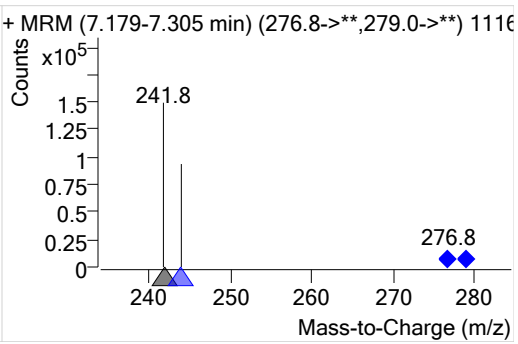




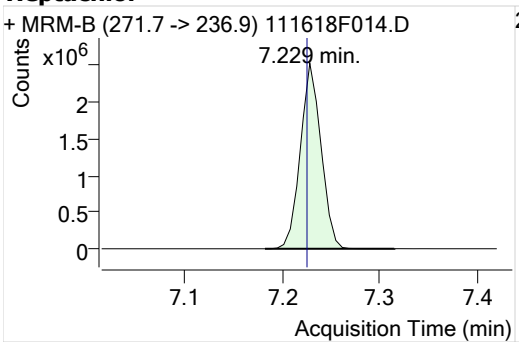
Heptachlor-13C10

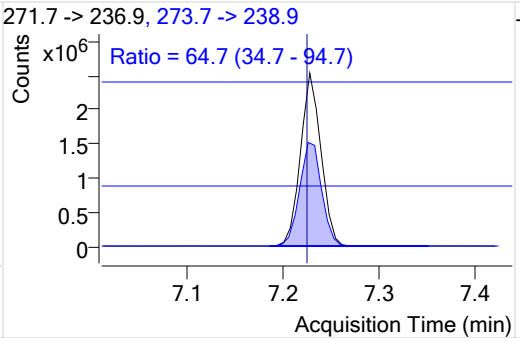


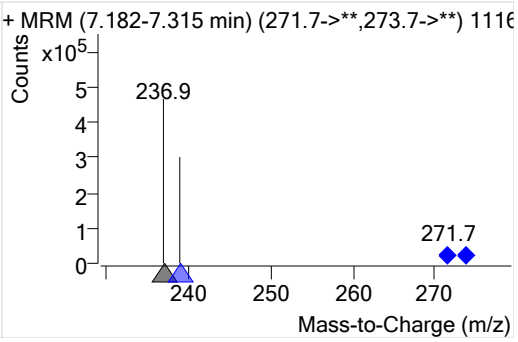




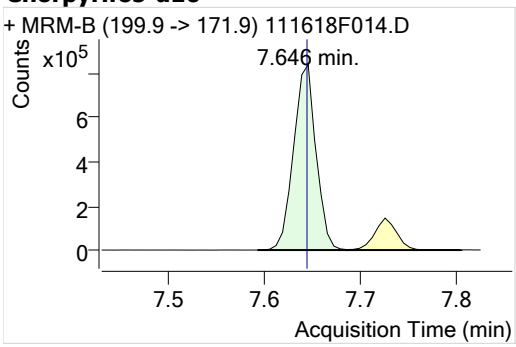
Heptachlor

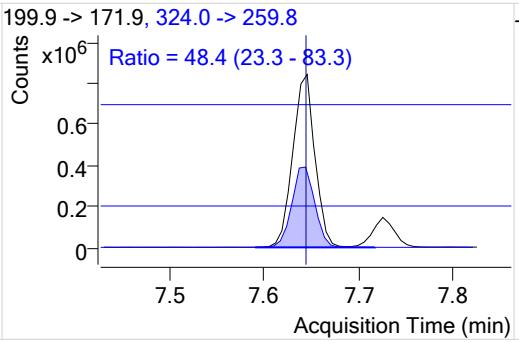


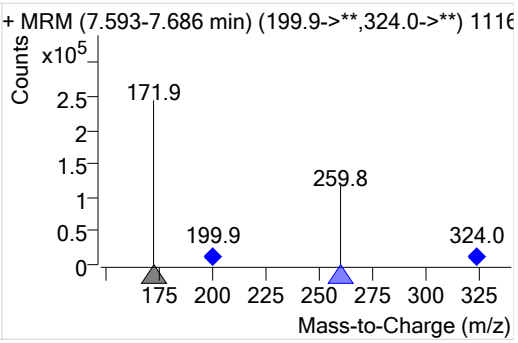




Chorpyrifos-d10

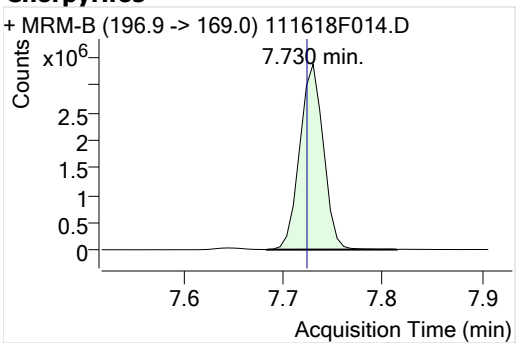


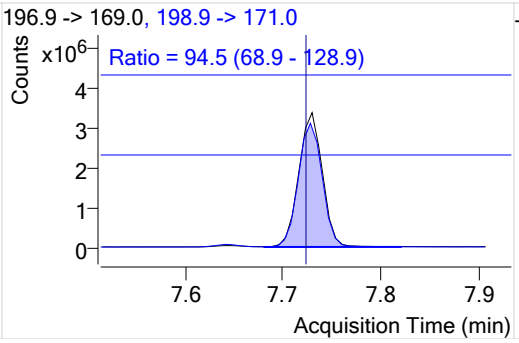


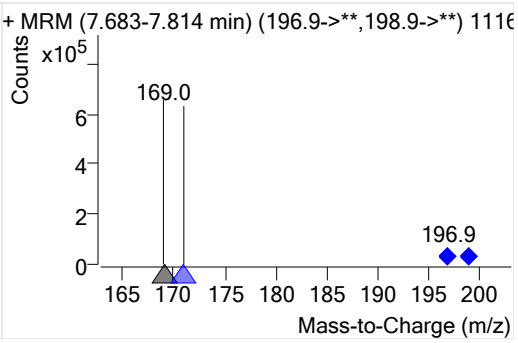


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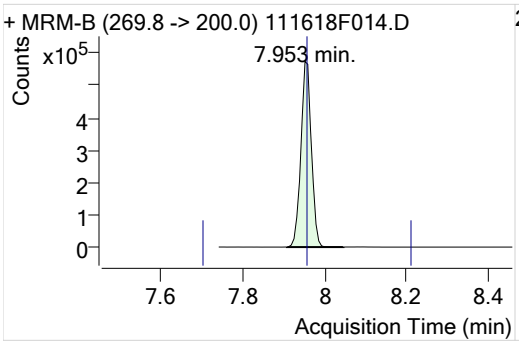
Chorpyrifos

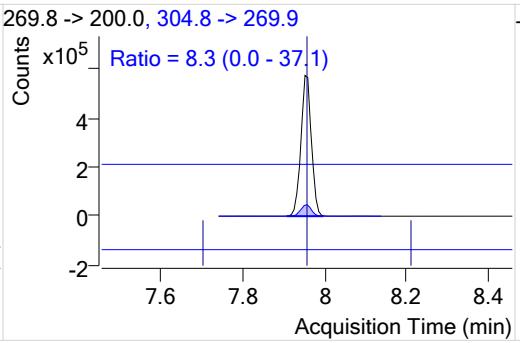


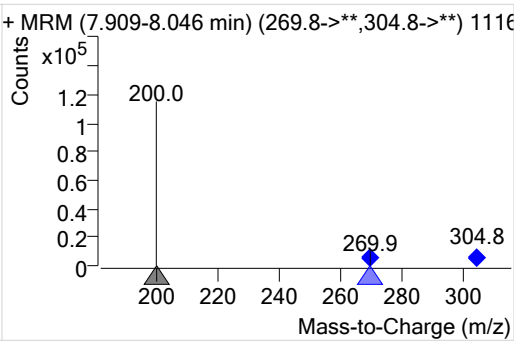




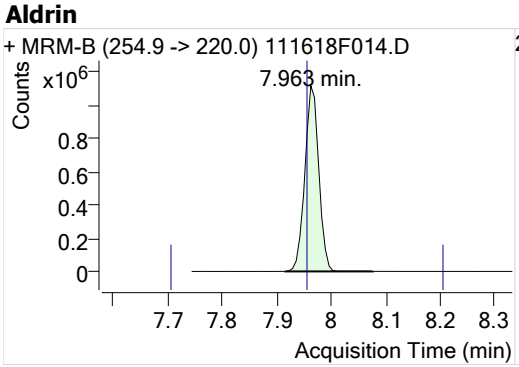
Aldrin-13C

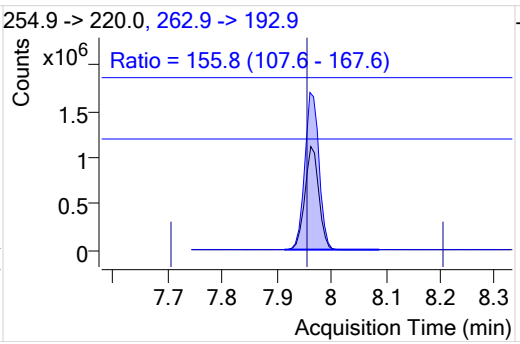


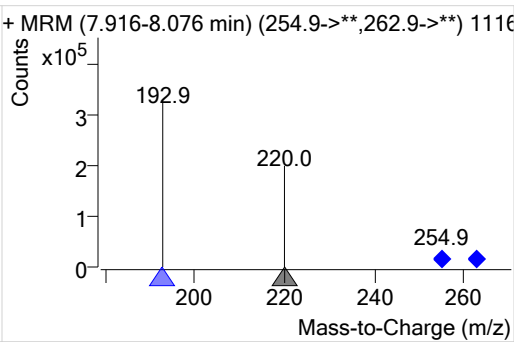




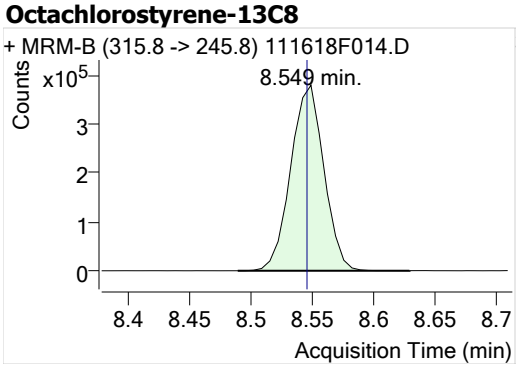
Aldrin

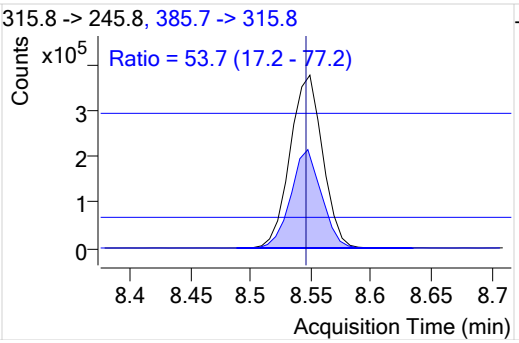


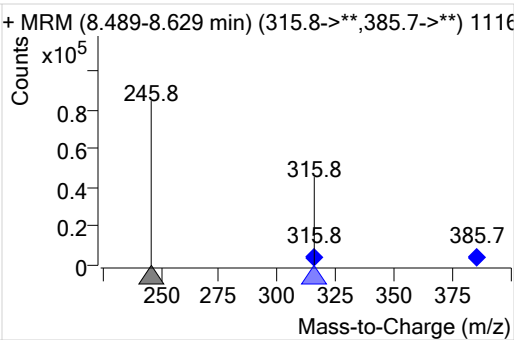




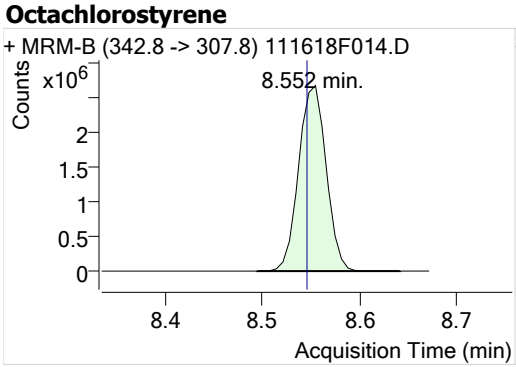
Octachlorostyrene-13C8

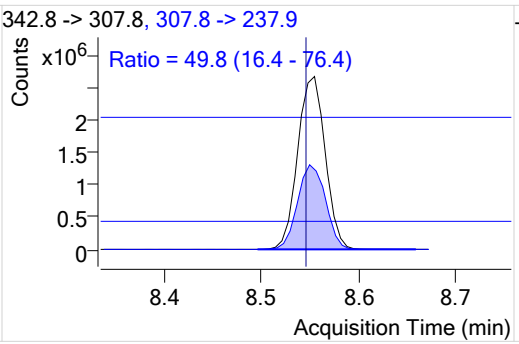


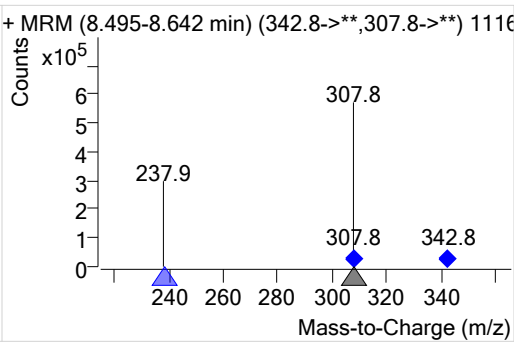




Octachlorostyrene

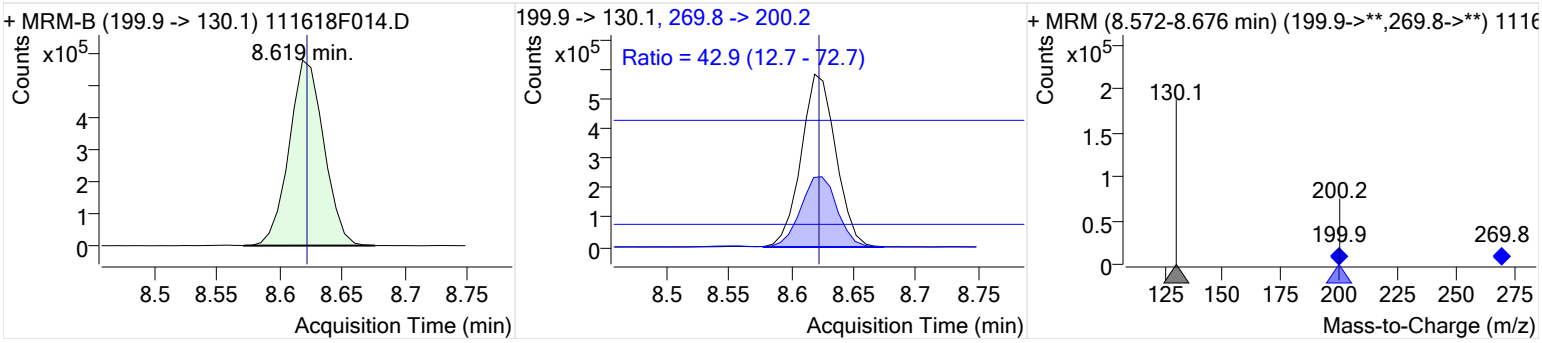




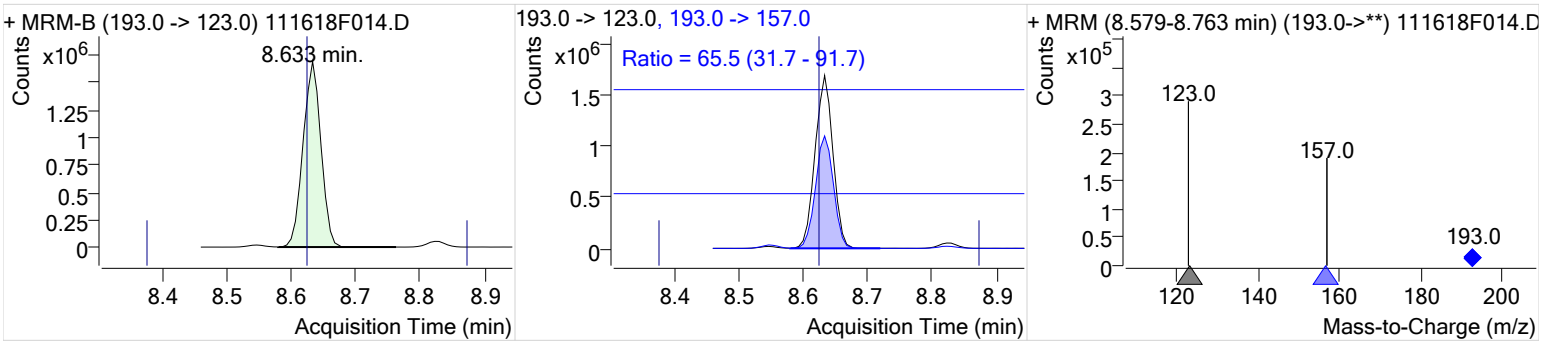


Quantitative Analysis Sample Report

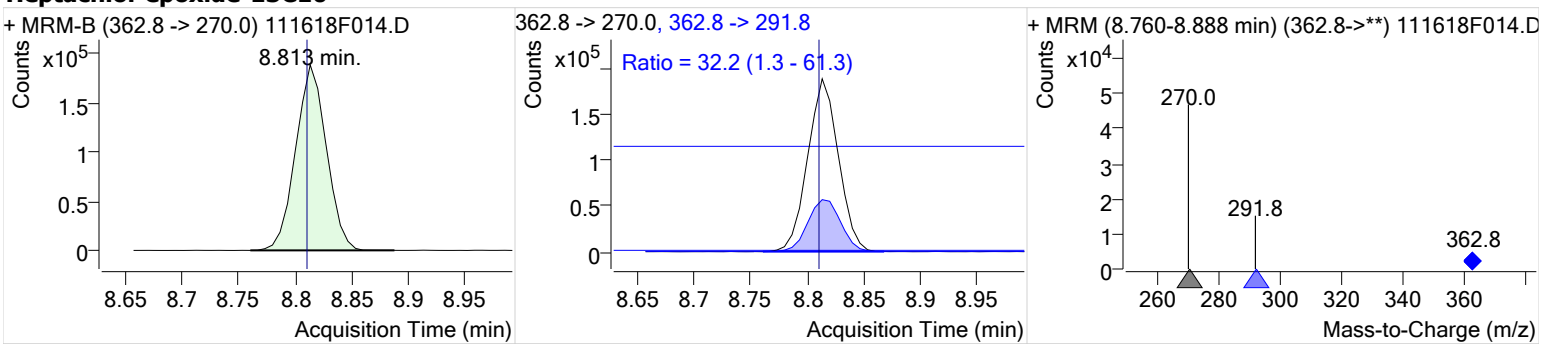
Isodrin-13C12



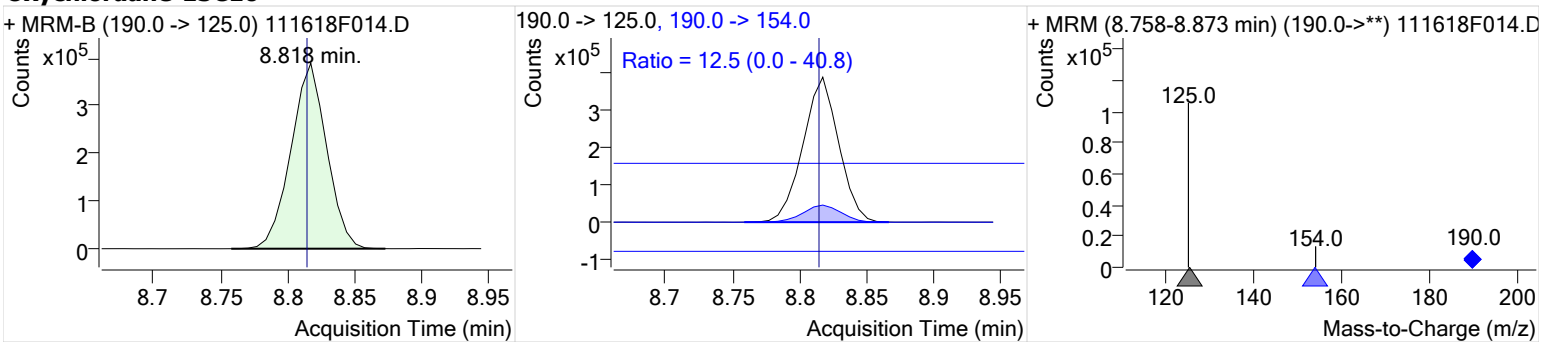
Isodrin



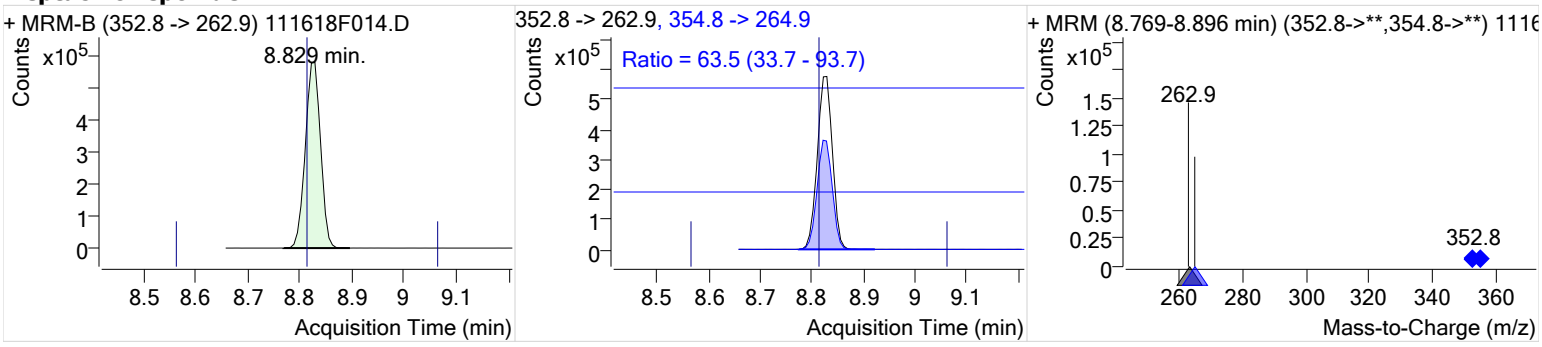
Heptachlor epoxide-13C10



Oxychlordane-13C10

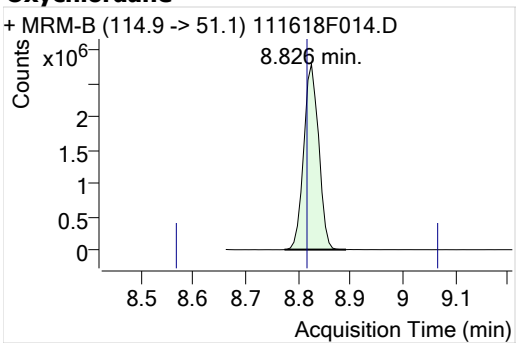


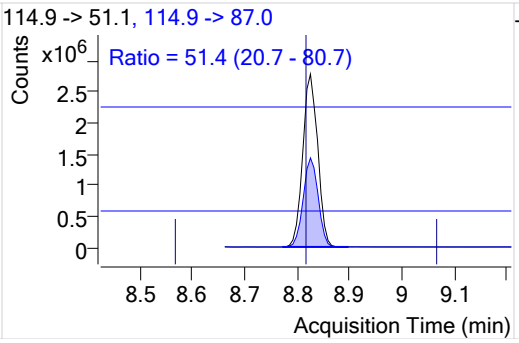
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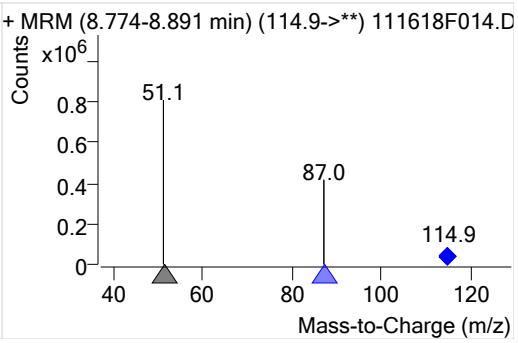


Quantitative Analysis Sample Report

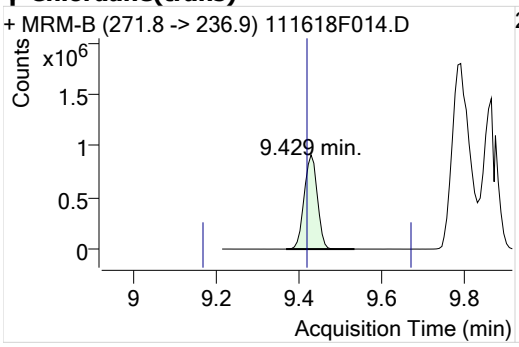
Oxychlordane

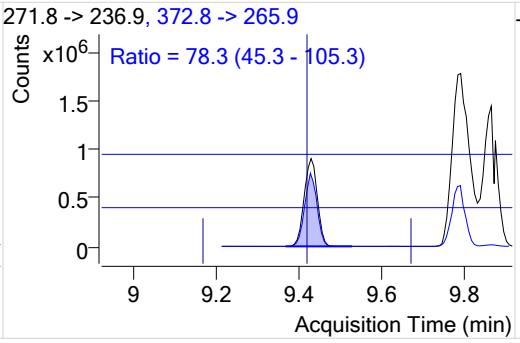


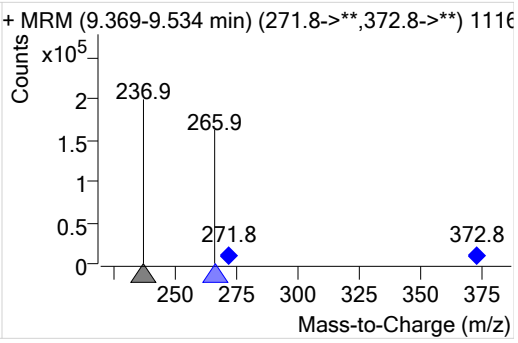




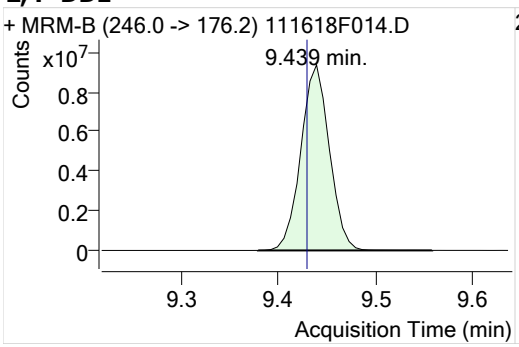
γ-Chlordane(trans)

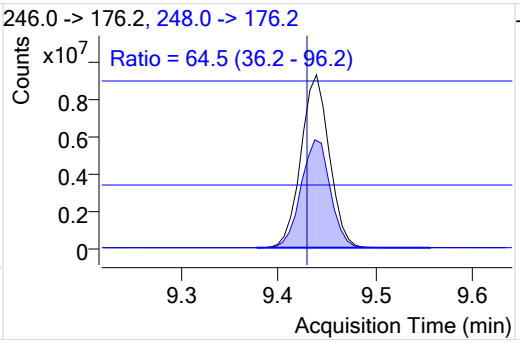


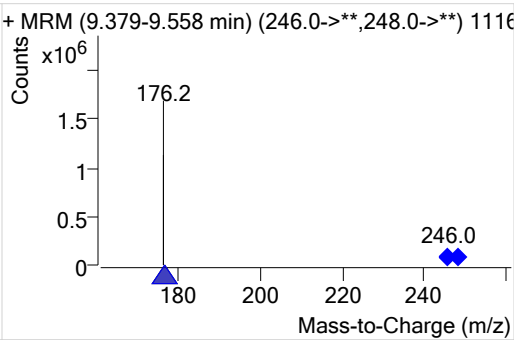




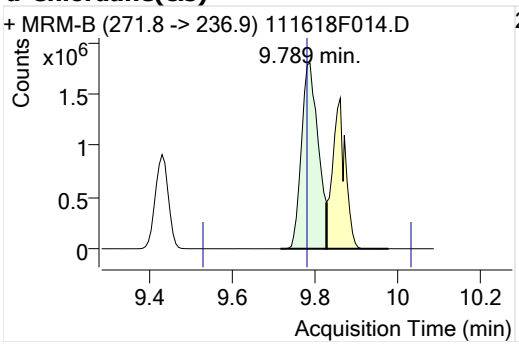
2,4'-DDE

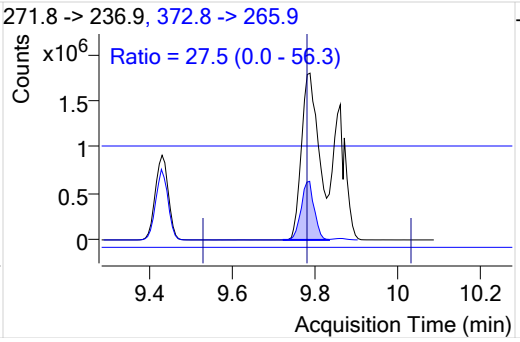


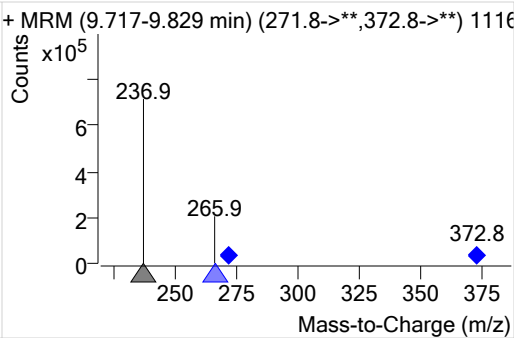




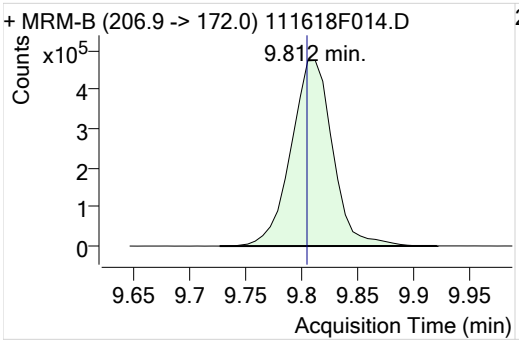
α-Chlordane(cis)

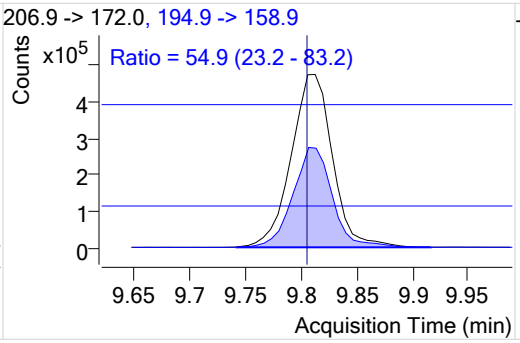


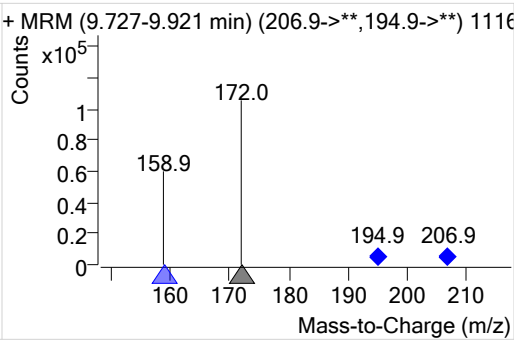




Endosulfan I

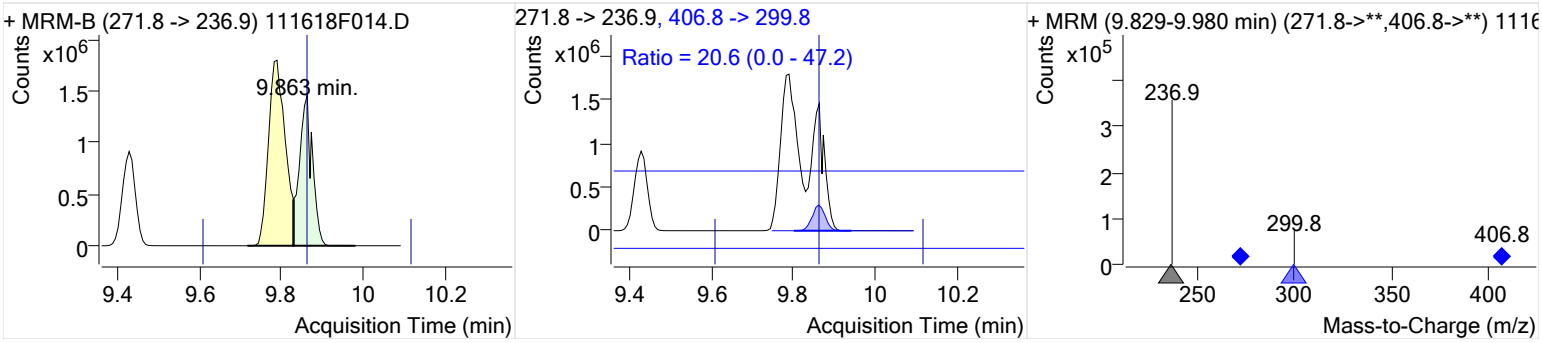




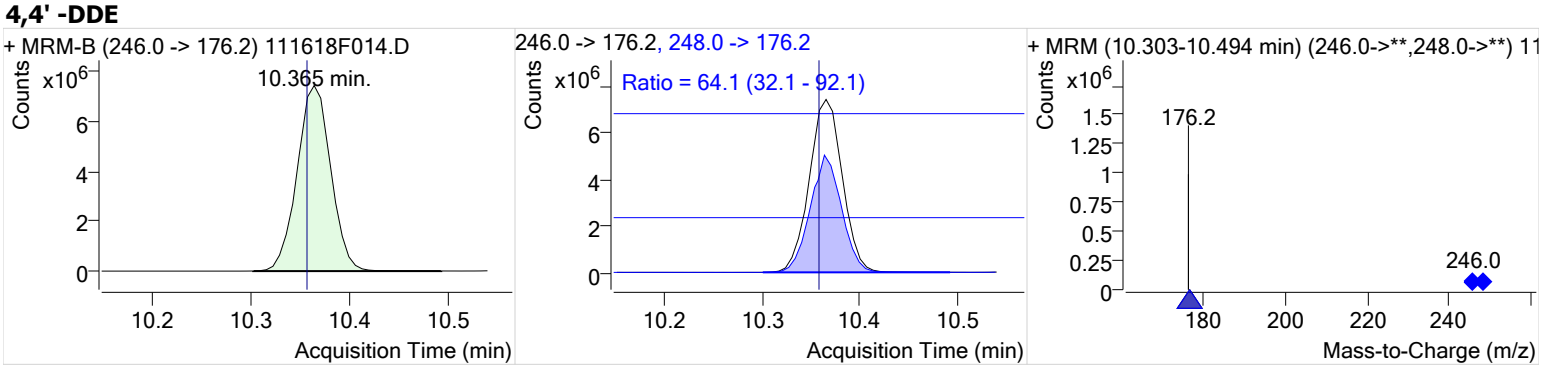


Quantitative Analysis Sample Report

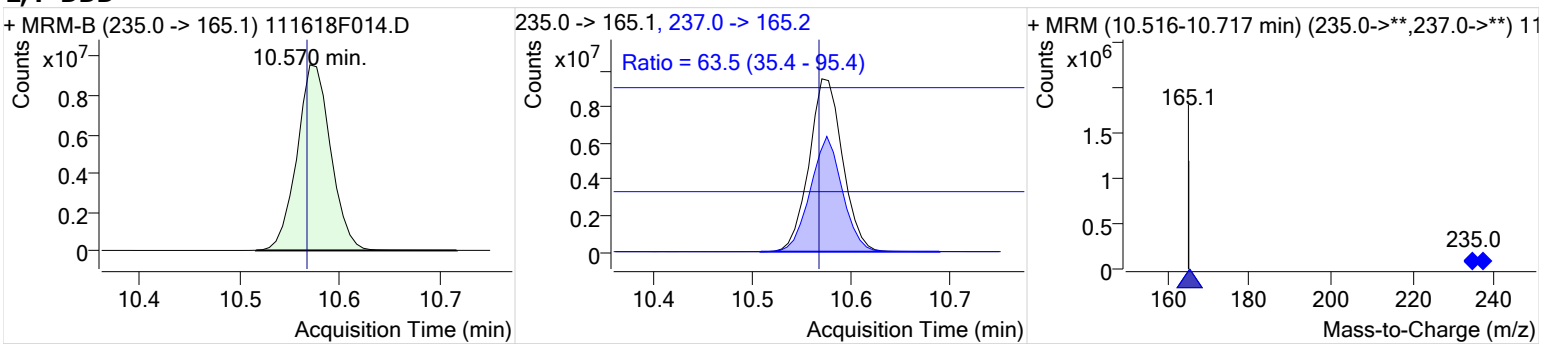
trans-Nanochlor



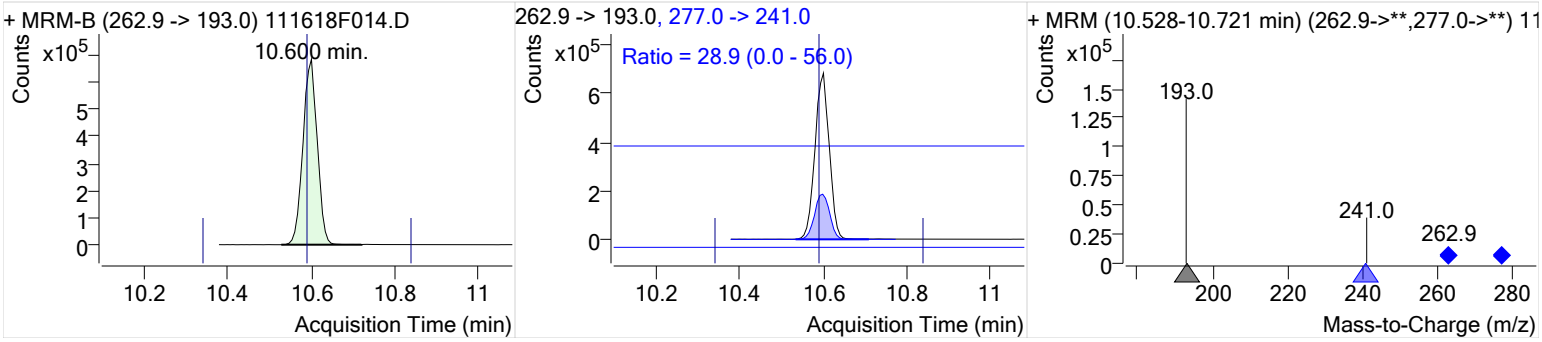
4,4' -DDE



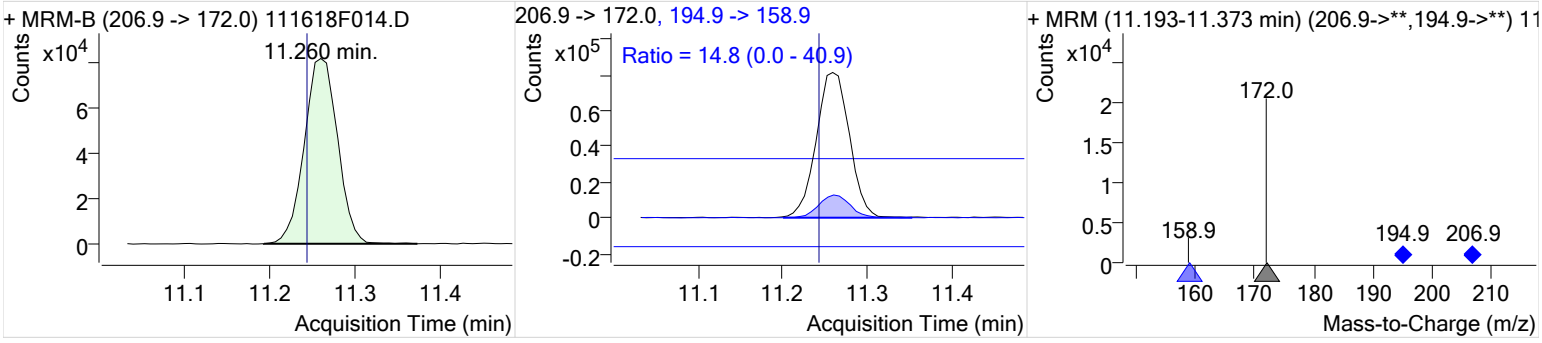
2,4'-DDD



Dieldrin

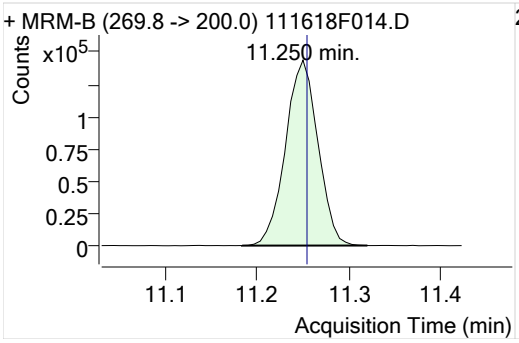


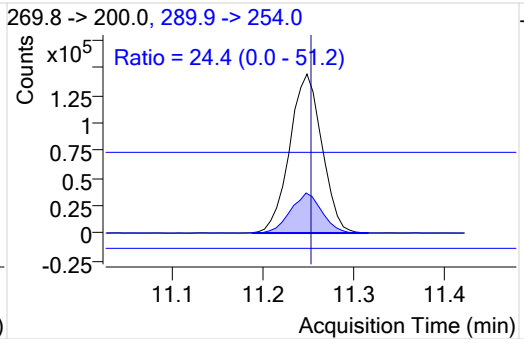
Endosulfan II

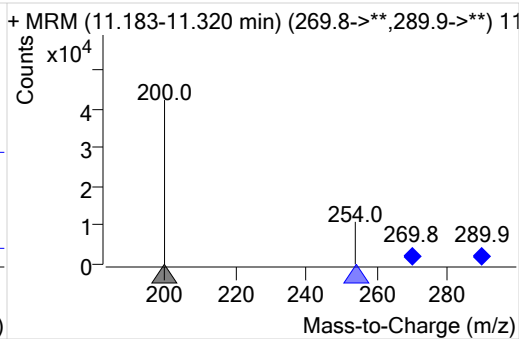


Quantitative Analysis Sample Report

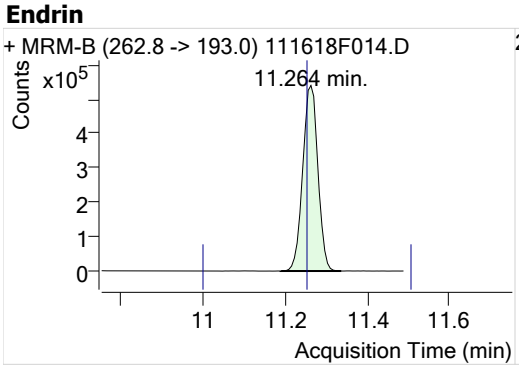
Endrin-13C12

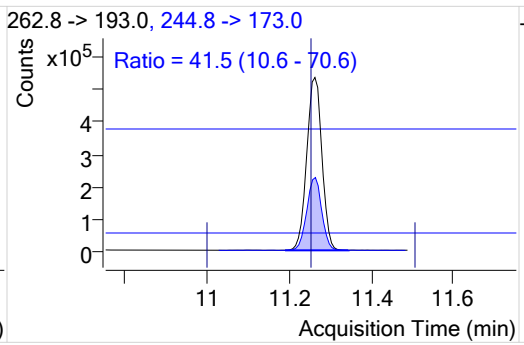


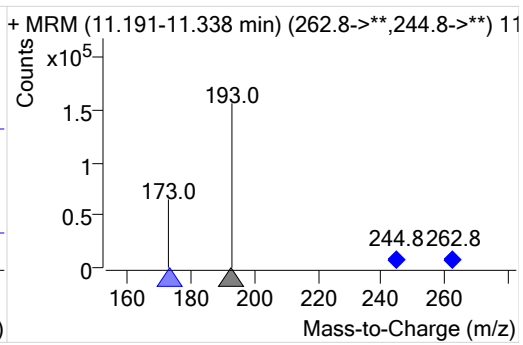




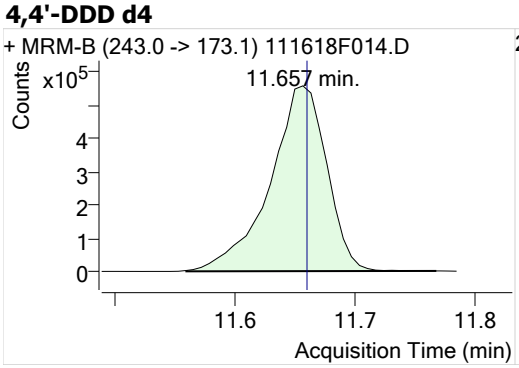
Endrin

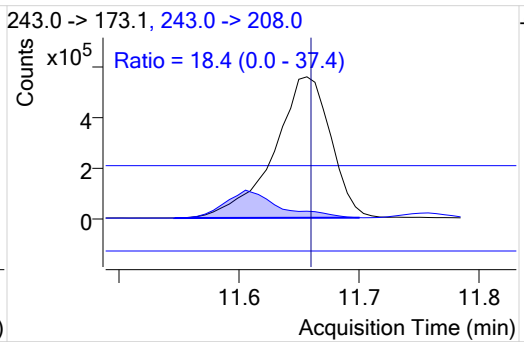


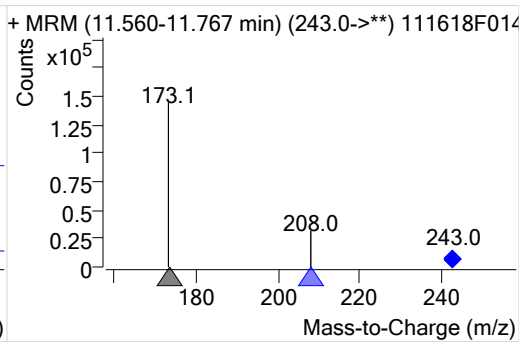




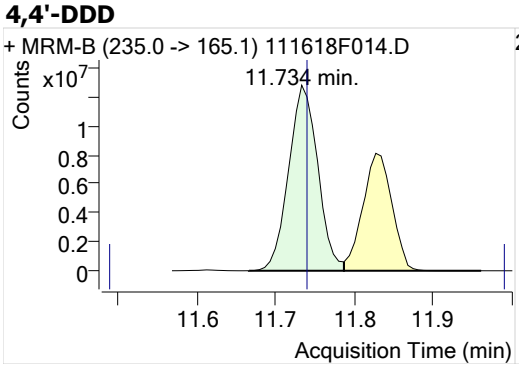
4,4'-DDD d4

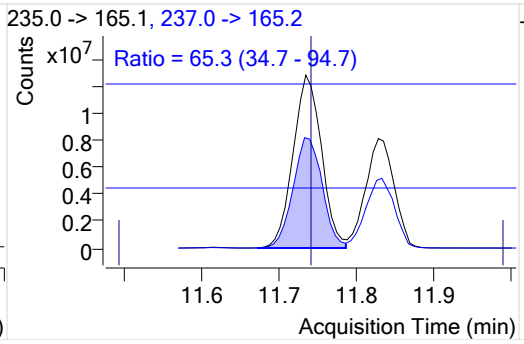


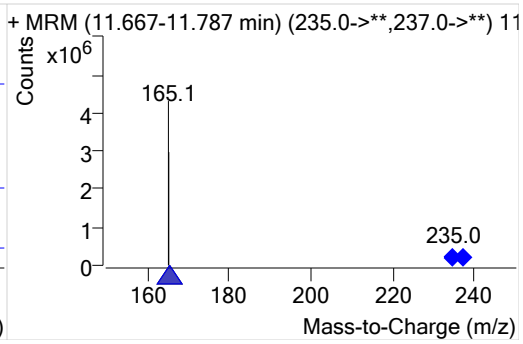




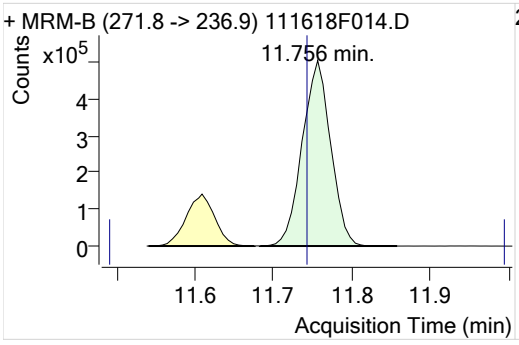
4,4'-DDD

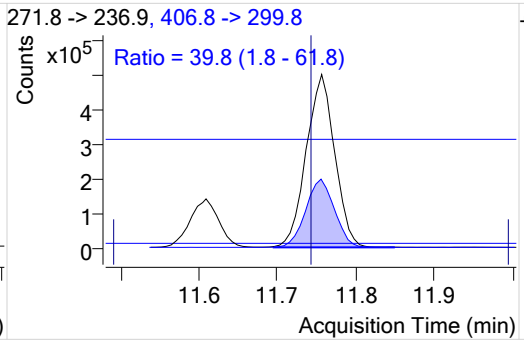


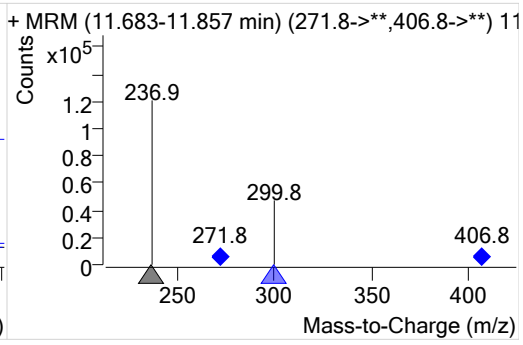




cis-Nonachlor

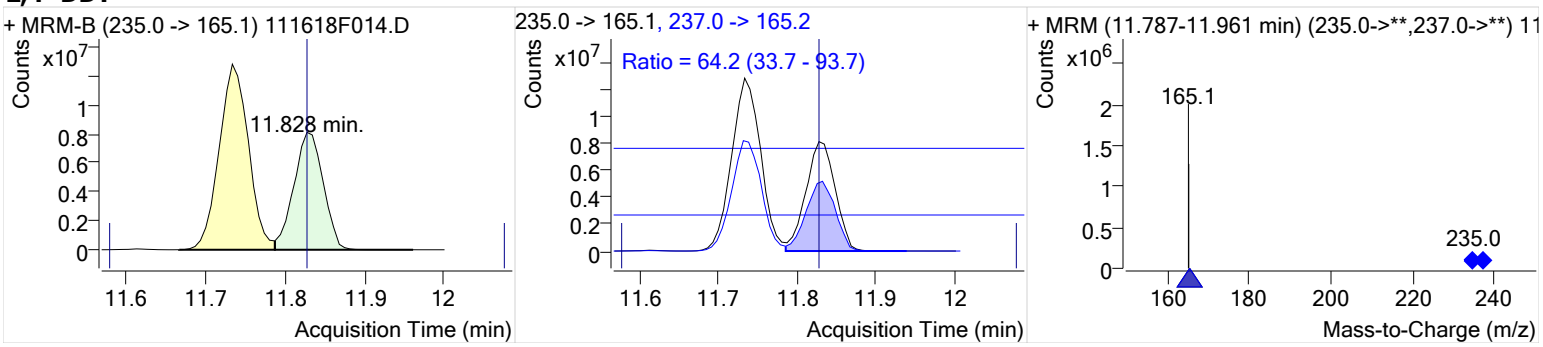




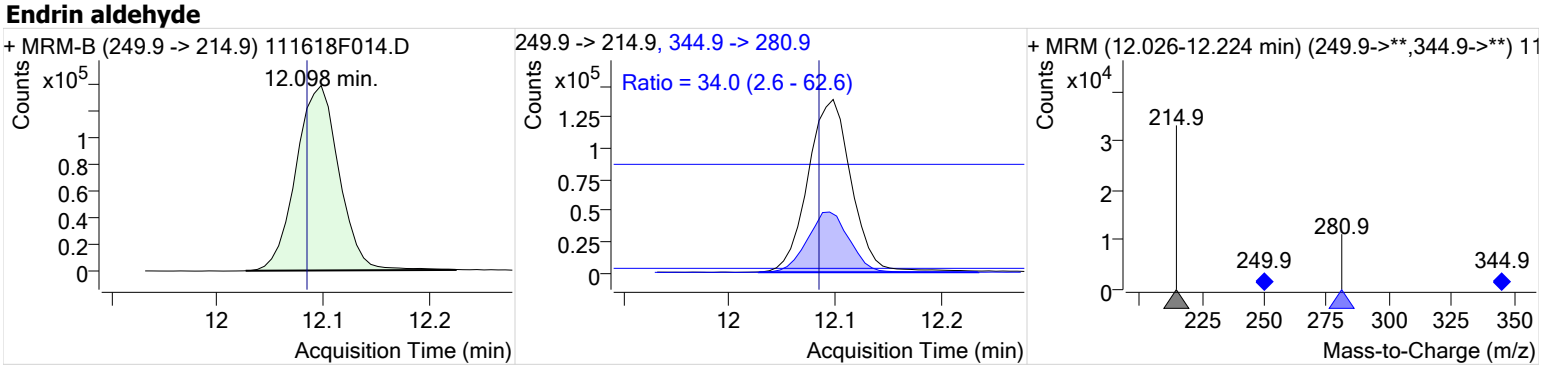


Quantitative Analysis Sample Report

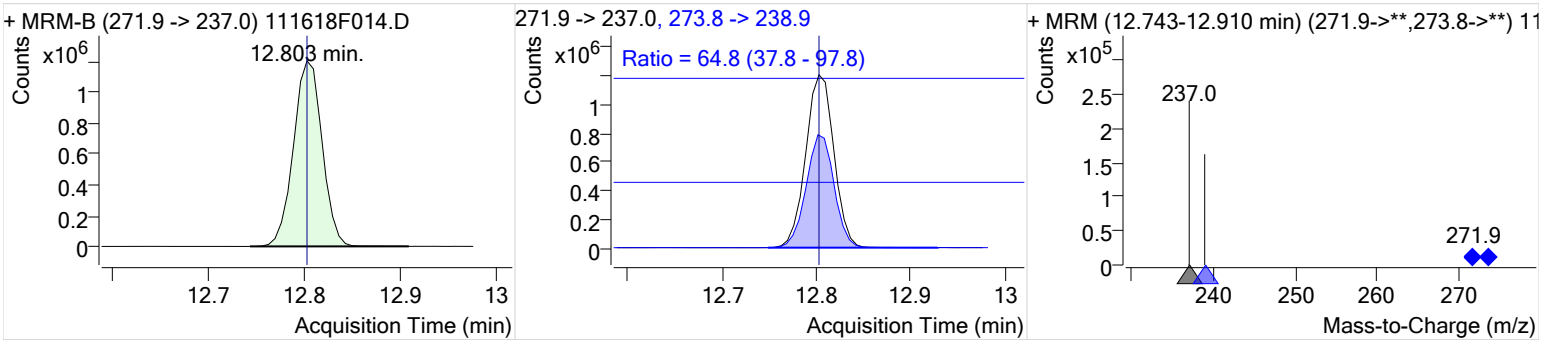
2,4'-DDT



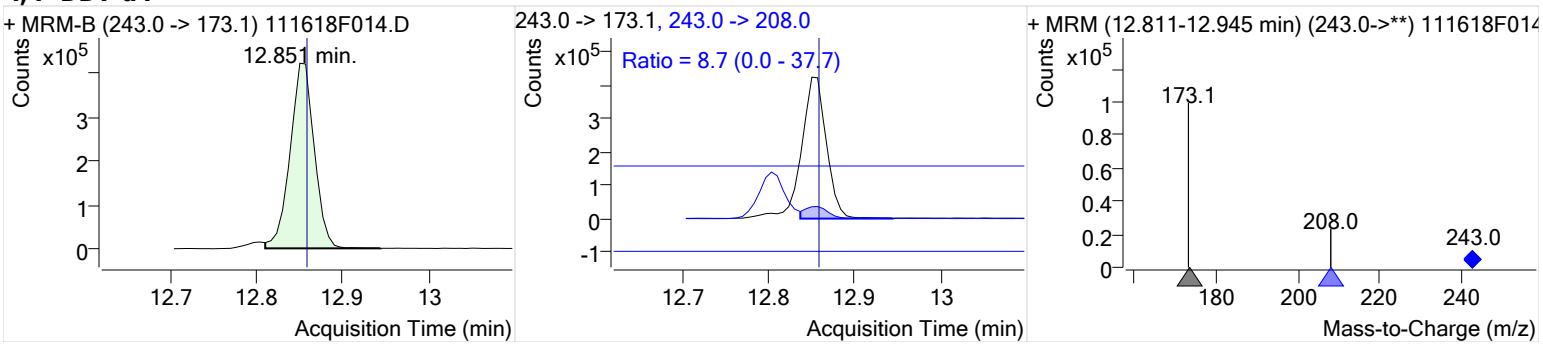
Endrin aldehyde



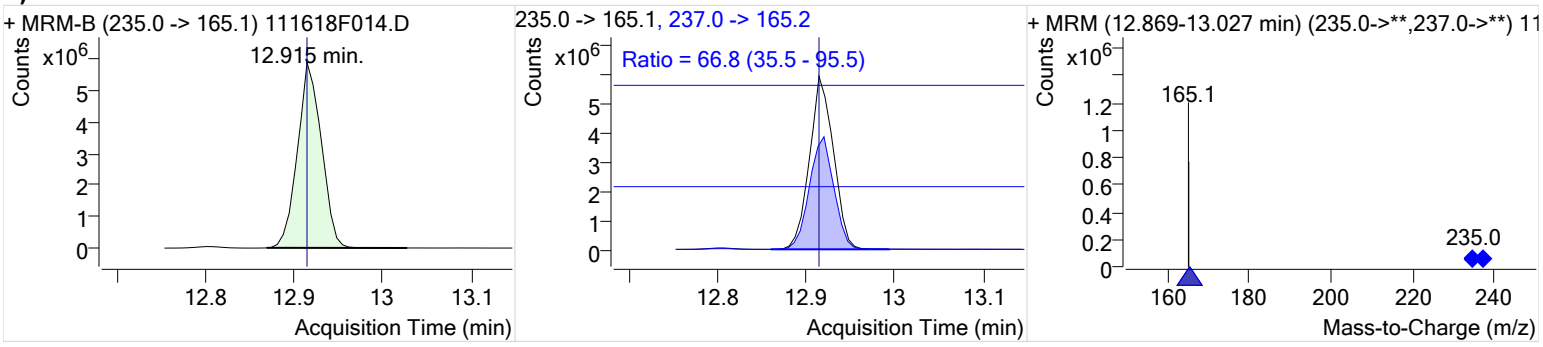
Endosulfan sulfate



4,4'-DDT-d4

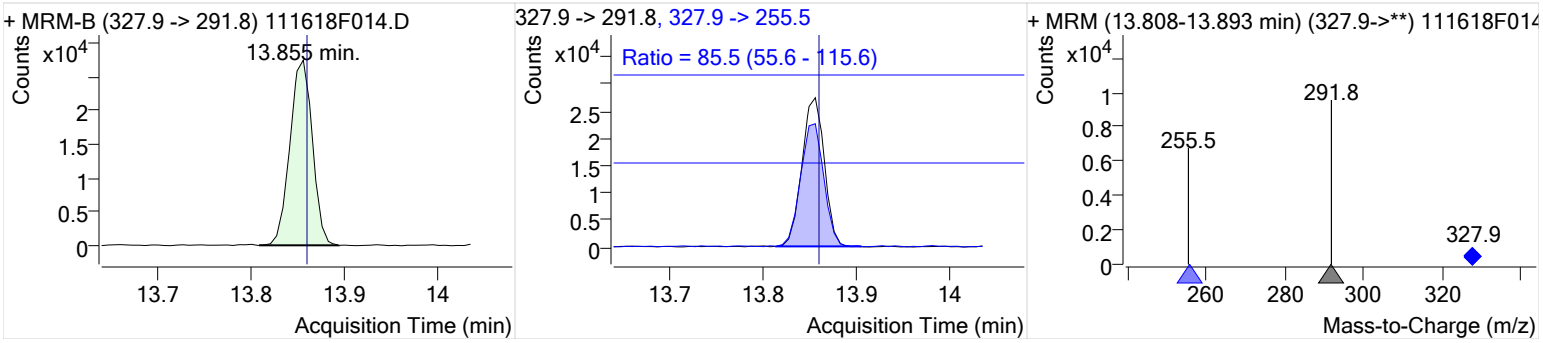


4,4'-DDT

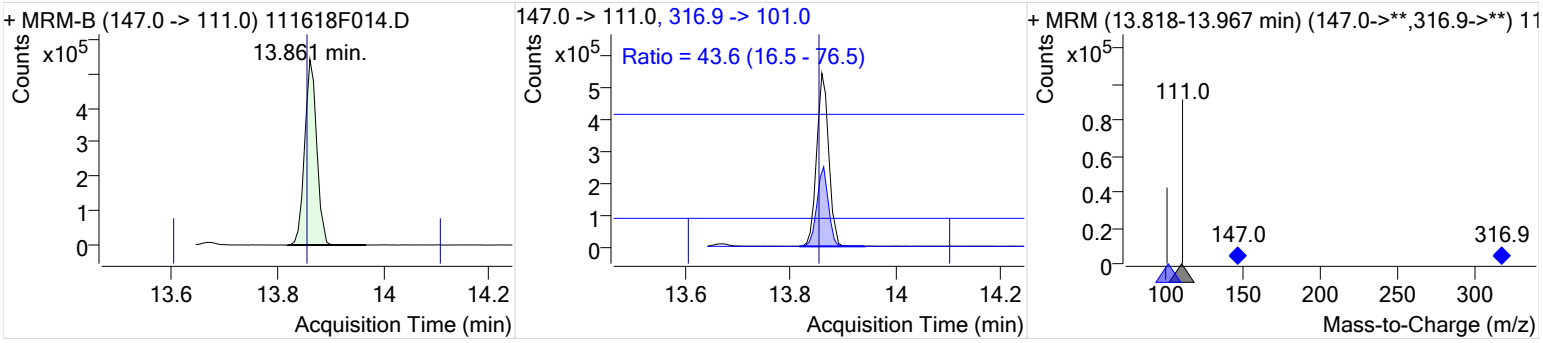


Quantitative Analysis Sample Report

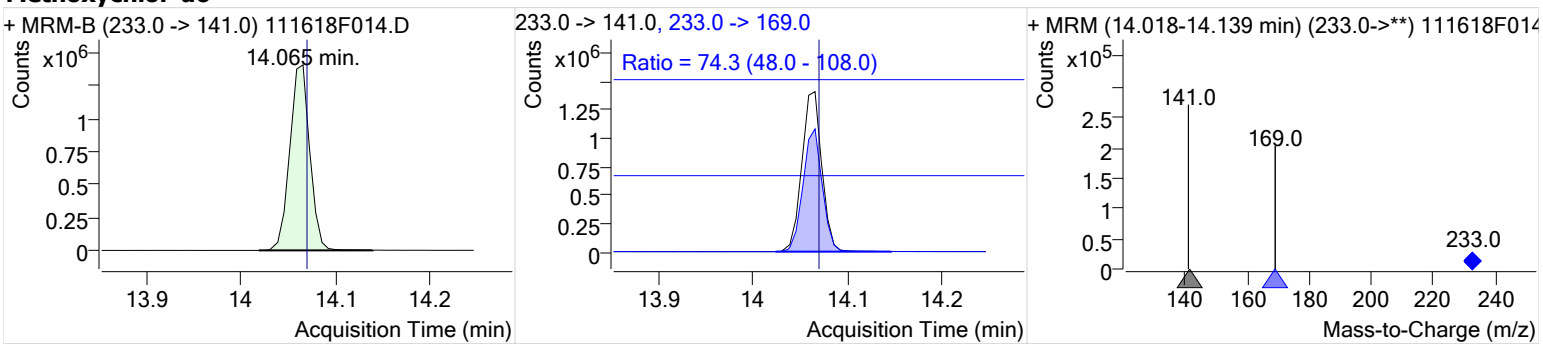
Endrin ketone-13C12



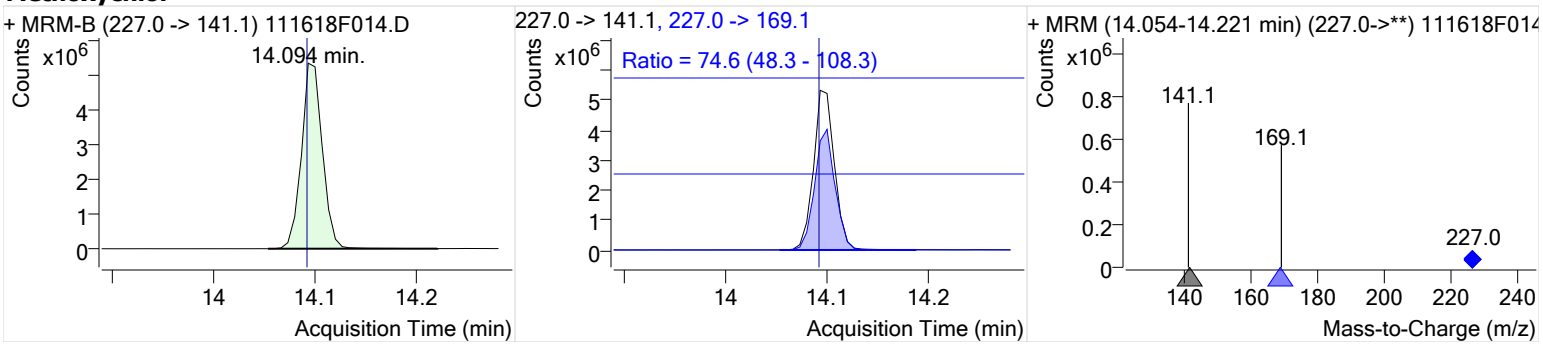
Endrin ketone



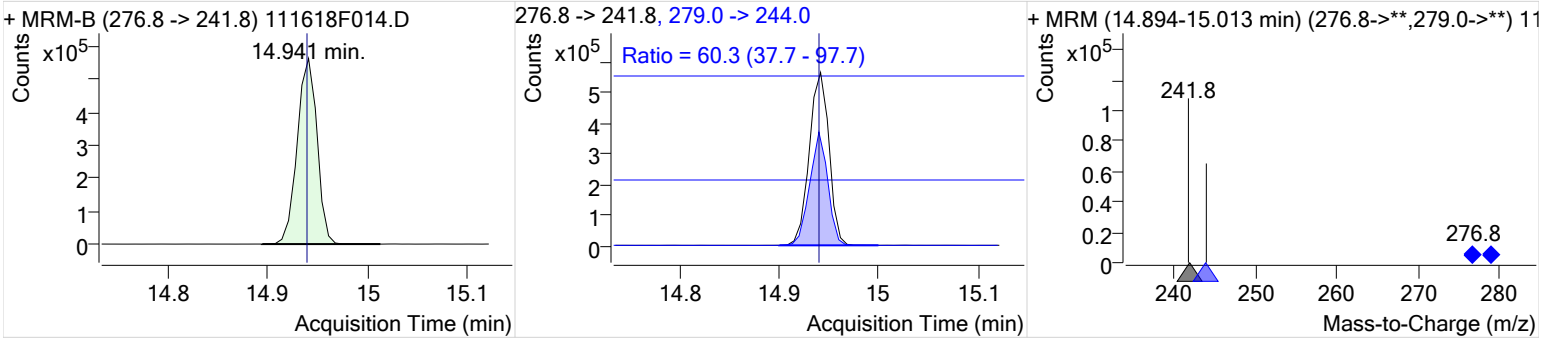
Methoxychlor-d6



Methoxychlor

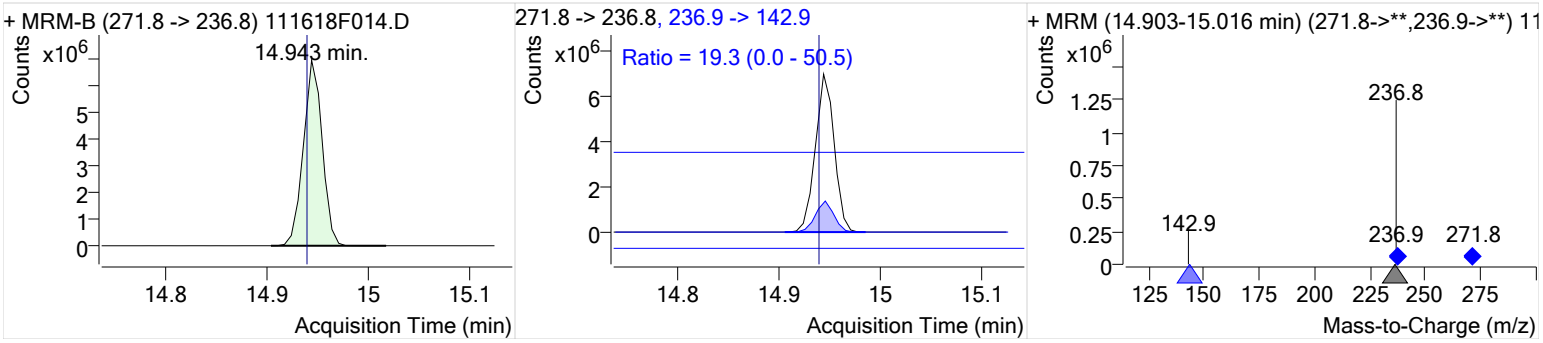


Mirex-13C10

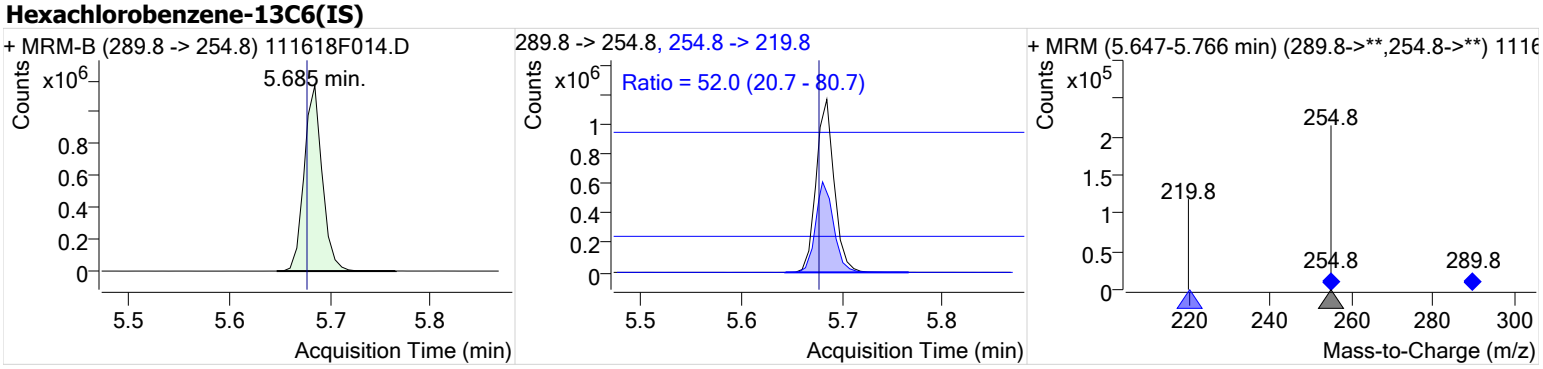


Quantitative Analysis Sample Report

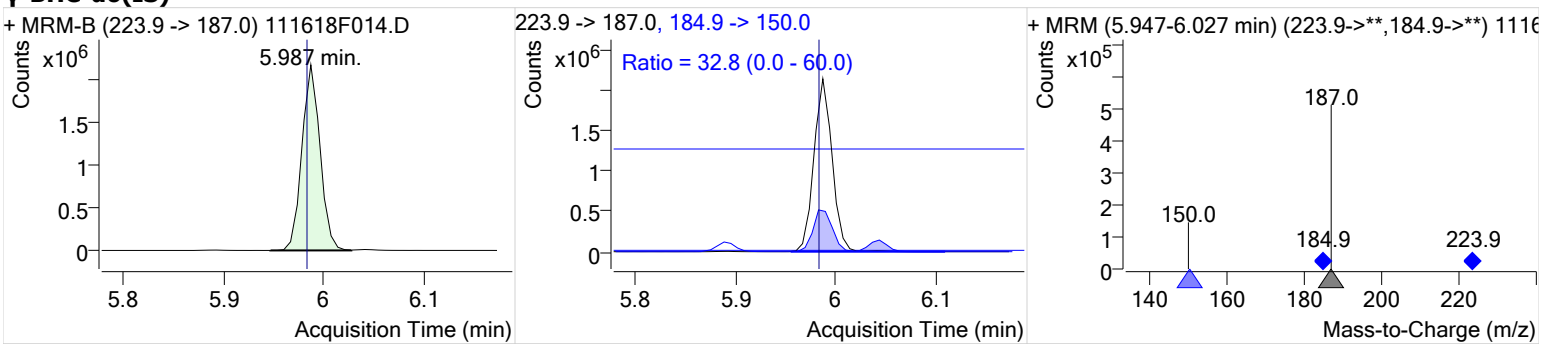
Mirex



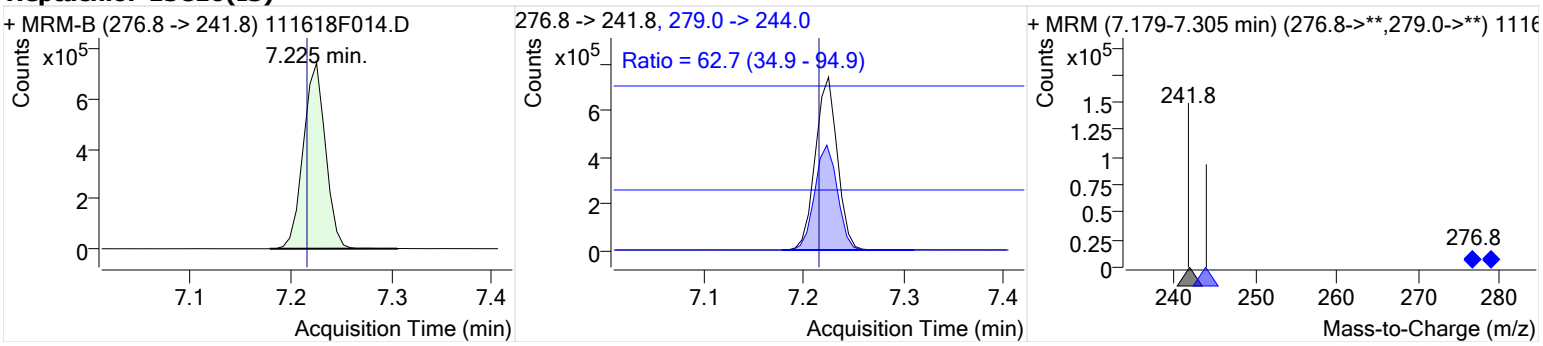
Hexachlorobenzene-13C6(IS)



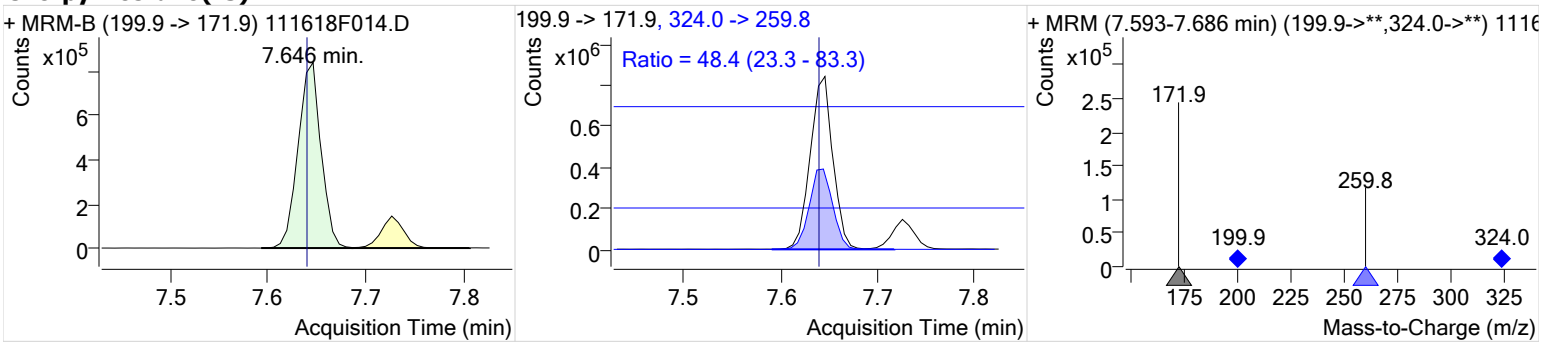
γ-BHC-d6(IS)



Heptachlor-13C10(IS)

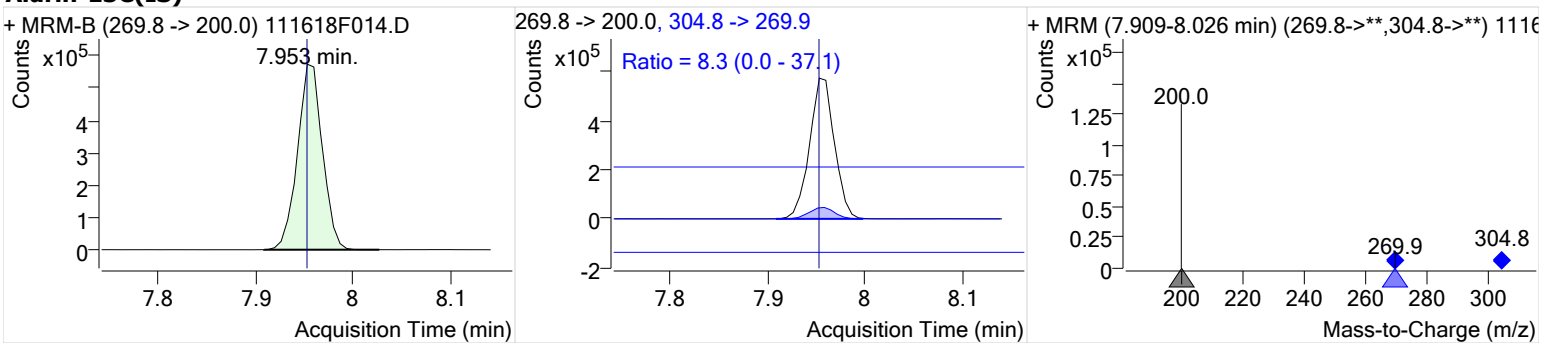


Chorpyrifos-d10(IS)

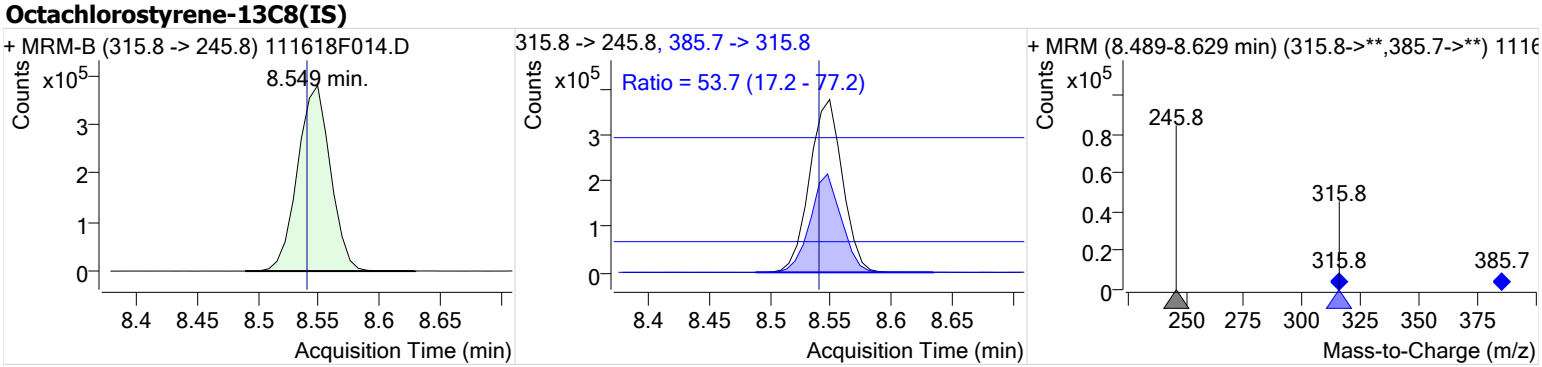


Quantitative Analysis Sample Report

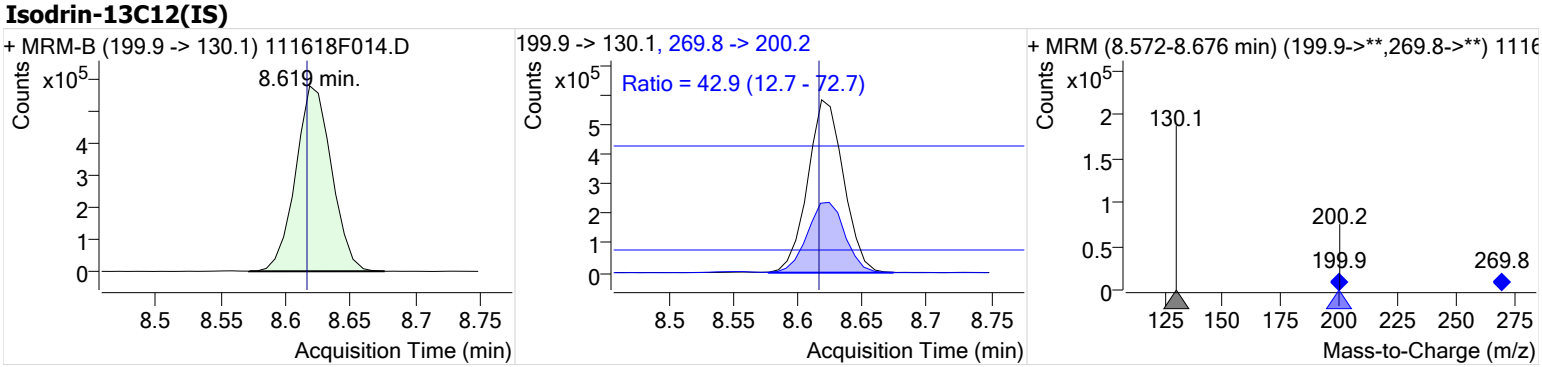
Aldrin-13C(IS)



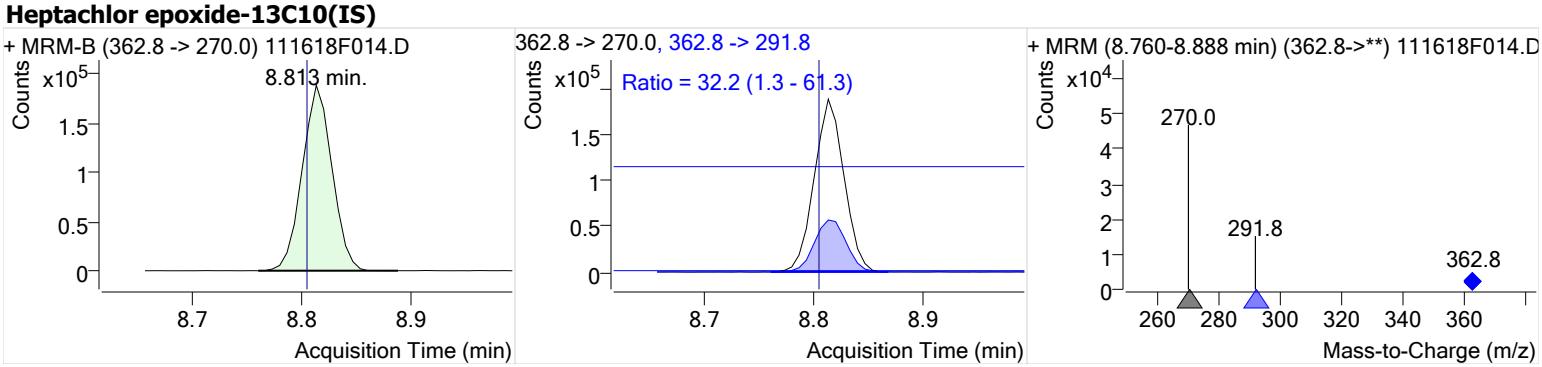
Octachlorostyrene-13C8(IS)



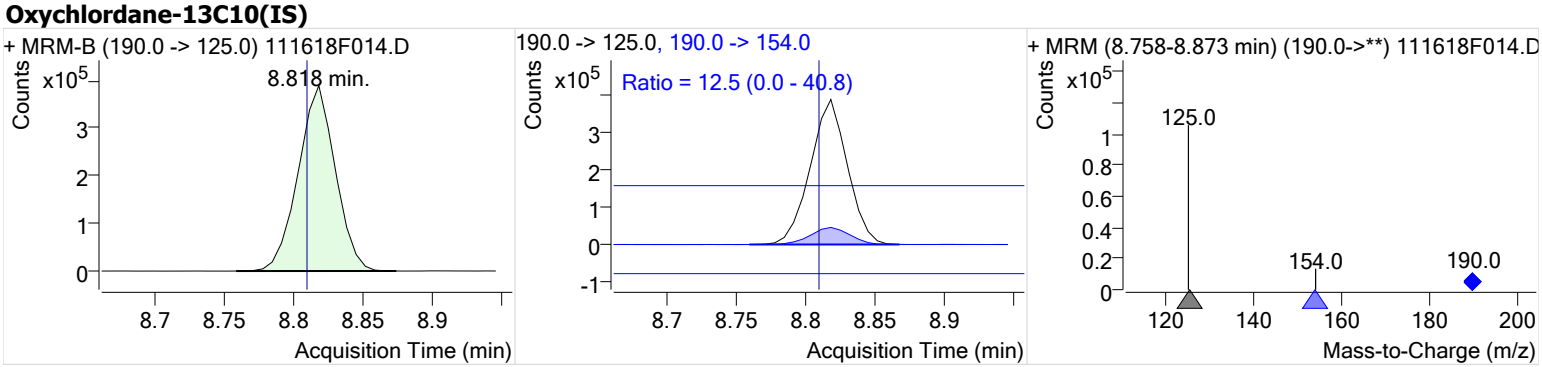
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

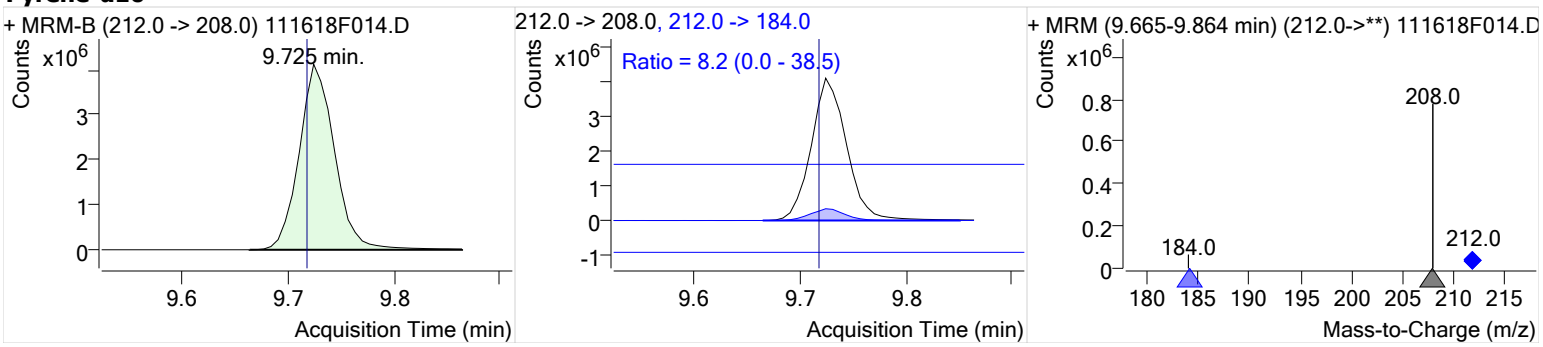


Oxychlordane-13C10(IS)

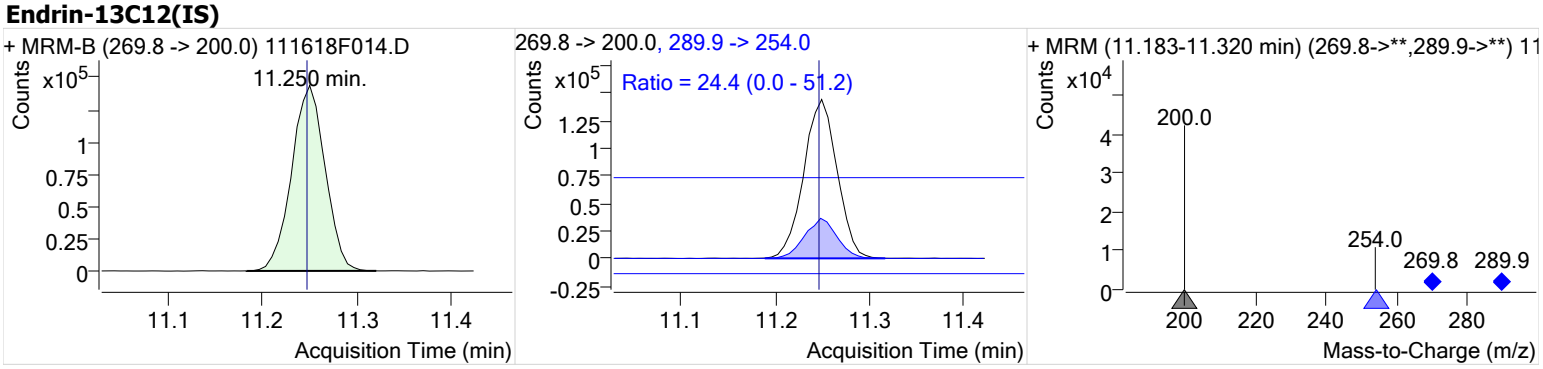


Quantitative Analysis Sample Report

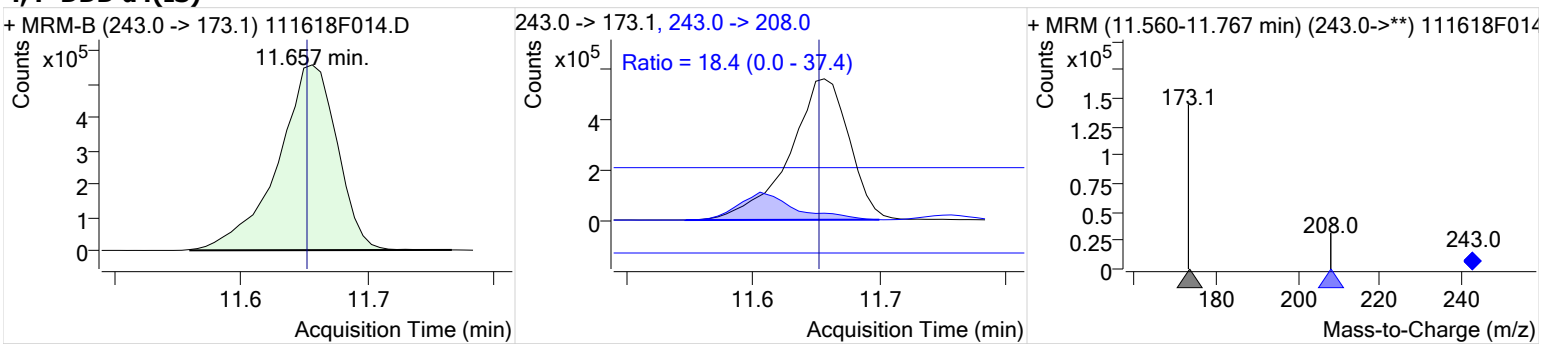
Pyrene-d10



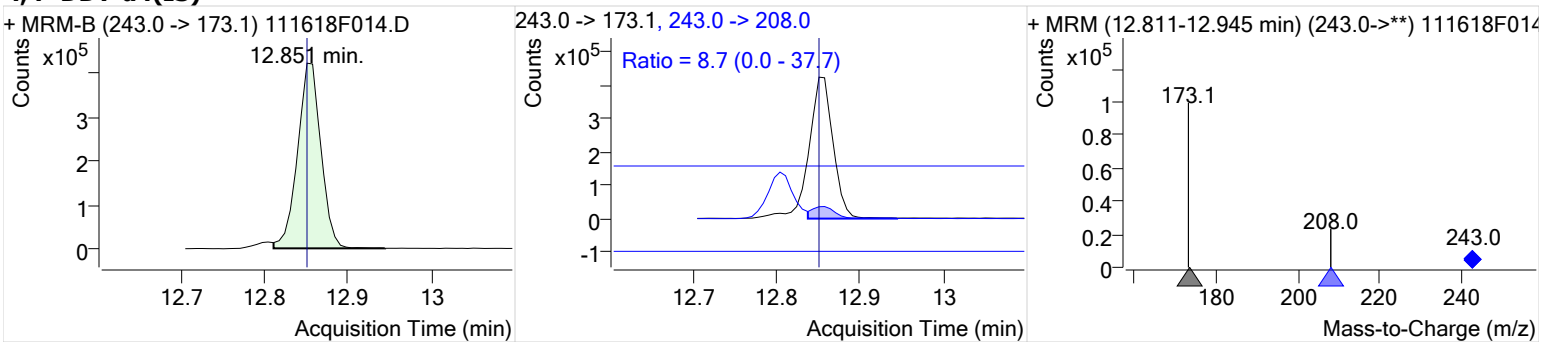
Endrin-13C12(IS)



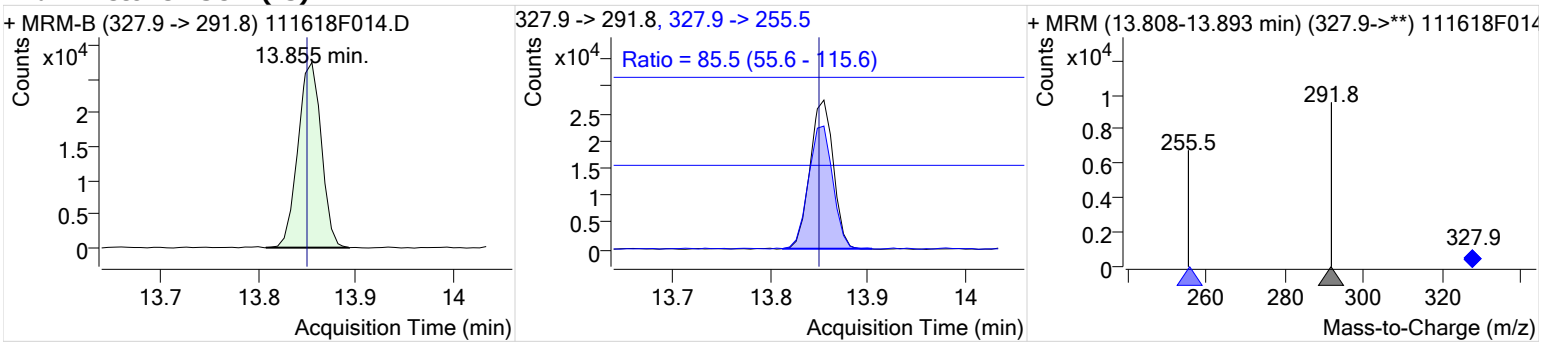
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

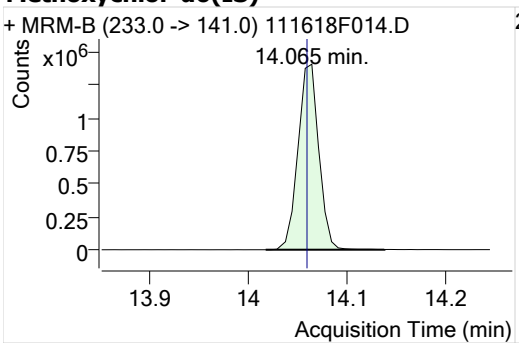


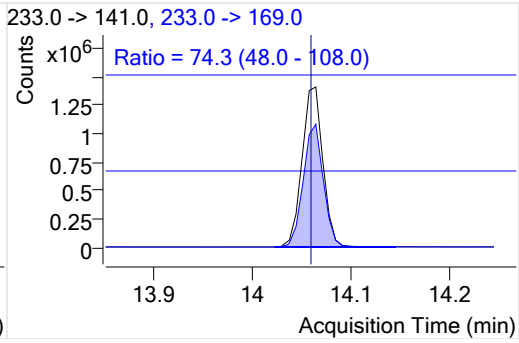
Endrin ketone-13C12(IS)

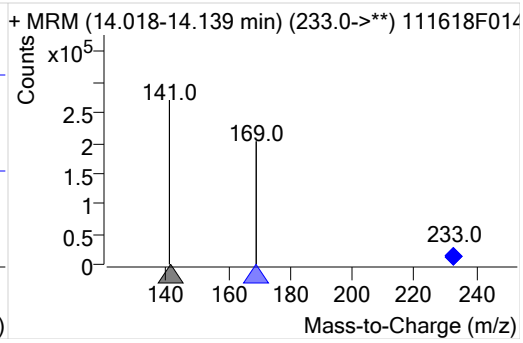


Quantitative Analysis Sample Report

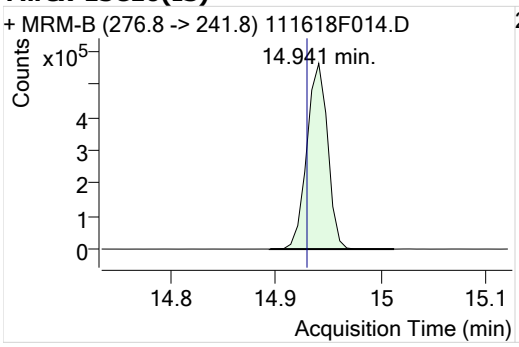
Methoxychlor-d6(IS)

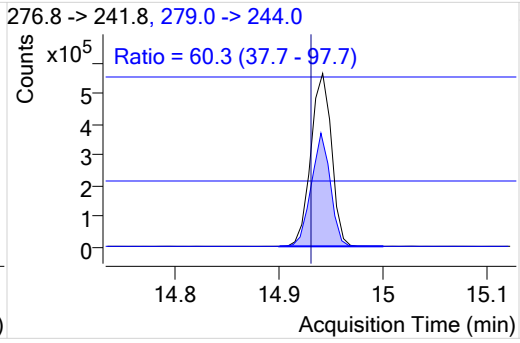


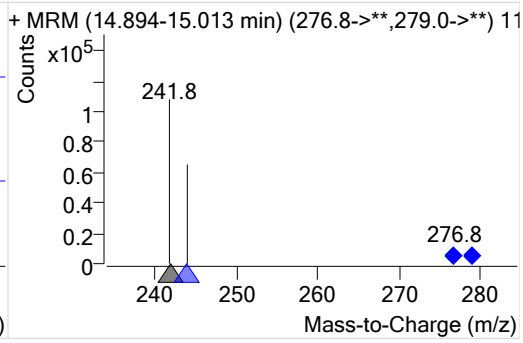




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F015.D	**Vial**	11
Acq. Date-Time	11/16/2018 3:25:54 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 80ng/mL SVM59-48I	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.686	289.8 -> 254.8	1475010	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2657799	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.220	276.8 -> 241.8	1014568	20.000 ng/ml	0.007
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1234693	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.958	269.8 -> 200.0	991938	20.000 ng/ml	0.005
Octachlorostyrene-13C8(IS)	8.550	315.8 -> 245.8	684107	20.000 ng/ml	0.009
Isodrin-13C12(IS)	8.619	199.9 -> 130.1	1037158	20.000 ng/ml	0.006
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	349722	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	699088	20.000 ng/ml	0.009
Pyrene-d10	9.725	212.0 -> 208.0	8324503	100.000 ng/ml	0.007
Endrin-13C12(IS)	11.250	269.8 -> 200.0	327789	20.000 ng/ml	0.002
4,4'-DDD d4(IS)	11.656	243.0 -> 173.1	1721594	5.000 ng/ml	0.021
4,4'-DDT-d4(IS)	12.852	243.0 -> 173.1	702784	5.000 ng/ml	0.026
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	39860	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	1717022	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	773403	5.000 ng/ml	0.011

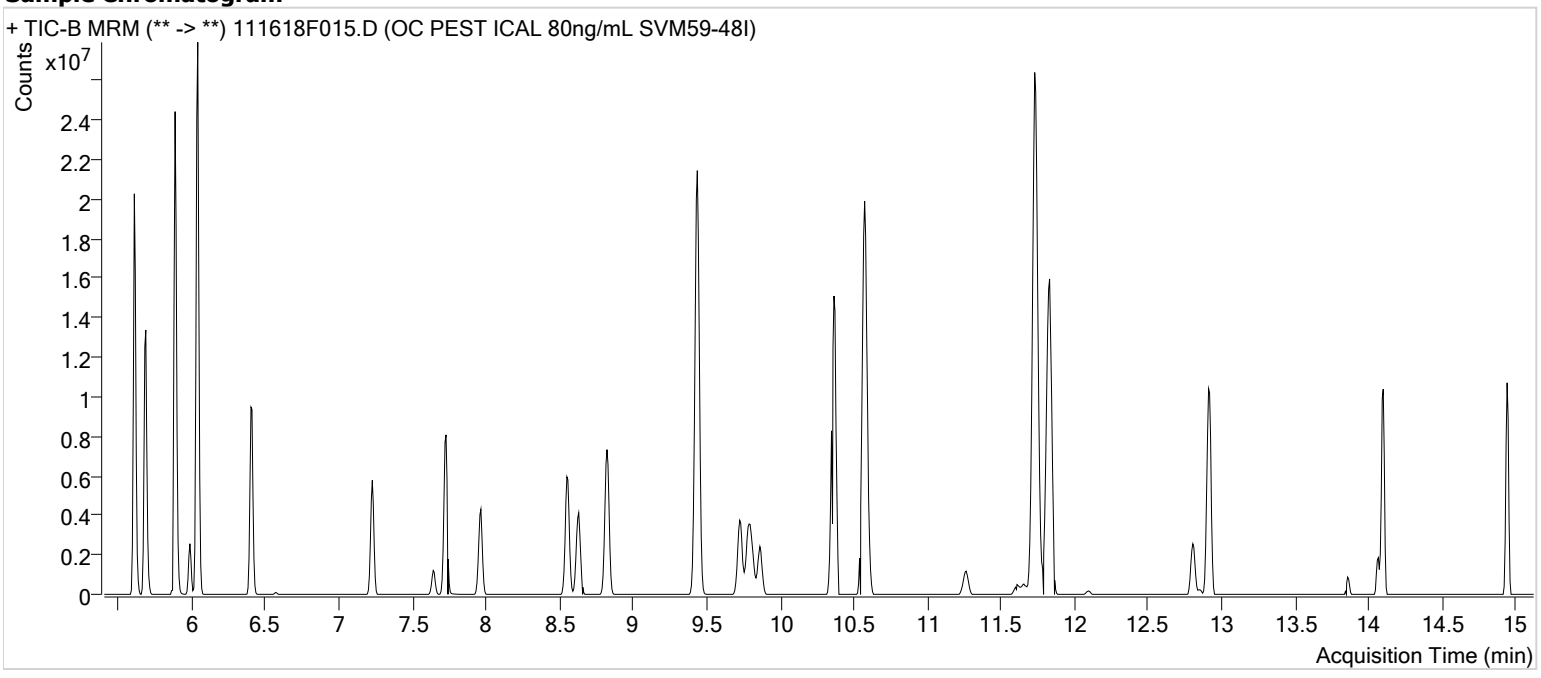
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1475010	24.071 ng/ml
		Spiked Amount =	20.0	Recovery = *120.4 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2657799	22.889 ng/ml
		Spiked Amount =	20.0	Recovery = *114.4 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1014568	21.130 ng/ml
		Spiked Amount =	20.0	Recovery = *105.6 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1234693	20.497 ng/ml
		Spiked Amount =	20.0	Recovery = *102.5 %*
Aldrin-13C	7.952	269.8 -> 200.0	991938	22.619 ng/ml
		Spiked Amount =	20.0	Recovery = *113.1 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	684107	21.787 ng/ml
		Spiked Amount =	20.0	Recovery = *108.9 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1037158	21.675 ng/ml
		Spiked Amount =	20.0	Recovery = *108.4 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	349722	22.859 ng/ml
		Spiked Amount =	20.0	Recovery = *114.3 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	699088	22.485 ng/ml
		Spiked Amount =	20.0	Recovery = *112.4 %*
Endrin-13C12	11.247	269.8 -> 200.0	327789	21.545 ng/ml
		Spiked Amount =	20.0	Recovery = *107.7 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1721594	5.823 ng/ml
		Spiked Amount =	5.0	Recovery = *116.5 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	702784	5.320 ng/ml
		Spiked Amount =	5.0	Recovery = *106.4 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	39860	21.158 ng/ml
		Spiked Amount =	20.0	Recovery = *105.8 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	1717022	19.671 ng/ml
		Spiked Amount =	20.0	Recovery = *98.4 %*
Mirex-13C10	14.930	276.8 -> 241.8	773403	6.064 ng/ml
		Spiked Amount =	5.0	Recovery = *121.3 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	14893981	78.368	ng/ml	99
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	9569724	71.673	ng/ml	96
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	18582531	77.284	ng/ml	94
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	21601149	77.701	ng/ml	96
δ-BHC	γ-BHC-d6(IS)	6.404	181.1 -> 145.1	8458498	76.338	ng/ml	100
Heptachlor	Heptachlor-13C10(IS)	7.230	271.7 -> 236.9	4476940	76.130	ng/ml	99
Chorpyrifos	Chorpyrifos-d10(IS)	7.725	196.9 -> 169.0	6809479	78.128	ng/ml	98
Aldrin	Aldrin-13C(IS)	7.969	254.9 -> 220.0	2552387	81.208	ng/ml	82
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.553	342.8 -> 307.8	7000713	79.517	ng/ml	95
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	4202512	78.973	ng/ml	97
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.823	352.8 -> 262.9	1563033	78.536	ng/ml	100
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	7283434	77.058	ng/ml	100
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.430	271.8 -> 236.9	2679110	79.535	ng/ml	97
2,4'-DDE	4,4'-DDD d4(IS)	9.440	246.0 -> 176.2	24634917	75.265	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	6471554	76.899	ng/ml	95
Endosulfan I	Endrin-13C12(IS)	9.812	206.9 -> 172.0	1592164	77.485	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	4429083	81.779	ng/ml	95
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	22143887	73.806	ng/ml	97
2,4'-DDD	4,4'-DDD d4(IS)	10.577	235.0 -> 165.1	28127778	75.927	ng/ml	96
Dieldrin	Endrin-13C12(IS)	10.601	262.9 -> 193.0	2074704	82.980	ng/ml	92
Endosulfan II	Endrin-13C12(IS)	11.260	206.9 -> 172.0	257132	79.819	ng/ml	88
Endrin	Endrin-13C12(IS)	11.264	262.8 -> 193.0	1719960	76.460	ng/ml	98
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	39733640	71.466	ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	1592460	77.619	ng/ml	84
2,4'-DDT	4,4'-DDT-d4(IS)	11.834	235.0 -> 165.1	24924838	79.095	ng/ml	96
Endrin aldehyde	Endrin-13C12(IS)	12.097	249.9 -> 214.9	499924	78.779	ng/ml	99
Endosulfan sulfate	Endrin-13C12(IS)	12.804	271.9 -> 237.0	3069722	79.717	ng/ml	94
4,4'-DDT	4,4'-DDT-d4(IS)	12.916	235.0 -> 165.1	13057387	80.293	ng/ml	97
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	1044159	74.421	ng/ml	94
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	8942965	81.622	ng/ml	97
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	11436744	81.285	ng/ml	97

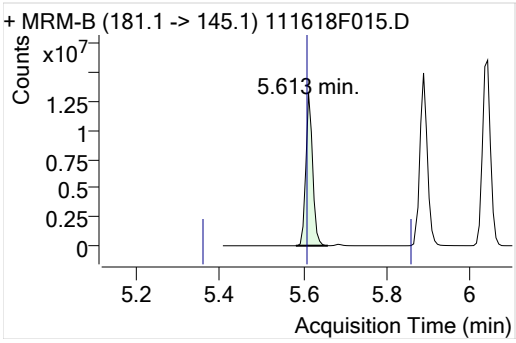
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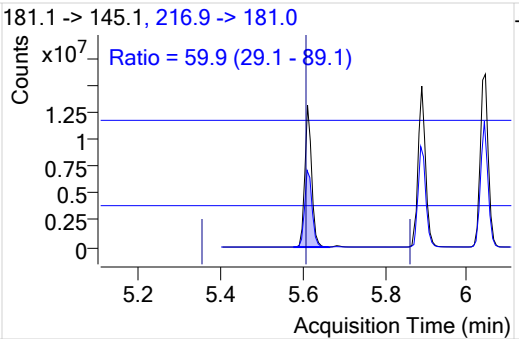
Sample Chromatogram

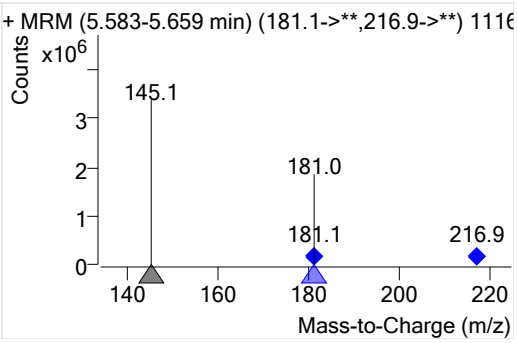


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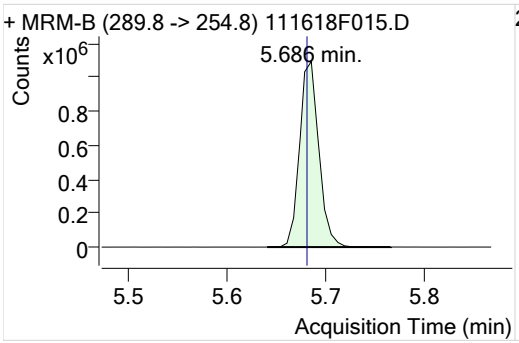
α-BHC

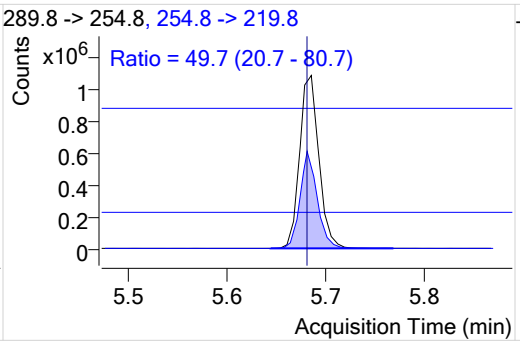


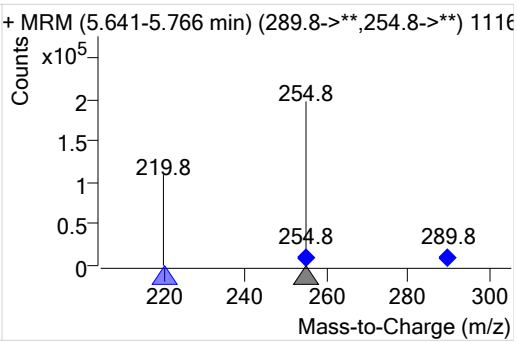




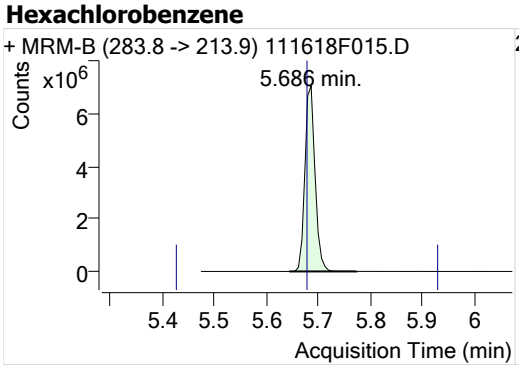
Hexachlorobenzene-13C6

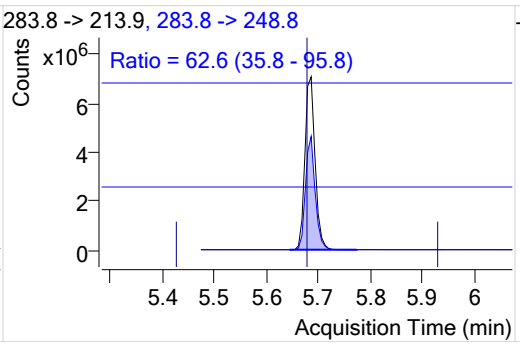


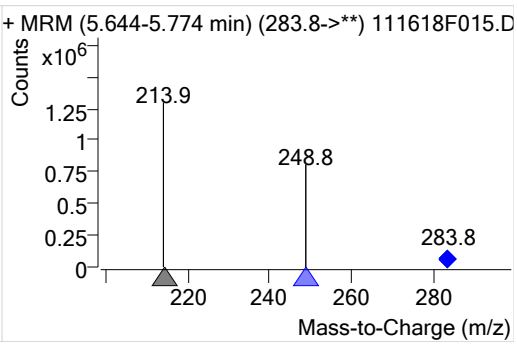




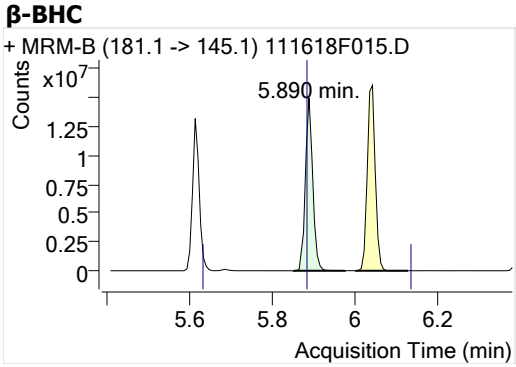
Hexachlorobenzene

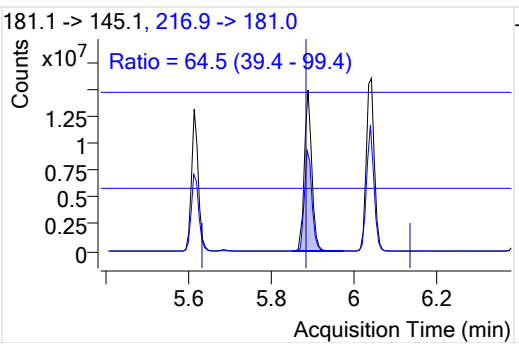


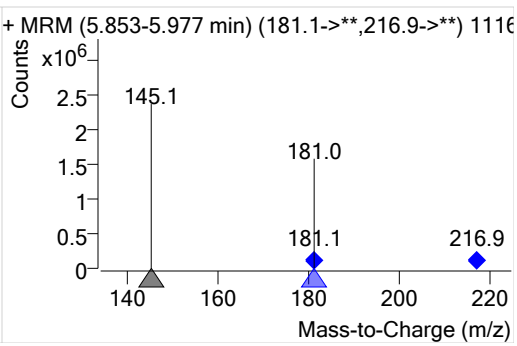




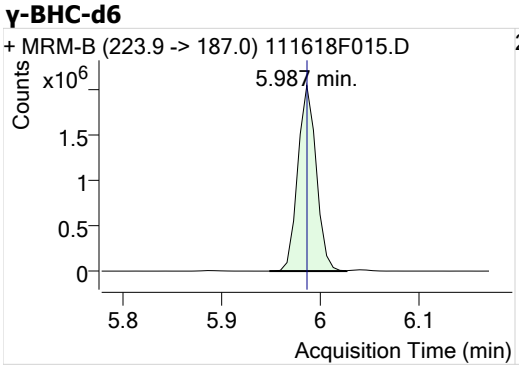
β-BHC

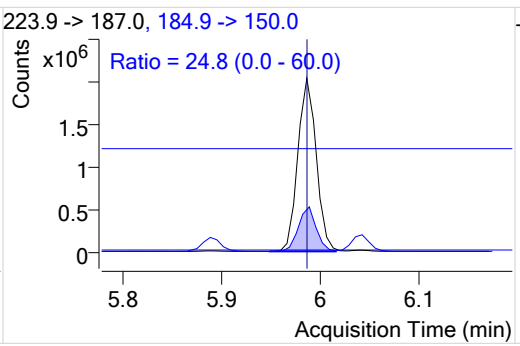


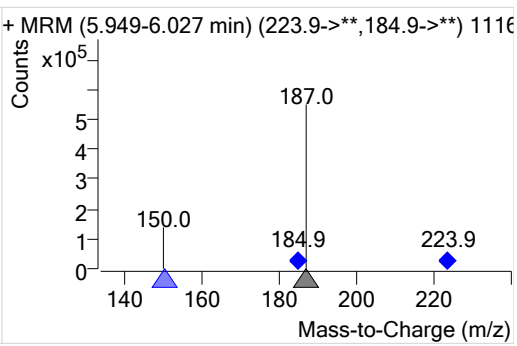




γ-BHC-d6

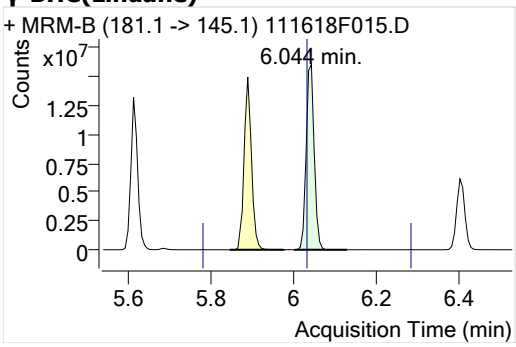


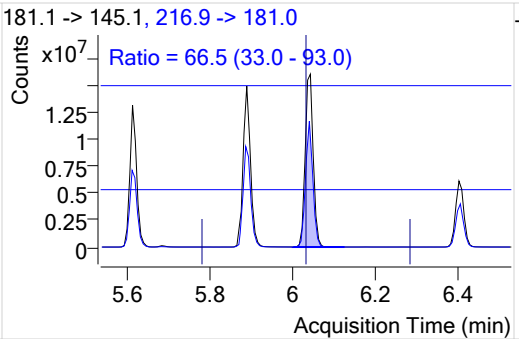


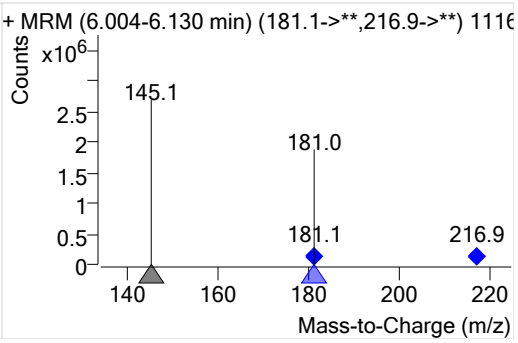


Quantitative Analysis Sample Report

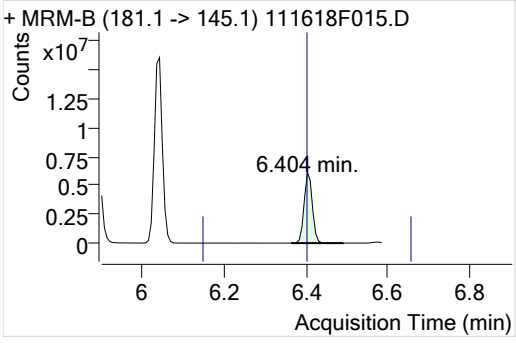
γ-BHC(Lindane)

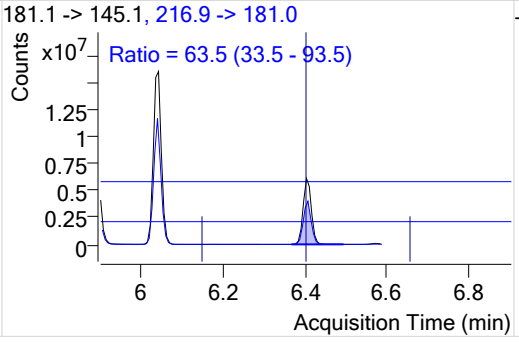


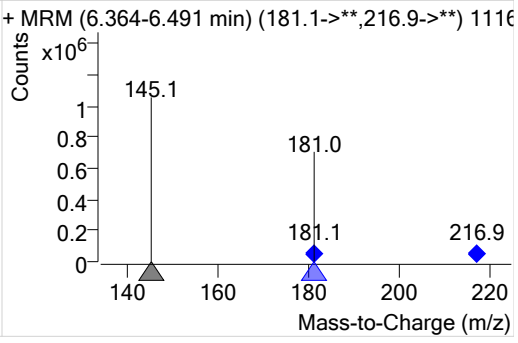




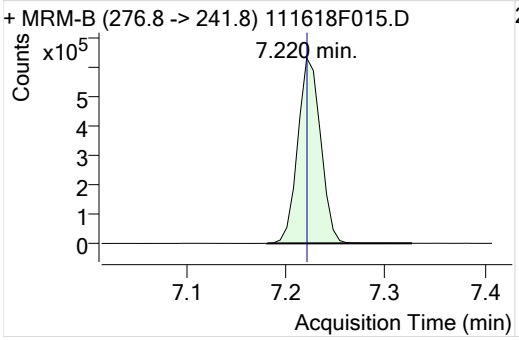
δ-BHC

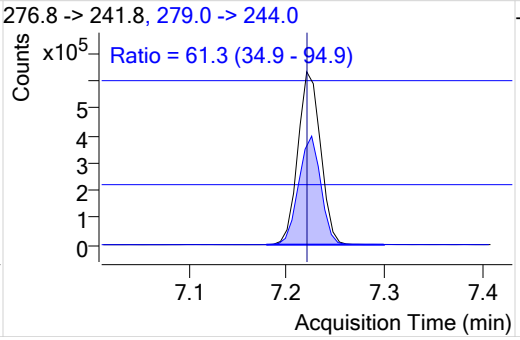


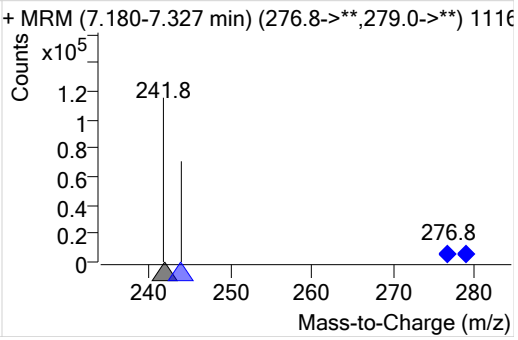




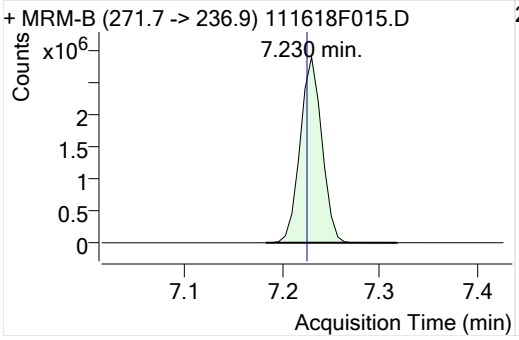
Heptachlor-13C10

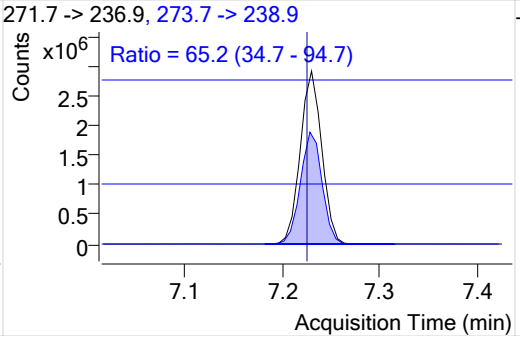


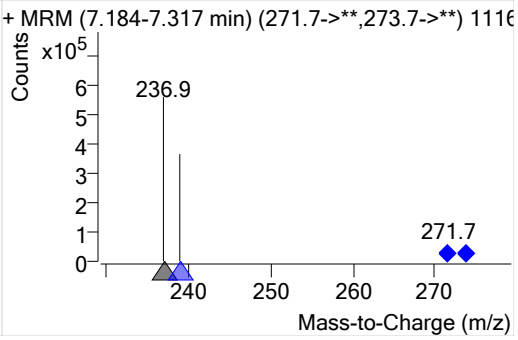




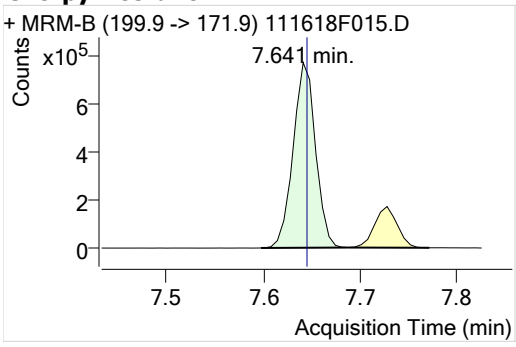
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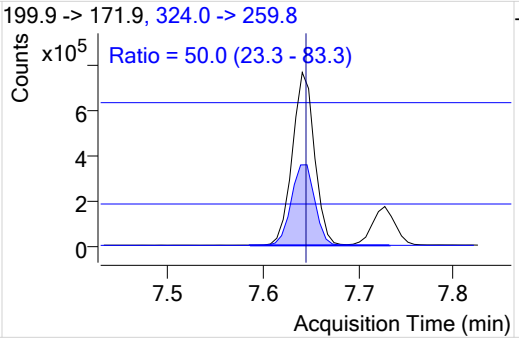


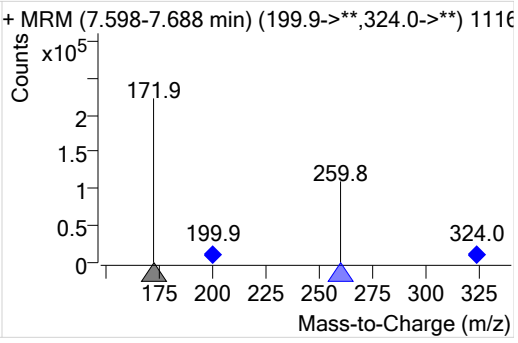




Chorpyrifos-d10

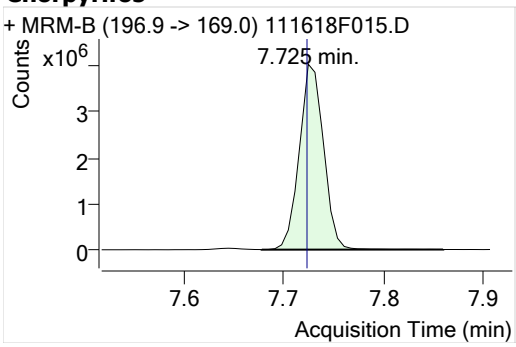


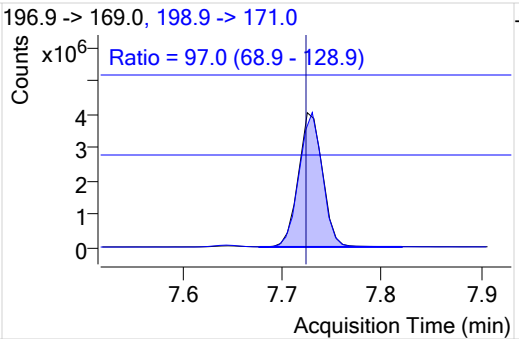


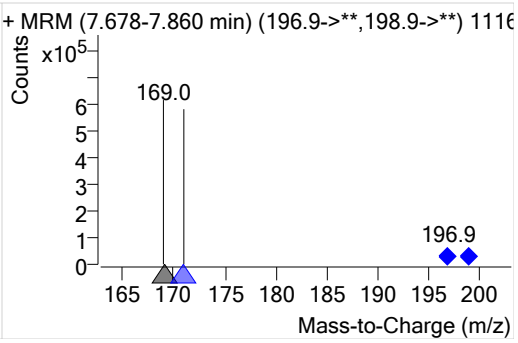


Quantitative Analysis Sample Report

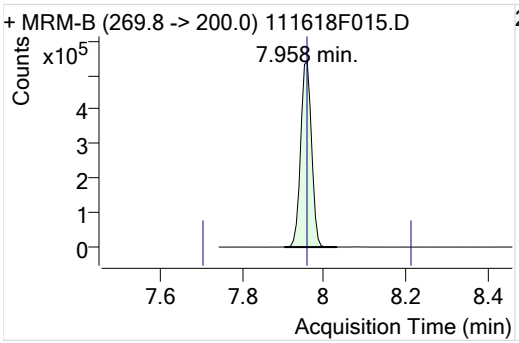
Chorpyrifos

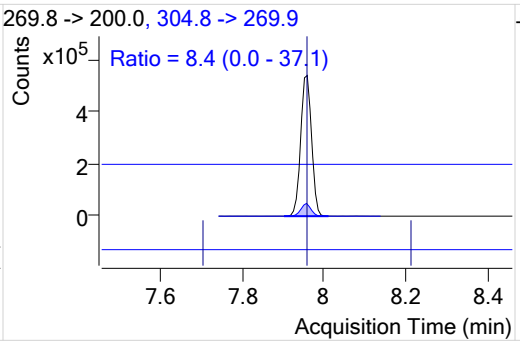


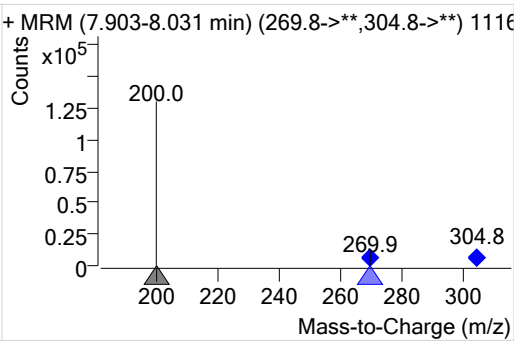




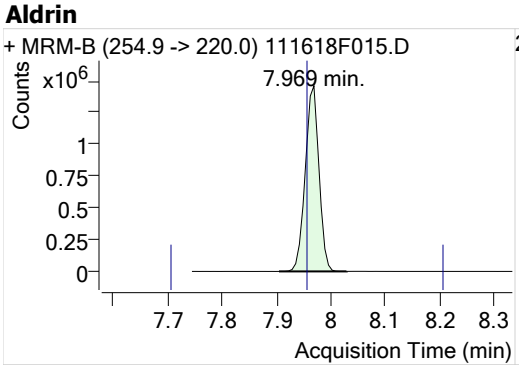
Aldrin-13C

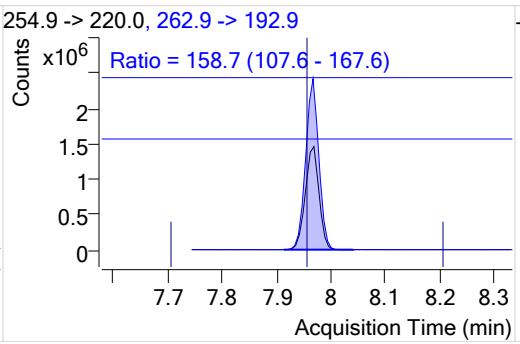


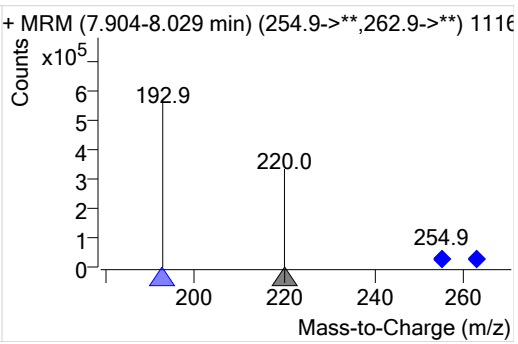




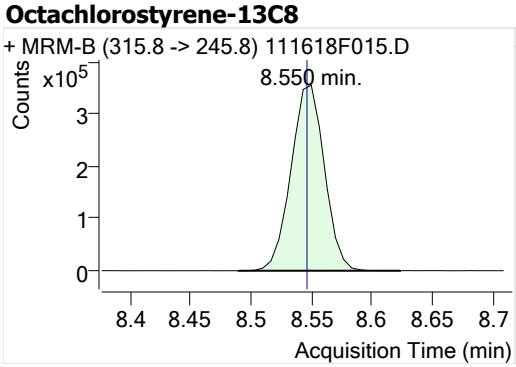
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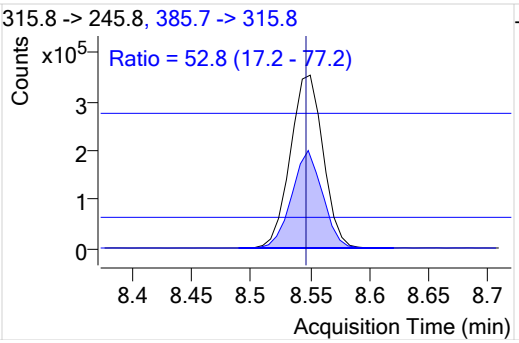


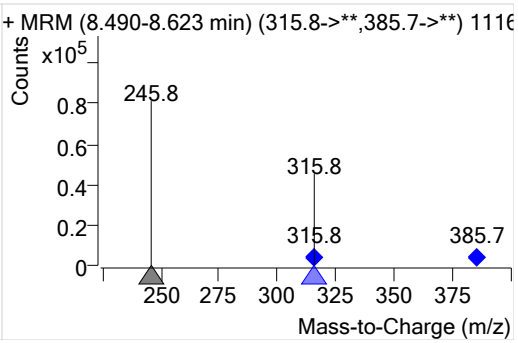




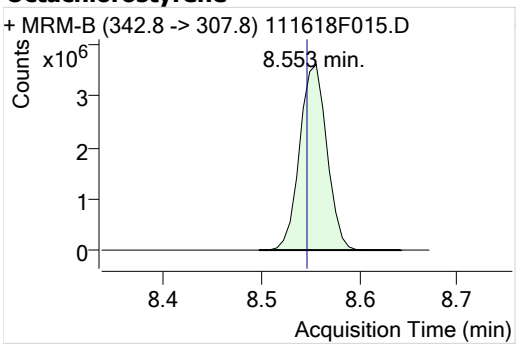
Octachlorostyrene-13C8

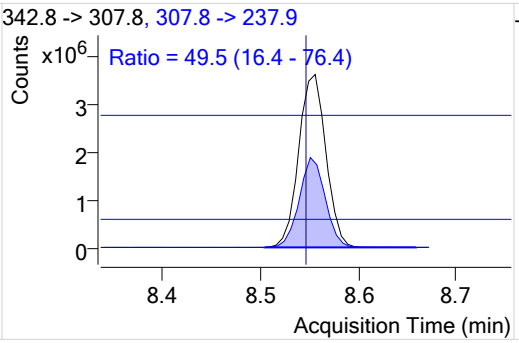


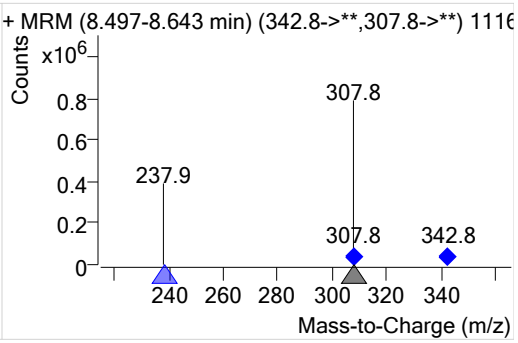




Octachlorostyrene

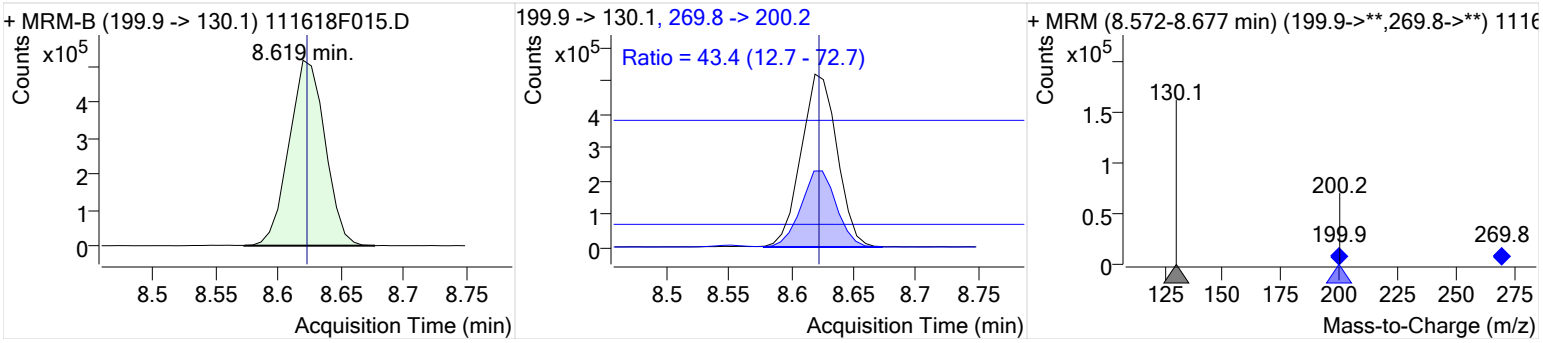




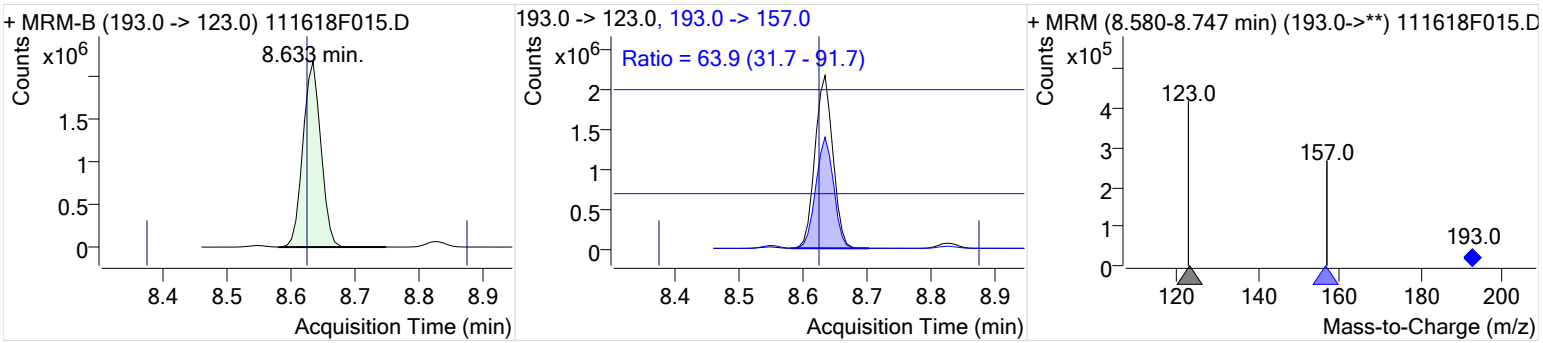


Quantitative Analysis Sample Report

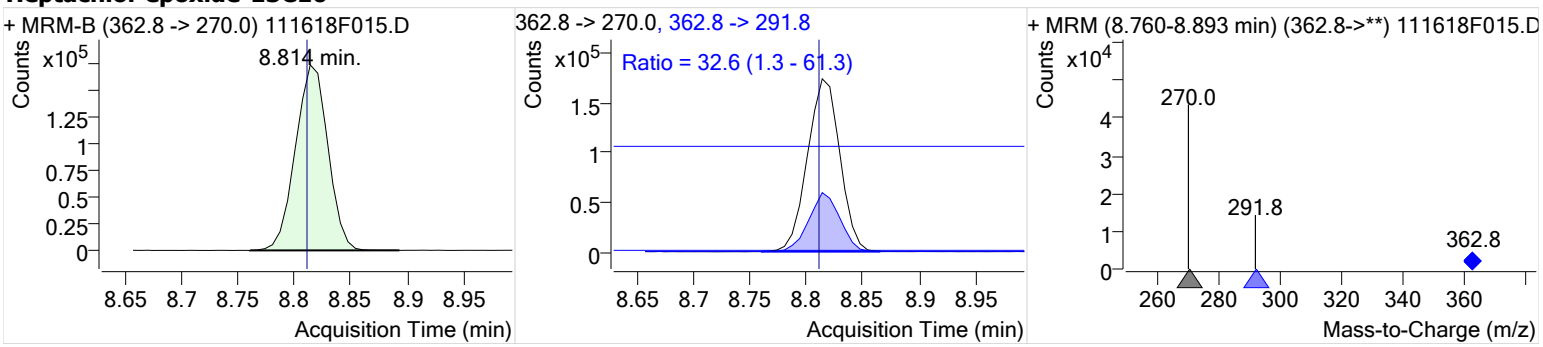
Isodrin-13C12



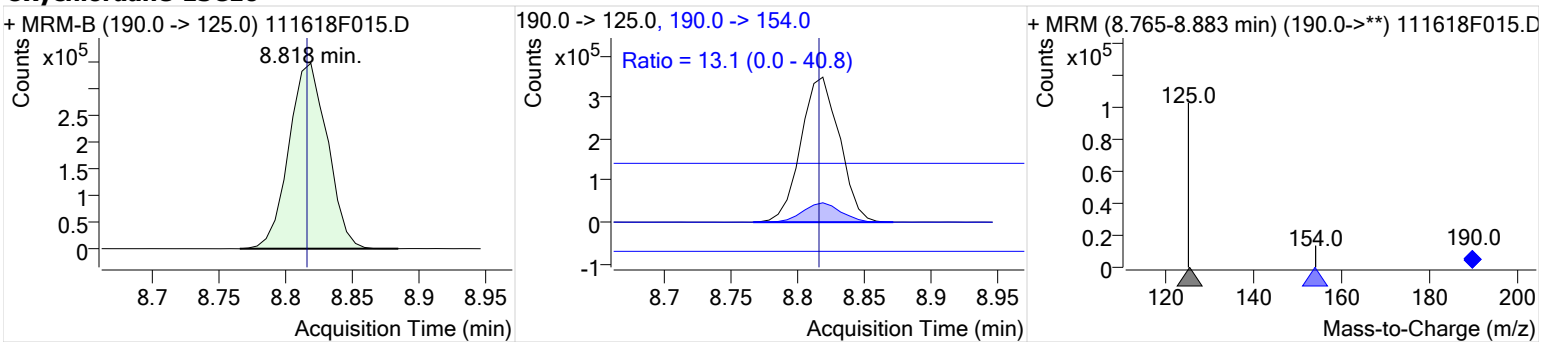
Isodrin



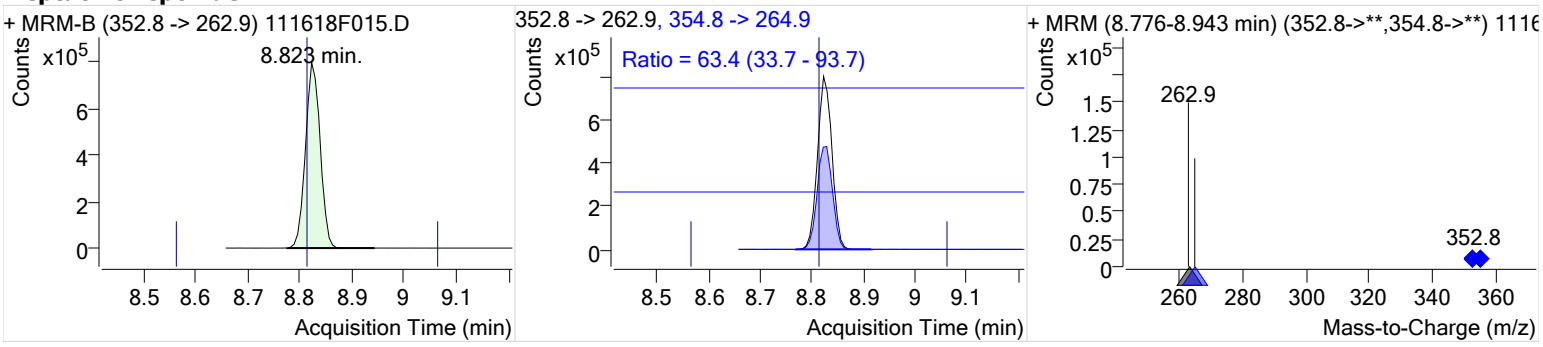
Heptachlor epoxide-13C10



Oxychlordane-13C10

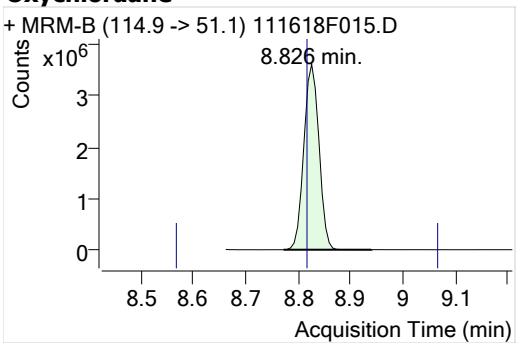


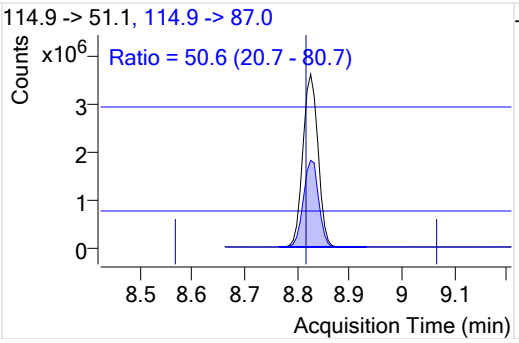
Heptachlor epoxide

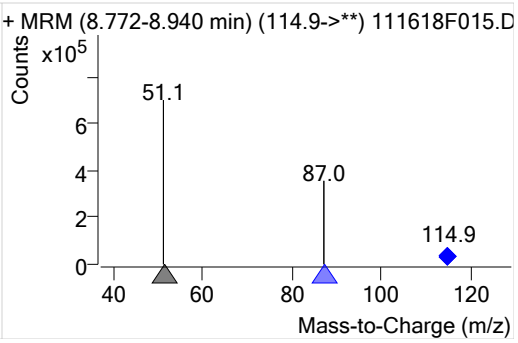


Quantitative Analysis Sample Report

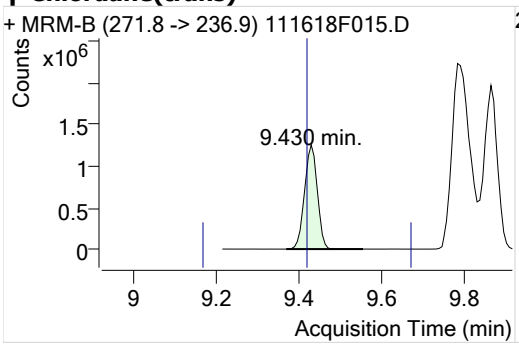
Oxychlordane

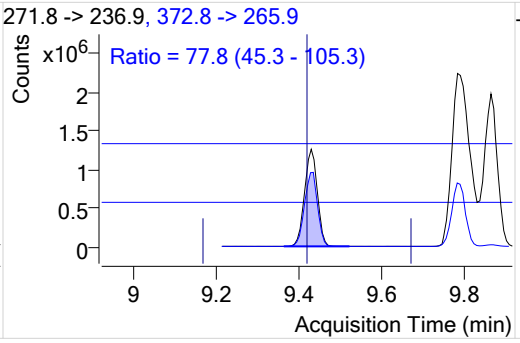


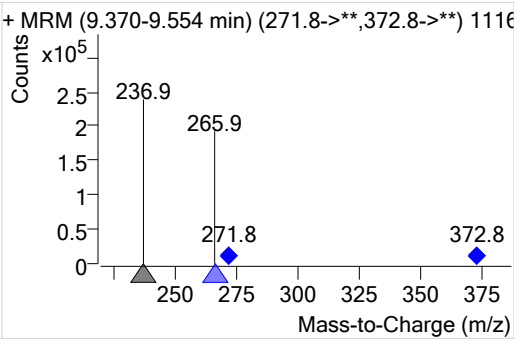




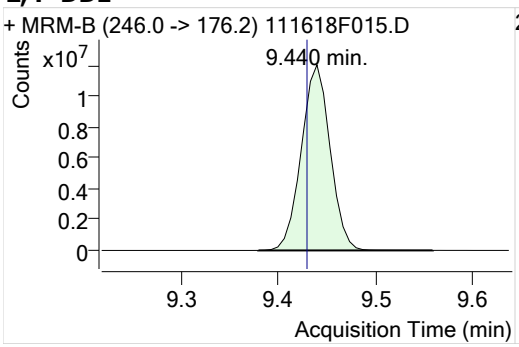
γ-Chlordane(trans)

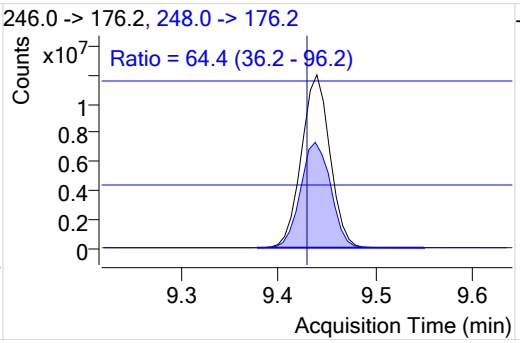


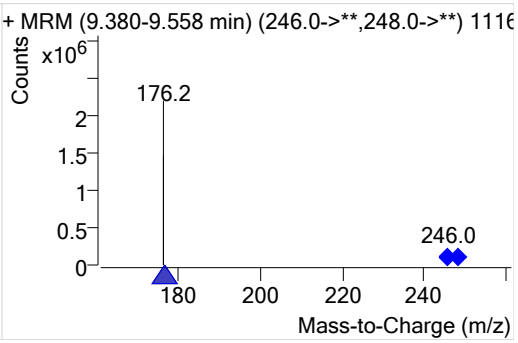




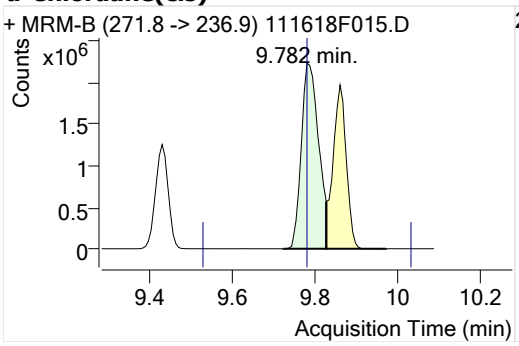
2,4'-DDE

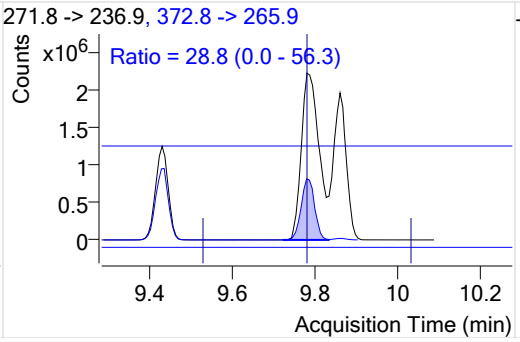


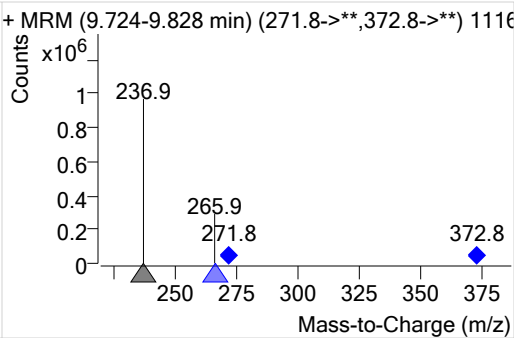




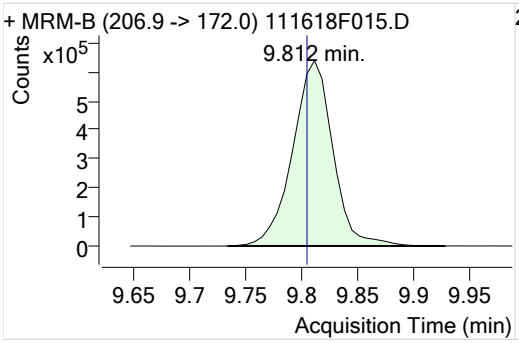
α-Chlordane(cis)

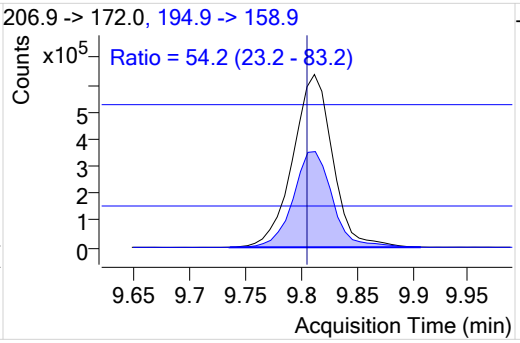


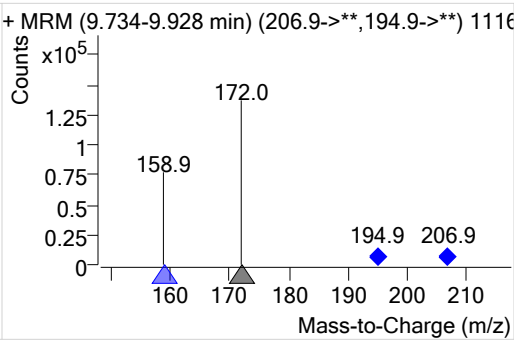




Endosulfan I

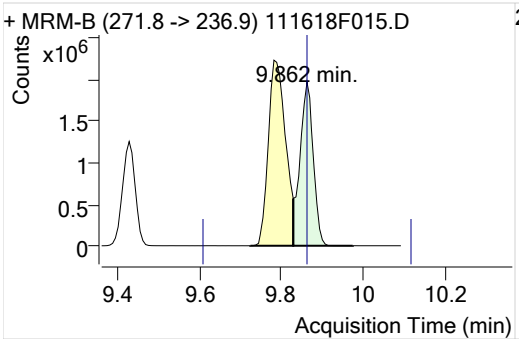


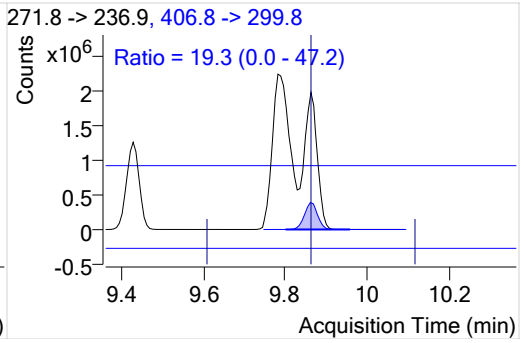


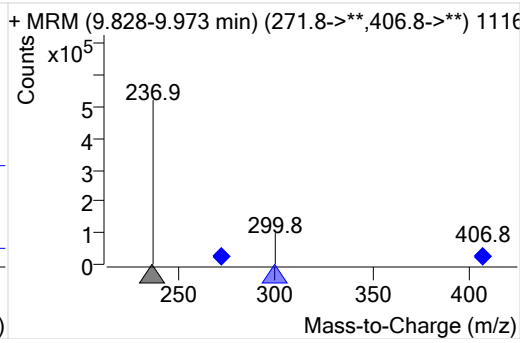


Quantitative Analysis Sample Report

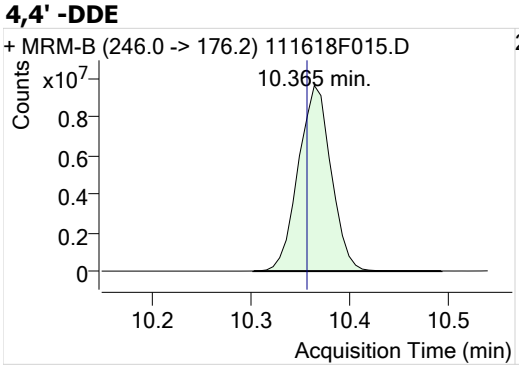
trans-Nanochlor

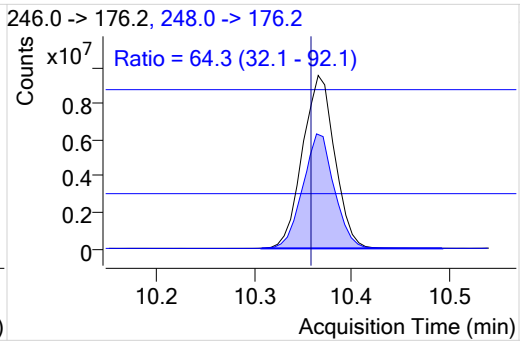


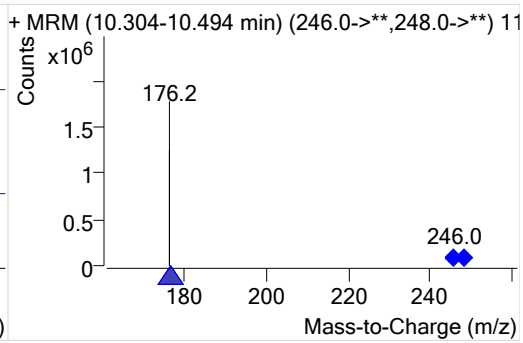




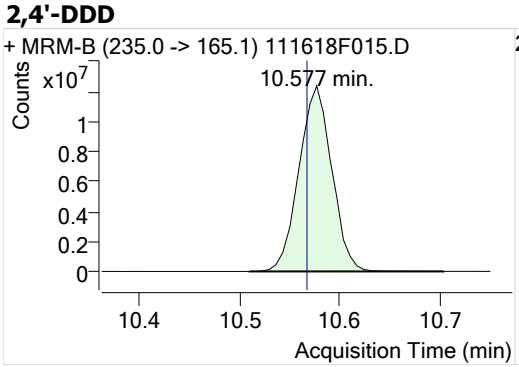
4,4' -DDE

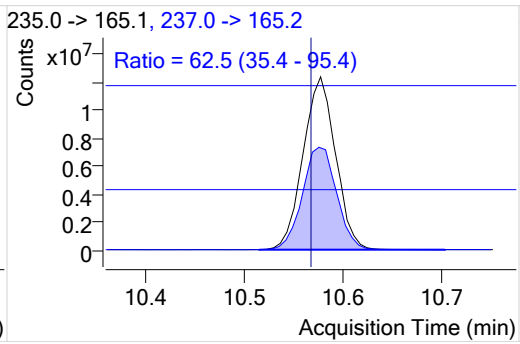


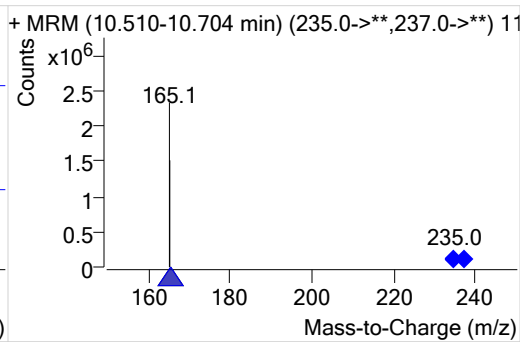




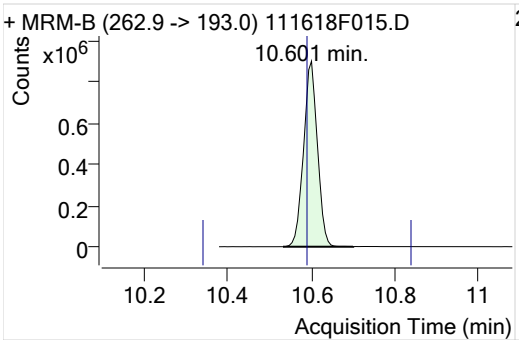
2,4'-DDD

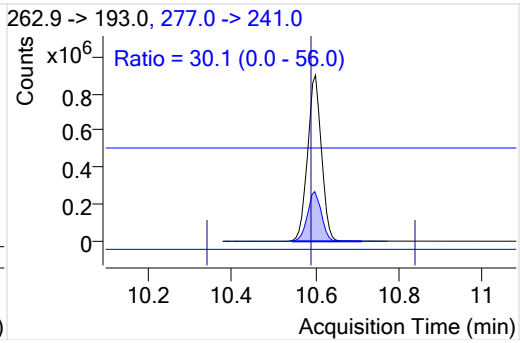


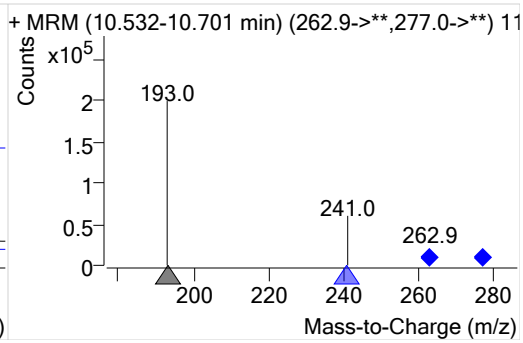




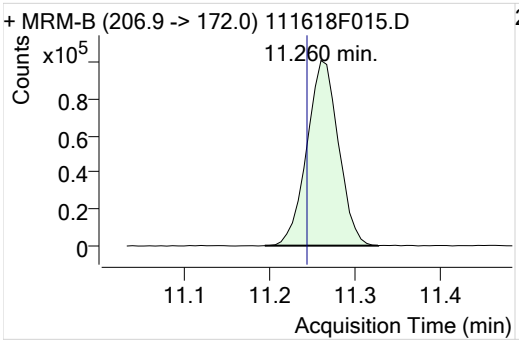
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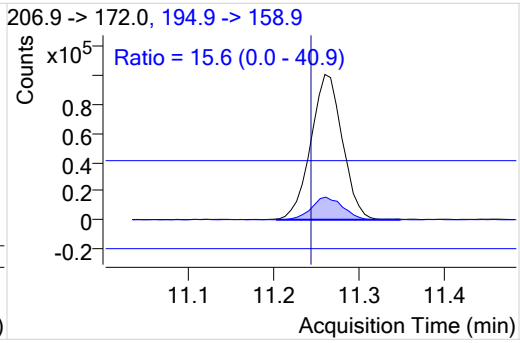


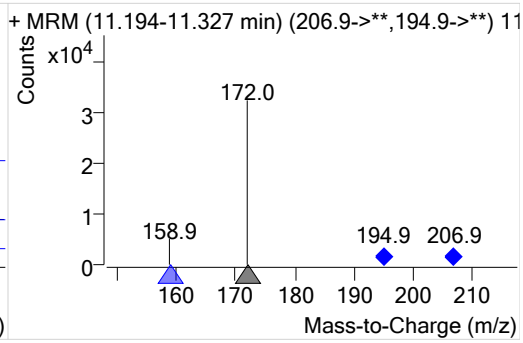




Endosulfan II

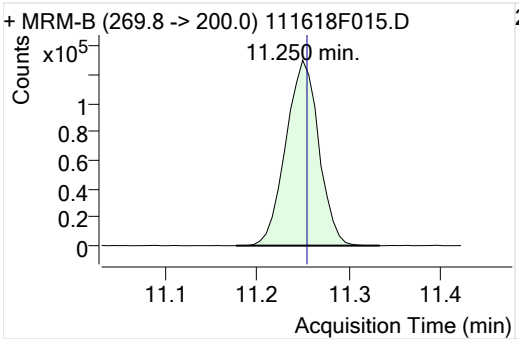


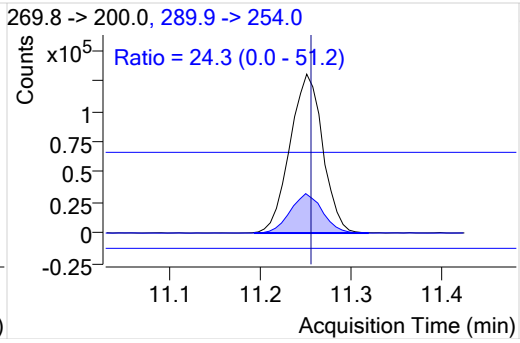


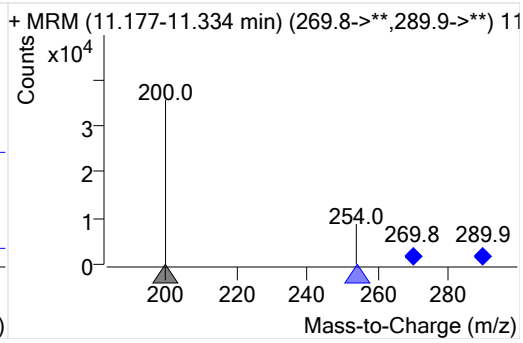


Quantitative Analysis Sample Report

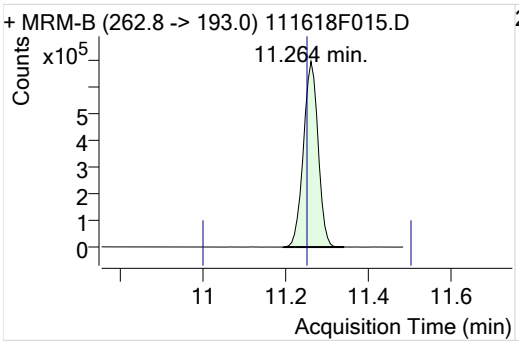
Endrin-13C12

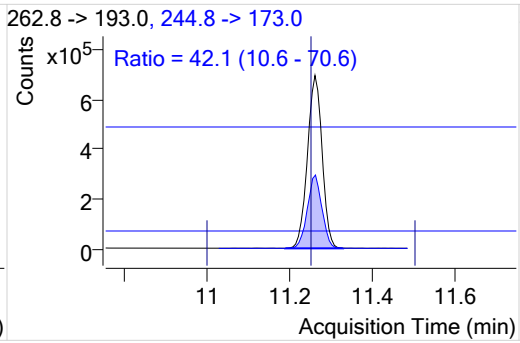


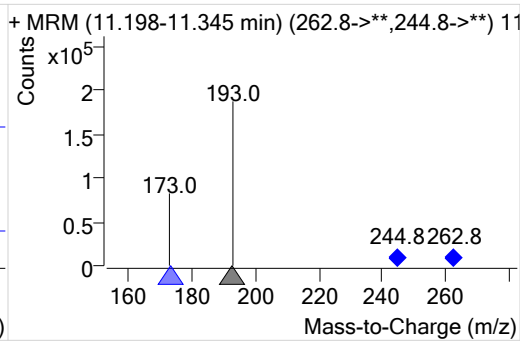




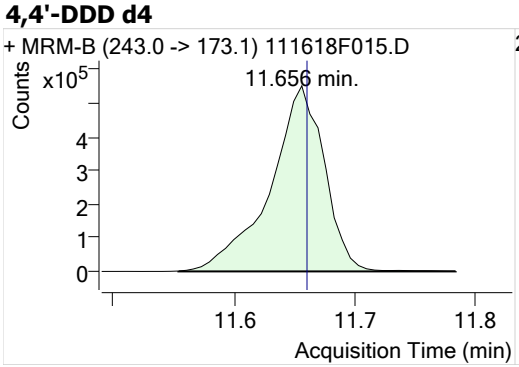
Endrin

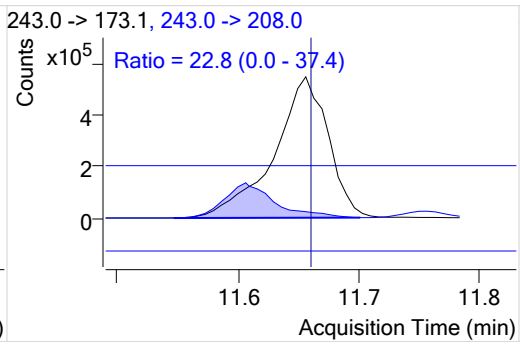


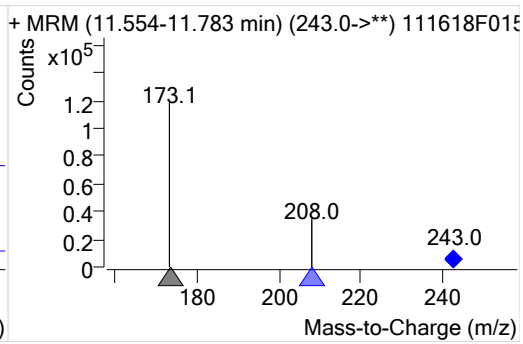




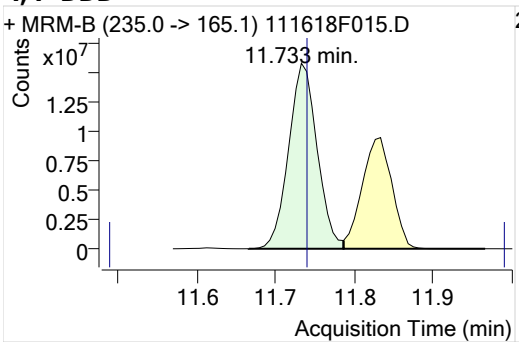
4,4'-DDD d4

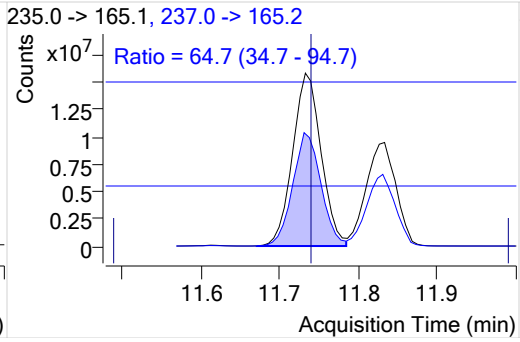


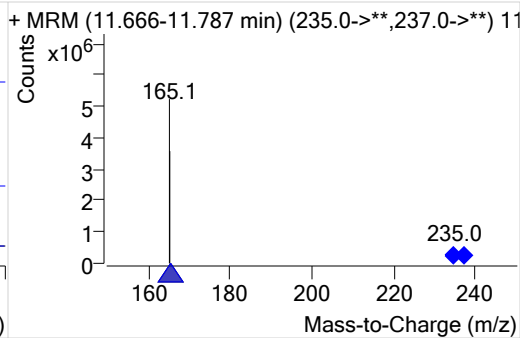




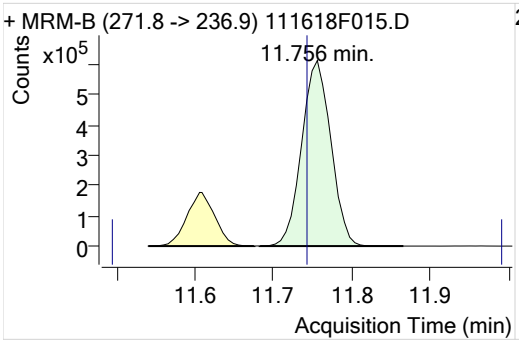
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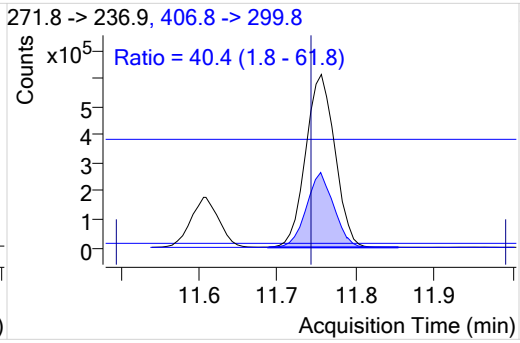


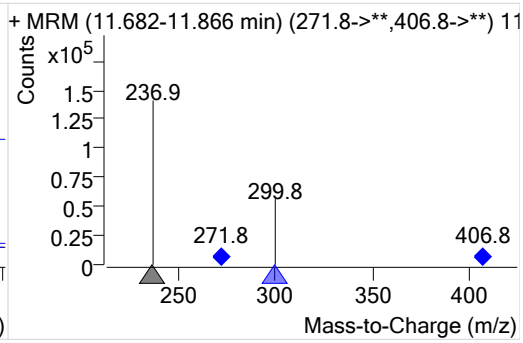




cis-Nonachlor

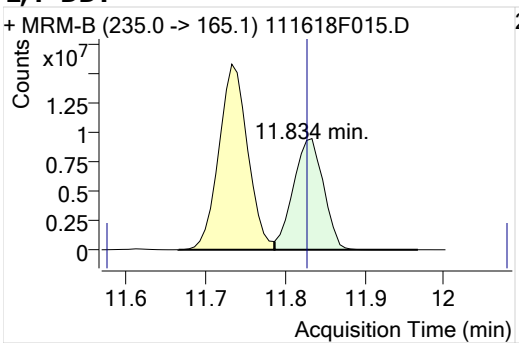


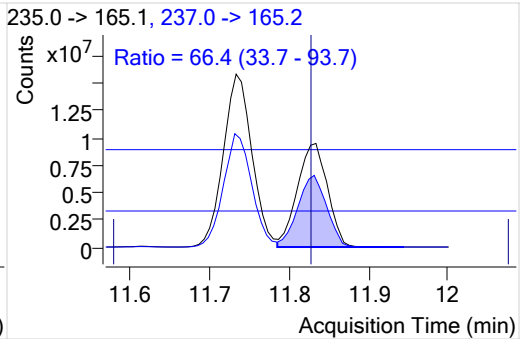


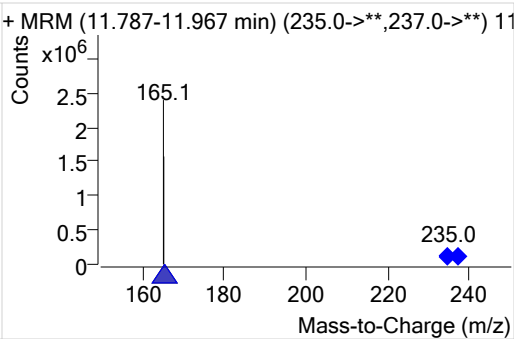


Quantitative Analysis Sample Report

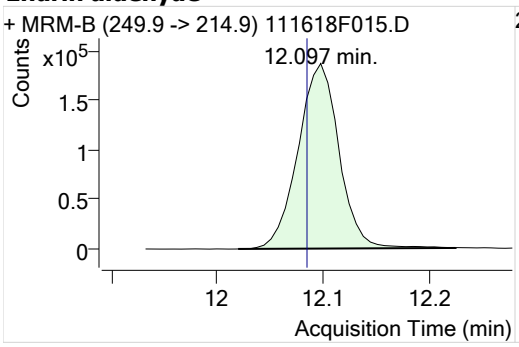
2,4'-DDT

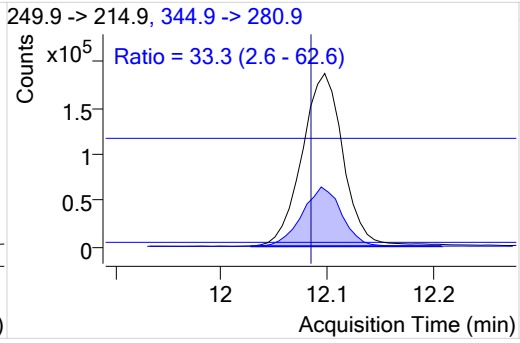


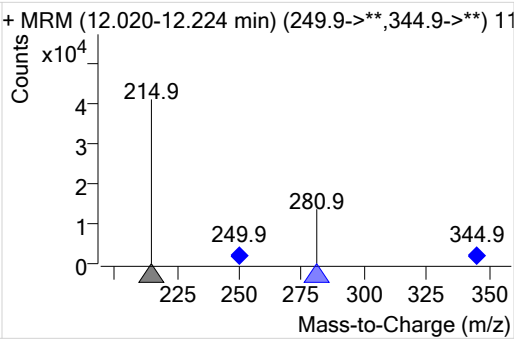




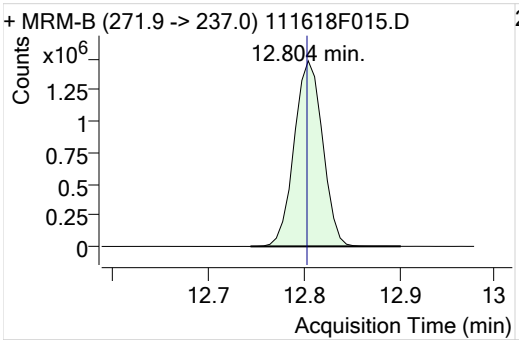
Endrin aldehyde

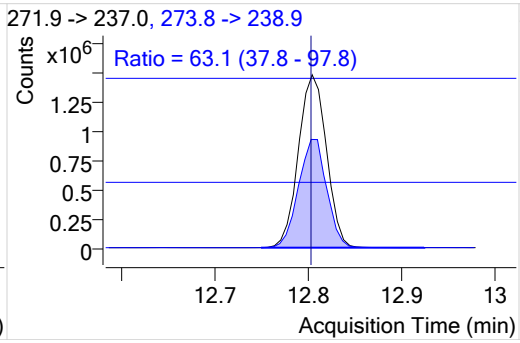


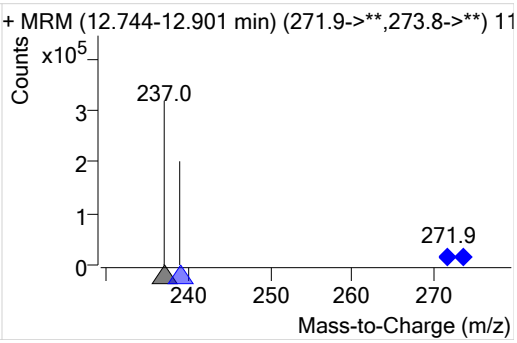




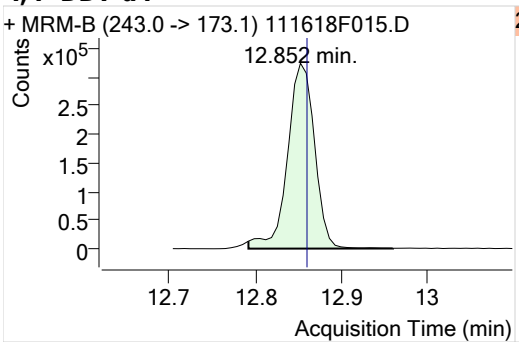
Endosulfan sulfate

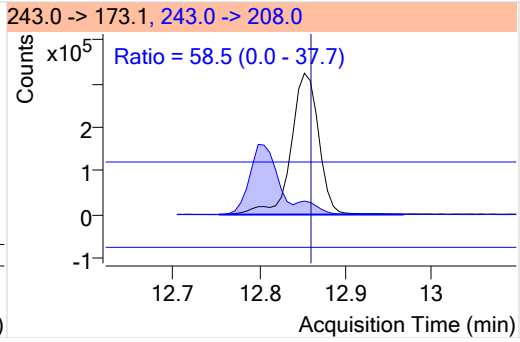


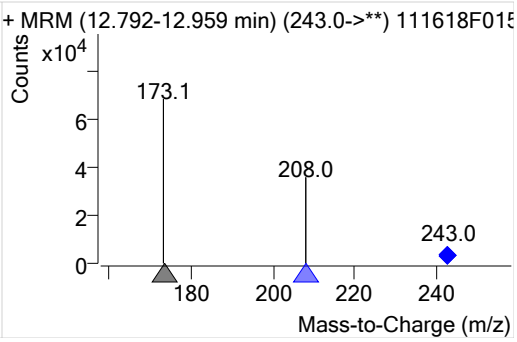




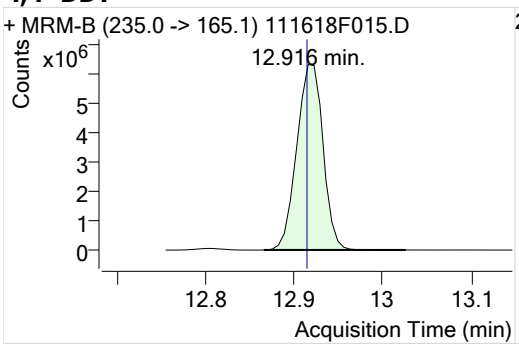
4,4'-DDT-d4

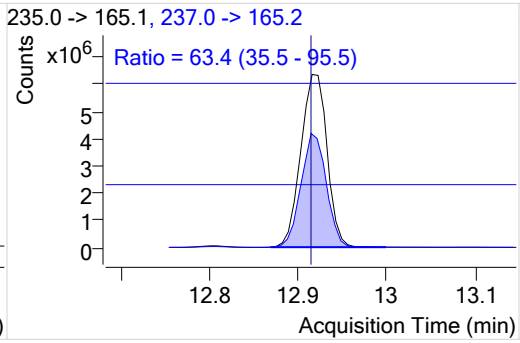


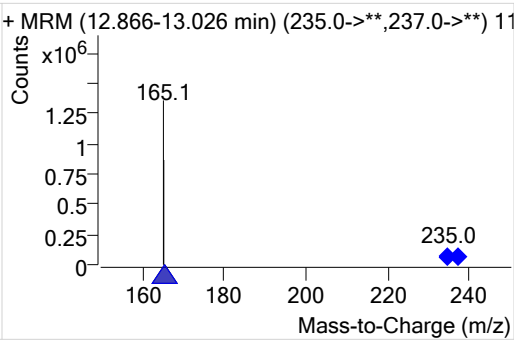




4,4'-DDT

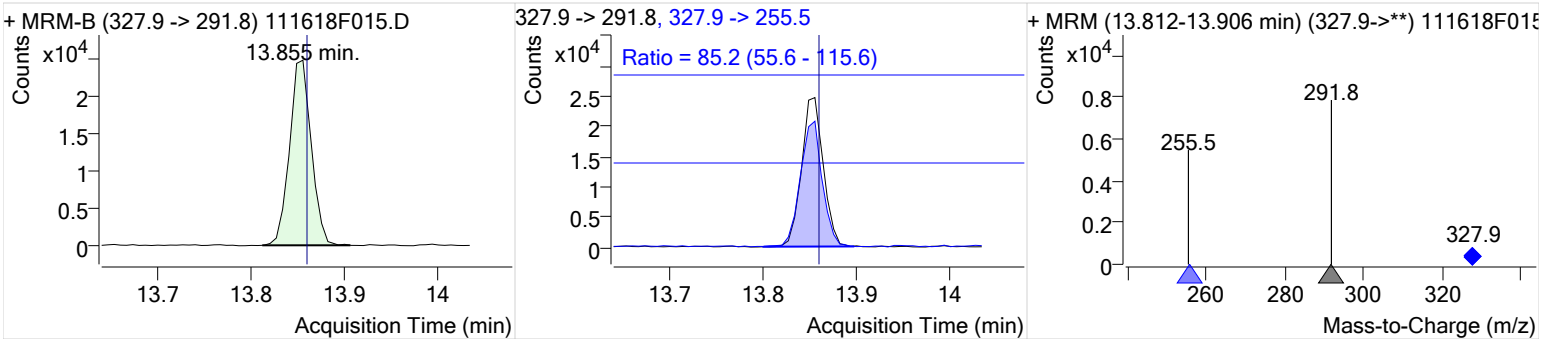




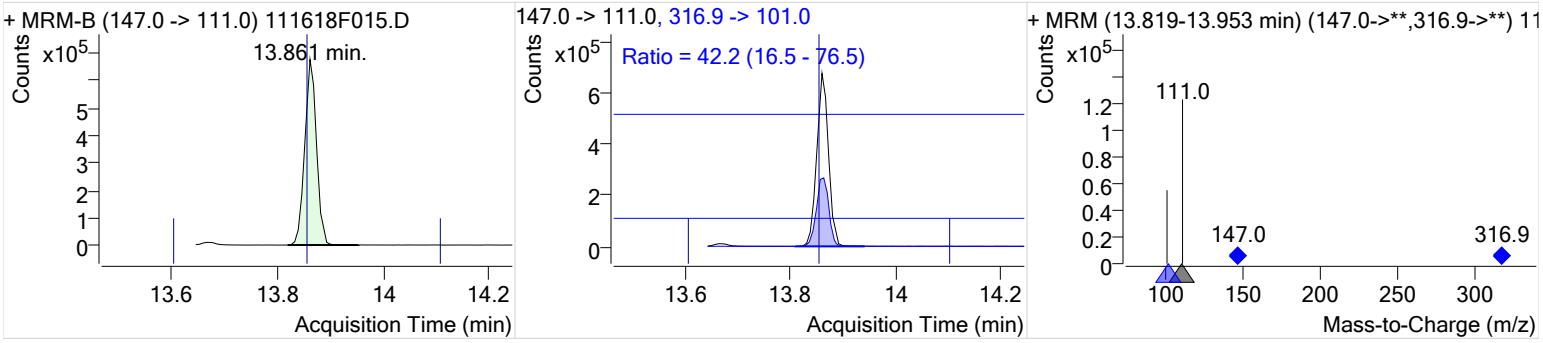


Quantitative Analysis Sample Report

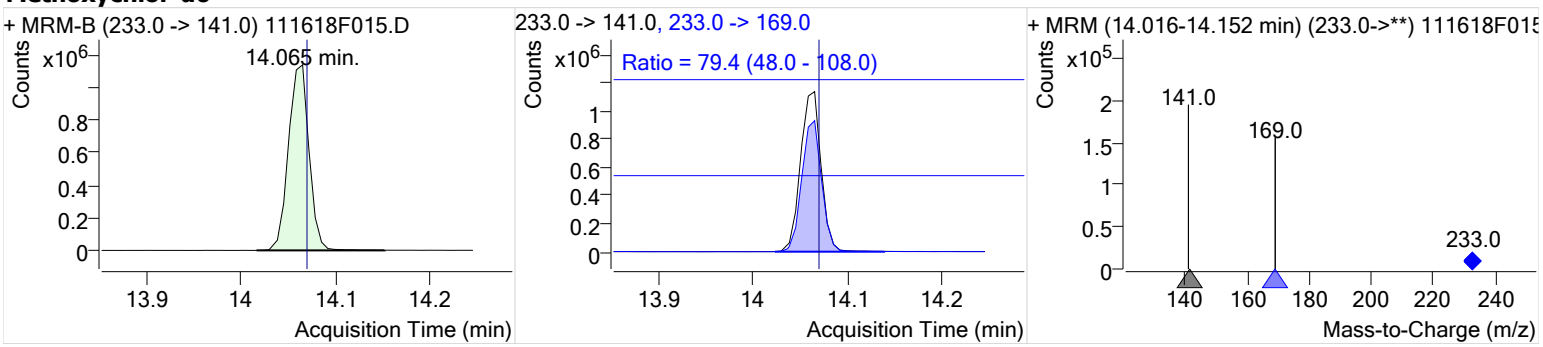
Endrin ketone-13C12



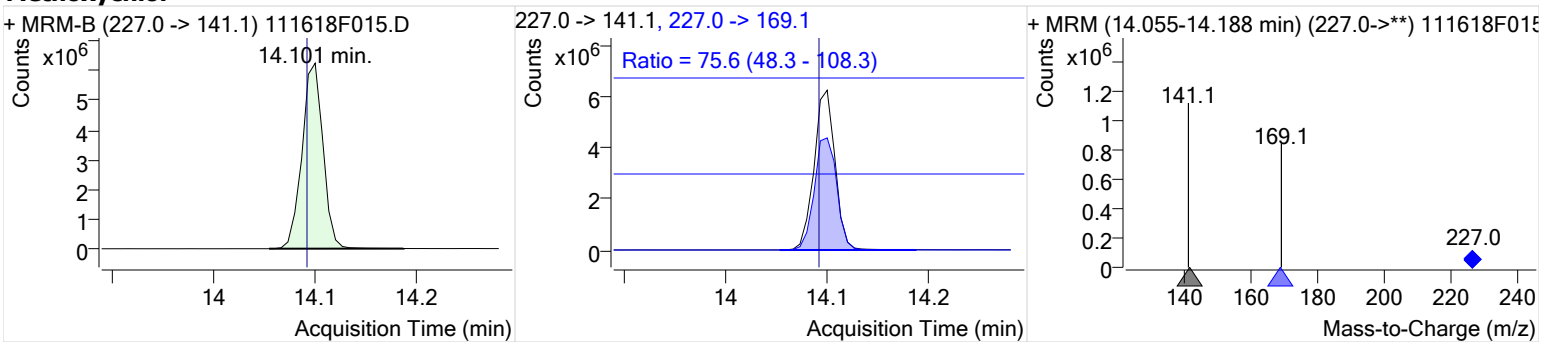
Endrin ketone



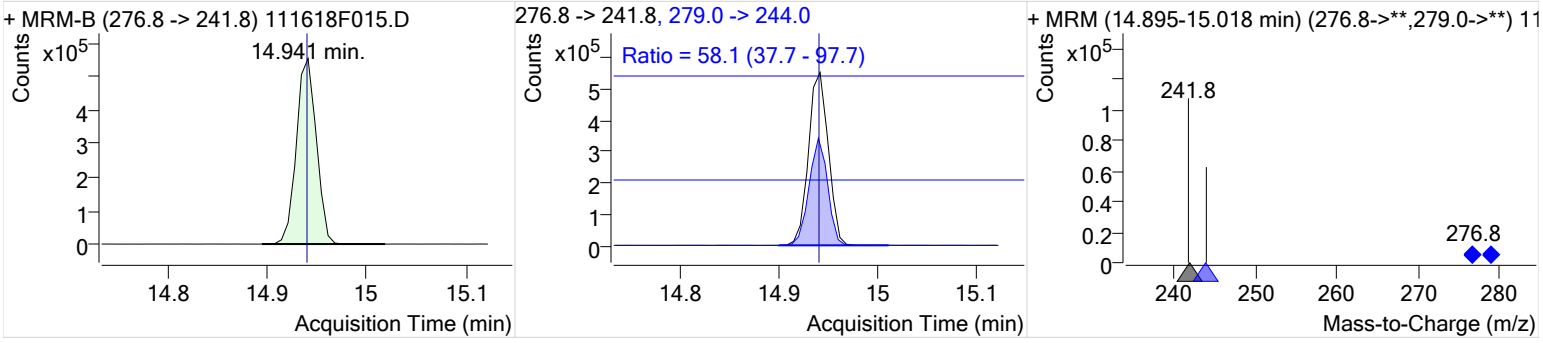
Methoxychlor-d6



Methoxychlor

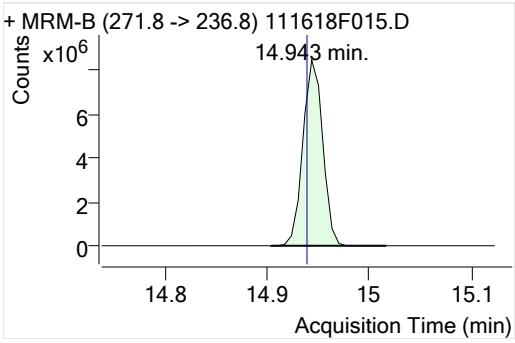


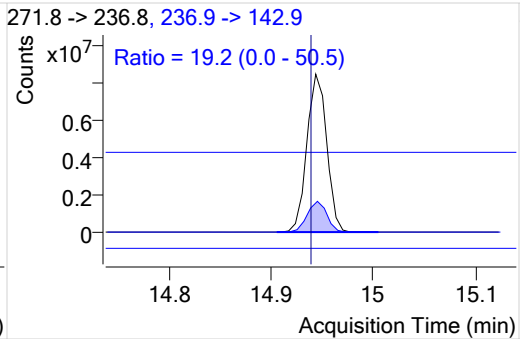
Mirex-13C10

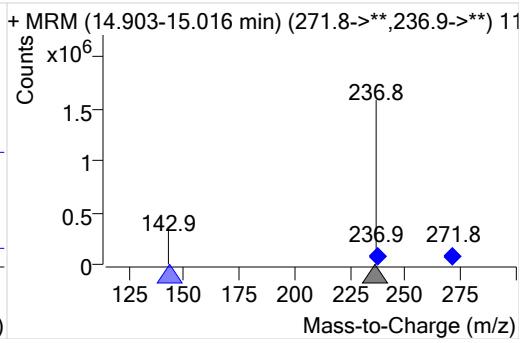


Quantitative Analysis Sample Report

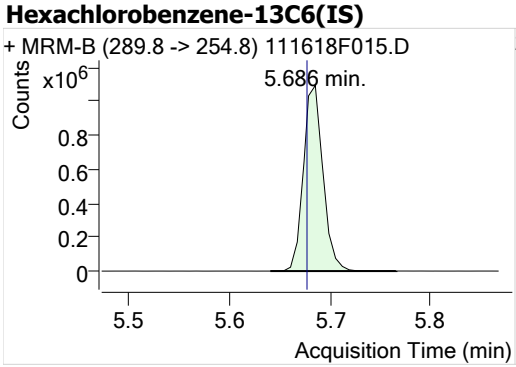
Mirex

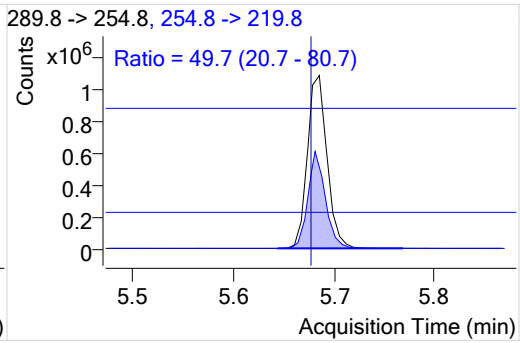


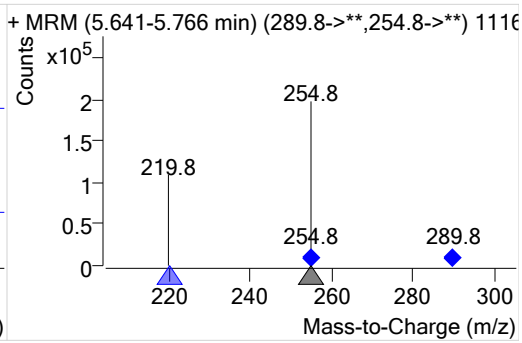




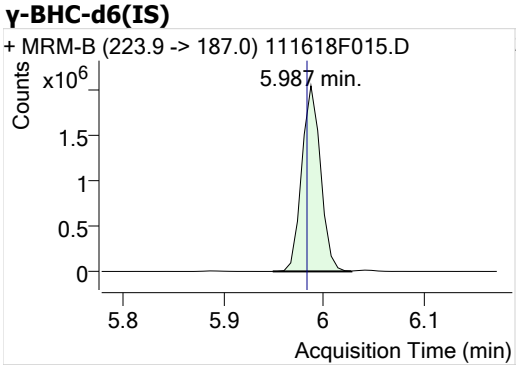
Hexachlorobenzene-13C6(IS)

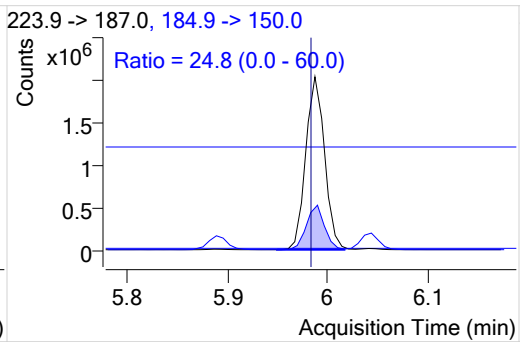


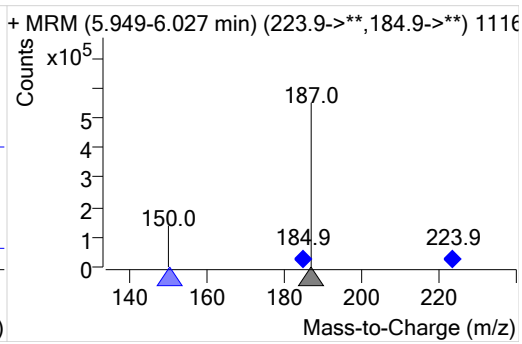




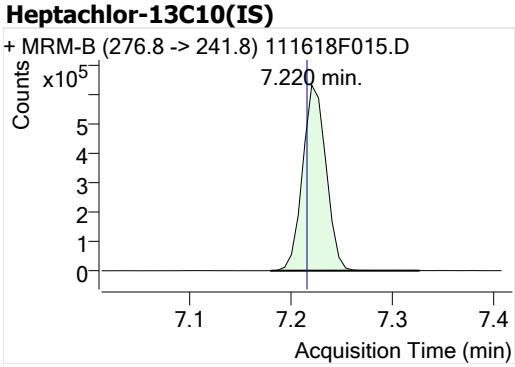
γ-BHC-d6(IS)

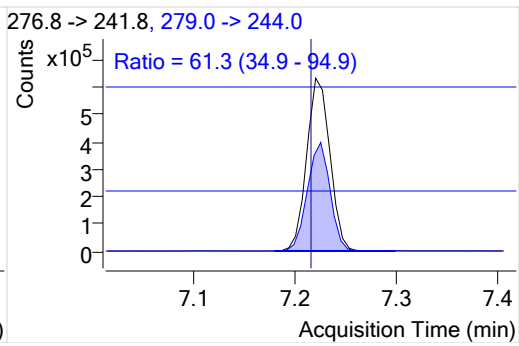


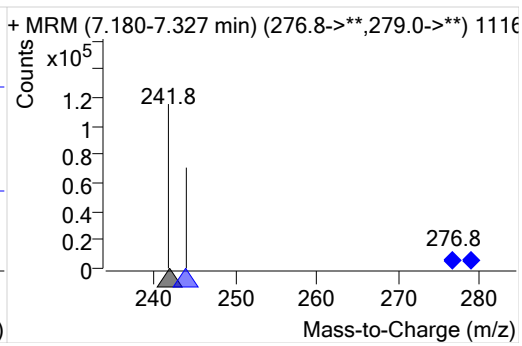




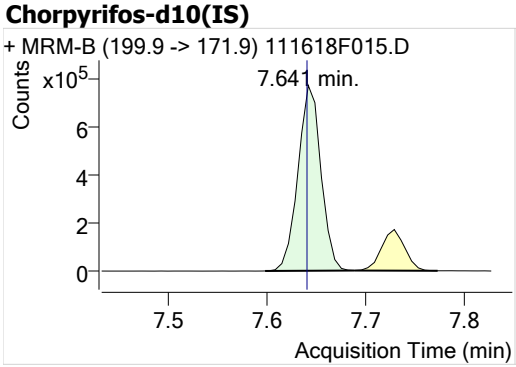
Heptachlor-13C10(IS)

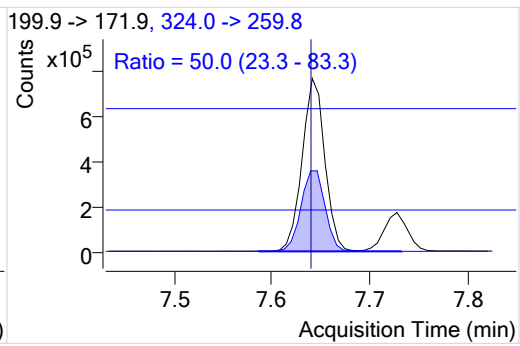


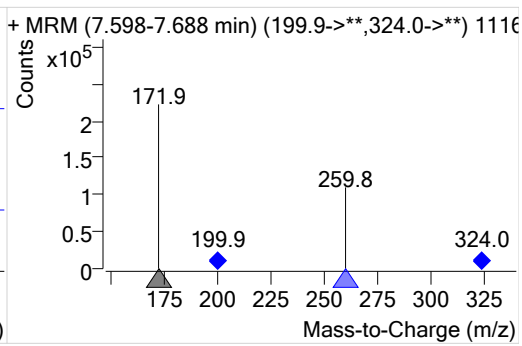




Chorpyrifos-d10(IS)

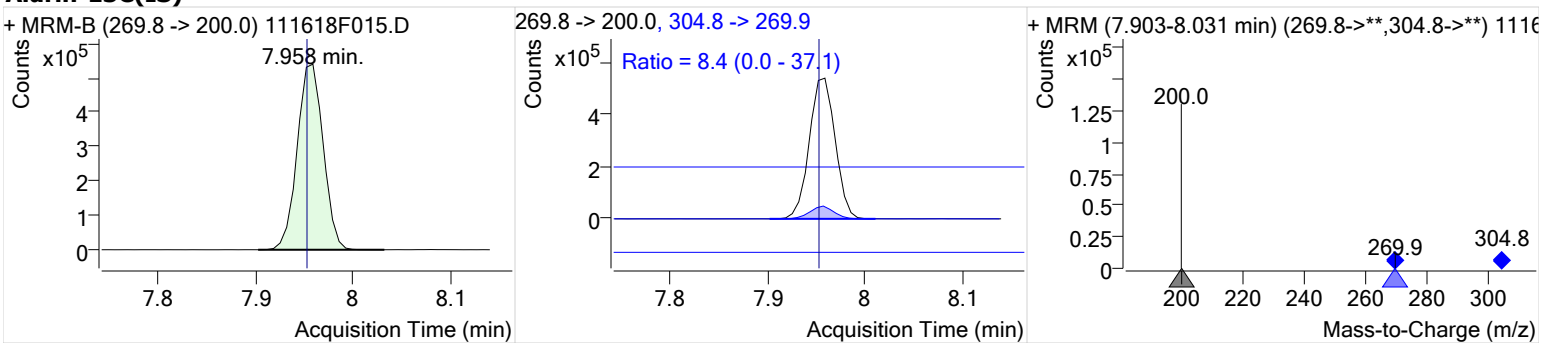




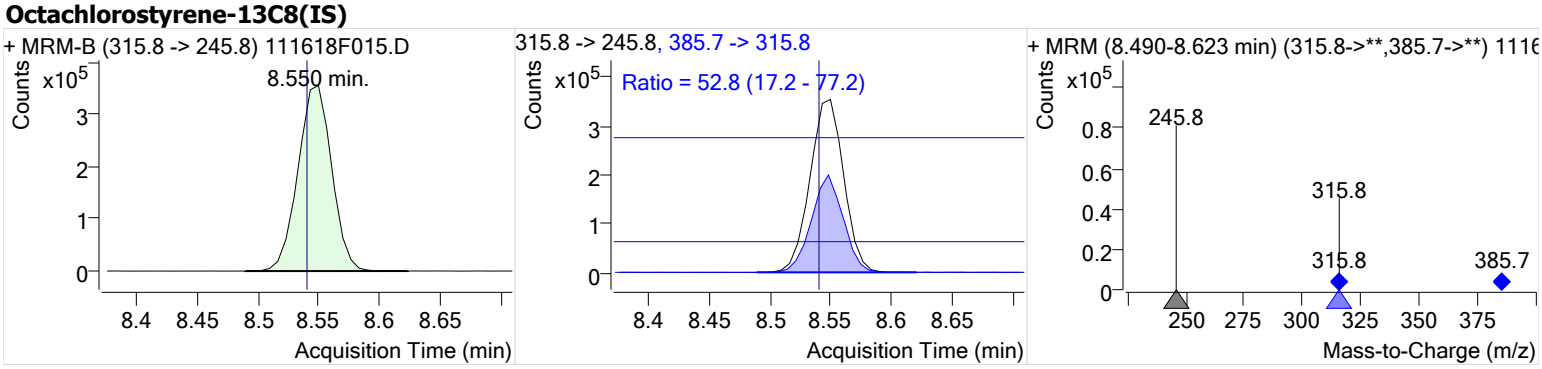


Quantitative Analysis Sample Report

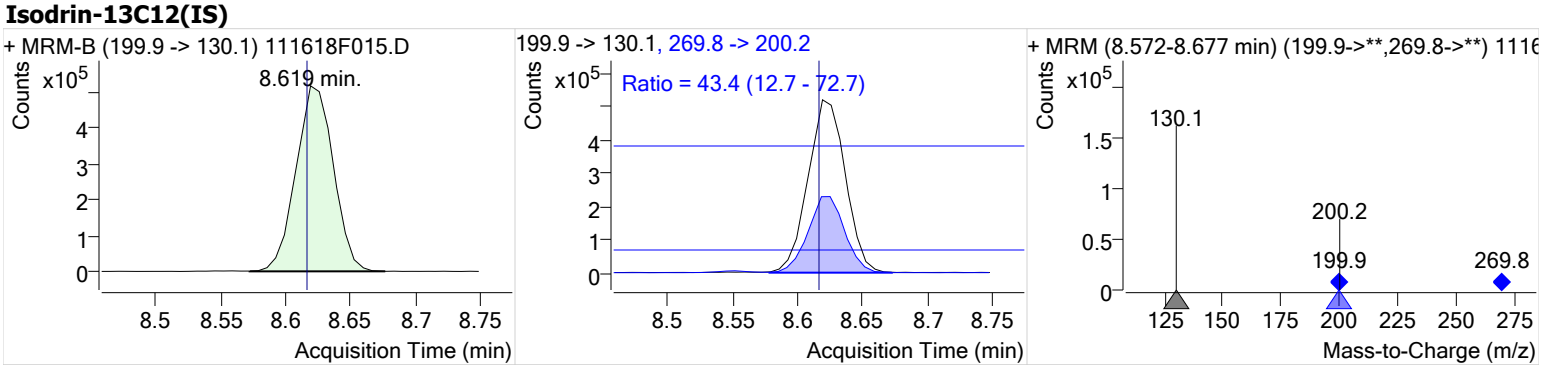
Aldrin-13C(IS)



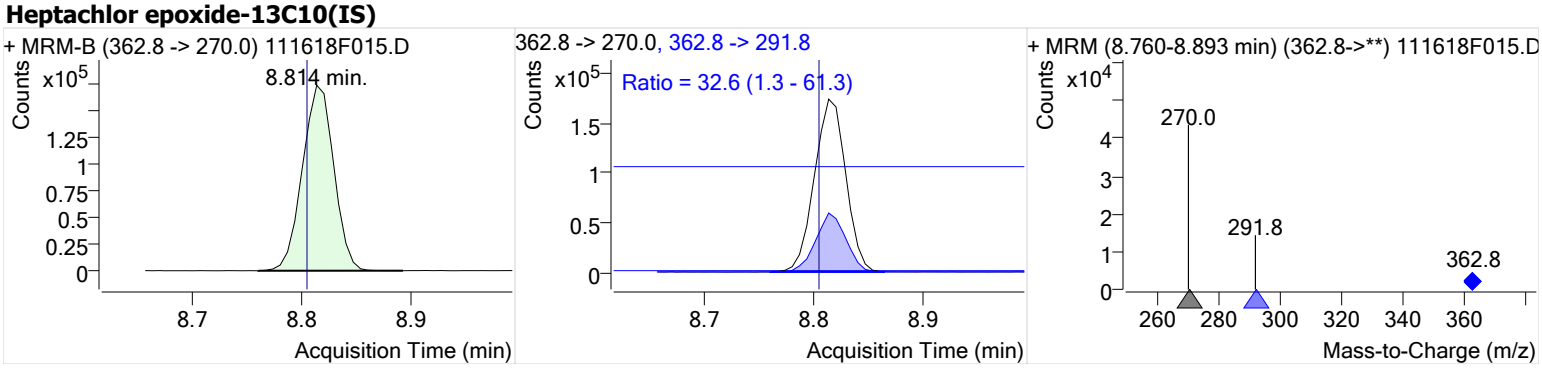
Octachlorostyrene-13C8(IS)



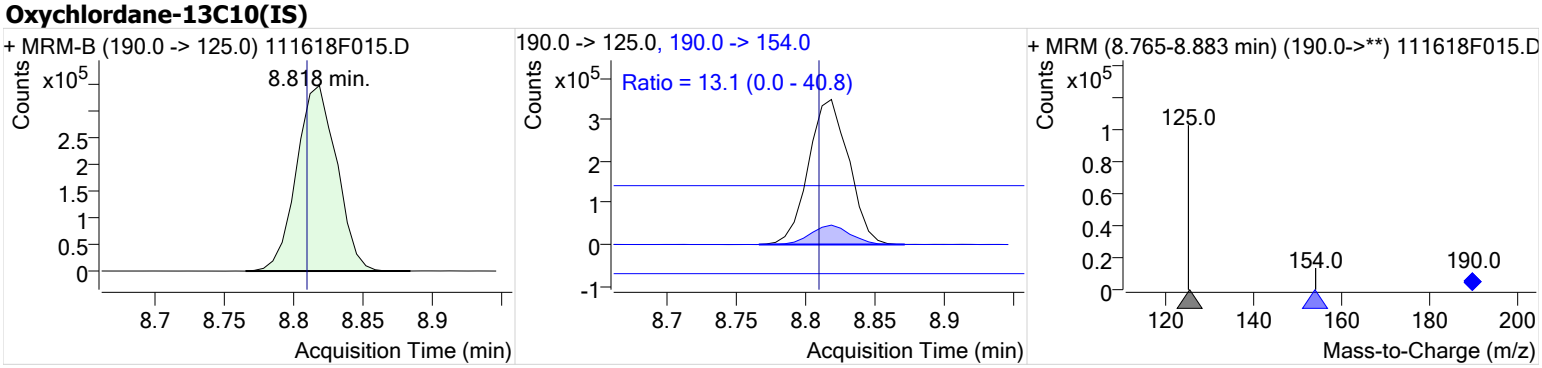
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

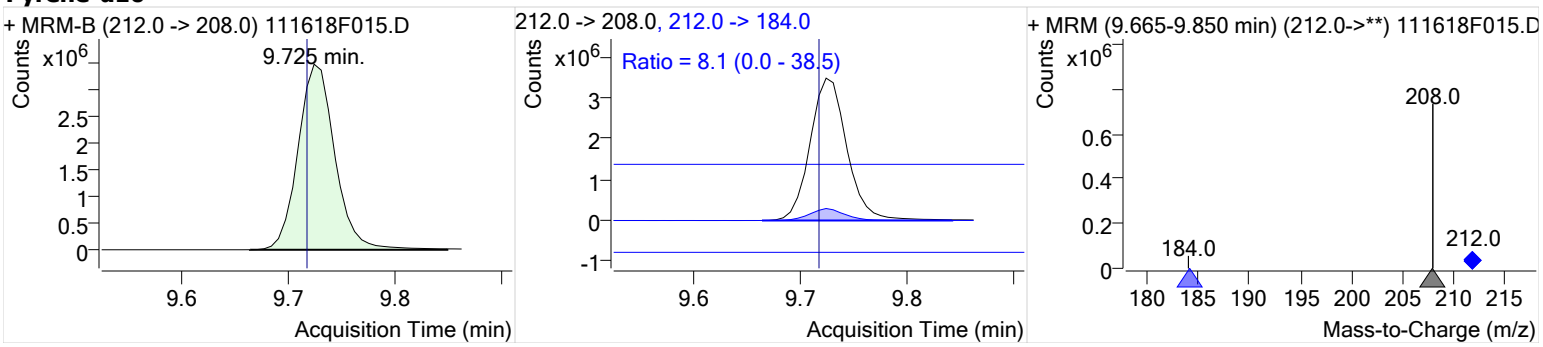


Oxychlordane-13C10(IS)

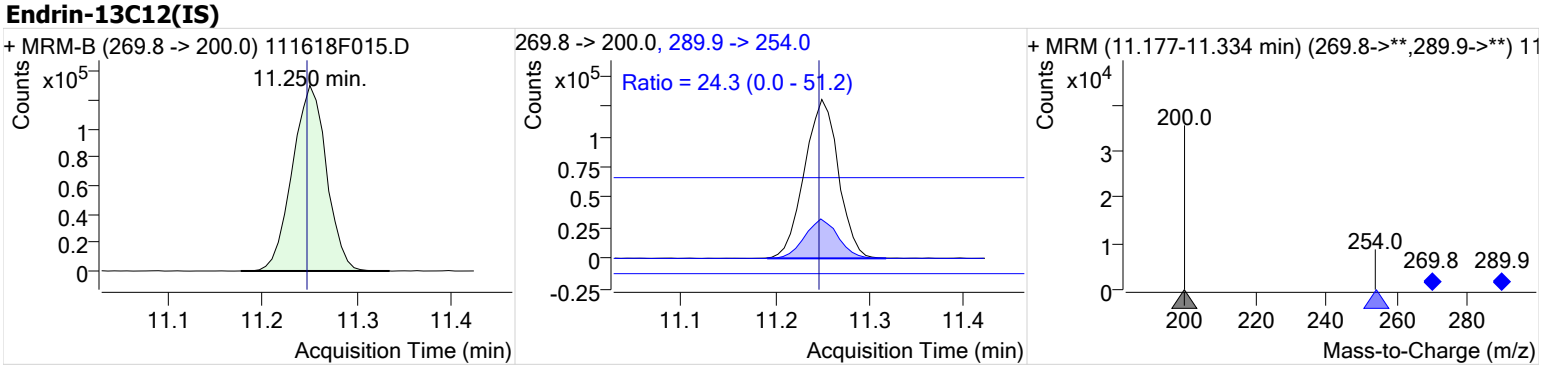


Quantitative Analysis Sample Report

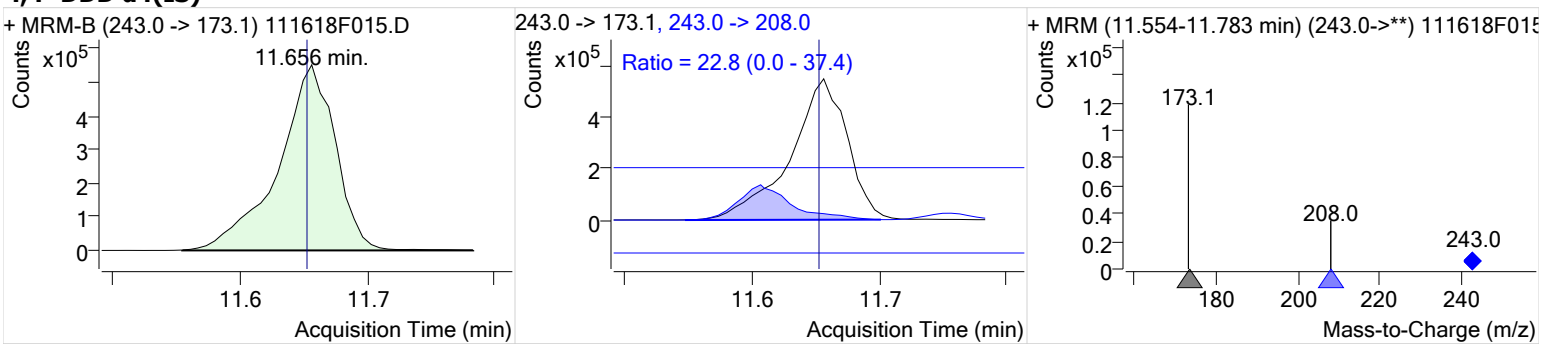
Pyrene-d10



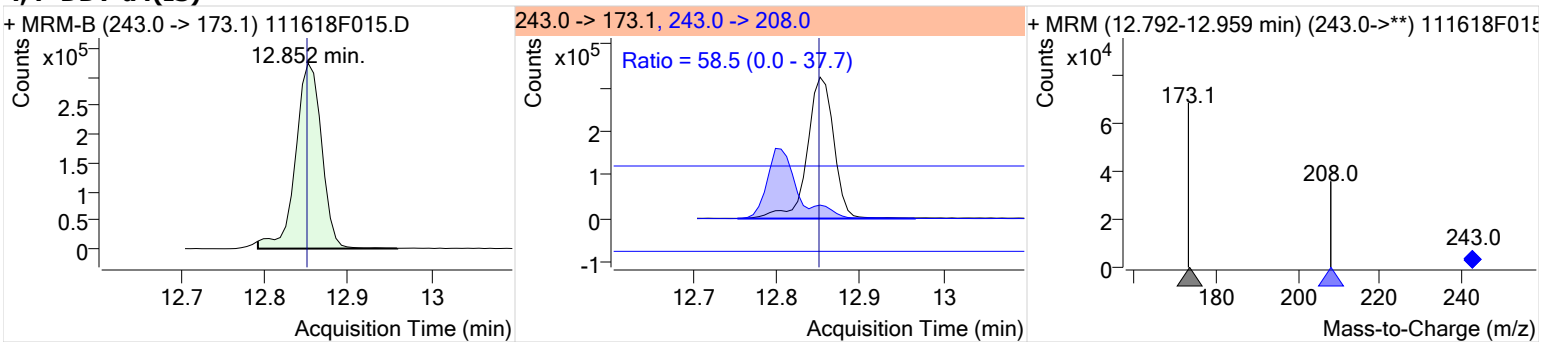
Endrin-13C12(IS)



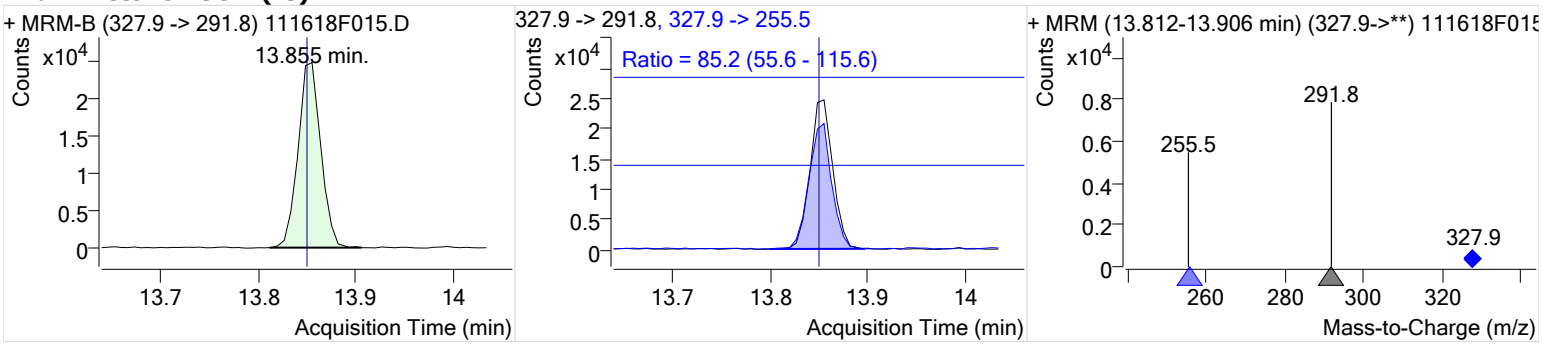
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

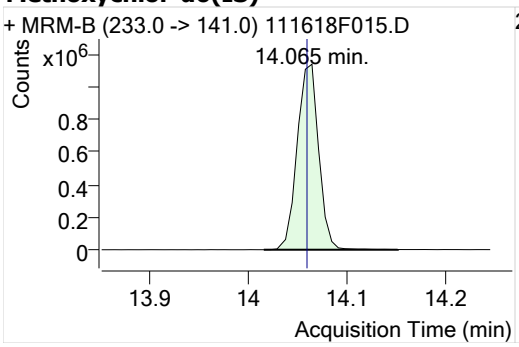


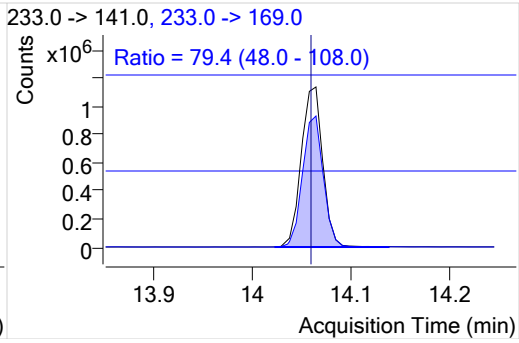
Endrin ketone-13C12(IS)

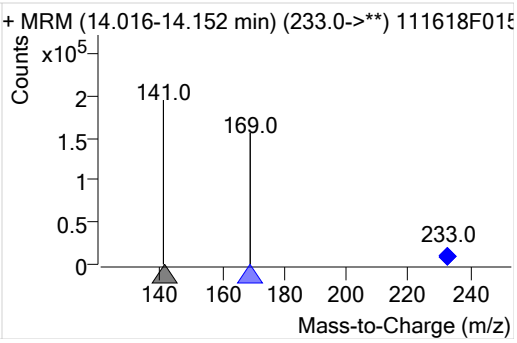


Quantitative Analysis Sample Report

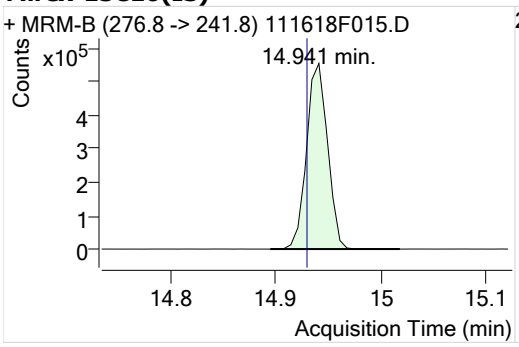
Methoxychlor-d6(IS)

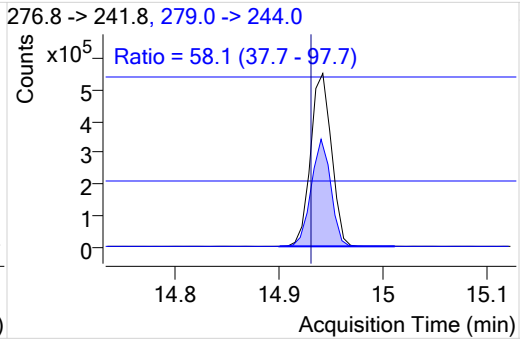


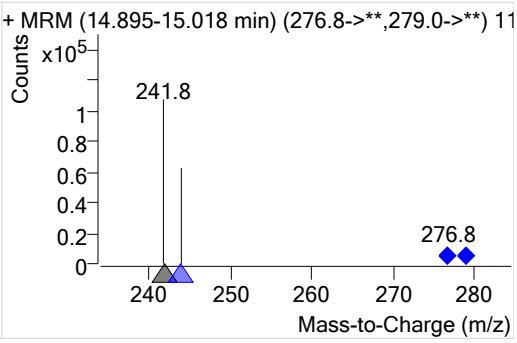




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F016.D	**Vial**	12
Acq. Date-Time	11/16/2018 3:43:29 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 100ng/mL SVM59-48J	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/14/2019 10:04:01 AM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 oc pest ical.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.685	289.8 -> 254.8	1899445	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	3340507	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.225	276.8 -> 241.8	1466700	20.000 ng/ml	0.009
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1818436	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.953	269.8 -> 200.0	1275460	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.549	315.8 -> 245.8	911237	20.000 ng/ml	0.008
Isodrin-13C12(IS)	8.625	199.9 -> 130.1	1329176	20.000 ng/ml	0.008
Heptachlor epoxide-13C10(IS)	8.814	362.8 -> 270.0	461956	20.000 ng/ml	0.012
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	953719	20.000 ng/ml	0.009
Pyrene-d10	9.727	212.0 -> 208.0	12441180	100.000 ng/ml	0.008
Endrin-13C12(IS)	11.244	269.8 -> 200.0	462438	20.000 ng/ml	0.000
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	2594027	5.000 ng/ml	0.019
4,4'-DDT-d4(IS)	12.858	243.0 -> 173.1	1014755	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	58277	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.065	233.0 -> 141.0	2580911	20.000 ng/ml	0.005
Mirex-13C10(IS)	14.941	276.8 -> 241.8	1078699	5.000 ng/ml	0.010

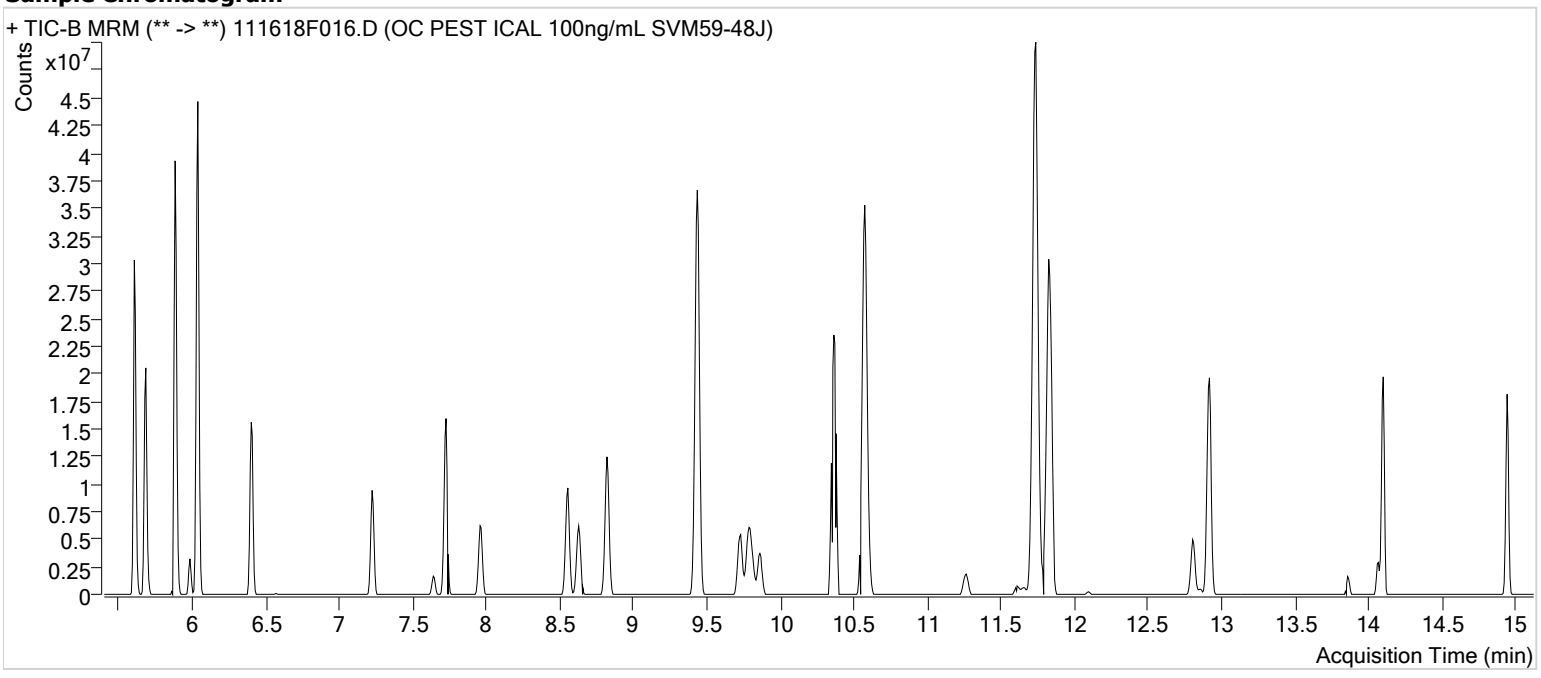
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1899445	20.741 ng/ml
		Spiked Amount =	20.0	Recovery = *103.7 %*
γ-BHC-d6	5.983	223.9 -> 187.0	3340507	19.249 ng/ml
		Spiked Amount =	20.0	Recovery = *96.2 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1466700	20.439 ng/ml
		Spiked Amount =	20.0	Recovery = *102.2 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1818436	20.199 ng/ml
		Spiked Amount =	20.0	Recovery = *101.0 %*
Aldrin-13C	7.952	269.8 -> 200.0	1275460	19.460 ng/ml
		Spiked Amount =	20.0	Recovery = *97.3 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	911237	19.418 ng/ml
		Spiked Amount =	20.0	Recovery = *97.1 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1329176	18.587 ng/ml
		Spiked Amount =	20.0	Recovery = *92.9 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	461956	20.204 ng/ml
		Spiked Amount =	20.0	Recovery = *101.0 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	953719	20.524 ng/ml
		Spiked Amount =	20.0	Recovery = *102.6 %*
Endrin-13C12	11.247	269.8 -> 200.0	462438	20.338 ng/ml
		Spiked Amount =	20.0	Recovery = *101.7 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	2594027	5.871 ng/ml
		Spiked Amount =	5.0	Recovery = *117.4 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	1014755	5.140 ng/ml
		Spiked Amount =	5.0	Recovery = *102.8 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	58277	20.698 ng/ml
		Spiked Amount =	20.0	Recovery = *103.5 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	2580911	19.785 ng/ml
		Spiked Amount =	20.0	Recovery = *98.9 %*
Mirex-13C10	14.930	276.8 -> 241.8	1078699	5.659 ng/ml
		Spiked Amount =	5.0	Recovery = *113.2 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	22860719	95.704	ng/ml	98
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	14240939	82.825	ng/ml	99
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	30212632	99.973	ng/ml	94
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	34856250	99.756	ng/ml	100
δ-BHC	γ-BHC-d6(IS)	6.405	181.1 -> 145.1	14192055	101.907	ng/ml	98
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	7748508	91.145	ng/ml	100
Chorpyrifos	Chorpyrifos-d10(IS)	7.731	196.9 -> 169.0	13081188	101.907	ng/ml	96
Aldrin	Aldrin-13C(IS)	7.963	254.9 -> 220.0	3968716	99.199	ng/ml	80
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.555	342.8 -> 307.8	11355912	96.835	ng/ml	98
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	6556516	96.141	ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.829	352.8 -> 262.9	2611579	99.341	ng/ml	100
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	12220531	94.772	ng/ml	98
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	4476975	97.423	ng/ml	94
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	42325424	85.823	ng/ml	100
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.788	271.8 -> 236.9	10901001	94.950	ng/ml	95
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	2608417	89.981	ng/ml	96
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	7289126	98.654	ng/ml	95
4,4' -DDE	4,4'-DDD d4(IS)	10.364	246.0 -> 176.2	37099575	82.066	ng/ml	96
2,4'-DDD	4,4'-DDD d4(IS)	10.578	235.0 -> 165.1	49812586	89.240	ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.599	262.9 -> 193.0	3475708	98.538	ng/ml	92
Endosulfan II	Endrin-13C12(IS)	11.260	206.9 -> 172.0	443928	99.652	ng/ml	87
Endrin	Endrin-13C12(IS)	11.265	262.8 -> 193.0	2997885	94.465	ng/ml	97
4,4'-DDD	4,4'-DDD d4(IS)	11.734	235.0 -> 165.1	77032013	91.954	ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	2680403	95.766	ng/ml	80
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	47224630	103.788	ng/ml	97
Endrin aldehyde	Endrin-13C12(IS)	12.098	249.9 -> 214.9	944282	105.475	ng/ml	100
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	5621132	103.471	ng/ml	95
4,4'-DDT	4,4'-DDT-d4(IS)	12.921	235.0 -> 165.1	23643097	100.690	ng/ml	99
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	1830237	89.221	ng/ml	98
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	16766315	101.805	ng/ml	95
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	18535923	99.291	ng/ml	98

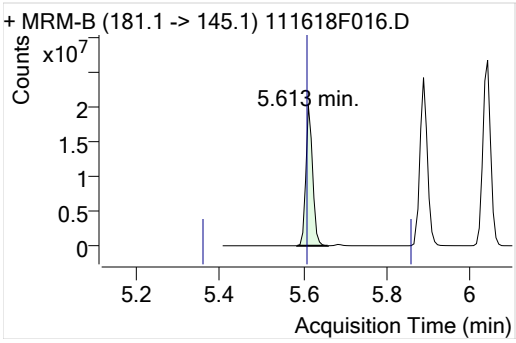
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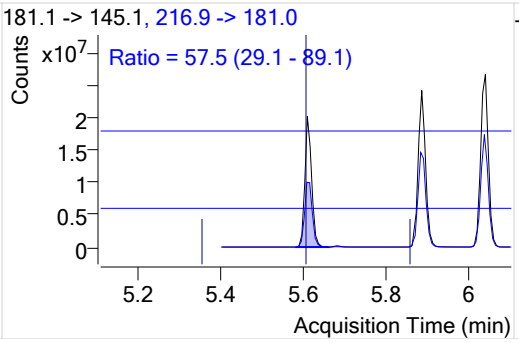
Sample Chromatogram

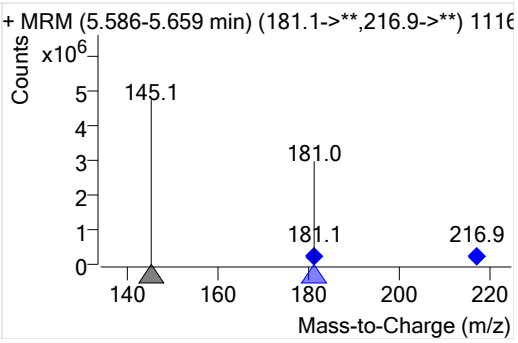


Quantitative Analysis Sample Report

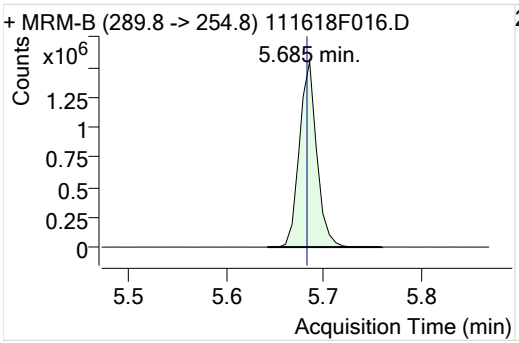
α-BHC

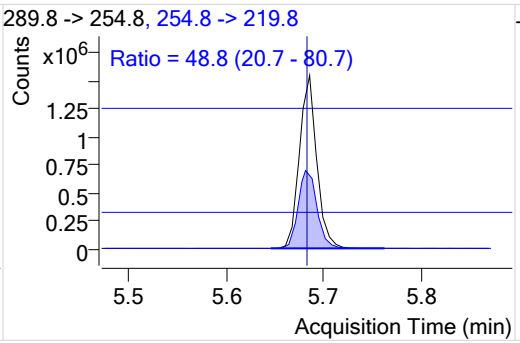


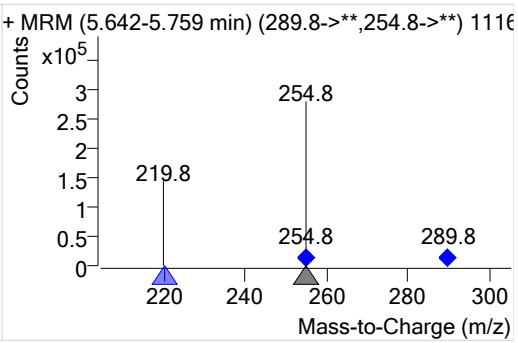




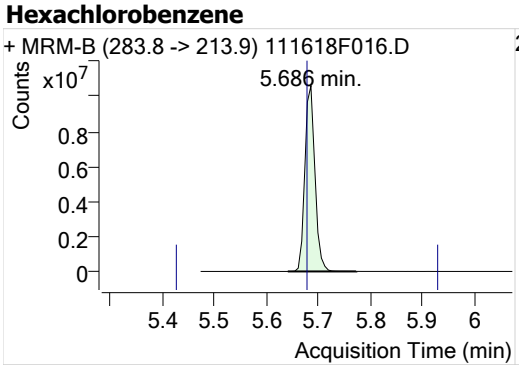
Hexachlorobenzene-13C6

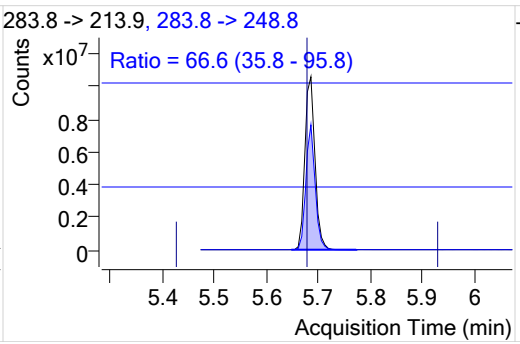


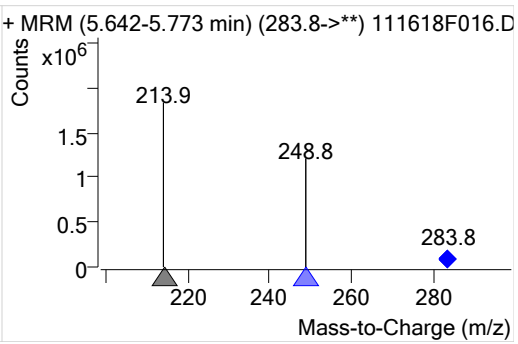




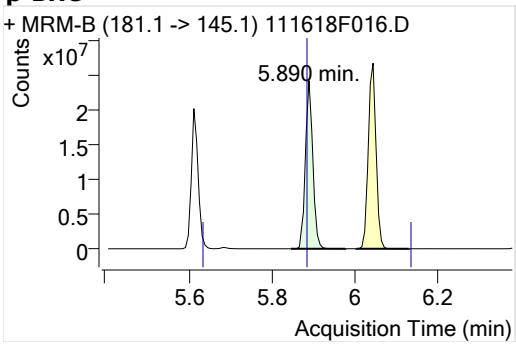
Hexachlorobenzene

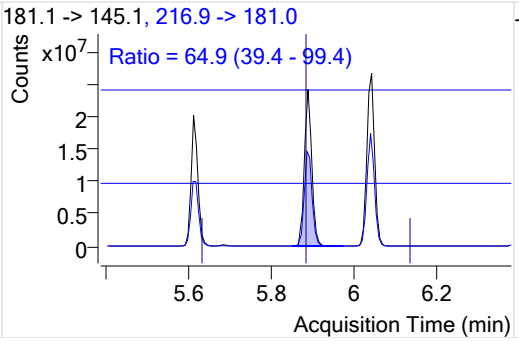


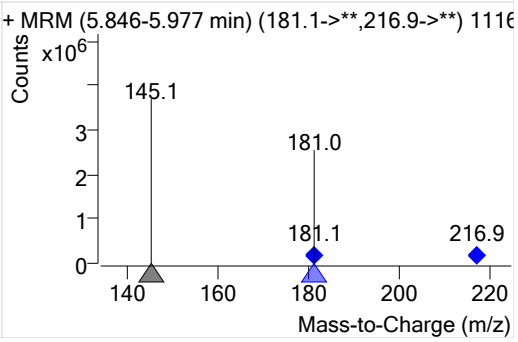




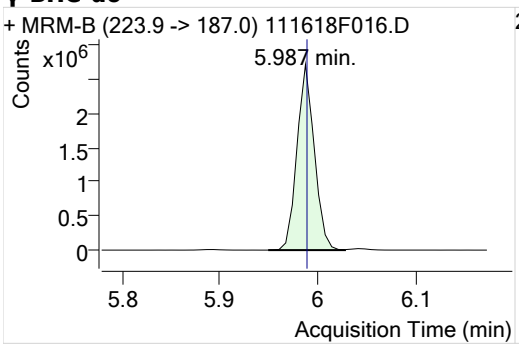
β-BHC

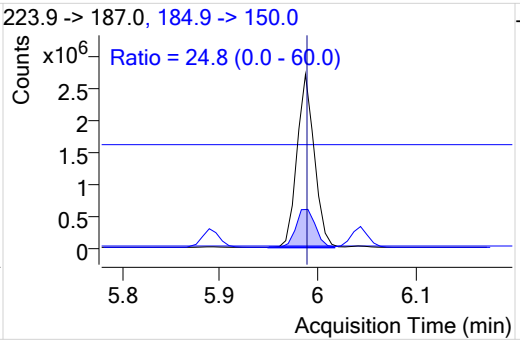


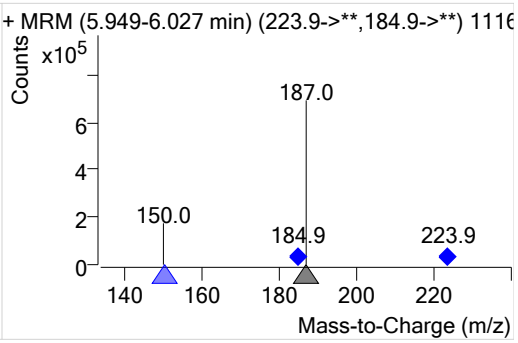




γ-BHC-d6

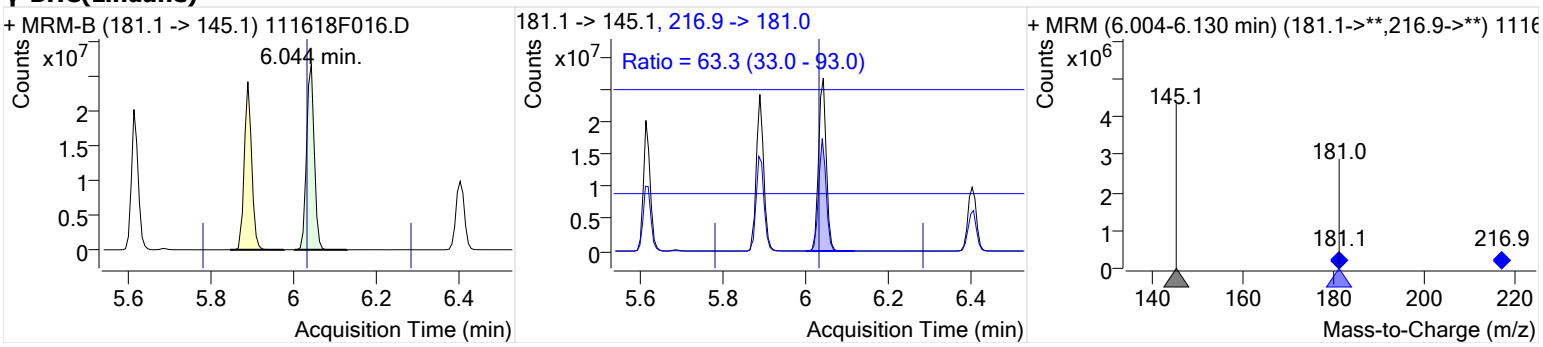




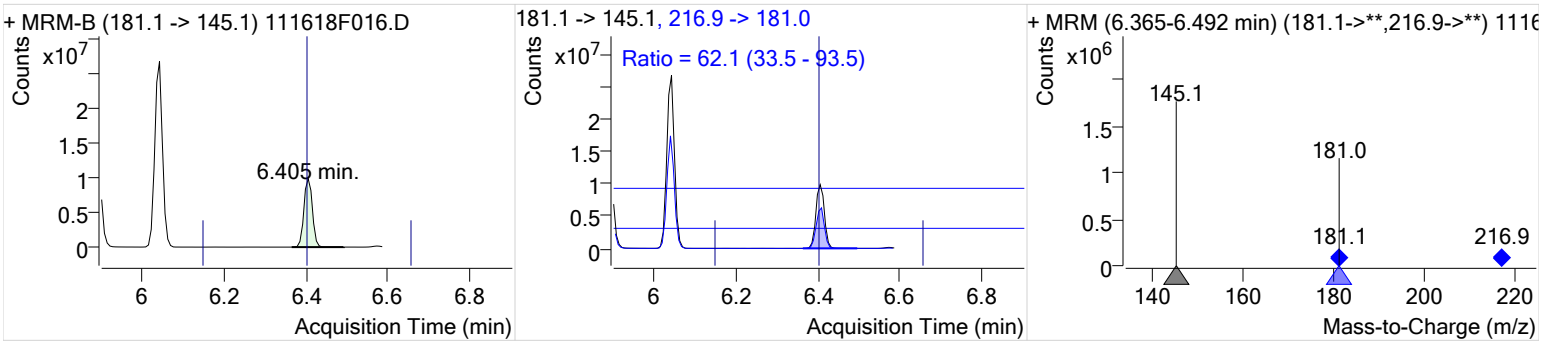


Quantitative Analysis Sample Report

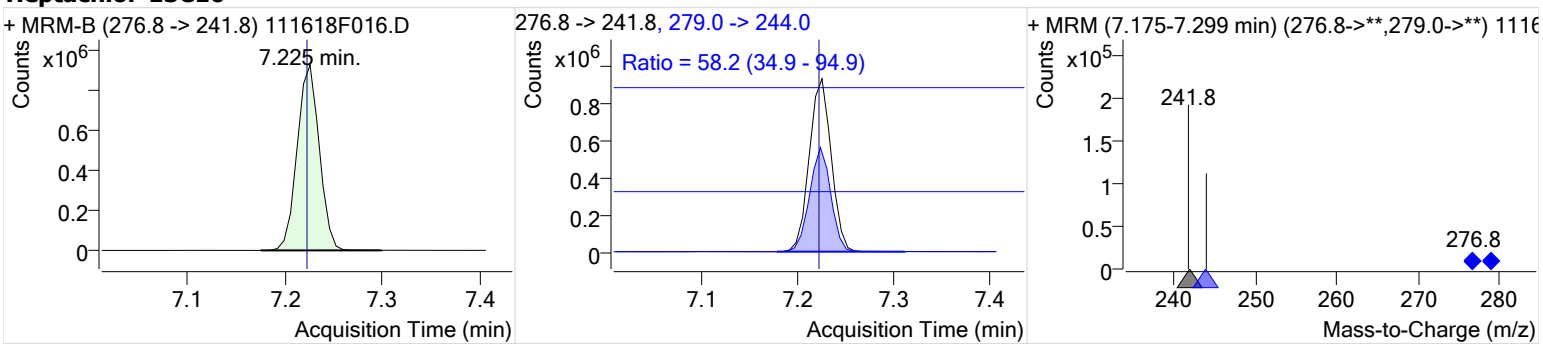
γ-BHC(Lindane)



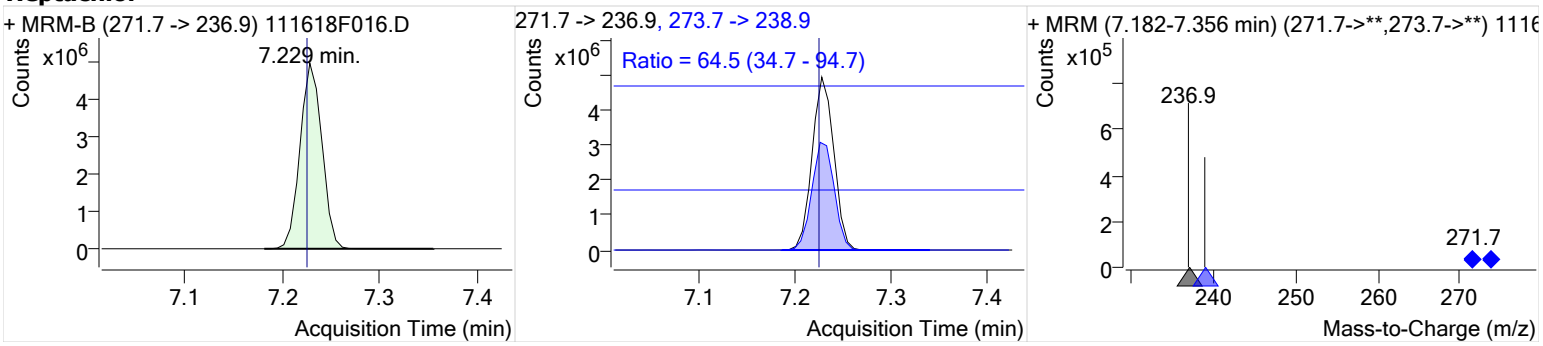
δ-BHC



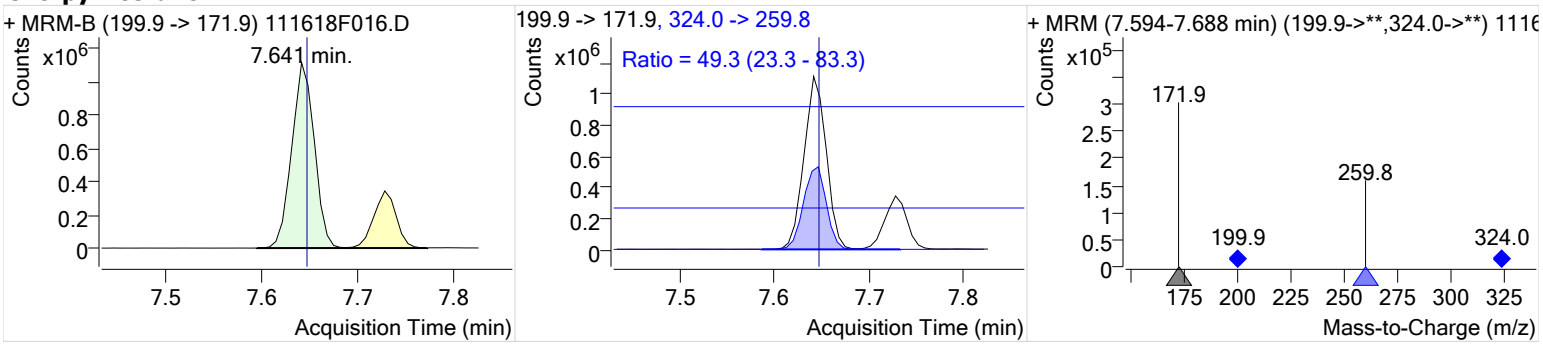
Heptachlor-13C10



Heptachlor

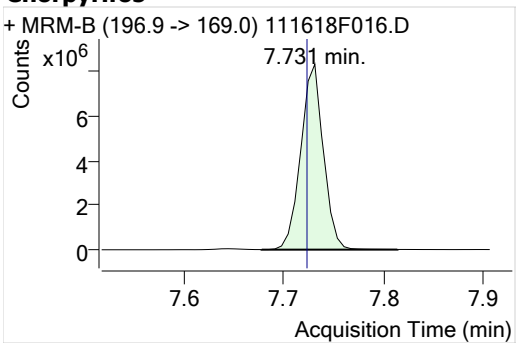


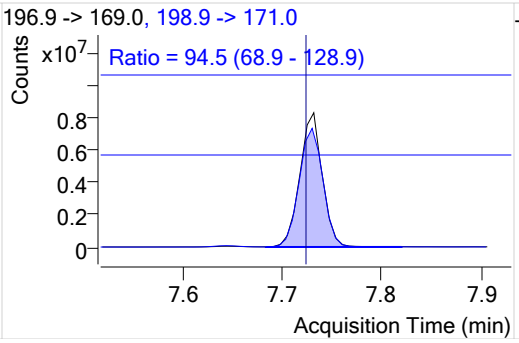
Chorpyrifos-d10

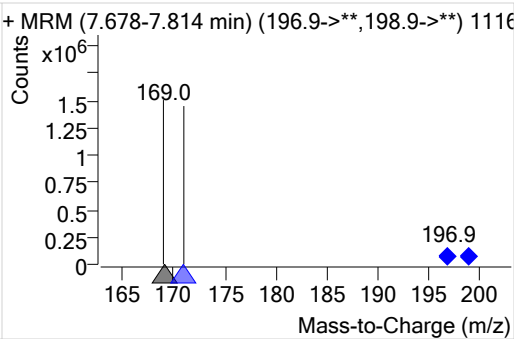


Quantitative Analysis Sample Report

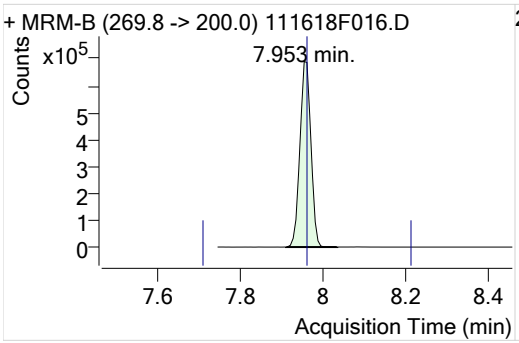
Chorpyrifos

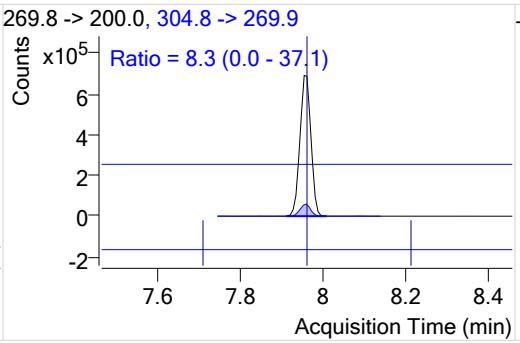


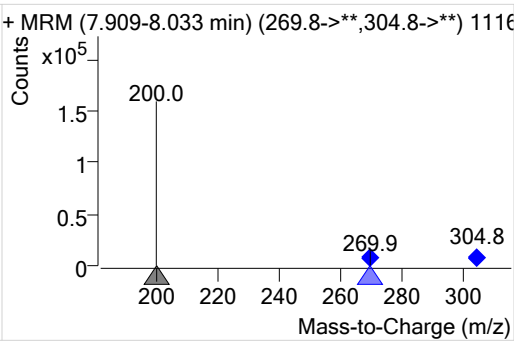




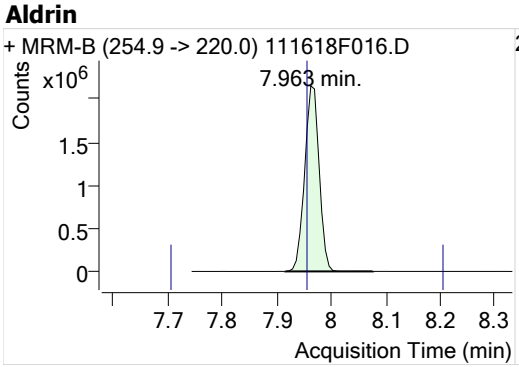
Aldrin-13C

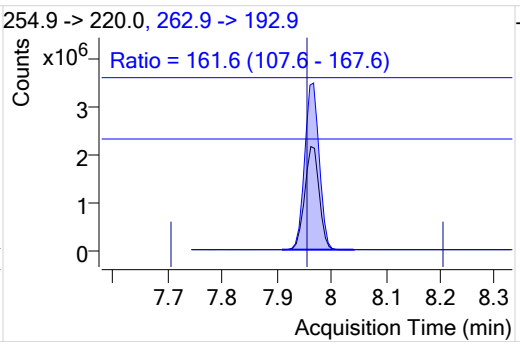


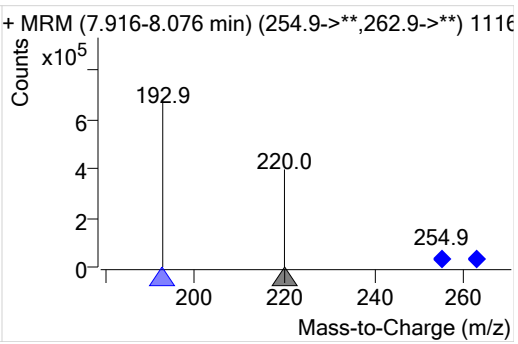




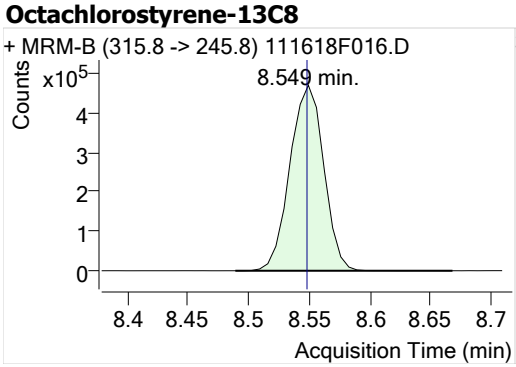
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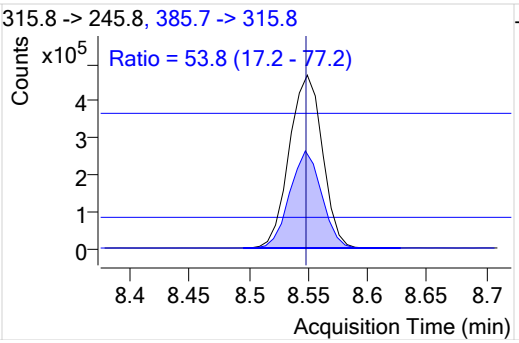


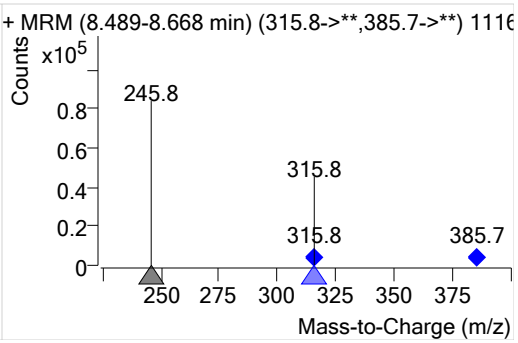




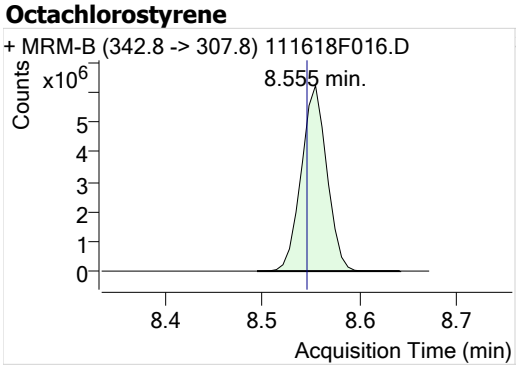
Octachlorostyrene-13C8

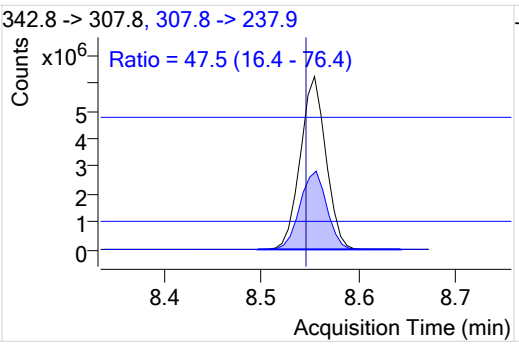


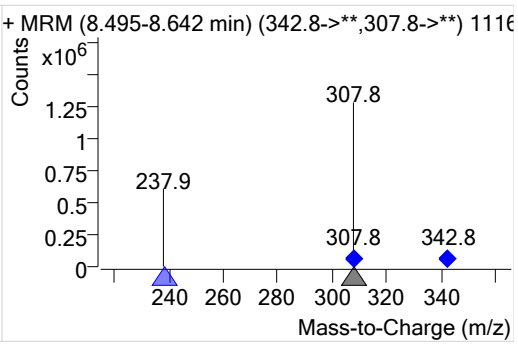




Octachlorostyrene

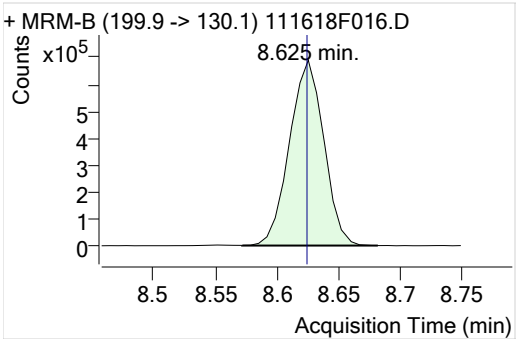


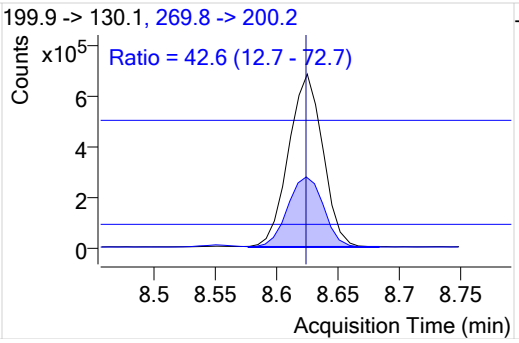


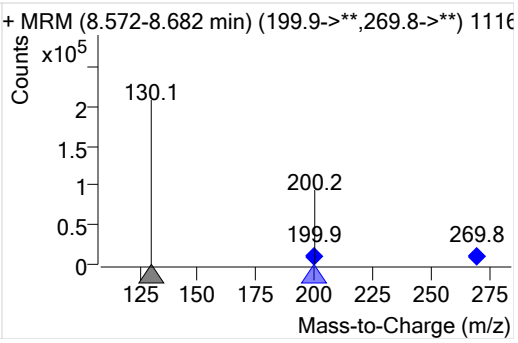


Quantitative Analysis Sample Report

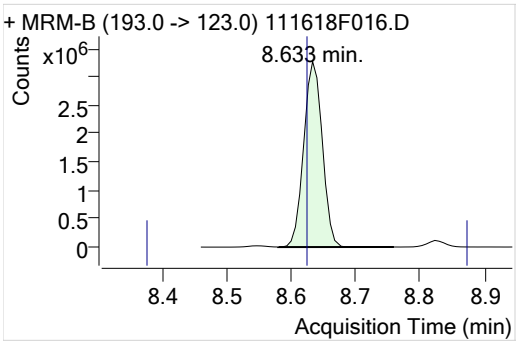
Isodrin-13C12

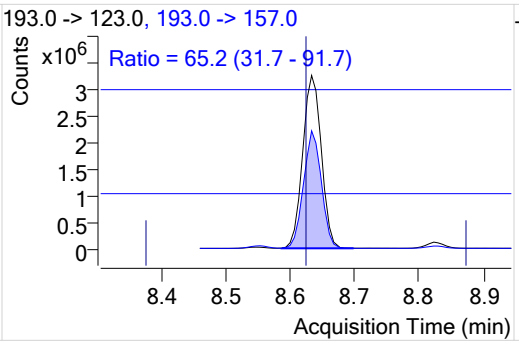


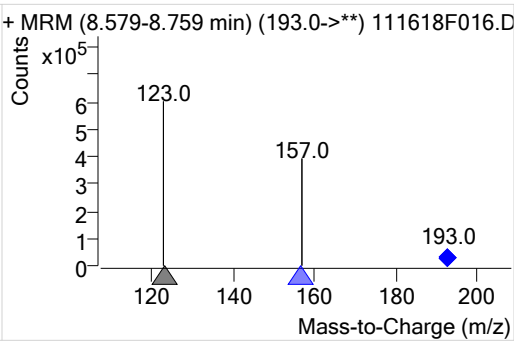




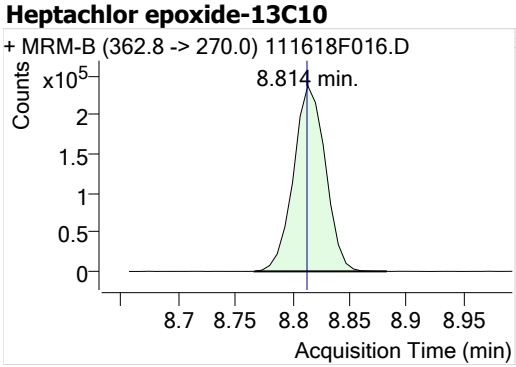
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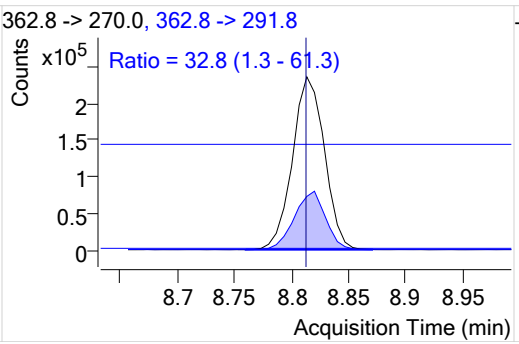


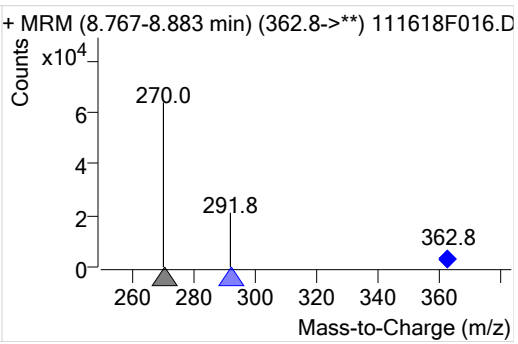




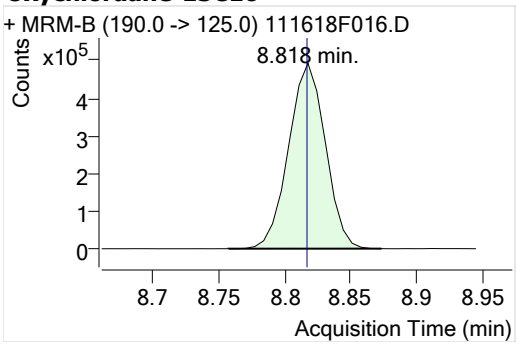
Heptachlor epoxide-13C10

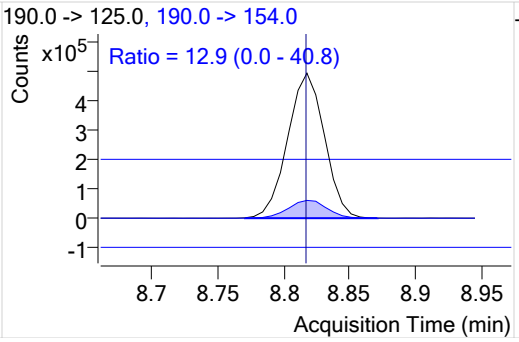


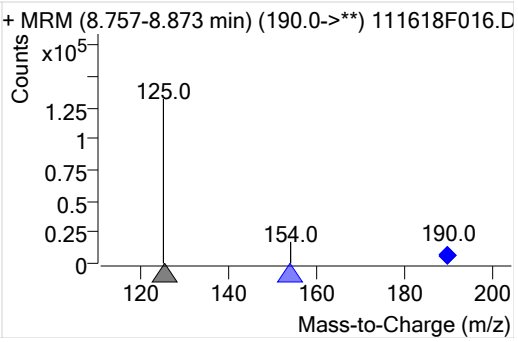




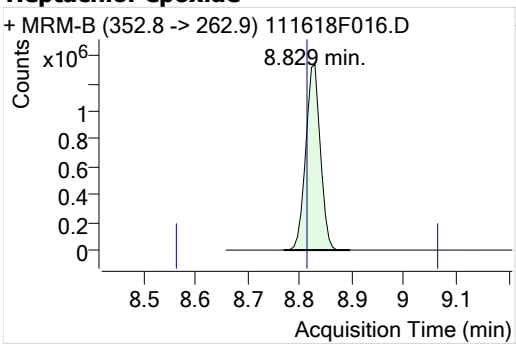
Oxychlordane-13C10

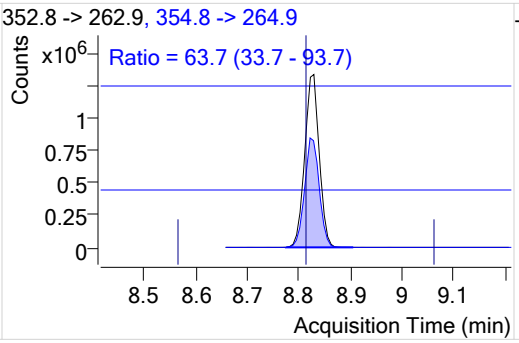


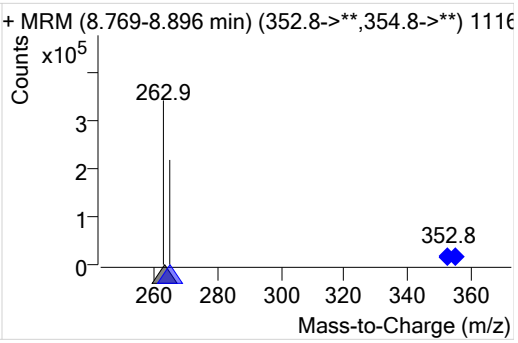




Heptachlor epoxide

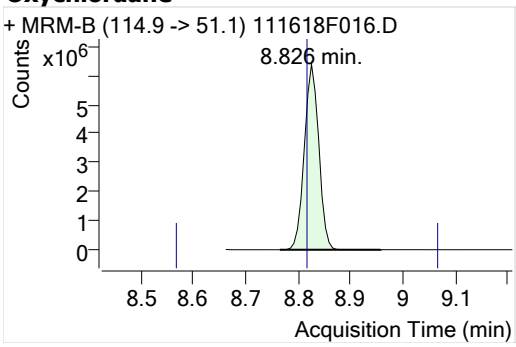


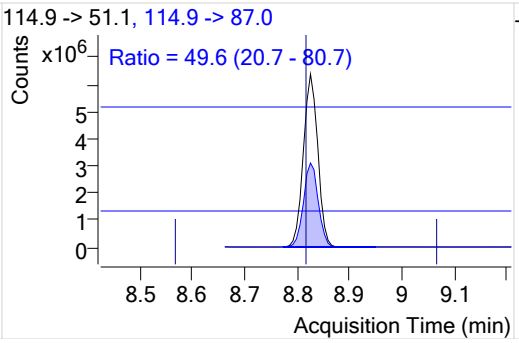


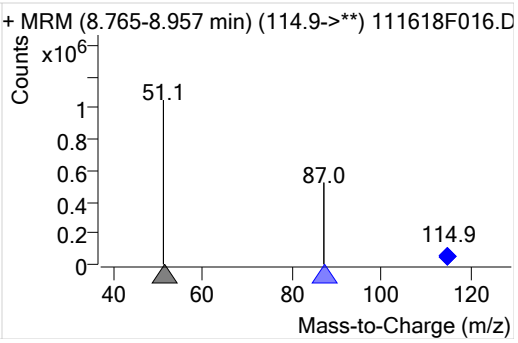


Quantitative Analysis Sample Report

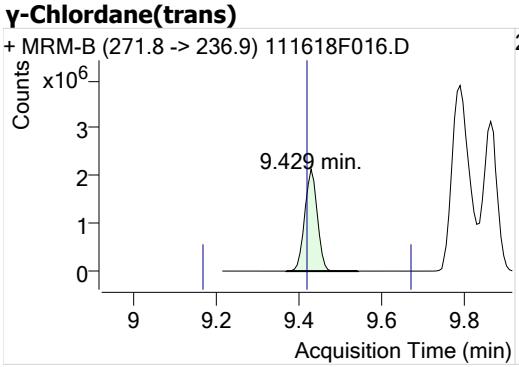
Oxychlordane

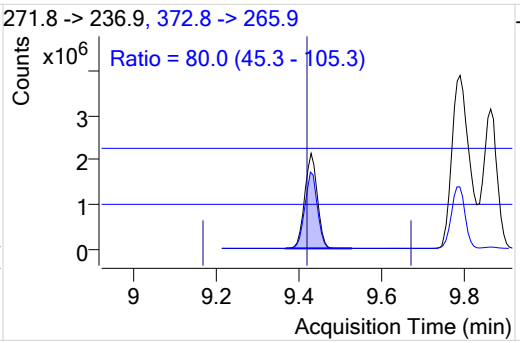


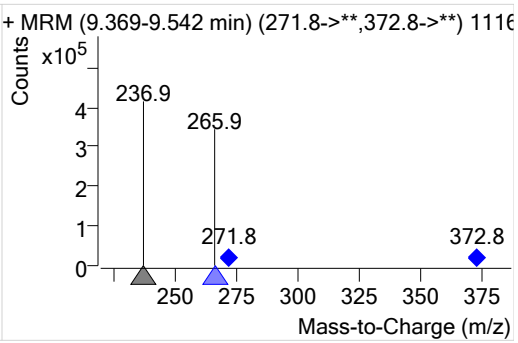




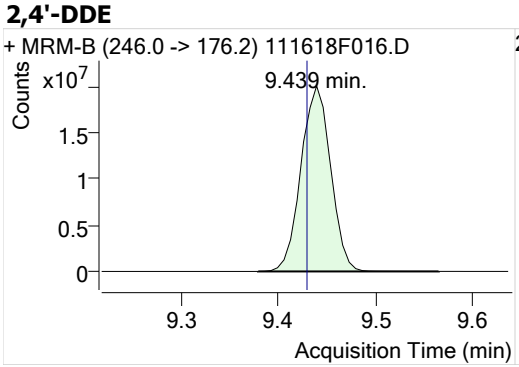
γ-Chlordane(trans)

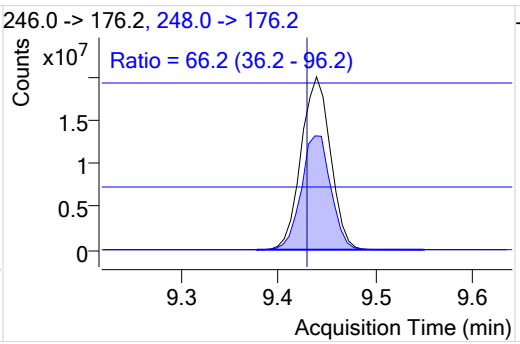


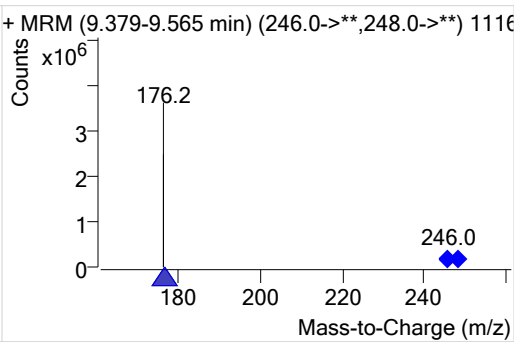




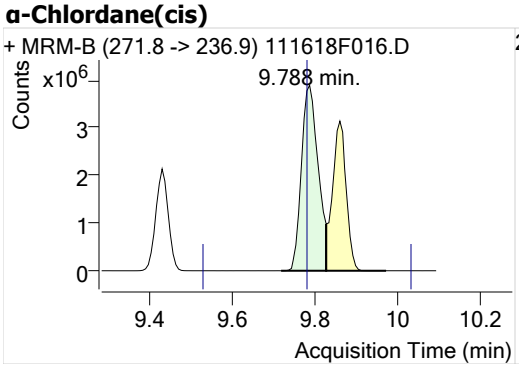
2,4'-DDE

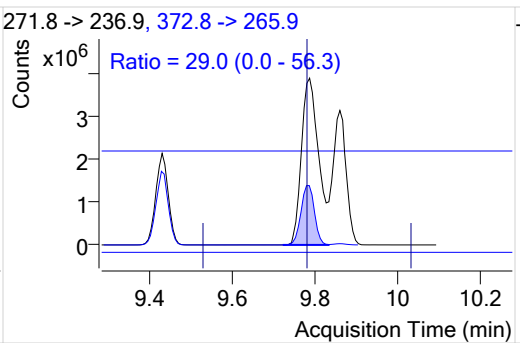


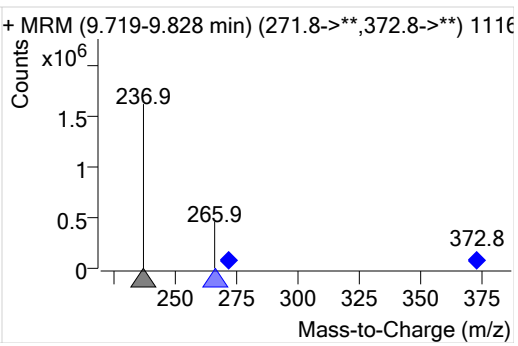




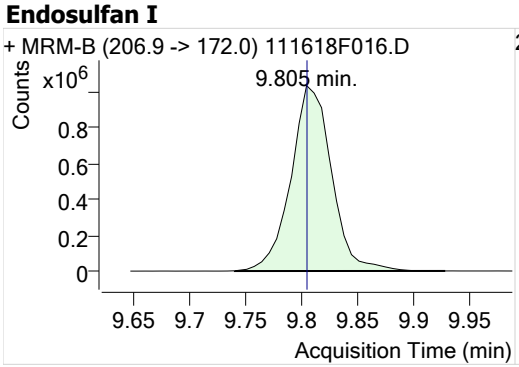
α-Chlordane(cis)

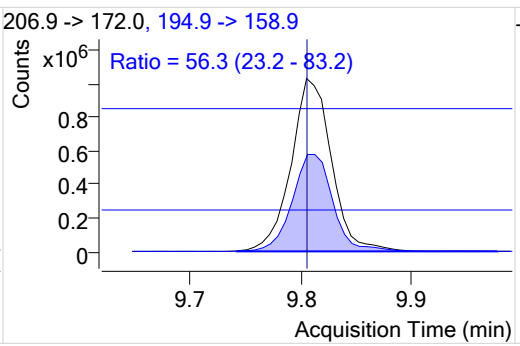


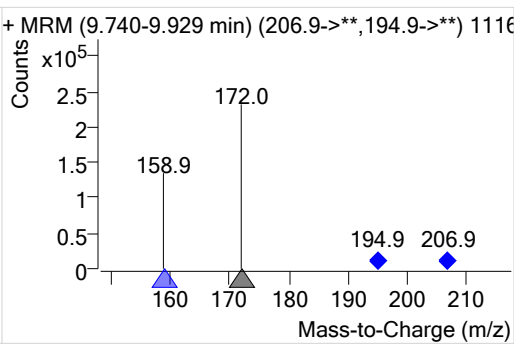




Endosulfan I

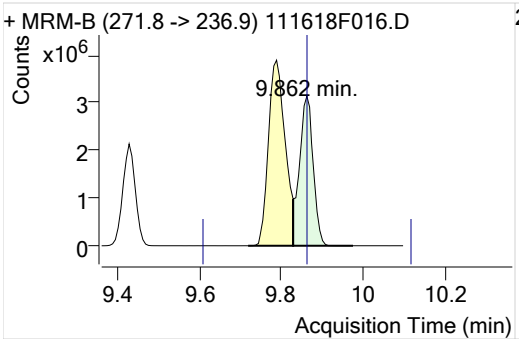


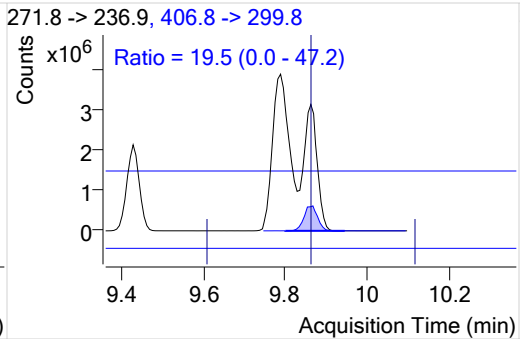


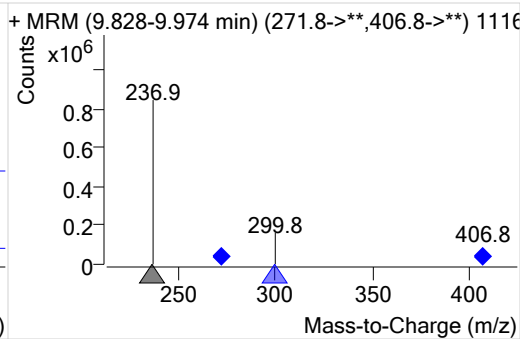


Quantitative Analysis Sample Report

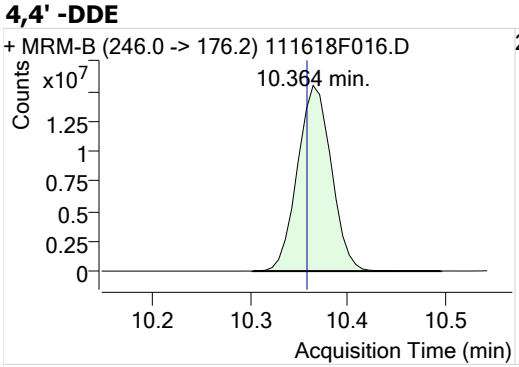
trans-Nanochlor

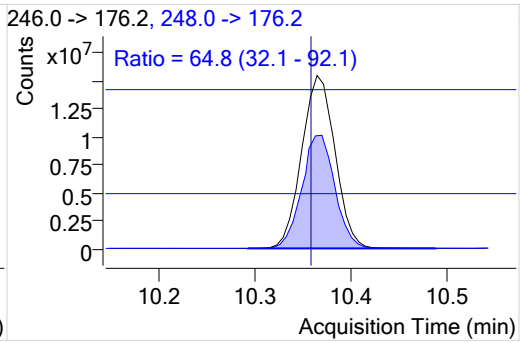


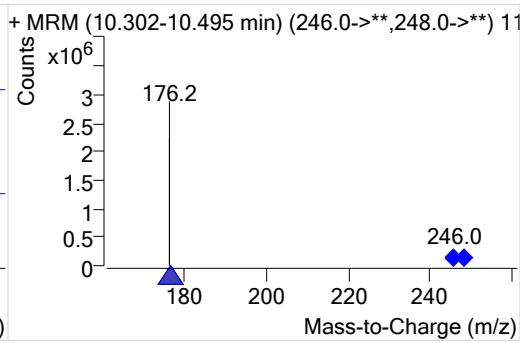




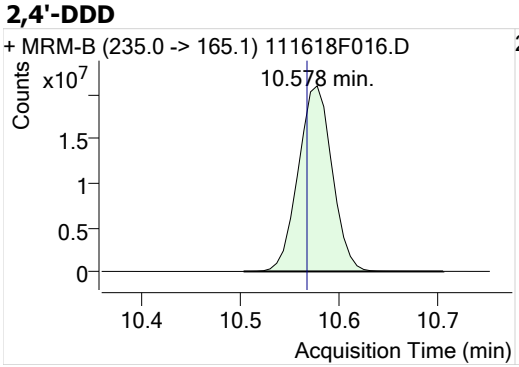
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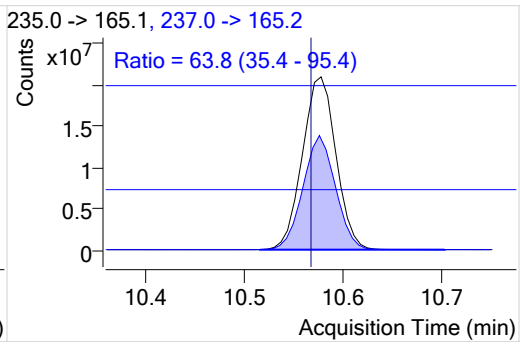


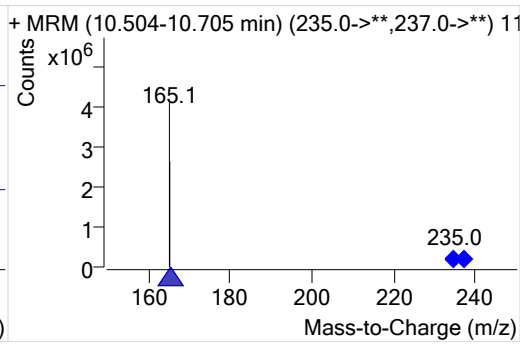




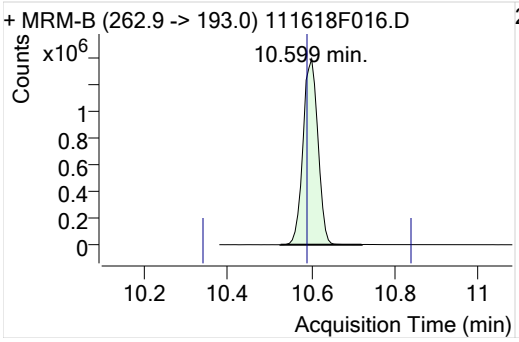
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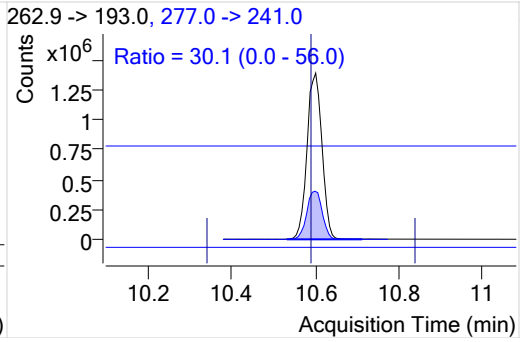


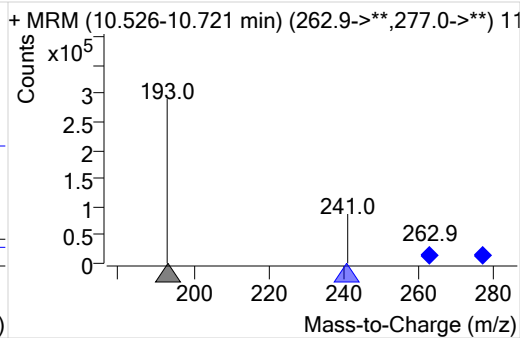




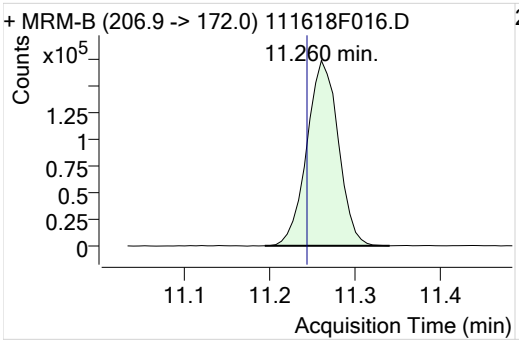
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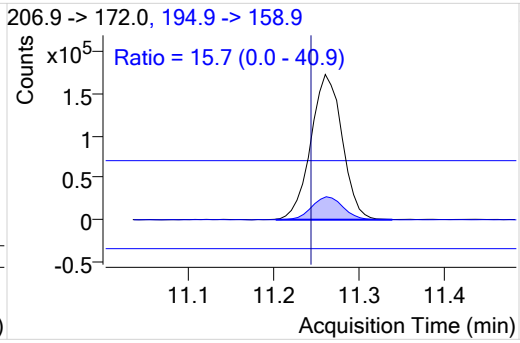


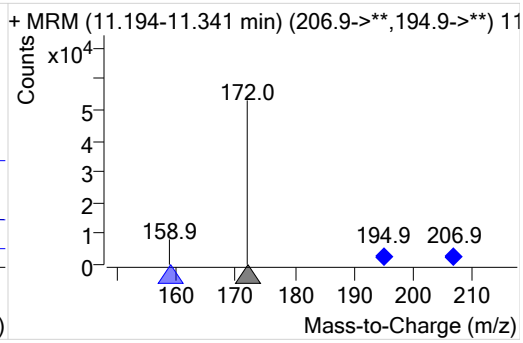




Endosulfan II

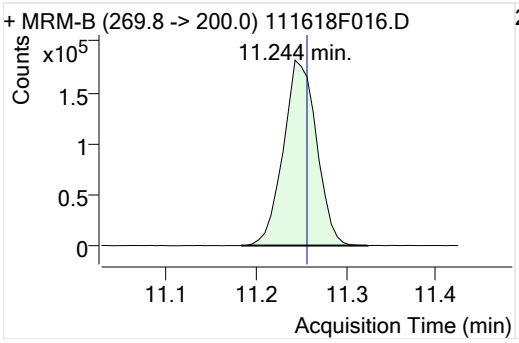


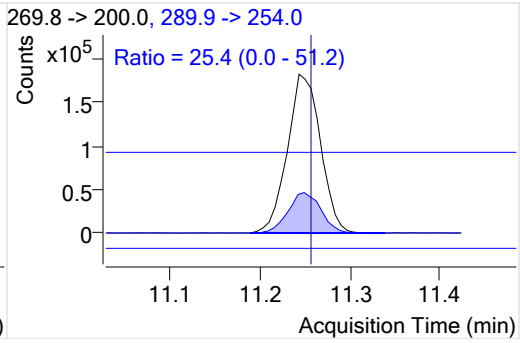


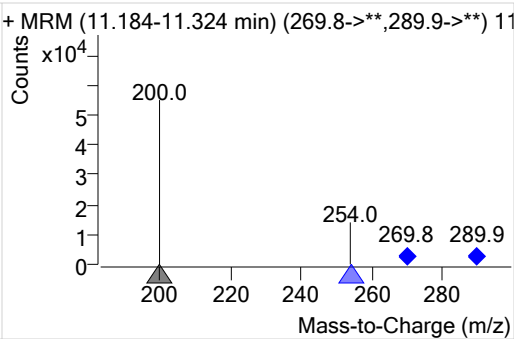


Quantitative Analysis Sample Report

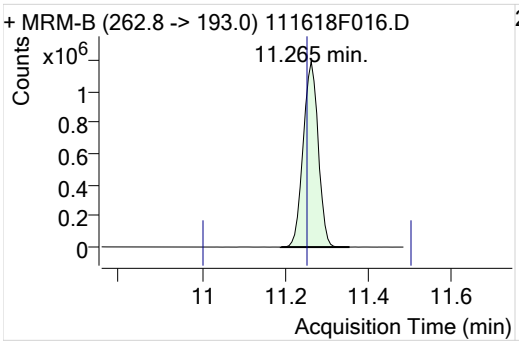
Endrin-13C12

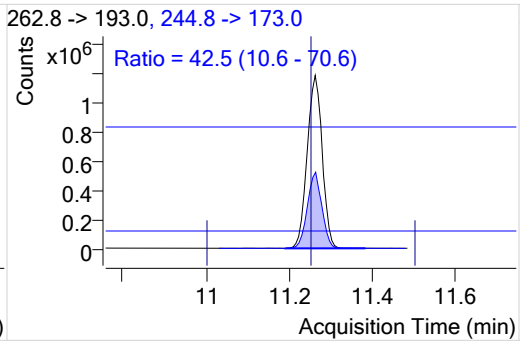


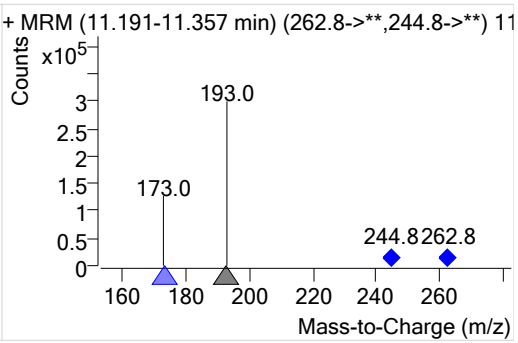




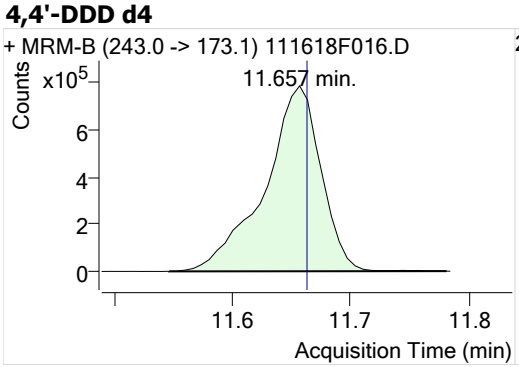
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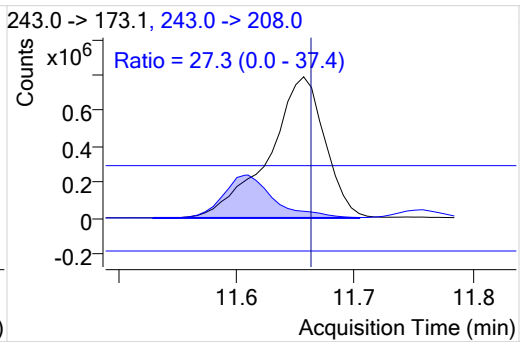


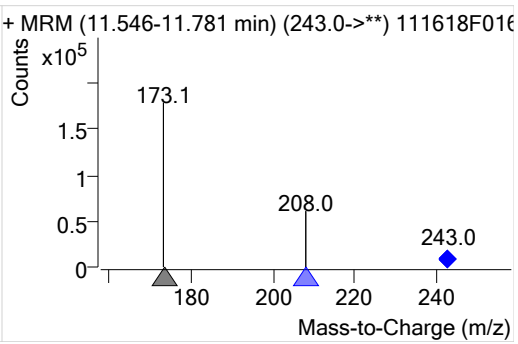




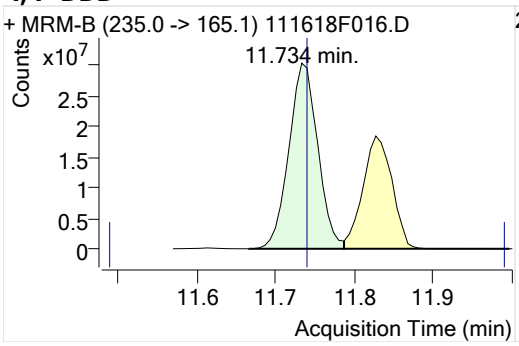
4,4'-DDD d4

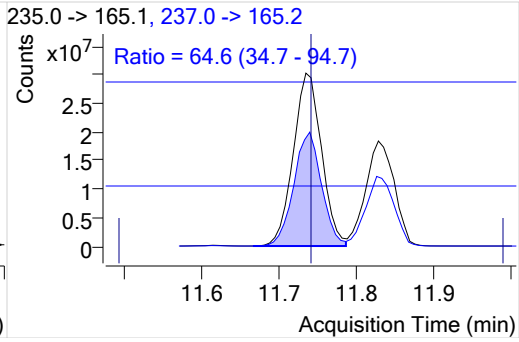


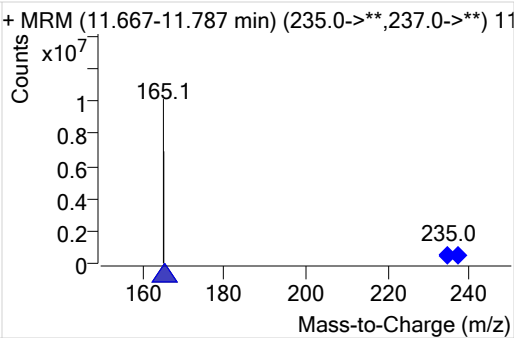




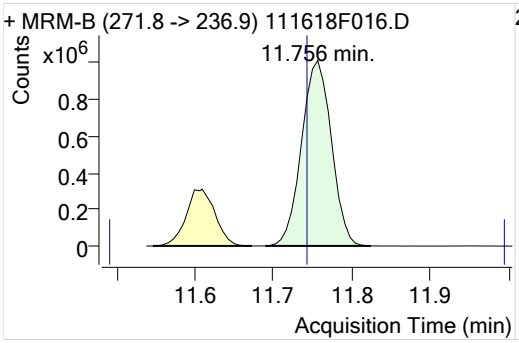
4,4'-DDD

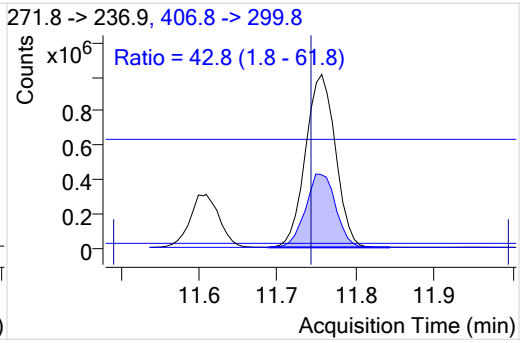


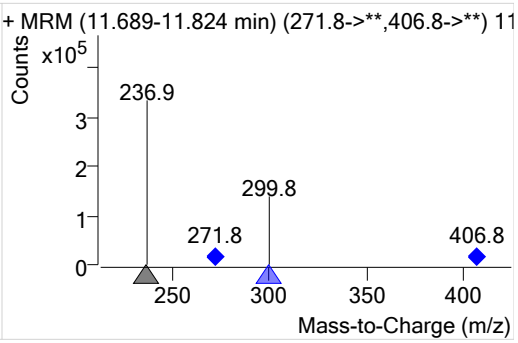




cis-Nonachlor

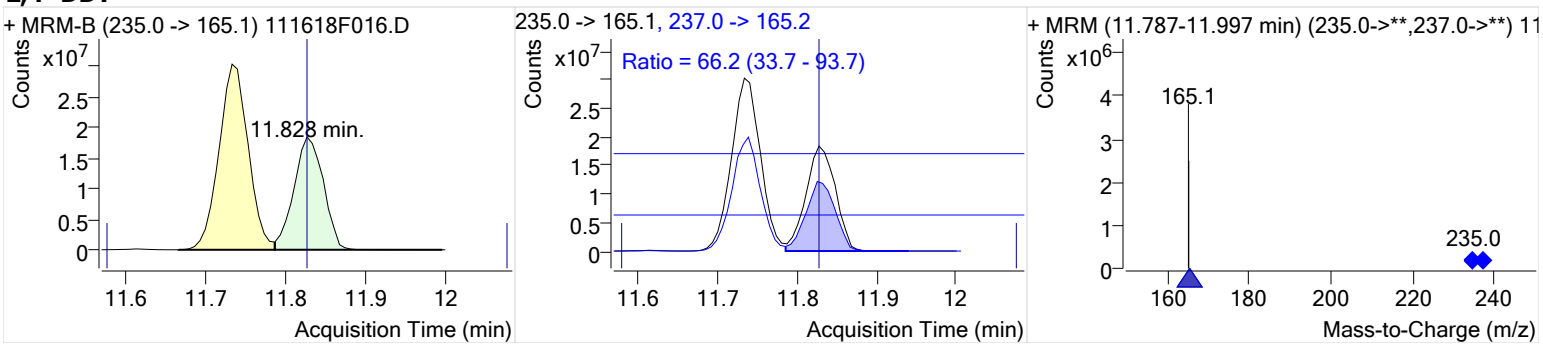




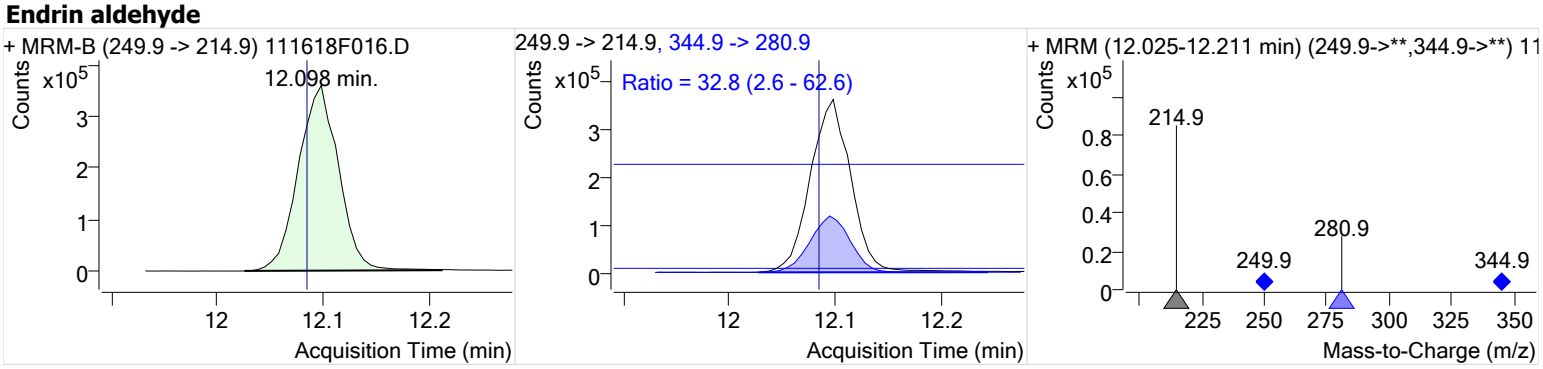


Quantitative Analysis Sample Report

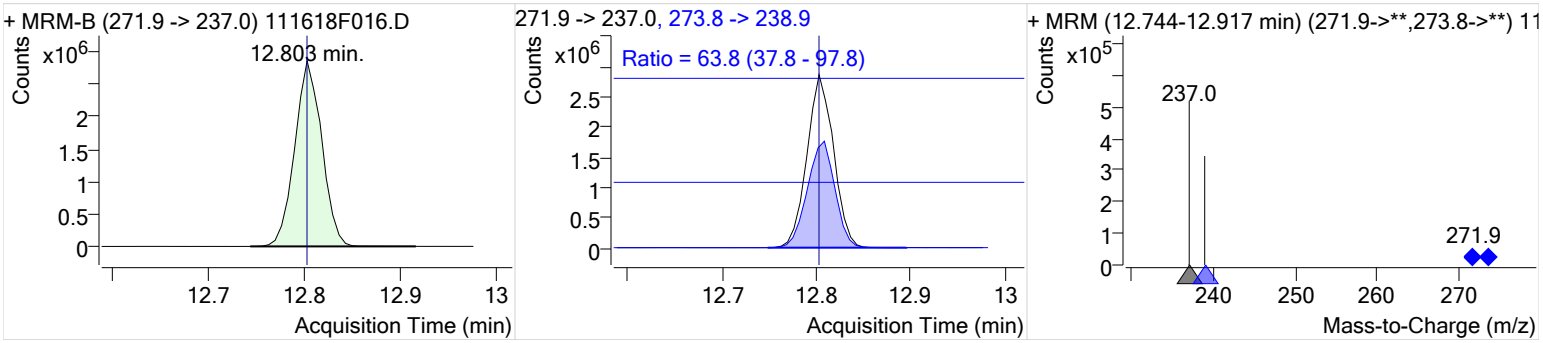
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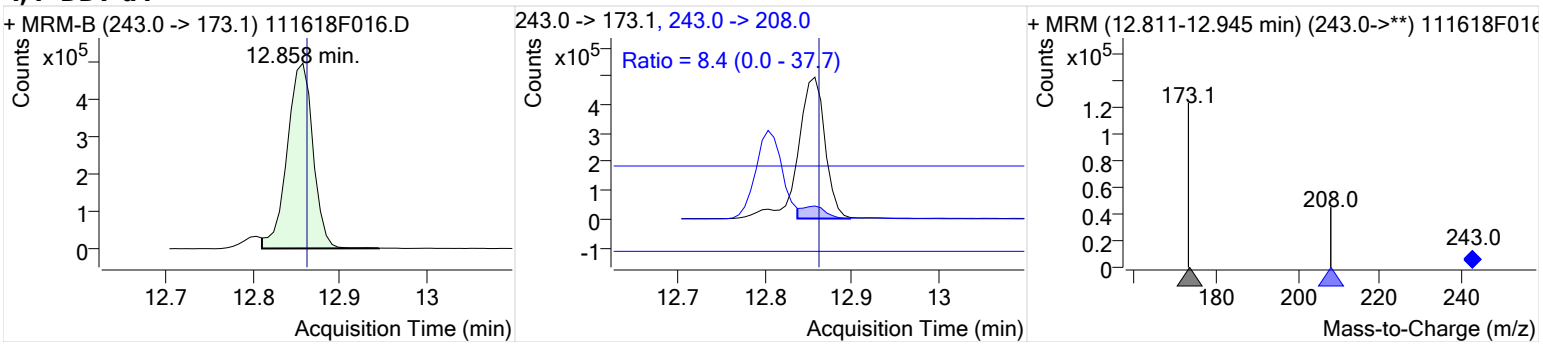
Endrin aldehyde



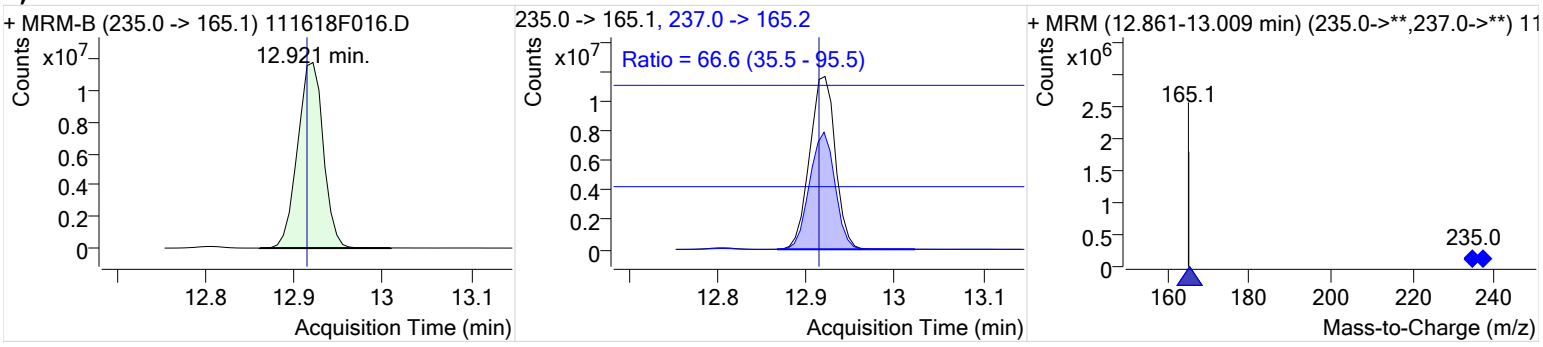
Endosulfan sulfate



4,4'-DDT-d4

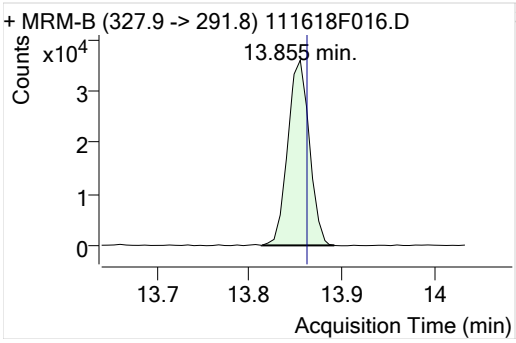


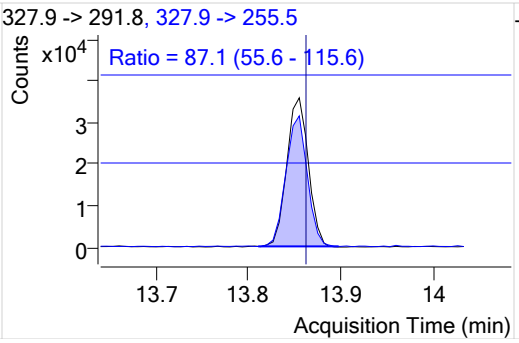
4,4'-DDT

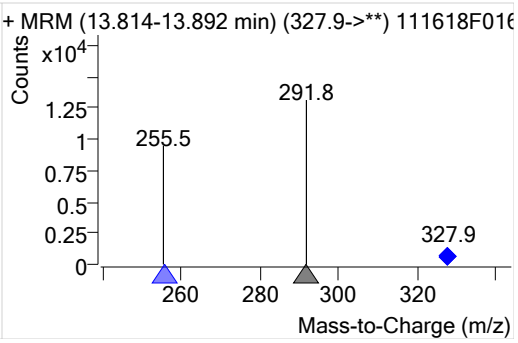


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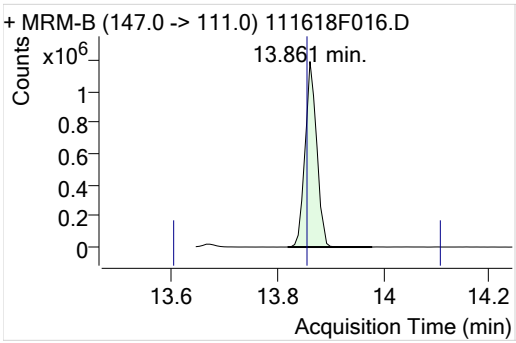
Endrin ketone-13C12

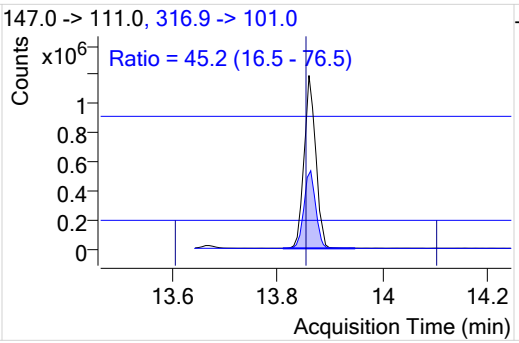


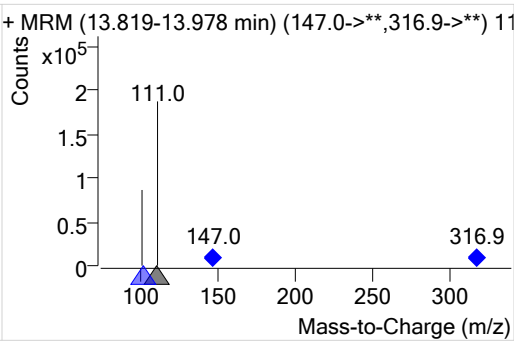




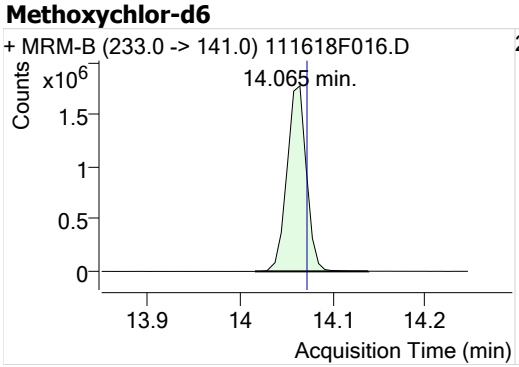
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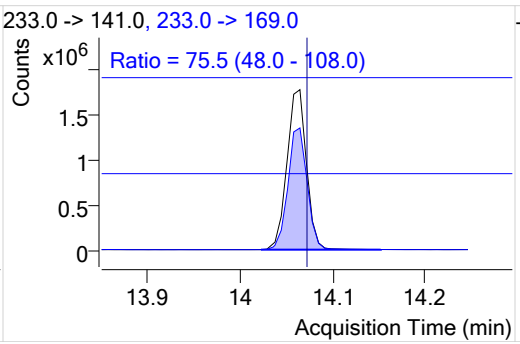


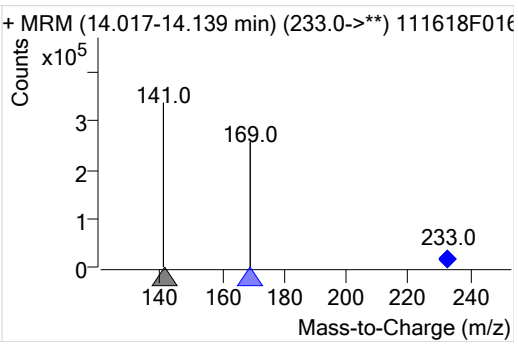




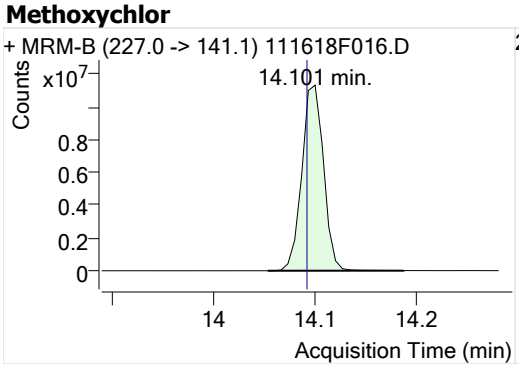
Methoxychlor-d6

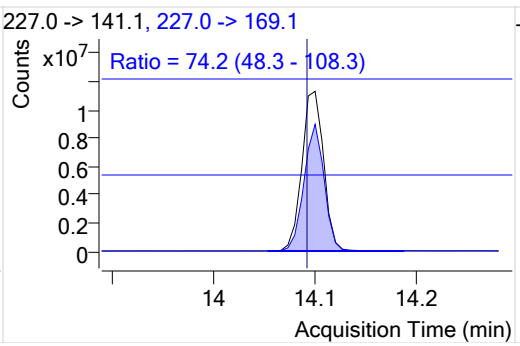


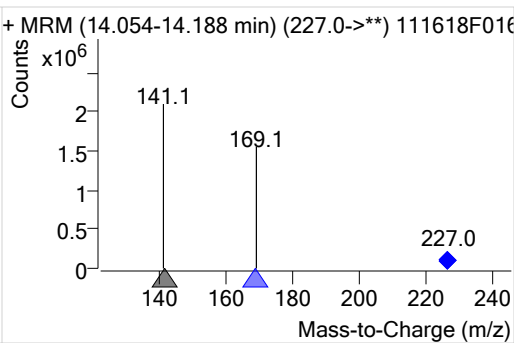




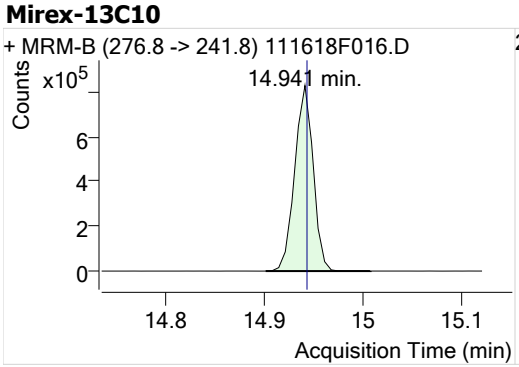
Methoxychlor

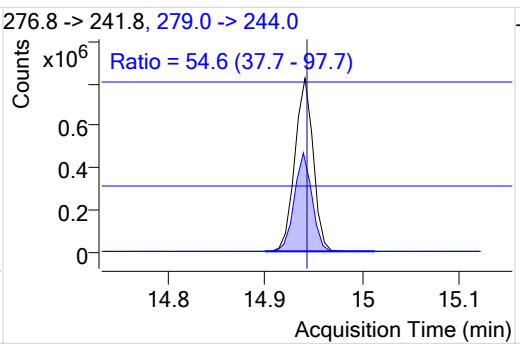


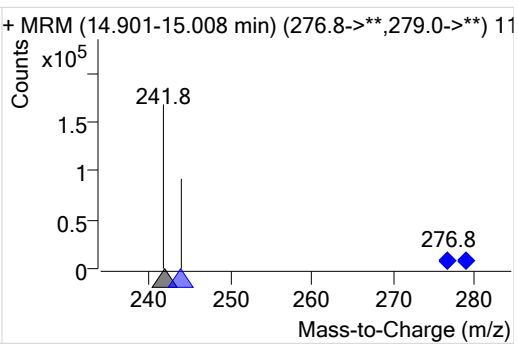




Mirex-13C10

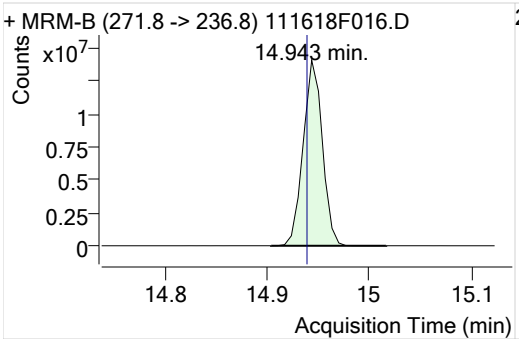


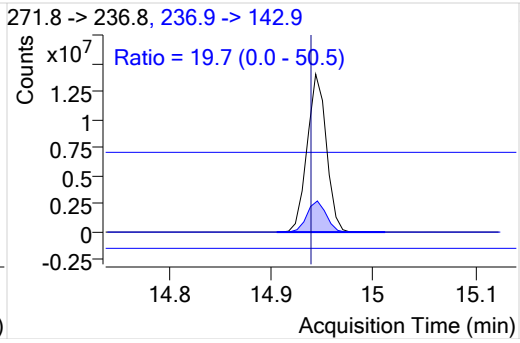


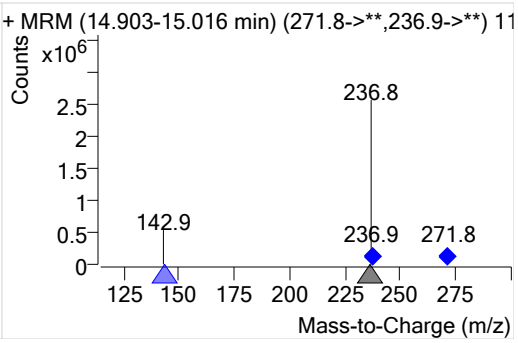


Quantitative Analysis Sample Report

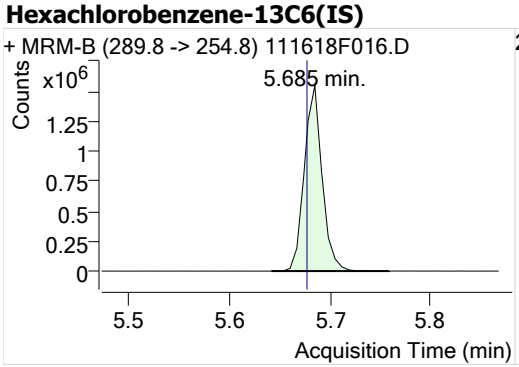
Mirex

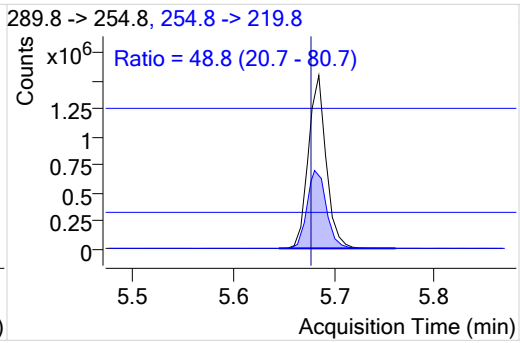


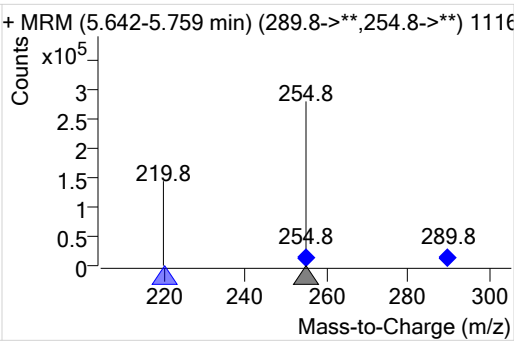




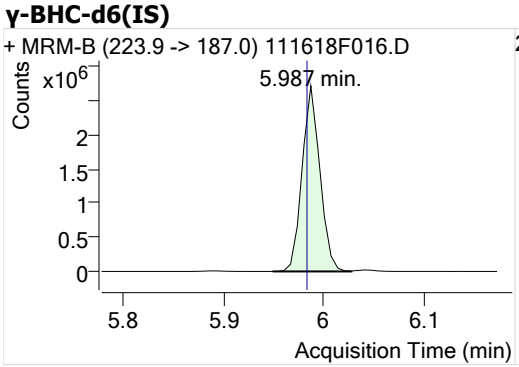
Hexachlorobenzene-13C6(IS)

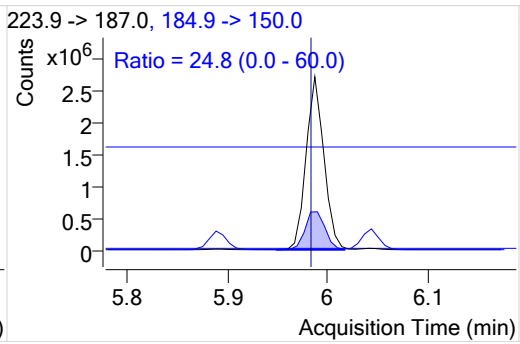


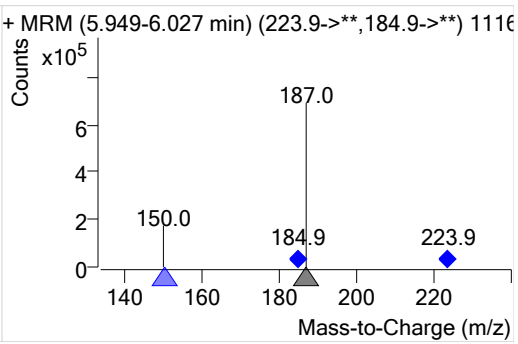




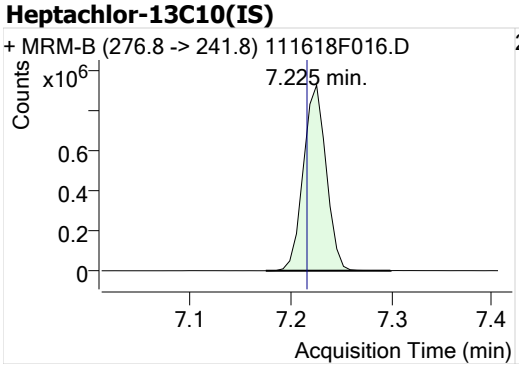
γ-BHC-d6(IS)

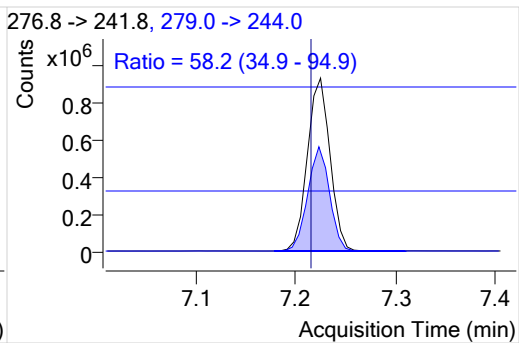


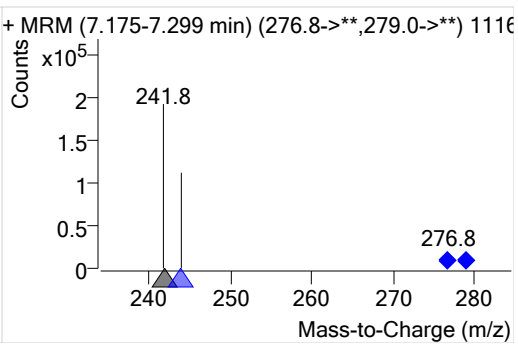




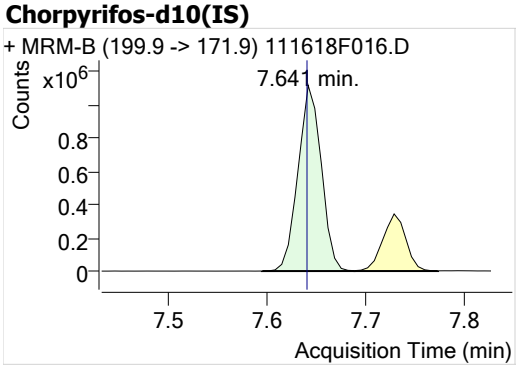
Heptachlor-13C10(IS)

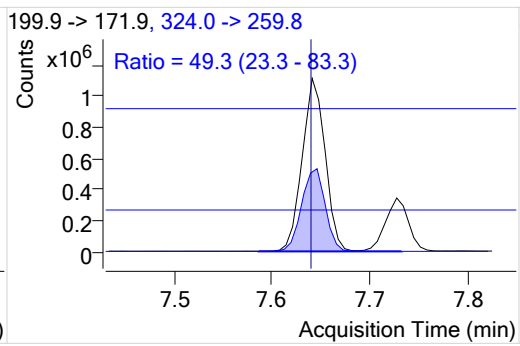


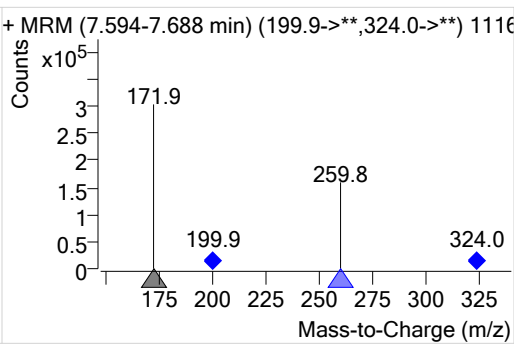




Chorpyrifos-d10(IS)

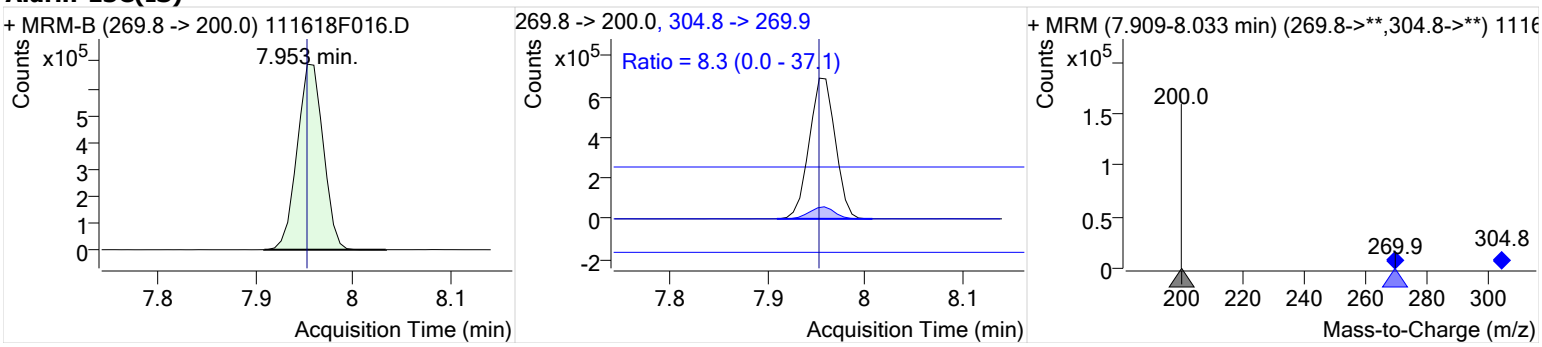




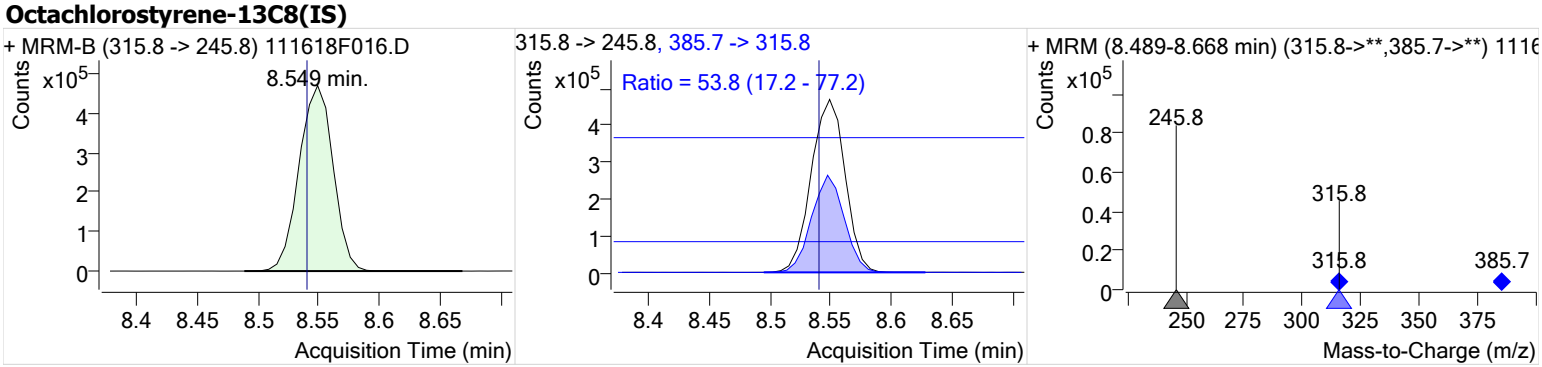


Quantitative Analysis Sample Report

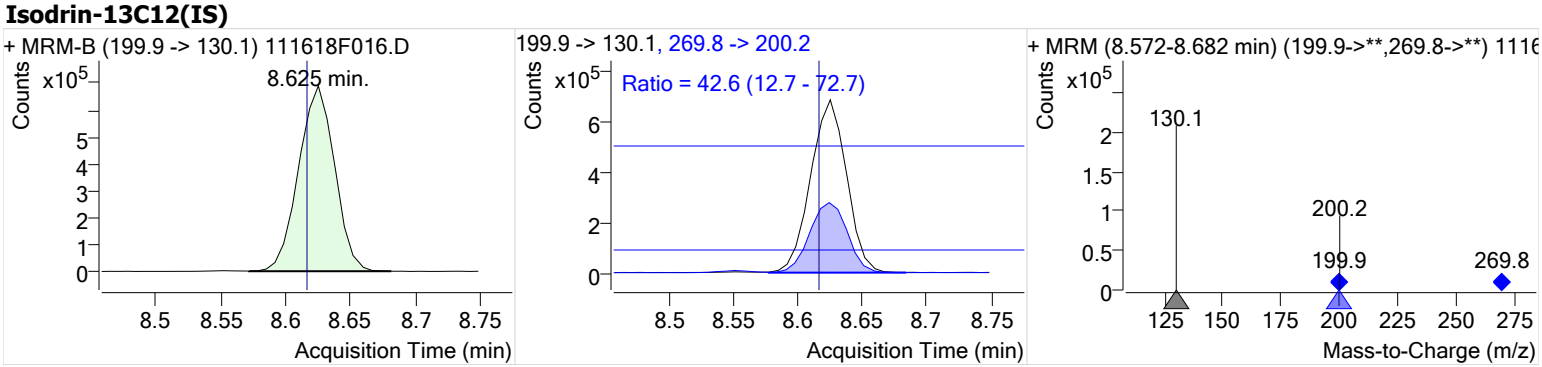
Aldrin-13C(IS)



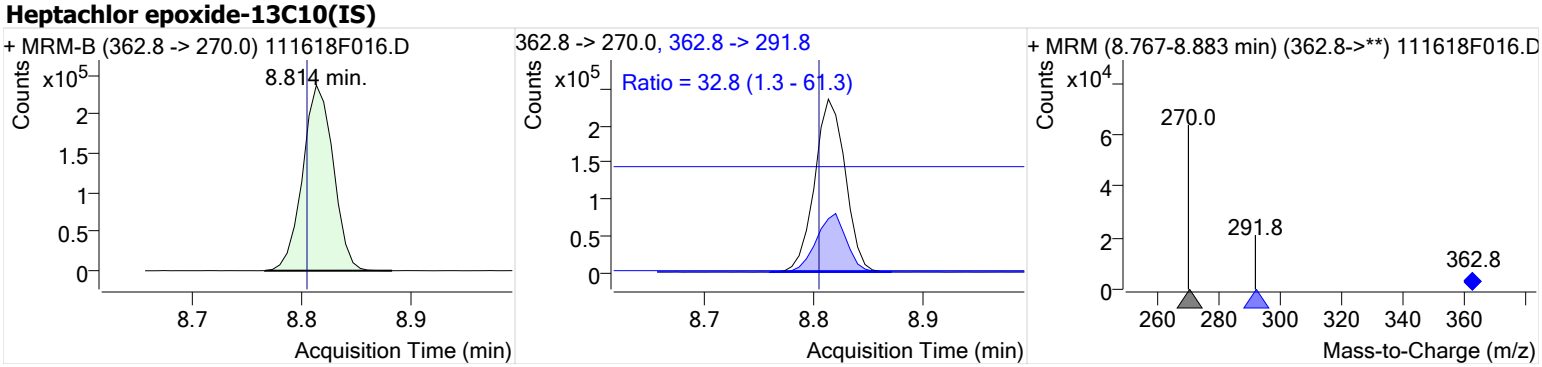
Octachlorostyrene-13C8(IS)



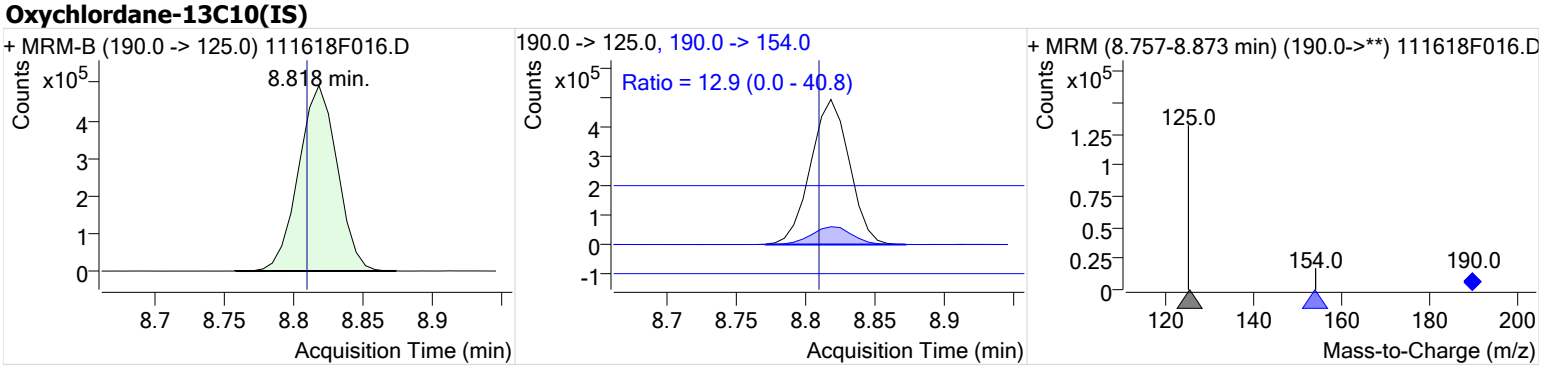
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

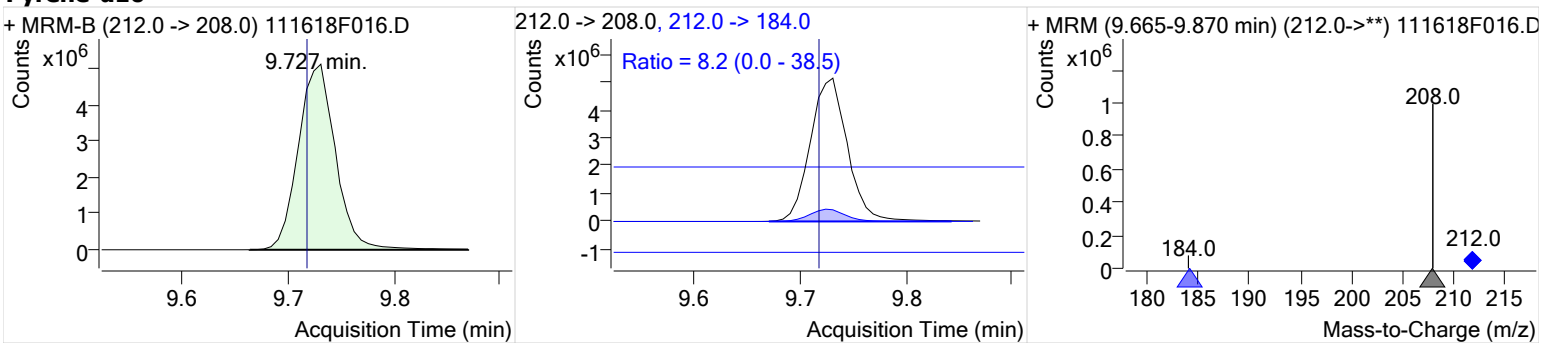


Oxychlordane-13C10(IS)

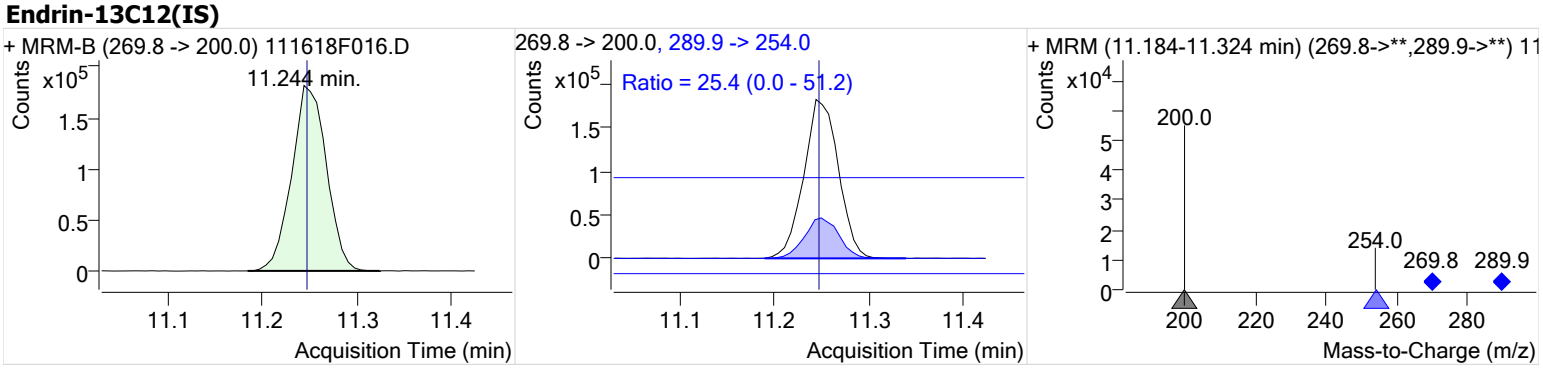


Quantitative Analysis Sample Report

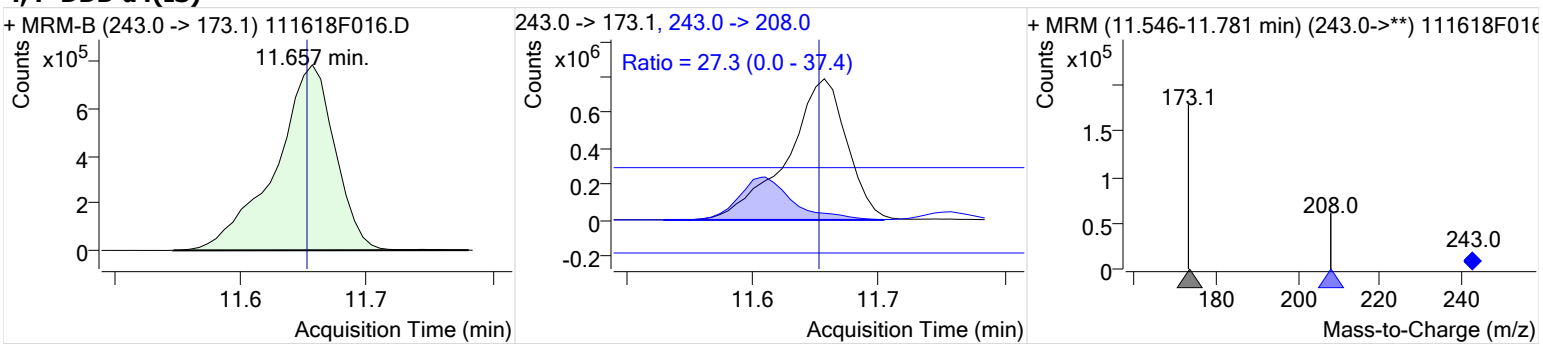
Pyrene-d10



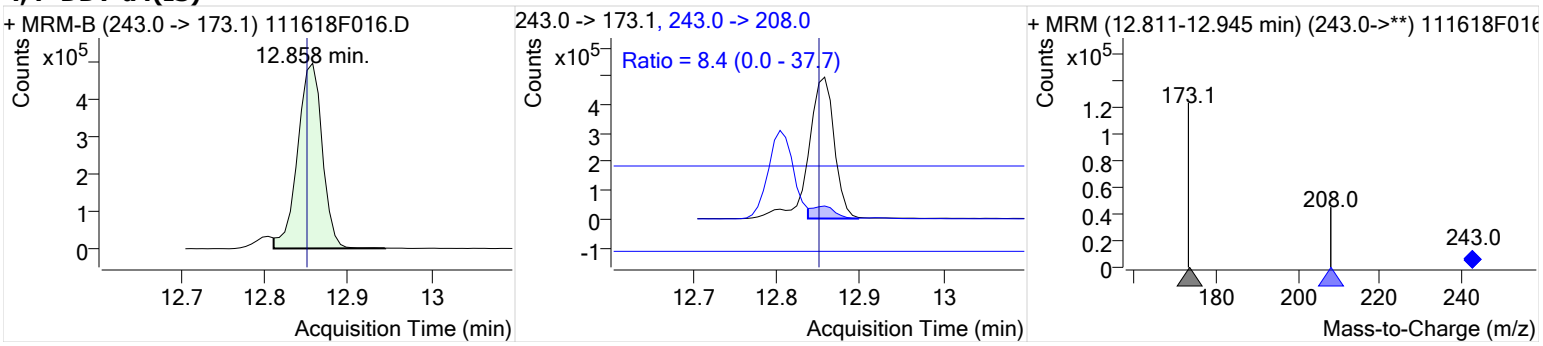
Endrin-13C12(IS)



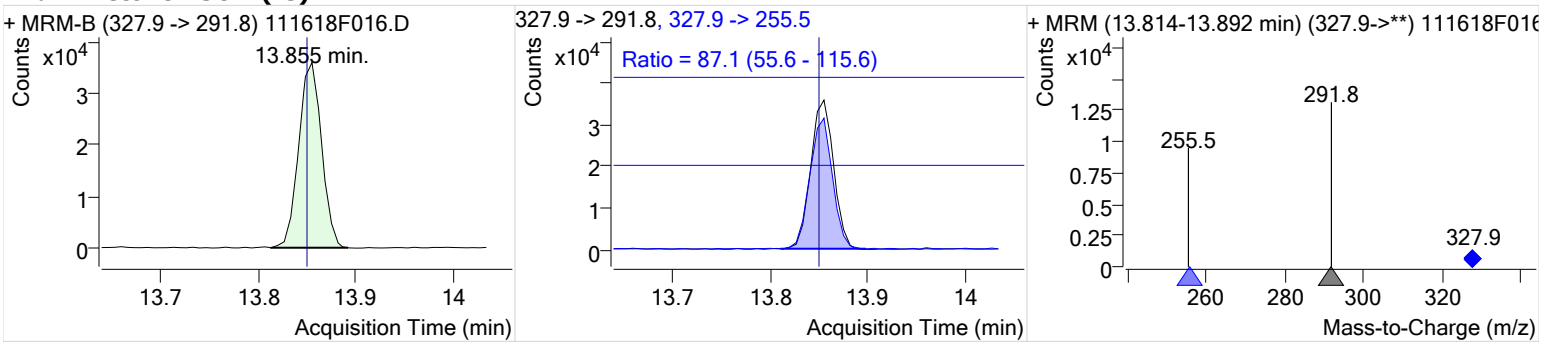
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

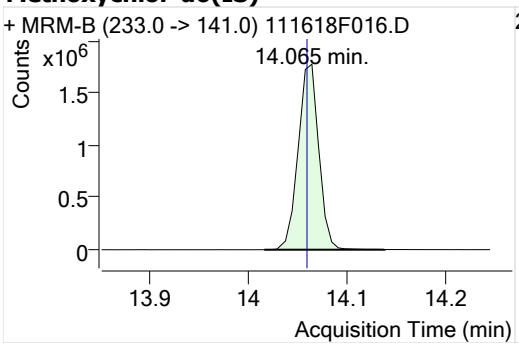


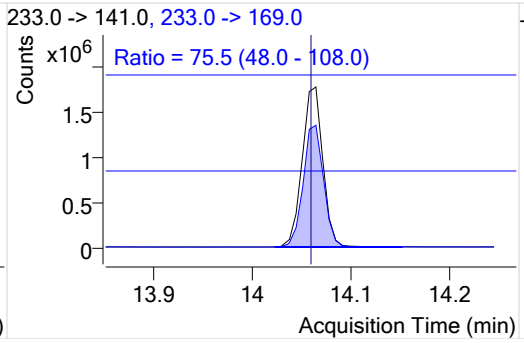
Endrin ketone-13C12(IS)

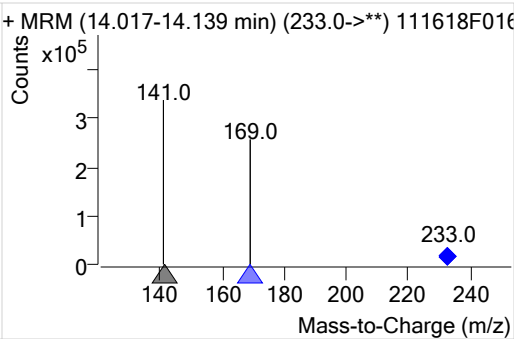


Quantitative Analysis Sample Report

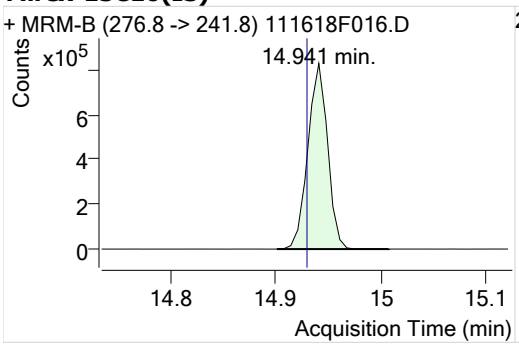
Methoxychlor-d6(IS)

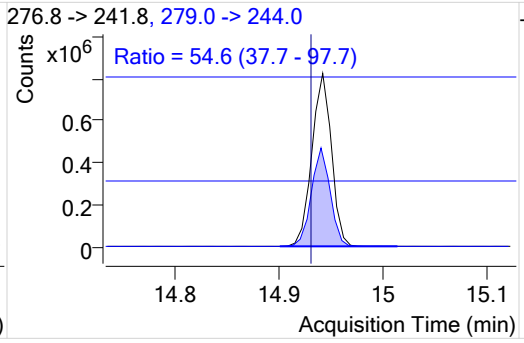


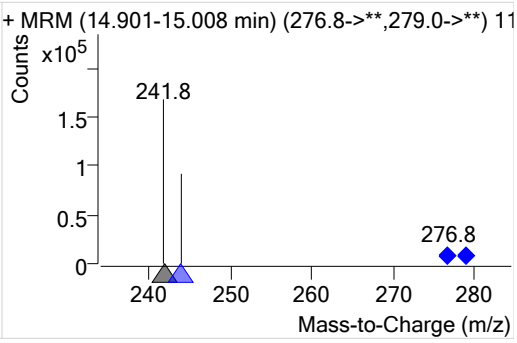




Mirex-13C10(IS)







1st 03/15/19
2nd 03/21/19

Validation Report

Data File: Y:\MS42\data\111618\111618F018.D
Lab ID: KQ1816988-01
RunType: CCV
Matrix: Sediment

Date Acquired: 11/16/18 16:18
Batch ID: 615706
Analysis Method: ALS SOP/OC_Pest

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

1st 03/15/19
2nd 03/21/19

Quantitation Report

Data File:	Y:\MS42\data\111618\111618F018.D	**Instrument:**	K-MS-42
Acqu Date:	11/16/18 16:18	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816988-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest	**Collect Date:**	10/21/18	**Receive Date:**	10/22/18

Analysis Lot:	615706	**Prep Lot:**		**Report Group:**	KQ1816988
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900105
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.725		10374819.79	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
S_4,4'DDD-d4	11.657		1744273.87	4.733705004	Y
S_4,4'-DDT-d4	12.858		775203.8106	4.708583371	Y
S_Aldrin-13C12	7.953		1074657.952	19.66225716	Y
S_Endrin-13C12	11.250		367656.7133	19.3900651	Y
S_GBHCD6	5.987		2887197.027	19.9503853	Y
S_Heptachlor-13C10	7.225		1148215.326	19.18750779	Y
S_Heptachlrepox13C10	8.813		393081.4526	20.61555973	Y
S_Oxychlordane-13C10	8.818		807632.0681	20.84230451	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDD	10.577		7743775.532	20.63157611	Y
2,4'-DDE	9.439		6796933.074	20.49620391	Y
2,4'-DDT	11.828		6202330.239	17.84346469	Y
4,4'-DDD	11.734		11302129.82	20.06398573	Y
4,4'-DDE	10.365		6303174.533	20.73543394	Y
4,4'-DDT	12.921		3424337.016	19.08984354	Y
Aldrin	7.963		745969.3789	19.41103421	Y
alpha-Chlordane	9.782		1811606.978	18.63361471	Y
cis-Nonachlor	11.756		399742.7043	16.86553406	Y
Dieldrin	10.600		537488.9831	19.16633127	Y
gamma-BHC (Lindane)	6.044		5829133.012	19.30187431	Y
gamma-Chlordane	9.429		738947.31	18.98885343	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 3/15/19 15:51
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st 03/15/19
2nd 03/21/19

Data File:	Y:\MS42\data\111618\111618F018.D	**Instrument:**	K-MS-42
Acqu Date:	11/16/18 16:18	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816988-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Heptachlor	7.229		1269699.468	19.07798231	Y
Oxychlordane	8.826		2140265.07	19.60044387	Y
trans-Nonachlor	9.863		1104435.317	17.65161346	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
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c: check for co-elution

Printed: 3/15/19 15:51
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Quantitative Analysis Sample Report

Data File	Y:\MS42\data\111618\111618F018.D	**Vial**	13
Acq. Date-Time	11/16/2018 4:18:45 PM	**Acq Operator**	EBruno
Name	OC PEST ICV 20ng/mL SVM59-48K	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/15/2019 3:40:43 PM	**Inj Vol**	1
Quant Method	111618 oc pest ical.batch.bin		
Last Update	3/14/2019 10:04:01 AM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\111618\QuantResults\111618 OC PEST.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.685	289.8 -> 254.8	1408583	20.000 ng/ml	0.006
γ-BHC-d6(IS)	5.987	223.9 -> 187.0	2887197	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.225	276.8 -> 241.8	1148215	20.000 ng/ml	0.009
Chorpyrifos-d10(IS)	7.641	199.9 -> 171.9	1449007	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.953	269.8 -> 200.0	1074658	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.549	315.8 -> 245.8	793545	20.000 ng/ml	0.008
Isodrin-13C12(IS)	8.625	199.9 -> 130.1	1114050	20.000 ng/ml	0.008
Heptachlor epoxide-13C10(IS)	8.813	362.8 -> 270.0	393081	20.000 ng/ml	0.009
Oxychlordane-13C10(IS)	8.818	190.0 -> 125.0	807632	20.000 ng/ml	0.009
Pyrene-d10	9.725	212.0 -> 208.0	10374820	100.000 ng/ml	0.006
Endrin-13C12(IS)	11.250	269.8 -> 200.0	367657	20.000 ng/ml	0.002
4,4'-DDD d4(IS)	11.657	243.0 -> 173.1	1744274	5.000 ng/ml	0.021
4,4'-DDT-d4(IS)	12.858	243.0 -> 173.1	775204	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.855	327.9 -> 291.8	45997	20.000 ng/ml	0.005
Methoxychlor-d6(IS)	14.058	233.0 -> 141.0	2012989	20.000 ng/ml	0.002
Mirex-13C10(IS)	14.941	276.8 -> 241.8	755932	5.000 ng/ml	0.010

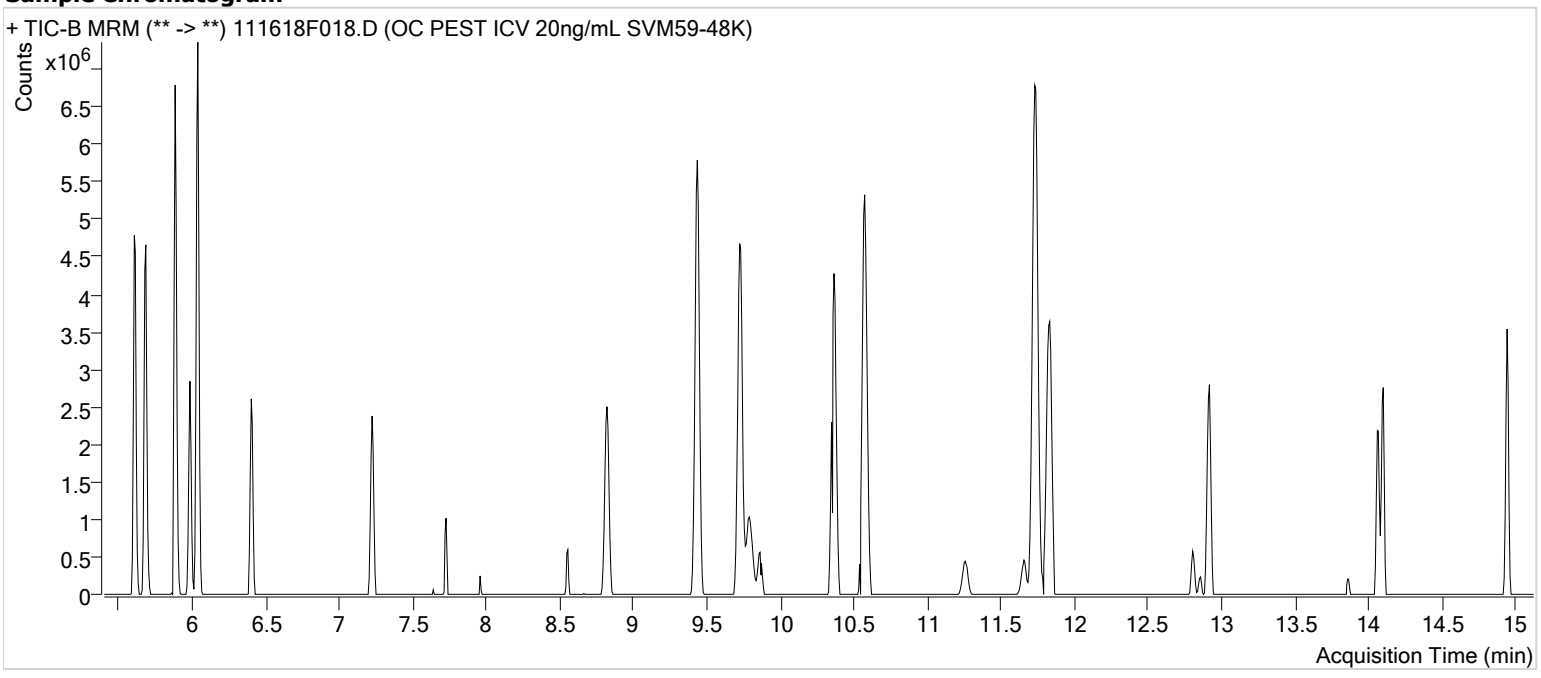
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	1408583	18.444 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.2 %*
γ-BHC-d6	5.983	223.9 -> 187.0	2887197	19.950 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.8 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	1148215	19.188 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.9 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	1449007	19.301 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.5 %*
Aldrin-13C	7.952	269.8 -> 200.0	1074658	19.662 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.3 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	793545	20.278 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.4 %*
Isodrin-13C12	8.616	199.9 -> 130.1	1114050	18.681 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.4 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	393081	20.616 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.1 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	807632	20.842 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.2 %*
Endrin-13C12	11.247	269.8 -> 200.0	367657	19.390 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.0 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	1744274	4.734 ng/ml	
		Spiked Amount =	5.0	Recovery =	*94.7 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	775204	4.709 ng/ml	
		Spiked Amount =	5.0	Recovery =	*94.2 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	45997	19.590 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.0 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	2012989	18.505 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.5 %*
Mirex-13C10	14.930	276.8 -> 241.8	755932	4.756 ng/ml	
		Spiked Amount =	5.0	Recovery =	*95.1 %*

Quantitative Analysis Sample Report

Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.613	181.1 -> 145.1	3841967	18.609	ng/ml	95
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.686	283.8 -> 213.9	2481419	19.461	ng/ml	98
β-BHC	γ-BHC-d6(IS)	5.890	181.1 -> 145.1	5102687	19.536	ng/ml	96
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.044	181.1 -> 145.1	5829133	19.302	ng/ml	99
δ-BHC	γ-BHC-d6(IS)	6.405	181.1 -> 145.1	2320182	19.276	ng/ml	99
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	1269699	19.078	ng/ml	95
Chorpyrifos	Chorpyrifos-d10(IS)	7.731	196.9 -> 169.0	2030051	19.847	ng/ml	95
Aldrin	Aldrin-13C(IS)	7.963	254.9 -> 220.0	745969	19.411	ng/ml	97
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.555	342.8 -> 307.8	1775792	17.388	ng/ml	96
Isodrin	Isodrin-13C12(IS)	8.633	193.0 -> 123.0	1175096	20.558	ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.829	352.8 -> 262.9	412337	18.433	ng/ml	99
Oxychlordane	Oxychlordane-13C10(IS)	8.826	114.9 -> 51.1	2140265	19.600	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.429	271.8 -> 236.9	738947	18.989	ng/ml	97
2,4'-DDE	4,4'-DDD d4(IS)	9.439	246.0 -> 176.2	6796933	20.496	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	1811607	18.634	ng/ml	96
Endosulfan I	Endrin-13C12(IS)	9.812	206.9 -> 172.0	445586	19.334	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.863	271.8 -> 236.9	1104435	17.652	ng/ml	92
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	6303175	20.735	ng/ml	98
2,4'-DDD	4,4'-DDD d4(IS)	10.577	235.0 -> 165.1	7743776	20.632	ng/ml	99
Dieldrin	Endrin-13C12(IS)	10.600	262.9 -> 193.0	537489	19.166	ng/ml	93
Endosulfan II	Endrin-13C12(IS)	11.260	206.9 -> 172.0	99612	19.572	ng/ml	97
Endrin	Endrin-13C12(IS)	11.271	262.8 -> 193.0	480602	19.048	ng/ml	100
4,4'-DDD	4,4'-DDD d4(IS)	11.734	235.0 -> 165.1	11302130	20.064	ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	399743	16.866	ng/ml	88
2,4'-DDT	4,4'-DDT-d4(IS)	11.828	235.0 -> 165.1	6202330	17.843	ng/ml	96
Endrin aldehyde	Endrin-13C12(IS)	12.098	249.9 -> 214.9	138856	19.508	ng/ml	97
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	811811	18.796	ng/ml	98
4,4'-DDT	4,4'-DDT-d4(IS)	12.921	235.0 -> 165.1	3424337	19.090	ng/ml	100
Endrin ketone	Endrin ketone-13C12(IS)	13.861	147.0 -> 111.0	284829	17.592	ng/ml	94
Methoxychlor	Methoxychlor-d6(IS)	14.101	227.0 -> 141.1	2460445	19.155	ng/ml	100
Mirex	Mirex-13C10(IS)	14.943	271.8 -> 236.8	3003896	18.528	ng/ml	96

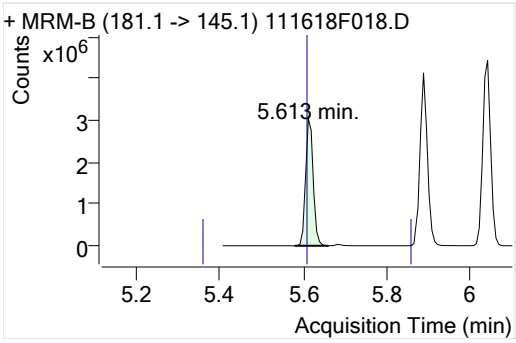
(m) = manual integration ND = Not Detected NC = Not Calculated

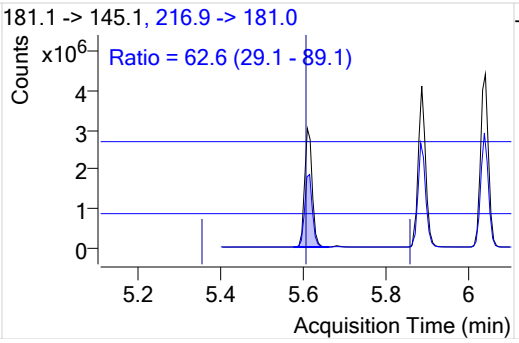
Sample Chromatogram

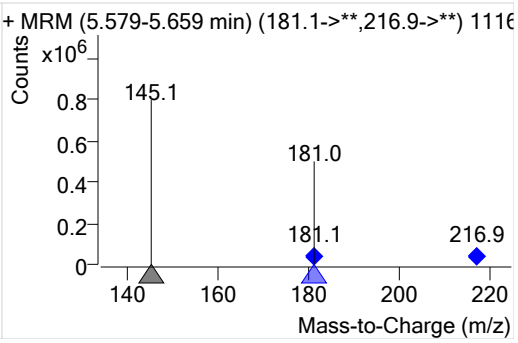


Quantitative Analysis Sample Report

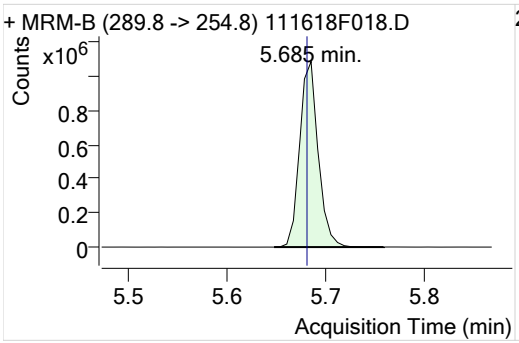
α-BHC

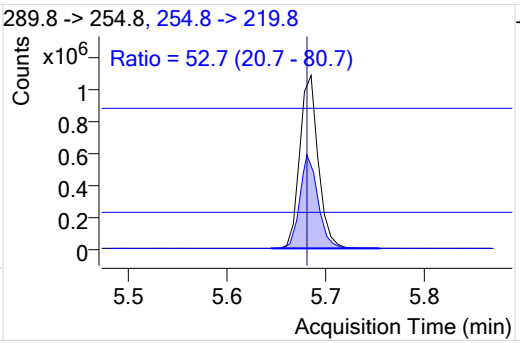


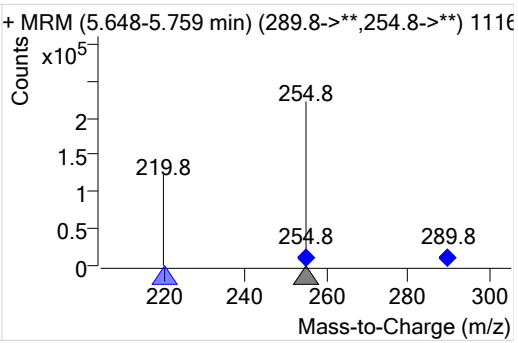




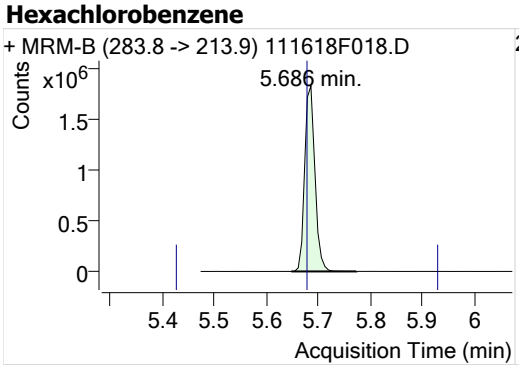
Hexachlorobenzene-13C6

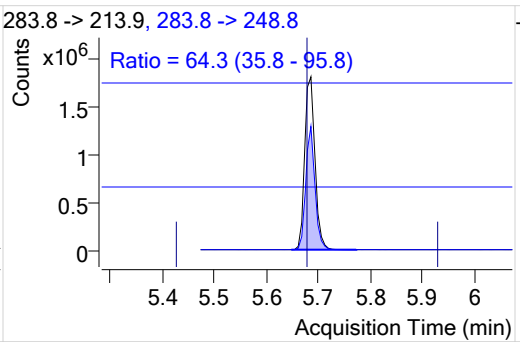


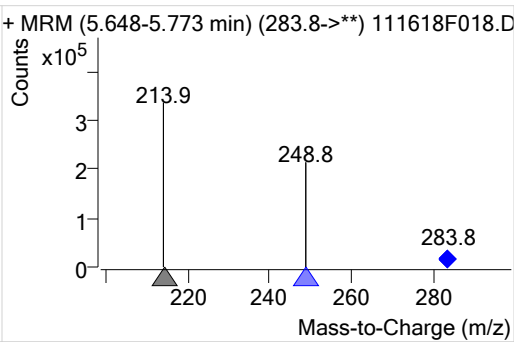




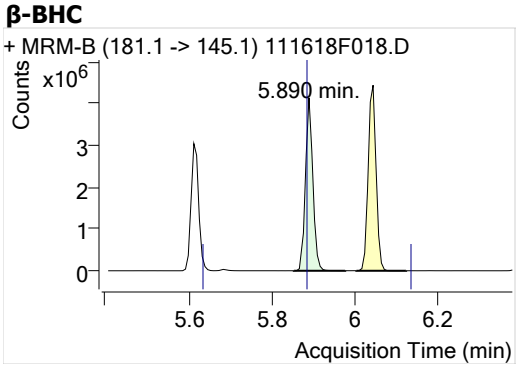
Hexachlorobenzene

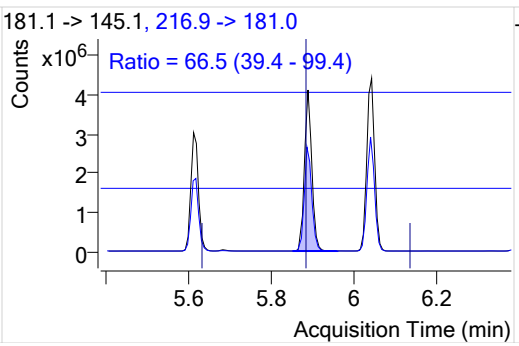


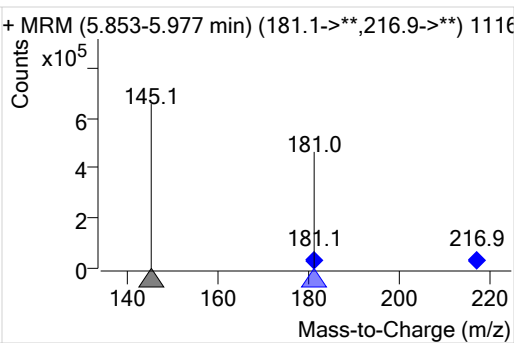




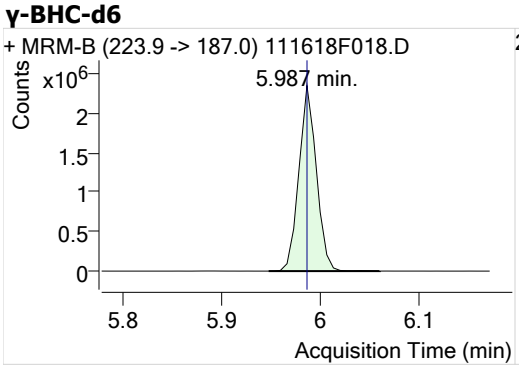
β-BHC

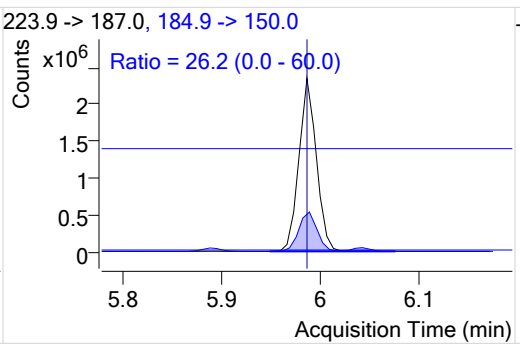


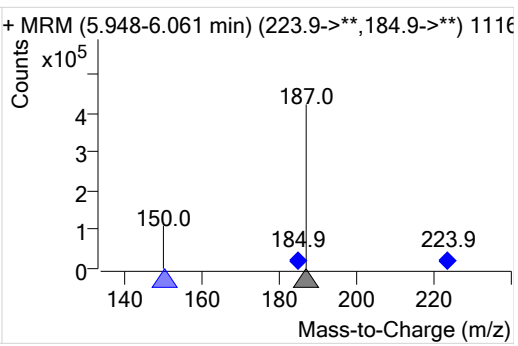




γ-BHC-d6

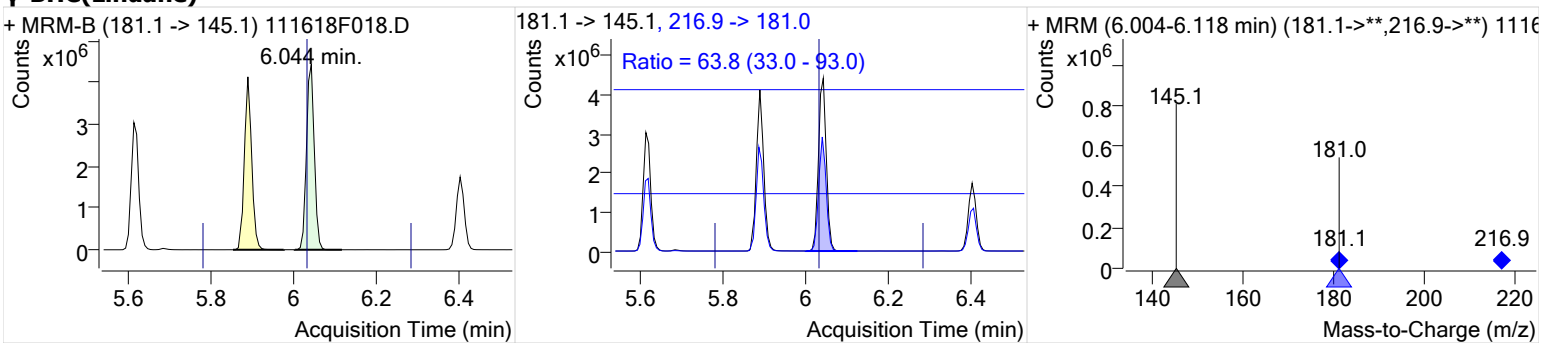




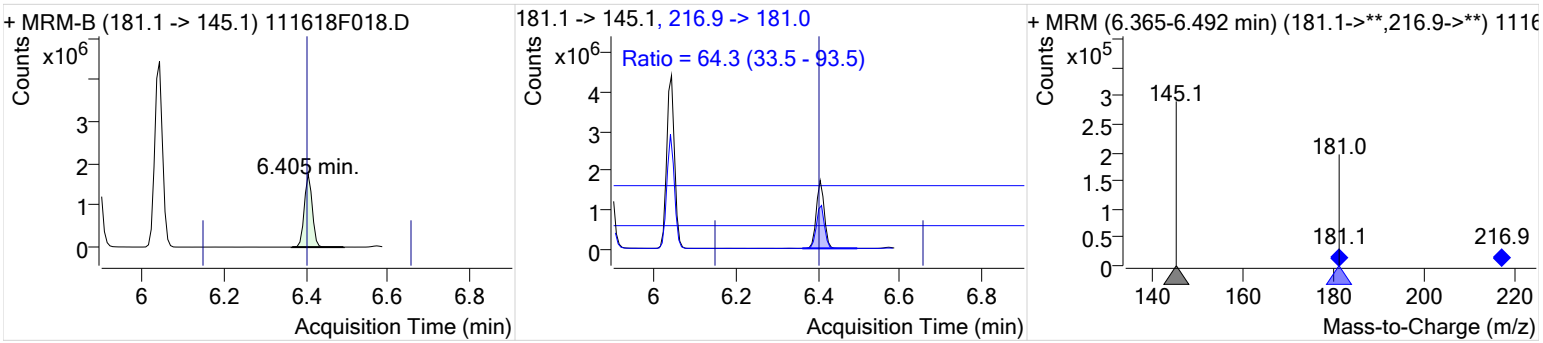


Quantitative Analysis Sample Report

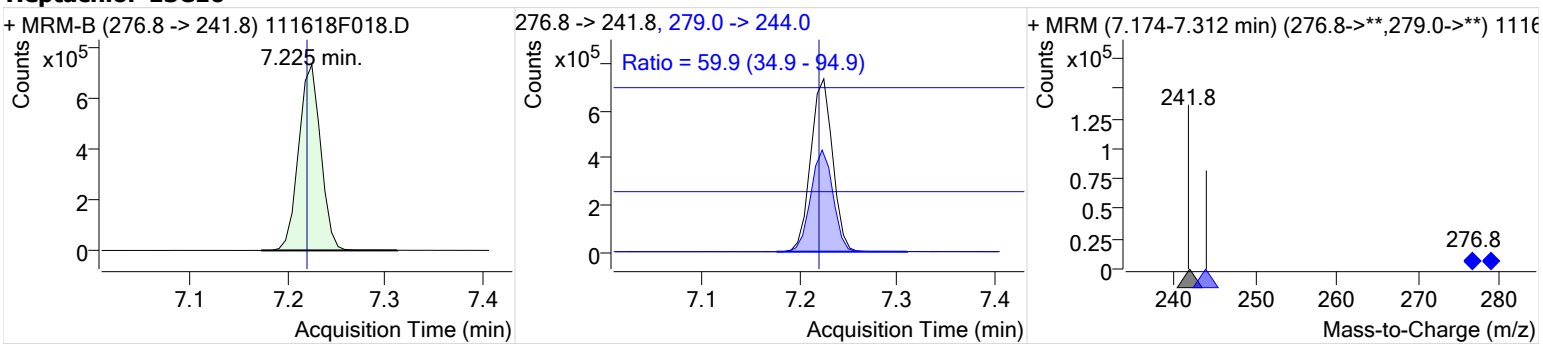
γ-BHC(Lindane)



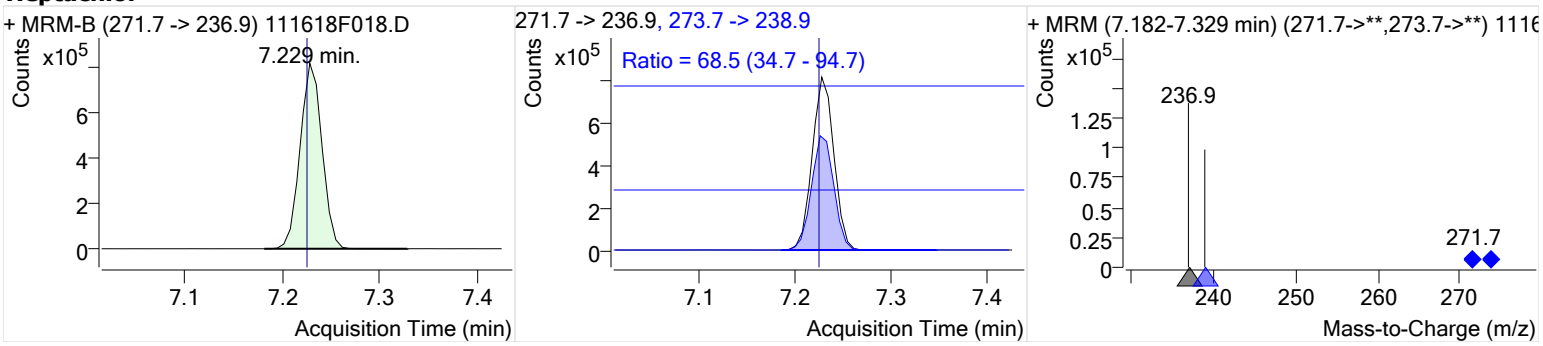
δ-BHC



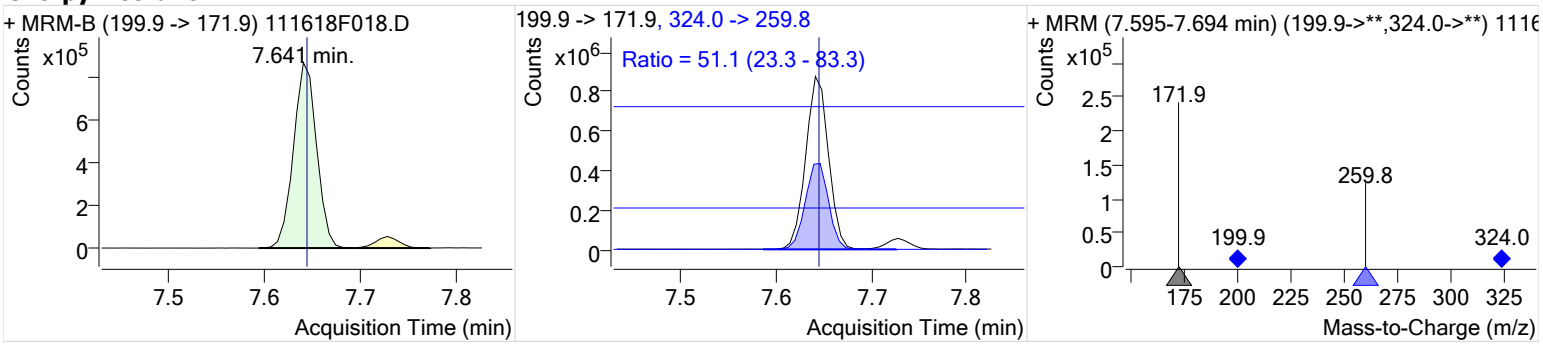
Heptachlor-13C10



Heptachlor

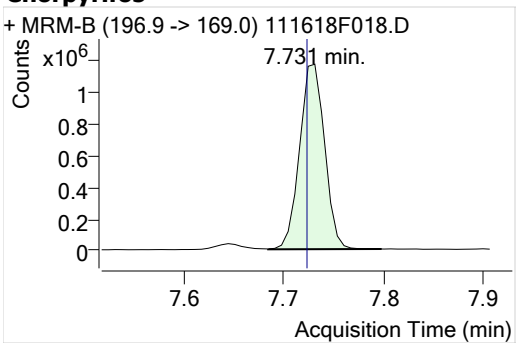


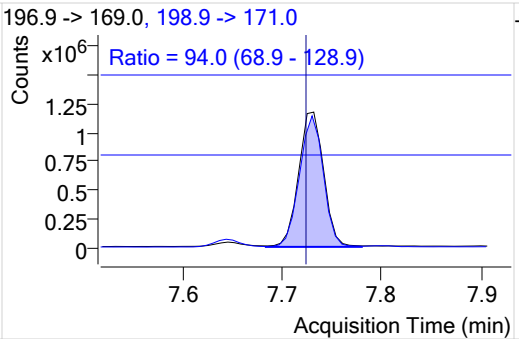
Chorpyrifos-d10

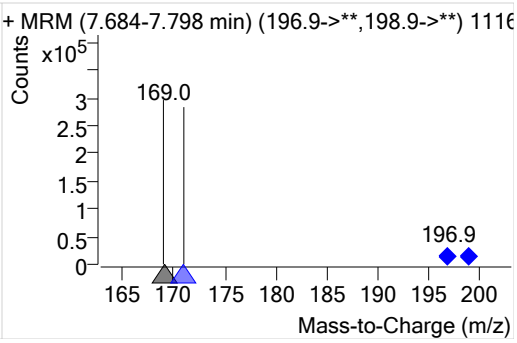


Quantitative Analysis Sample Report

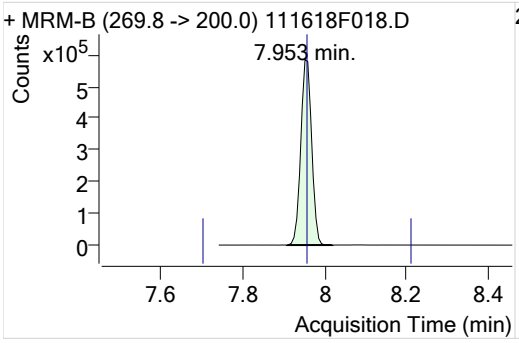
Chorpyrifos

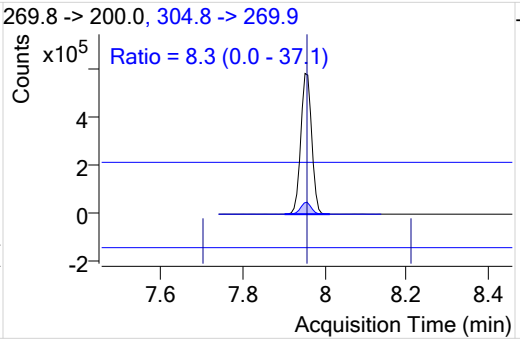


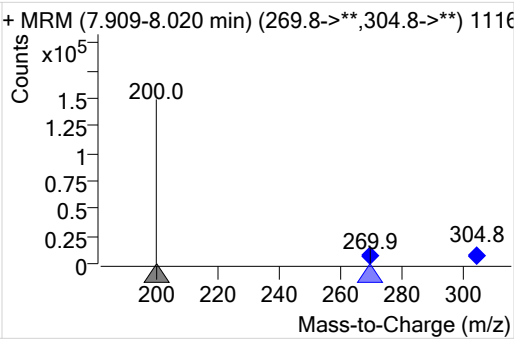




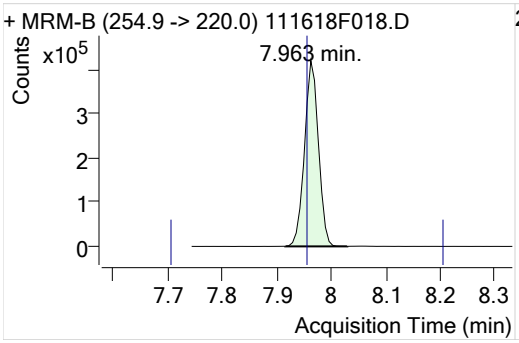
Aldrin-13C

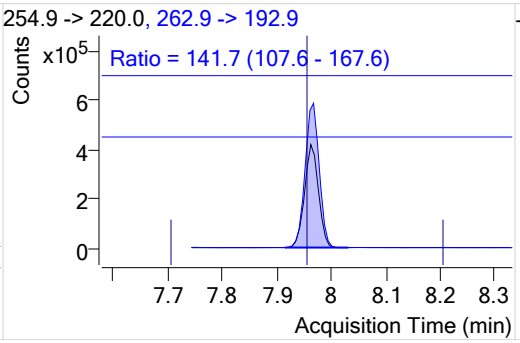


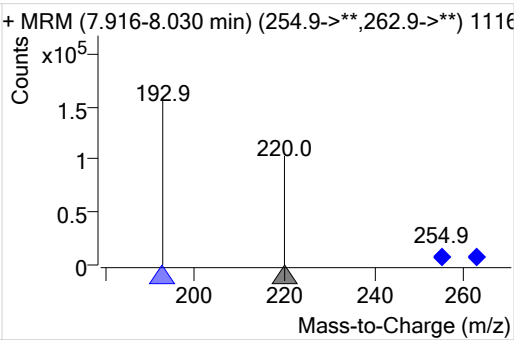




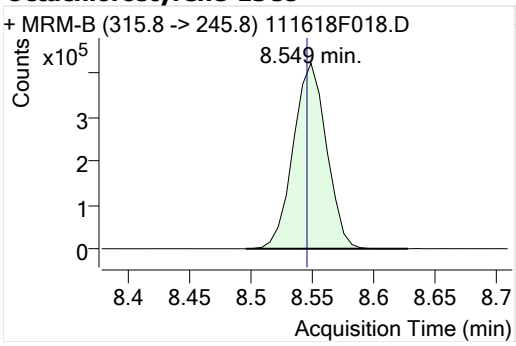
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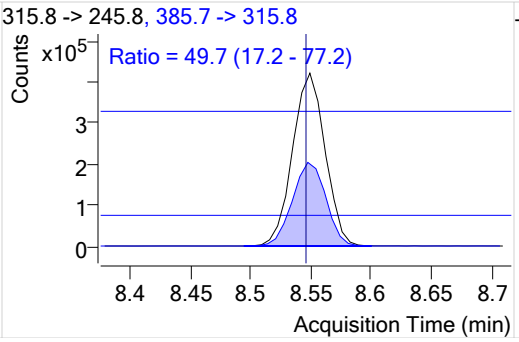


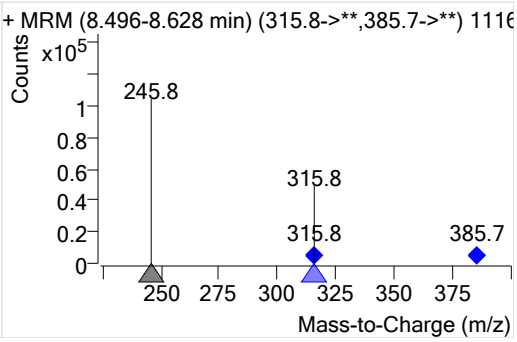




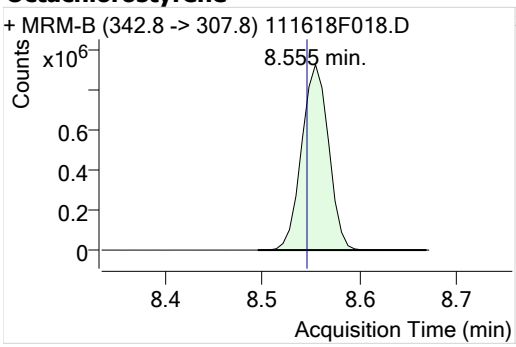
Octachlorostyrene-13C8

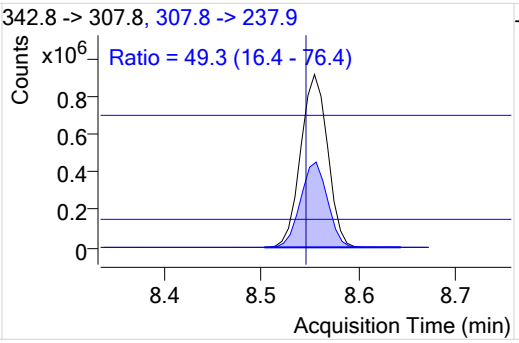


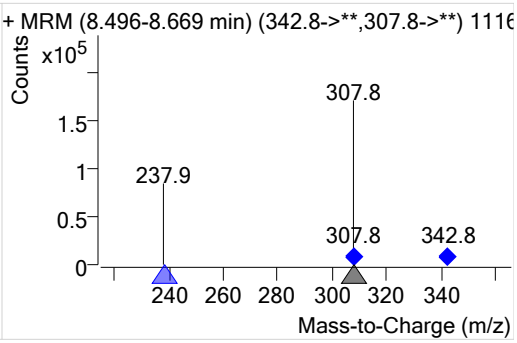




Octachlorostyrene

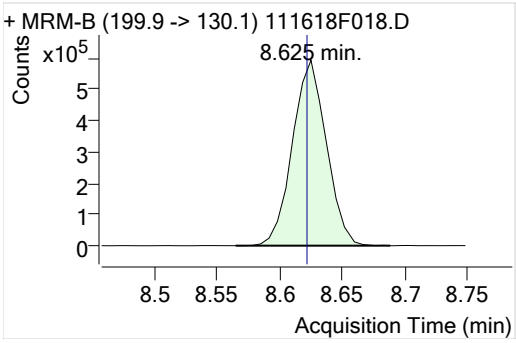


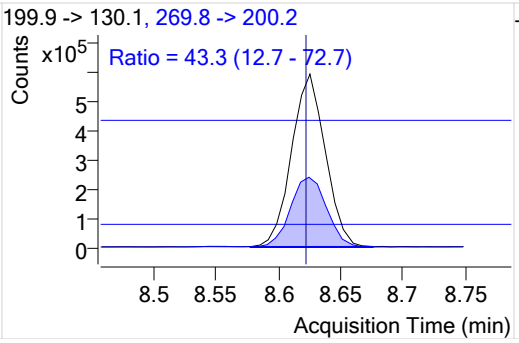


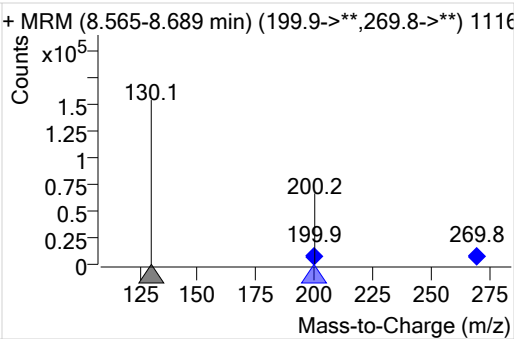


Quantitative Analysis Sample Report

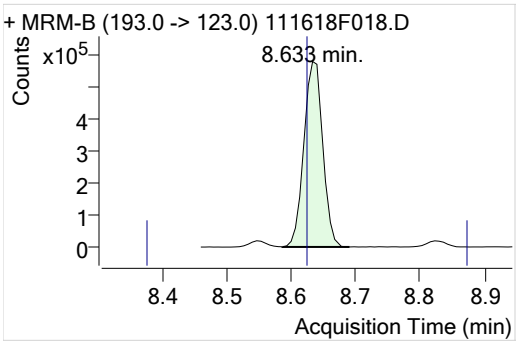
Isodrin-13C12

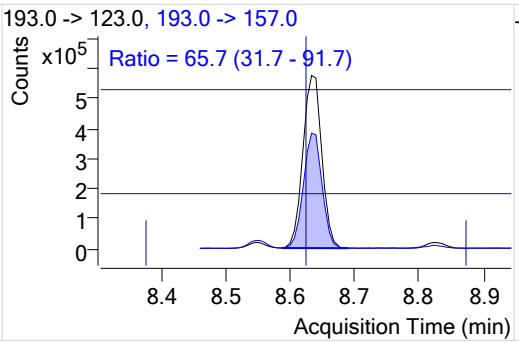


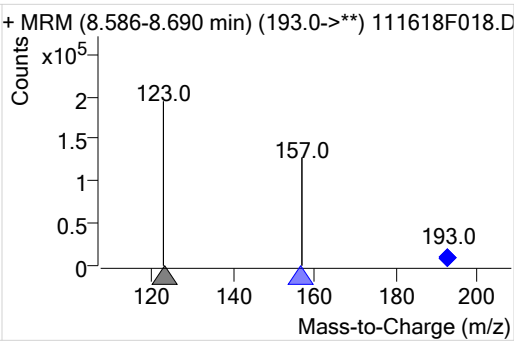




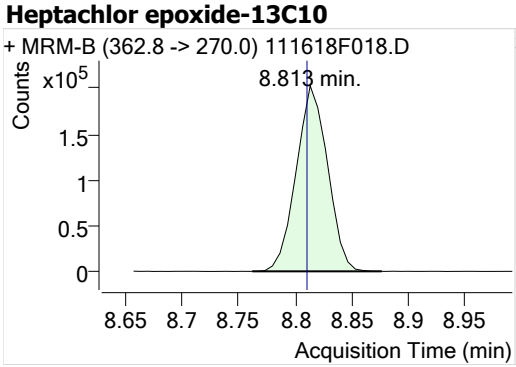
Isodrin

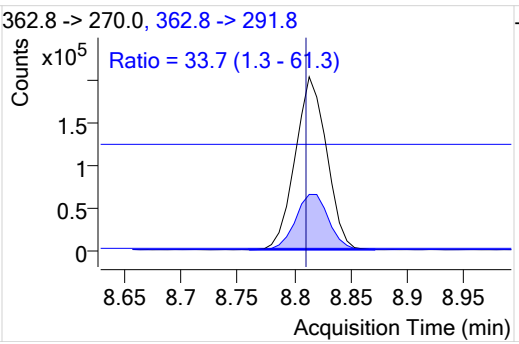


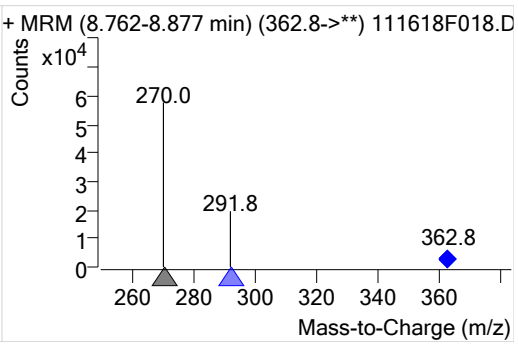




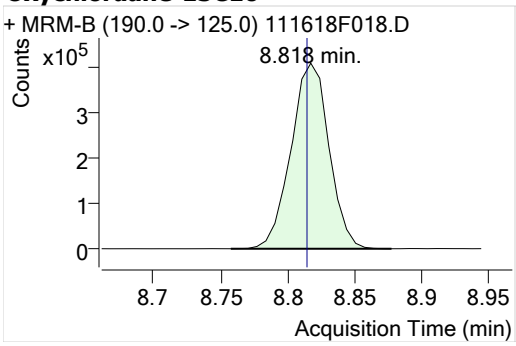
Heptachlor epoxide-13C10

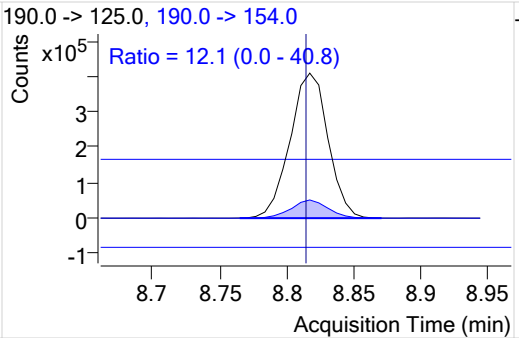


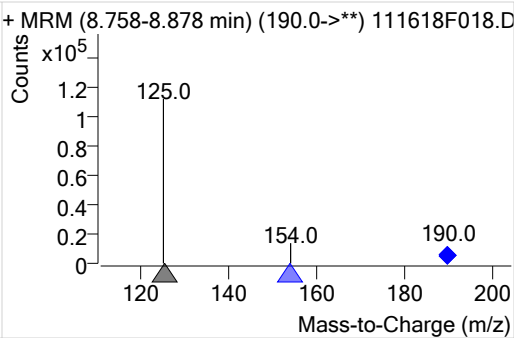




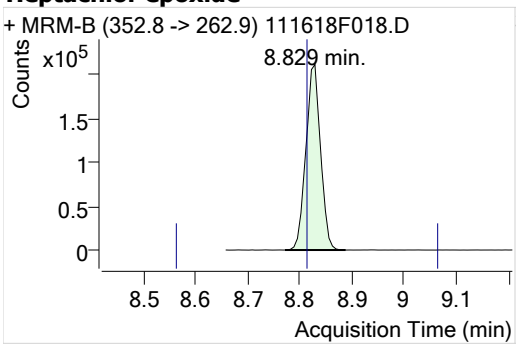
Oxychlordane-13C10

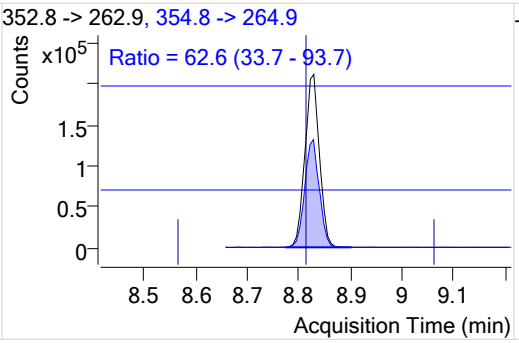


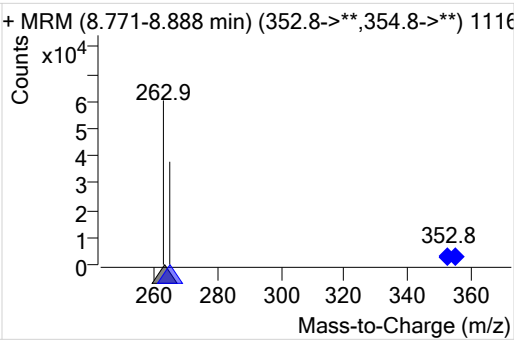




Heptachlor epoxide

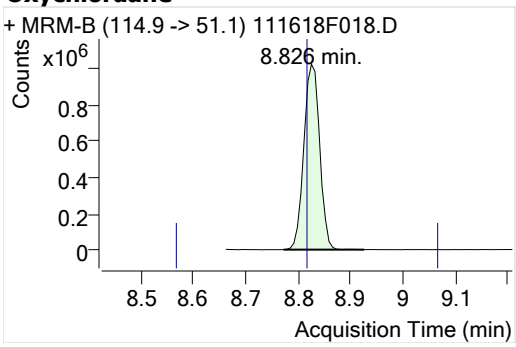


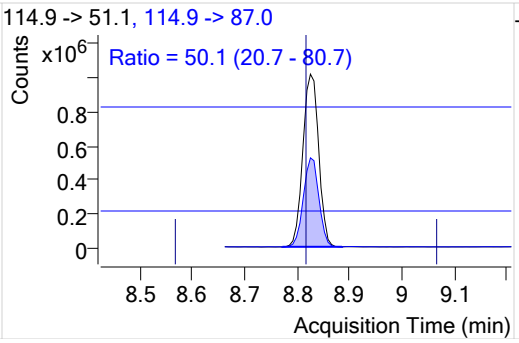


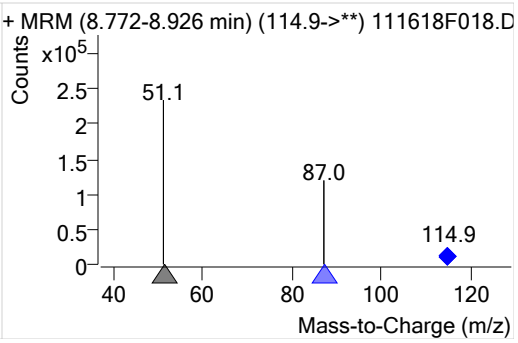


Quantitative Analysis Sample Report

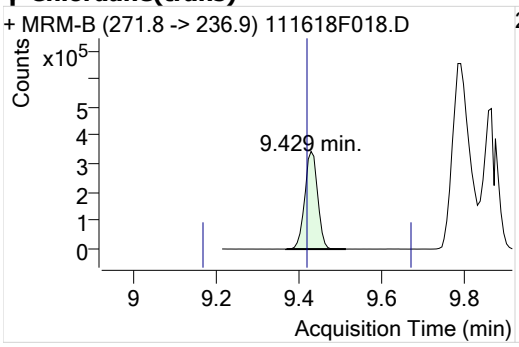
Oxychlordane

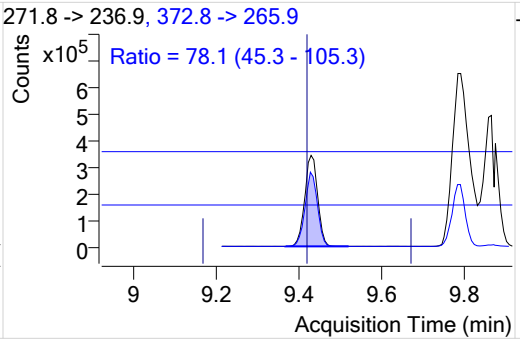


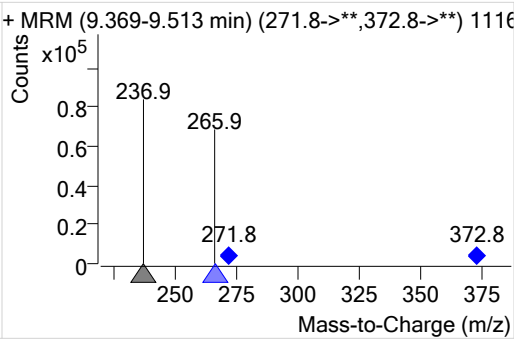




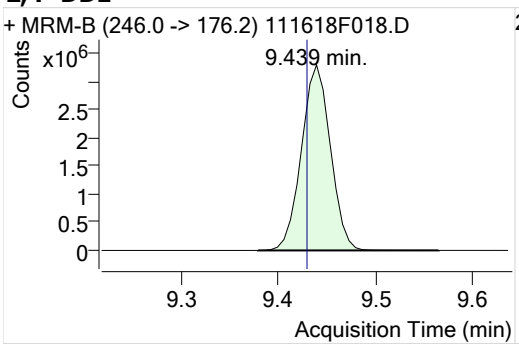
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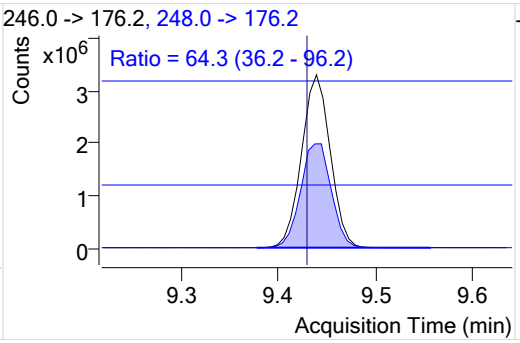


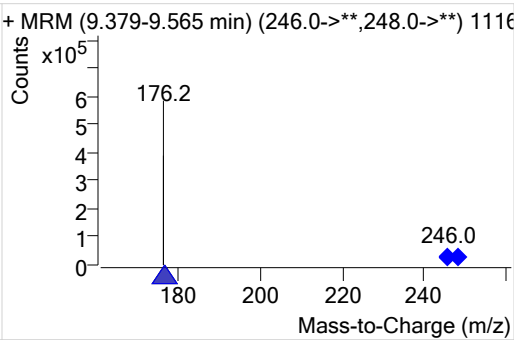




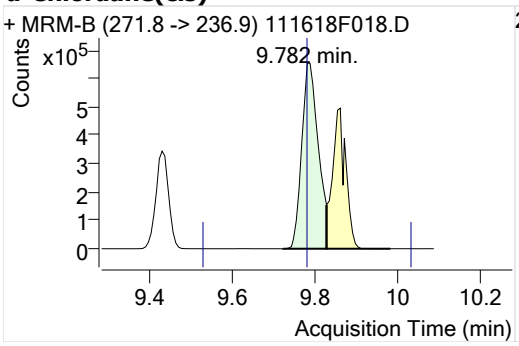
2,4'-DDE

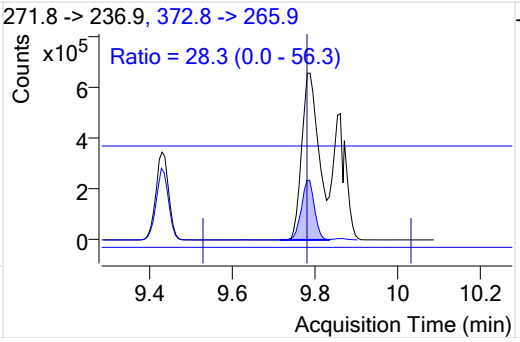


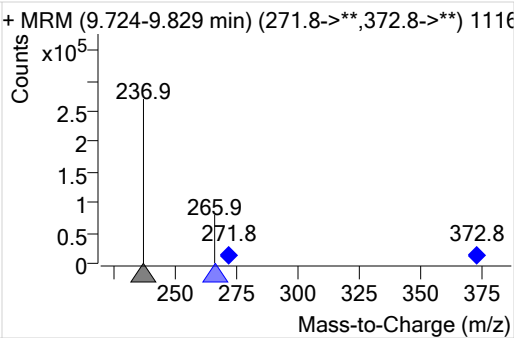




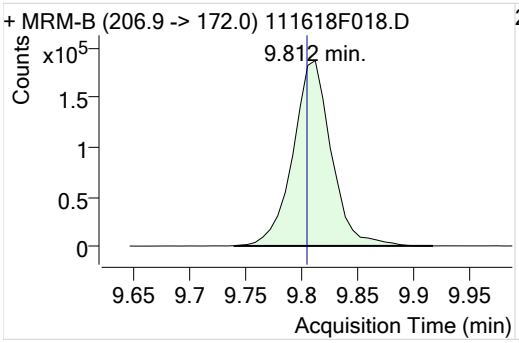
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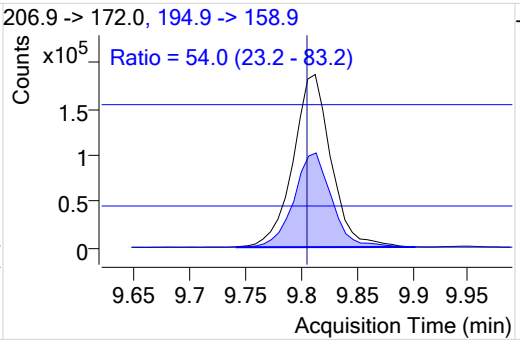


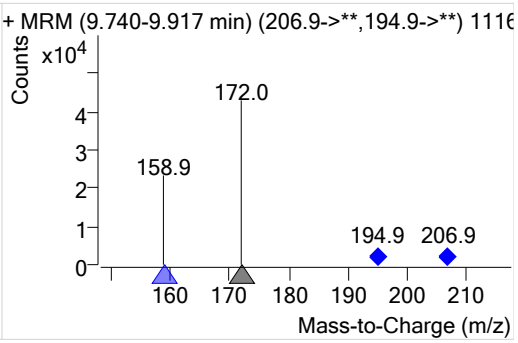




Endosulfan I

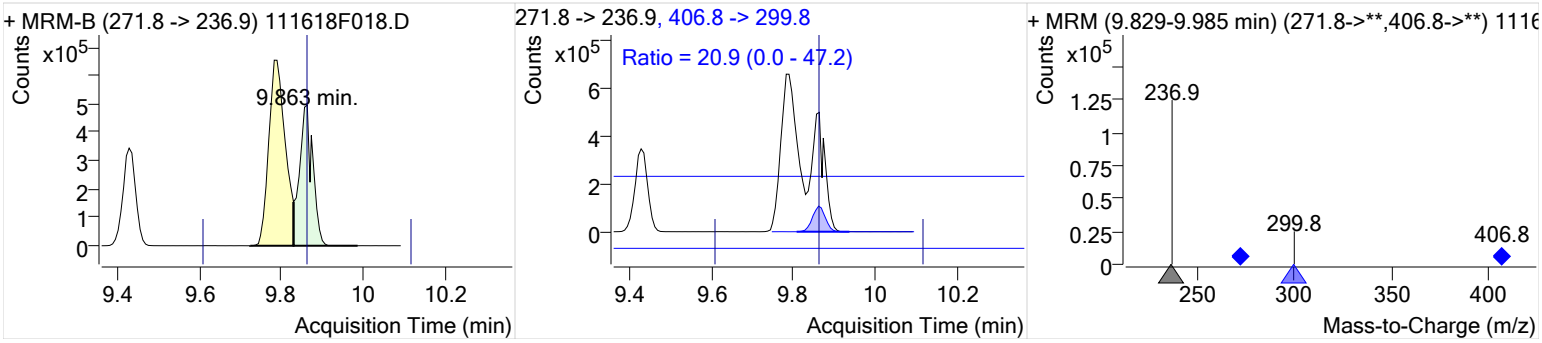




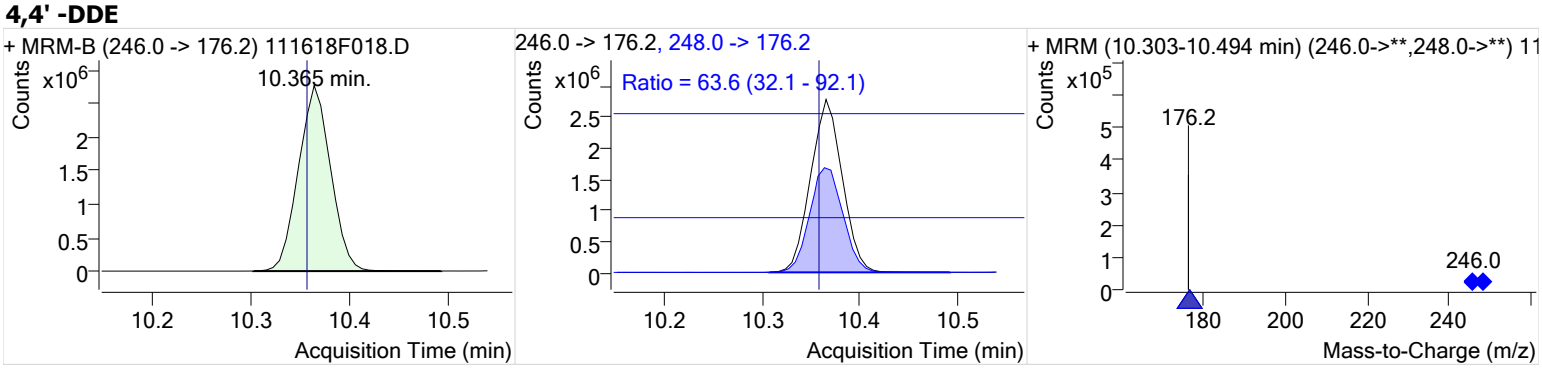


Quantitative Analysis Sample Report

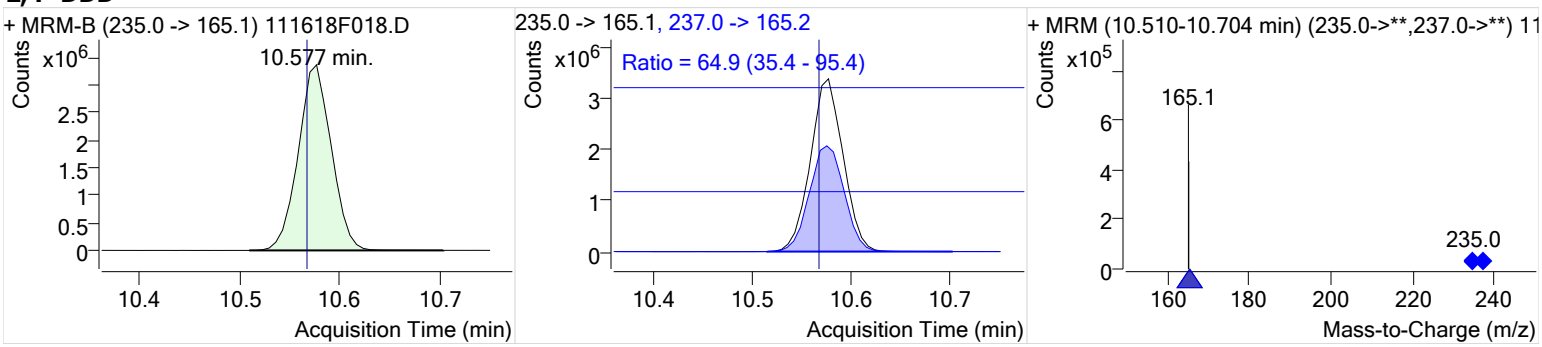
trans-Nanochlor



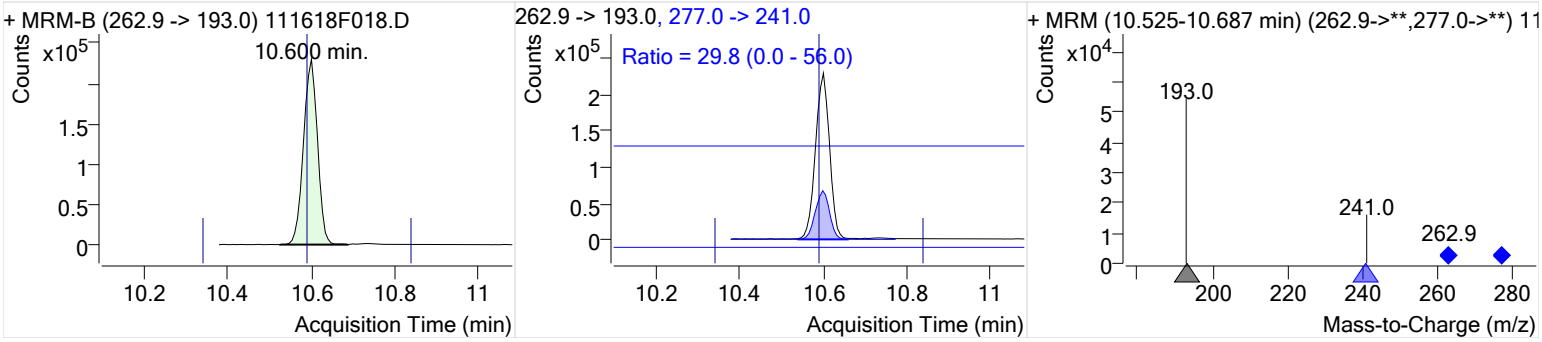
4,4' -DDE



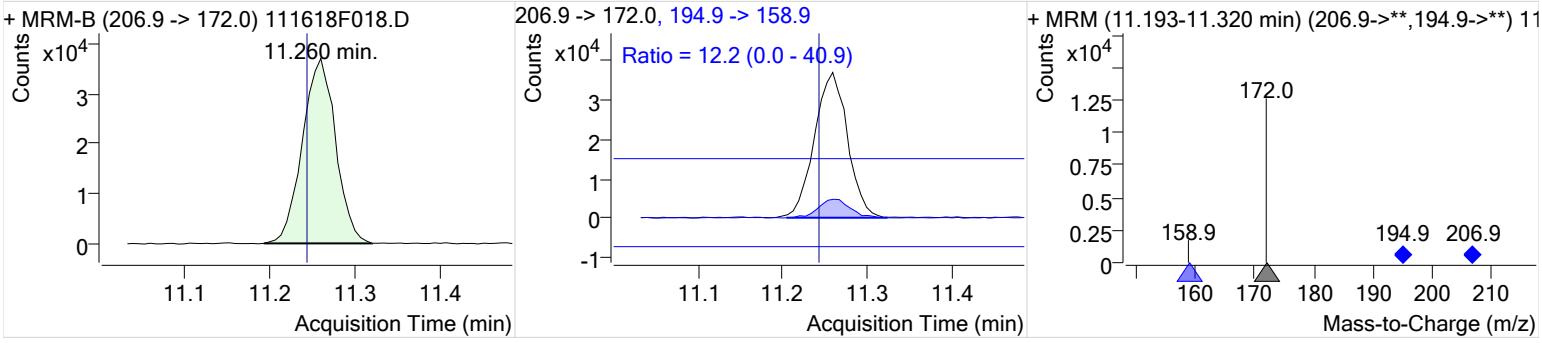
2,4'-DDD



Dieldrin

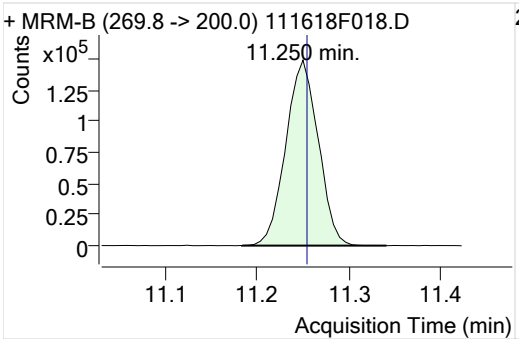


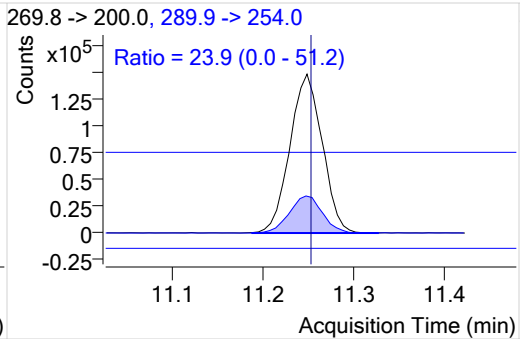
Endosulfan II

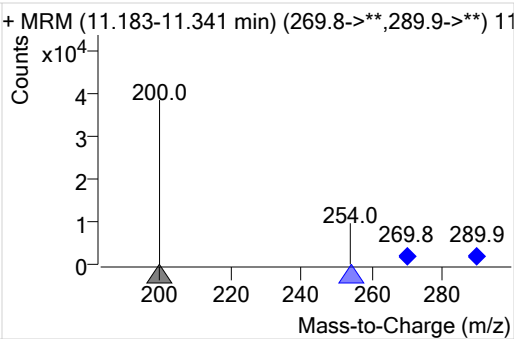


Quantitative Analysis Sample Report

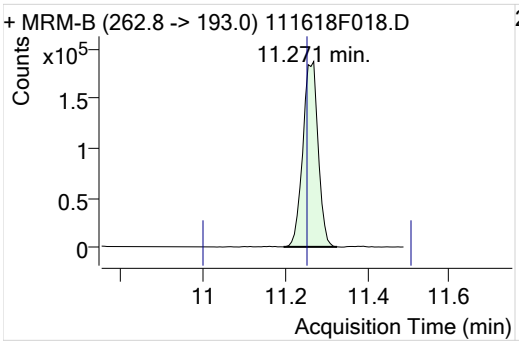
Endrin-13C12

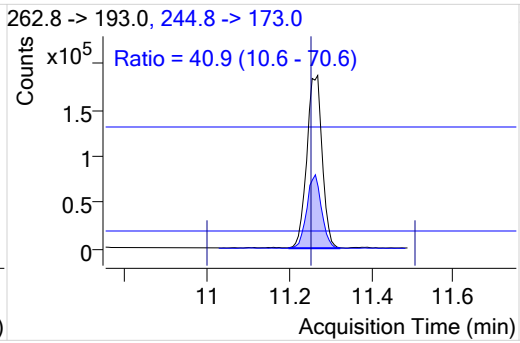


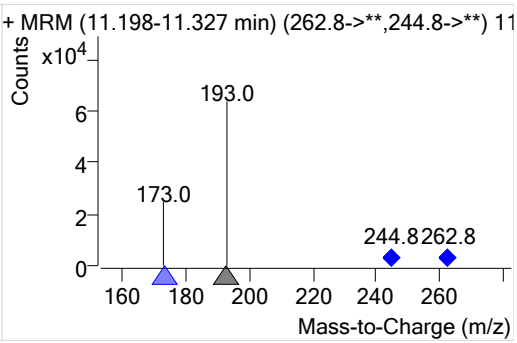




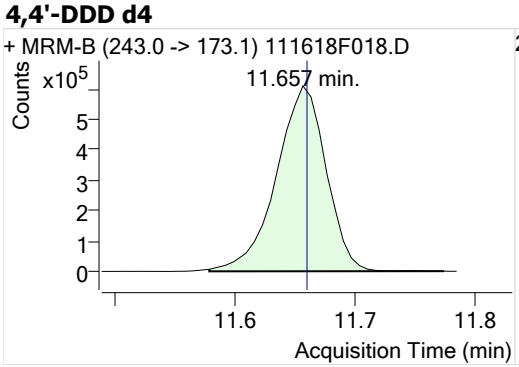
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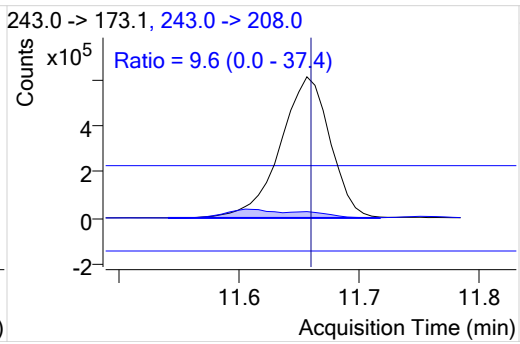


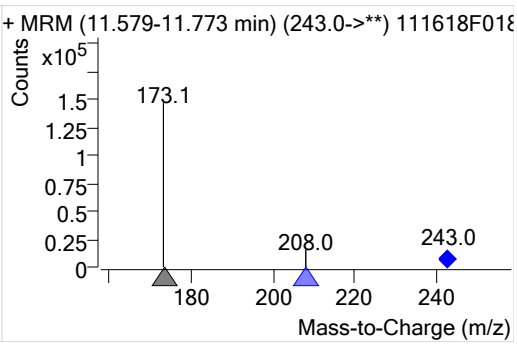




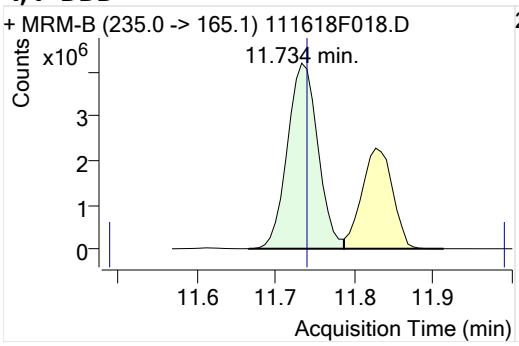
4,4'-DDD d4

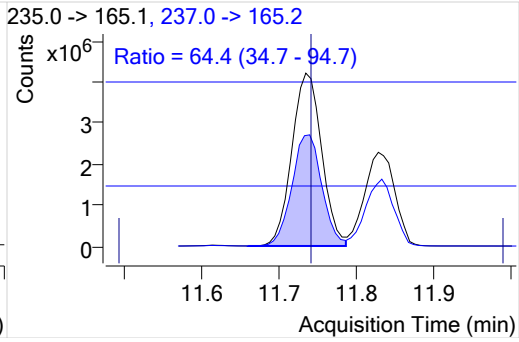


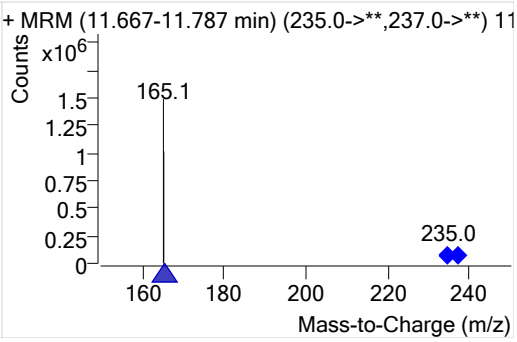




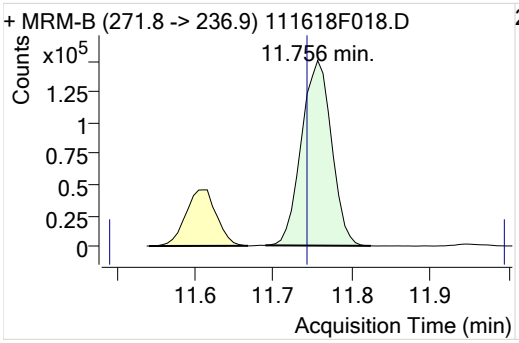
4,4'-DDD

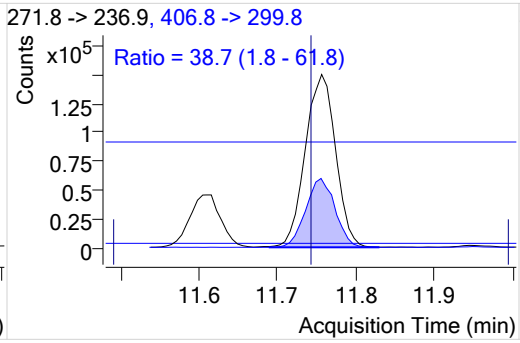


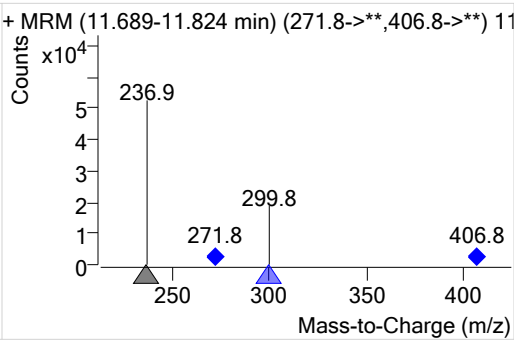




cis-Nonachlor

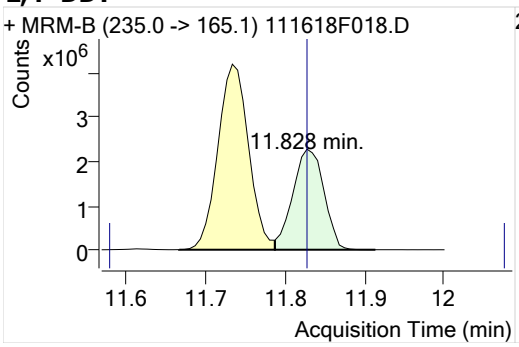


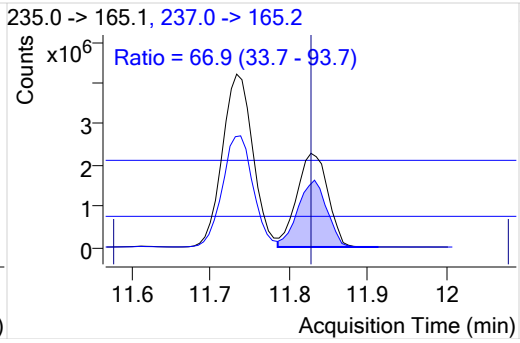


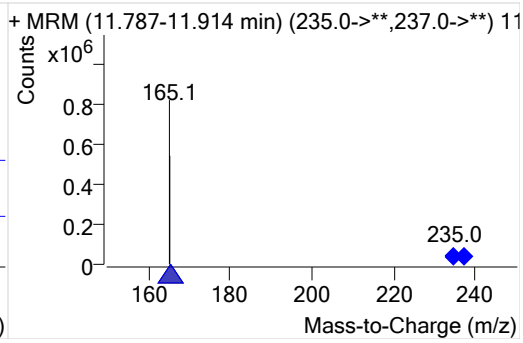


Quantitative Analysis Sample Report

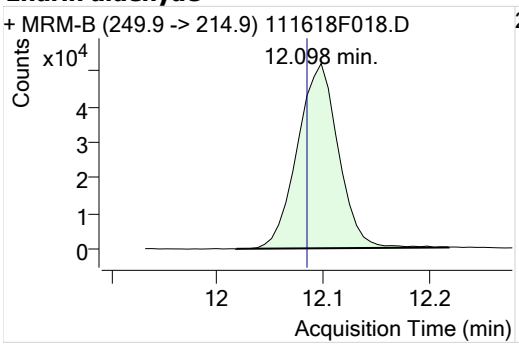
2,4'-DDT

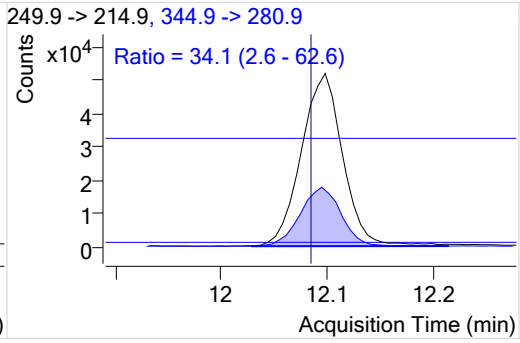


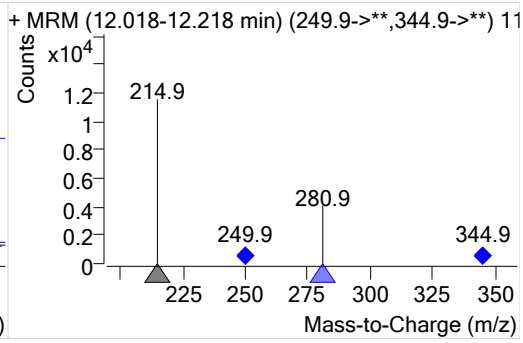




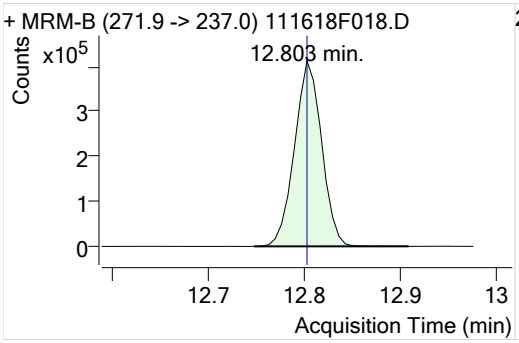
Endrin aldehyde

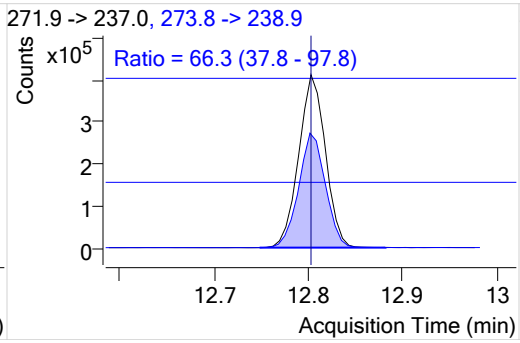


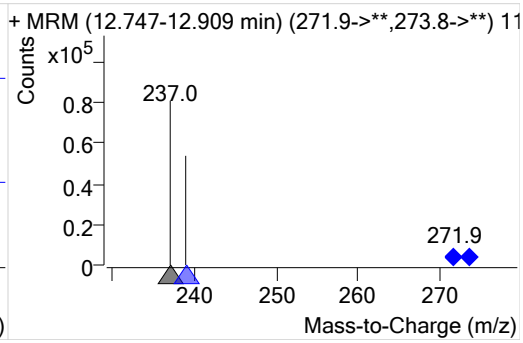




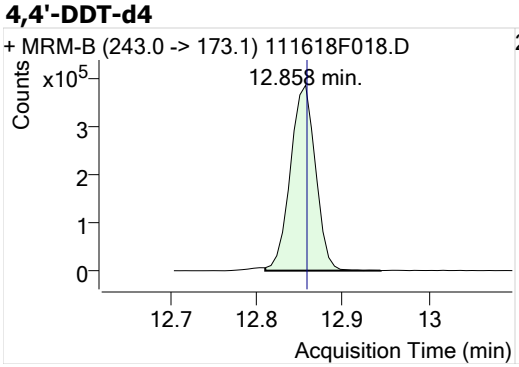
Endosulfan sulfate

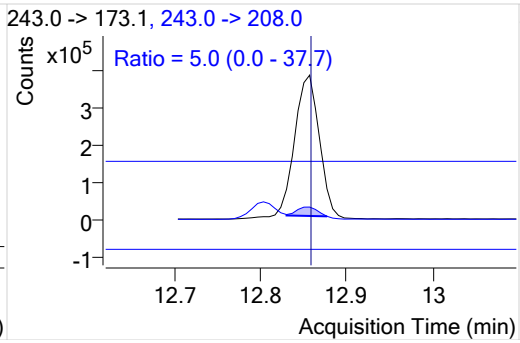


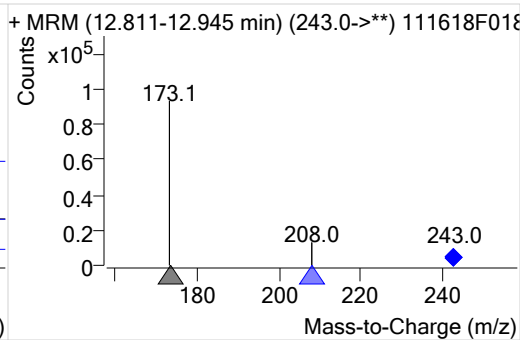




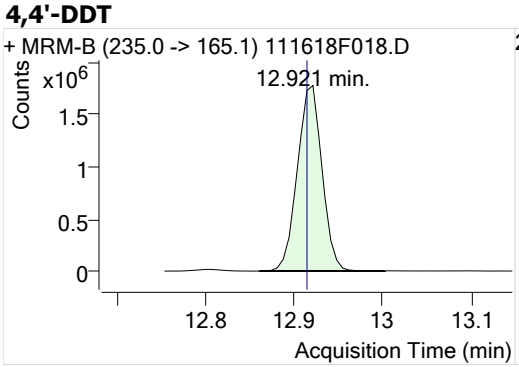
4,4'-DDT-d4

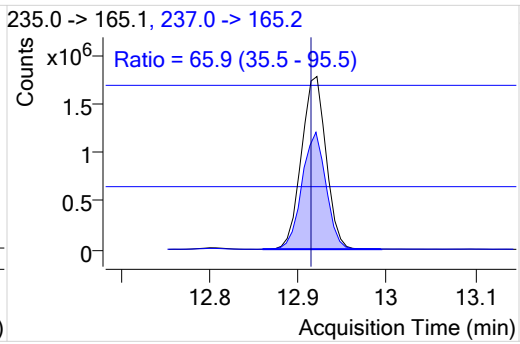


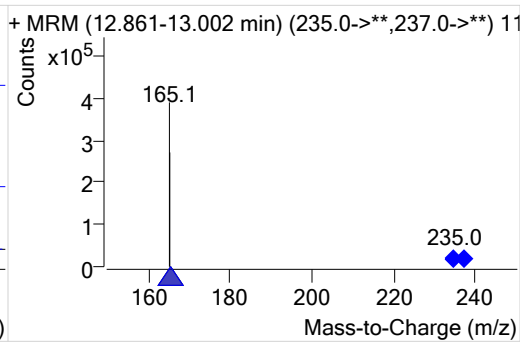




4,4'-DDT

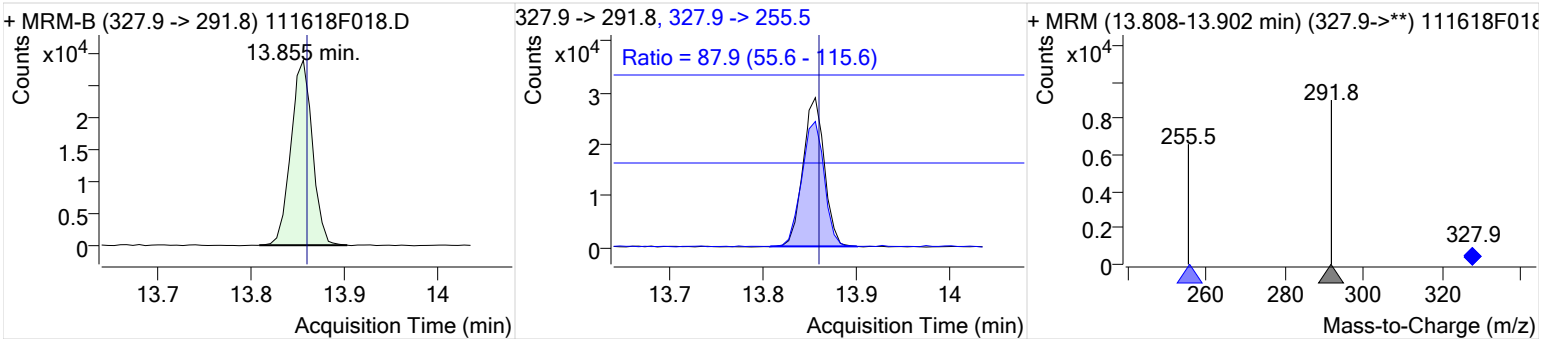




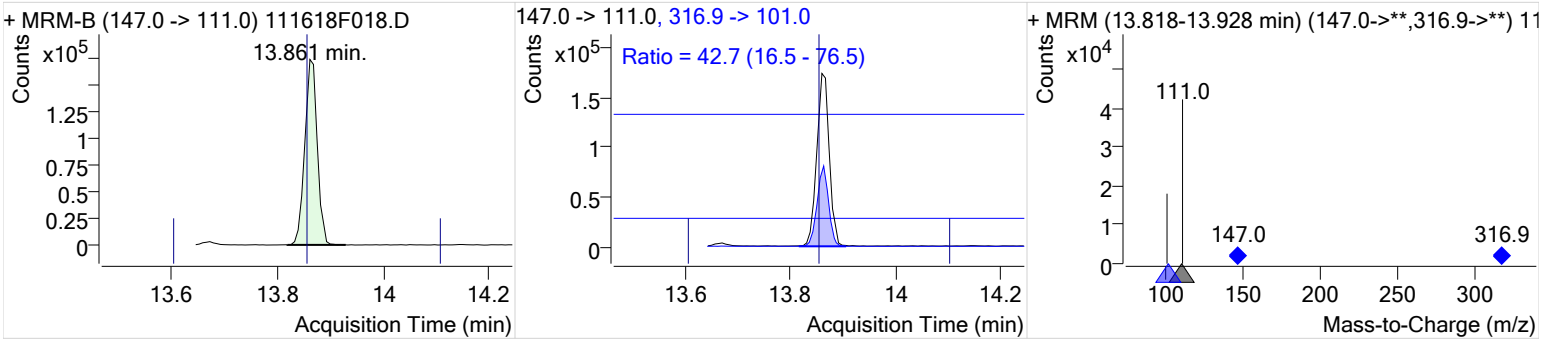


Quantitative Analysis Sample Report

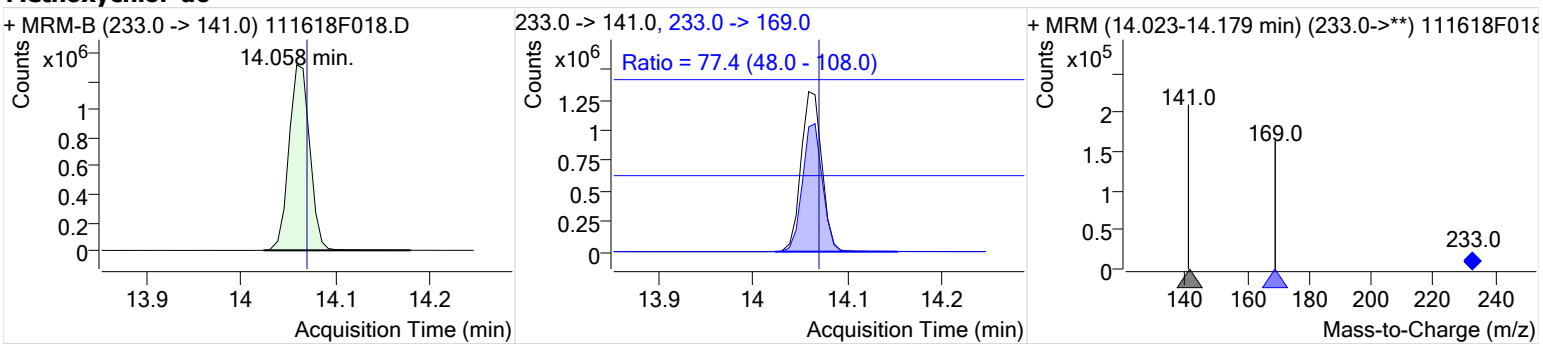
Endrin ketone-13C12



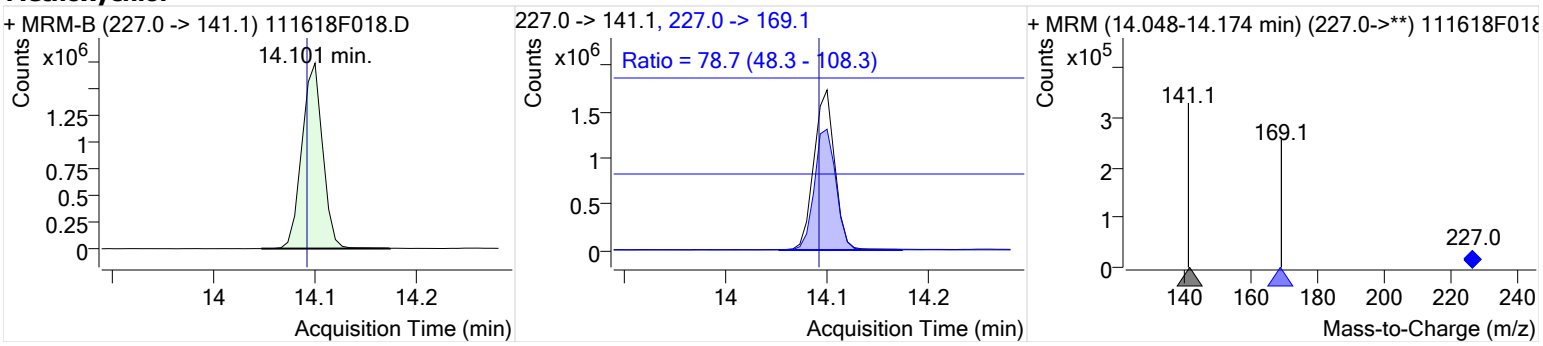
Endrin ketone



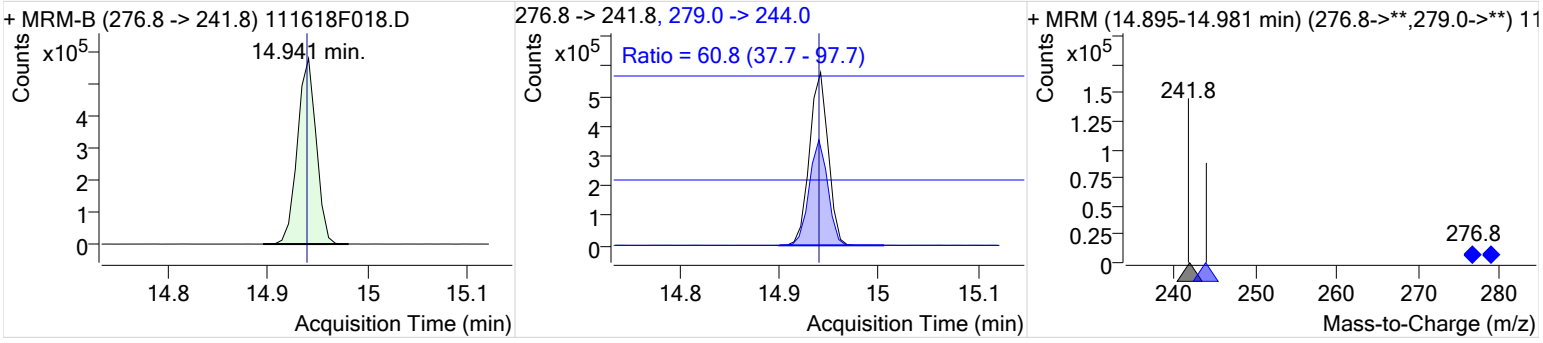
Methoxychlor-d6



Methoxychlor

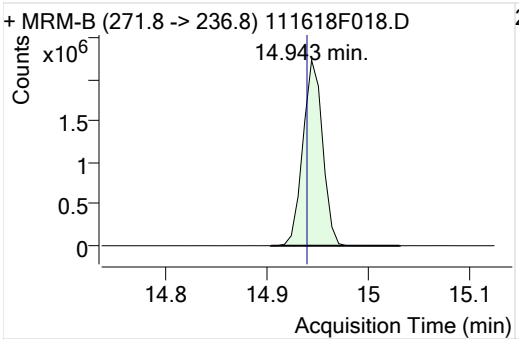


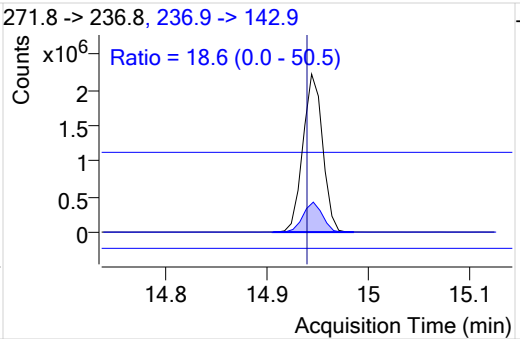
Mirex-13C10

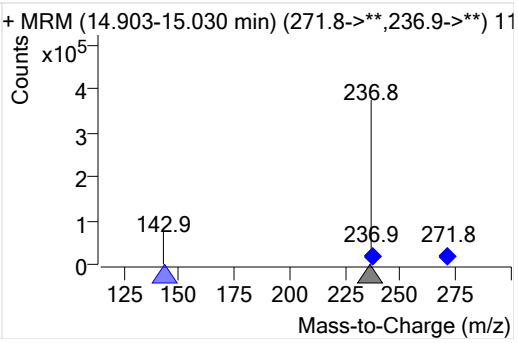


Quantitative Analysis Sample Report

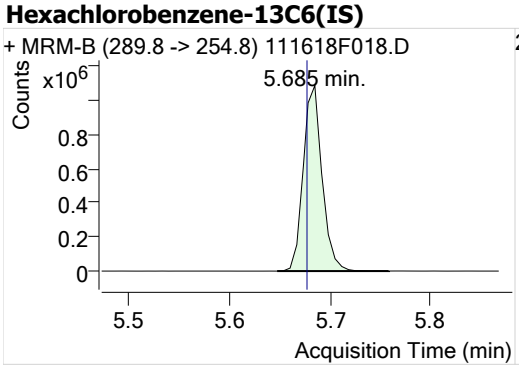
Mirex

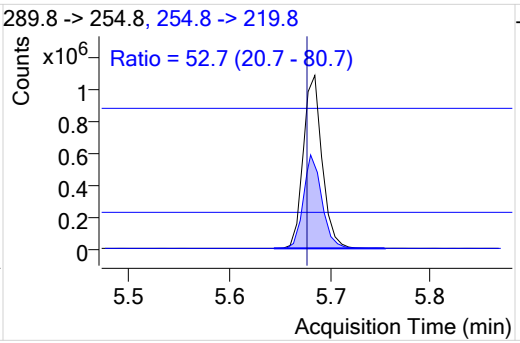


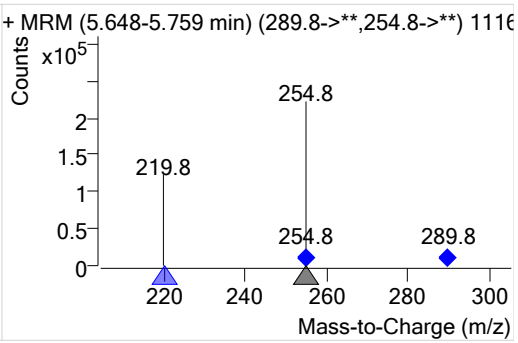




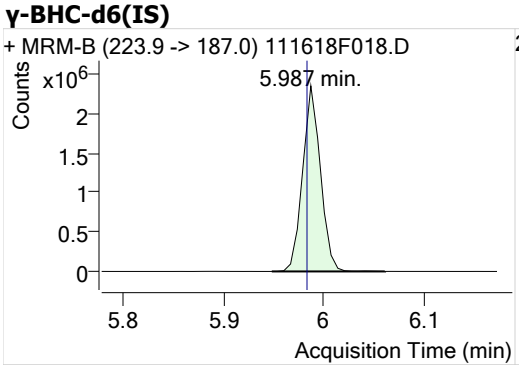
Hexachlorobenzene-13C6(IS)

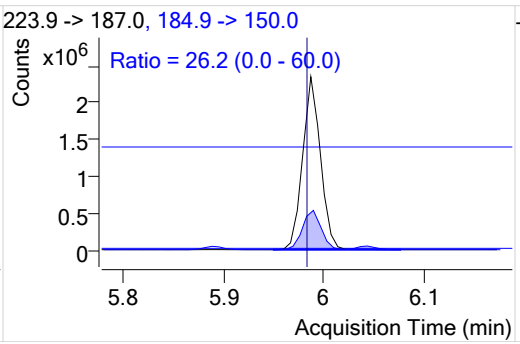


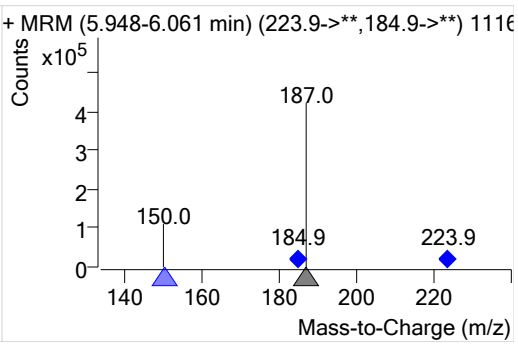




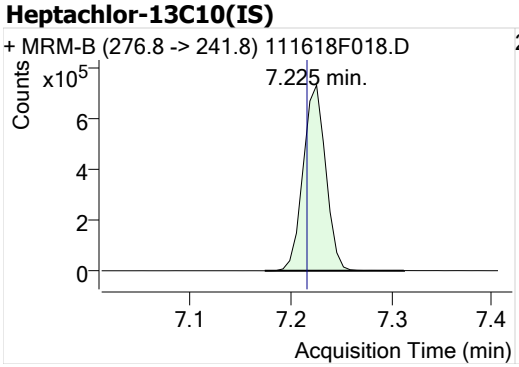
γ-BHC-d6(IS)

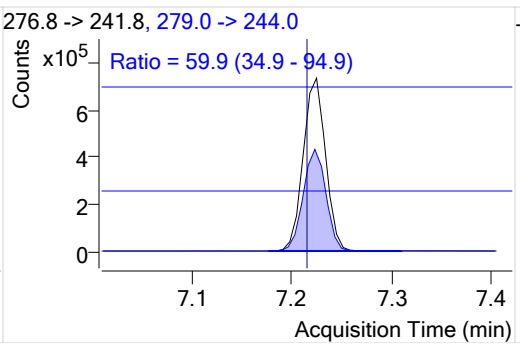


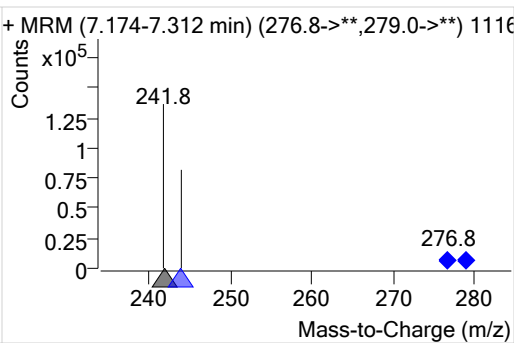




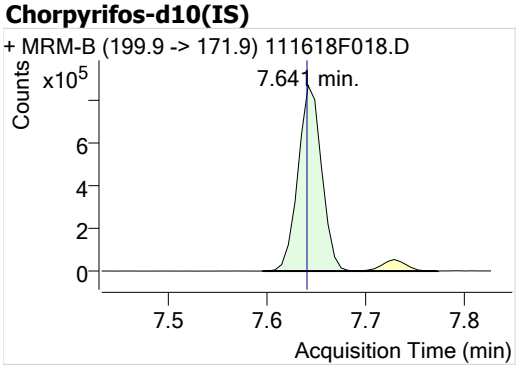
Heptachlor-13C10(IS)

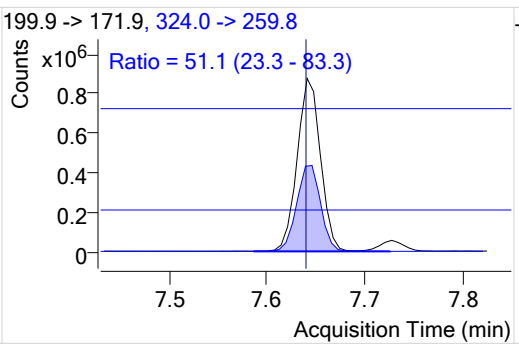


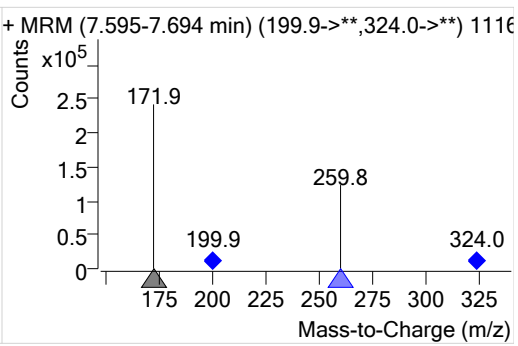




Chorpyrifos-d10(IS)

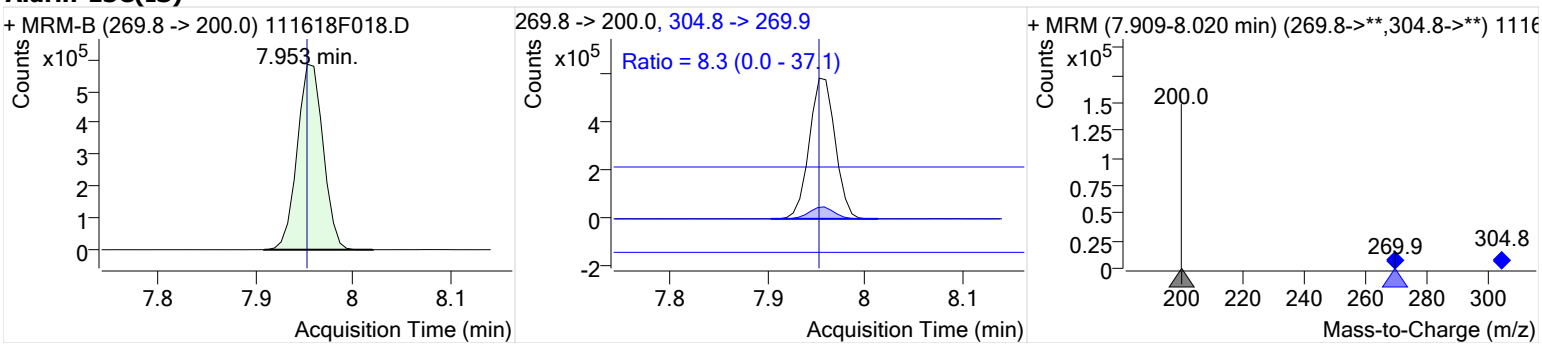




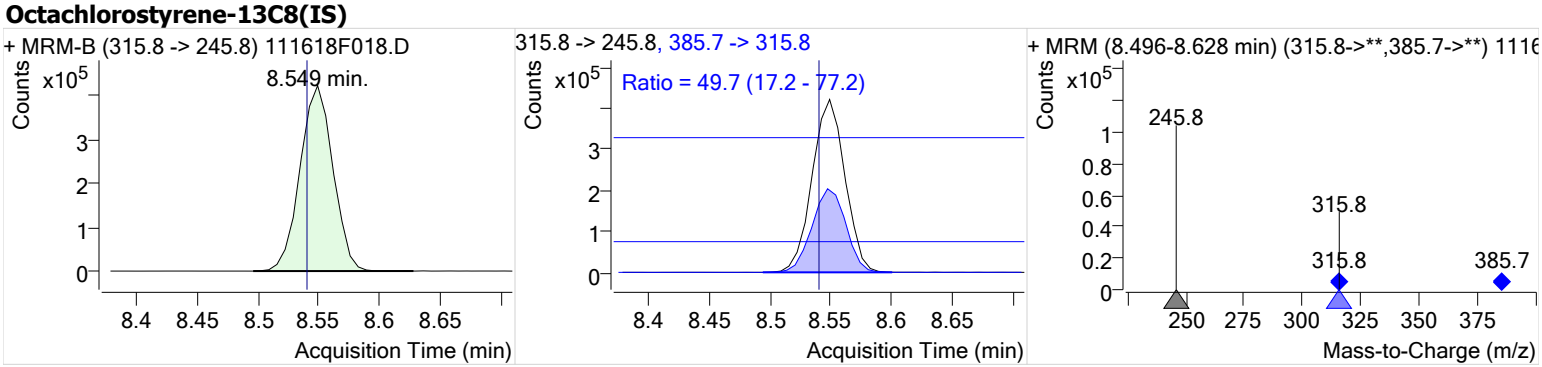


Quantitative Analysis Sample Report

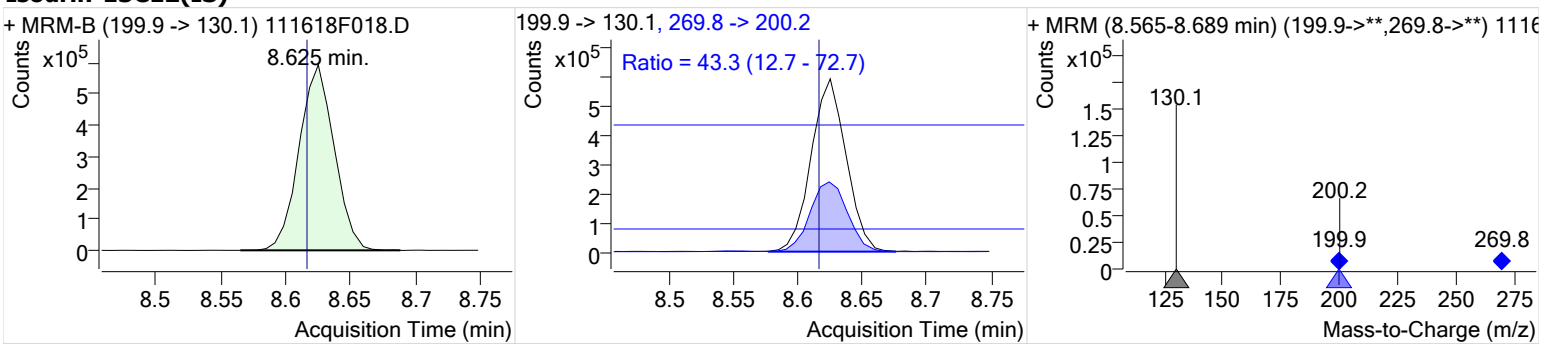
Aldrin-13C(IS)



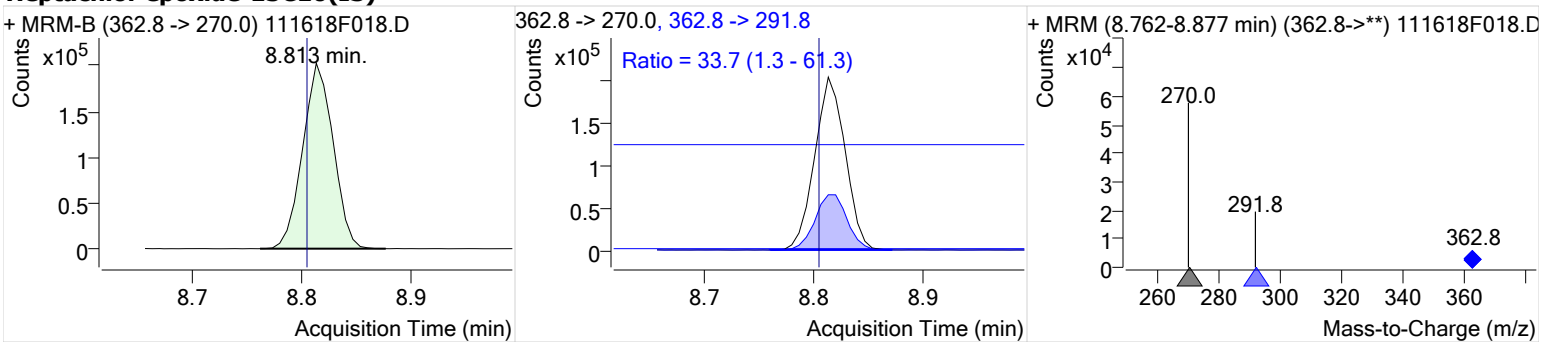
Octachlorostyrene-13C8(IS)



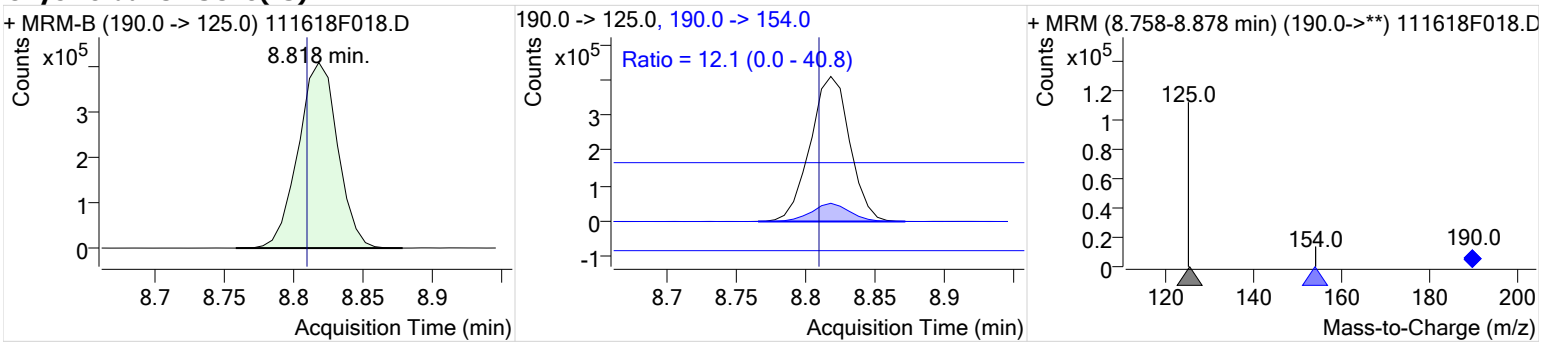
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

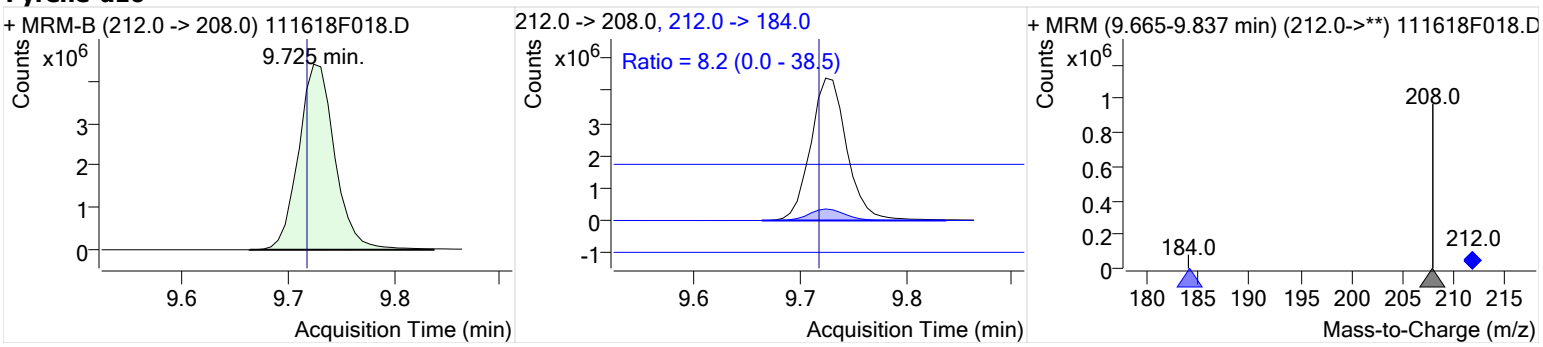


Oxychlordane-13C10(IS)

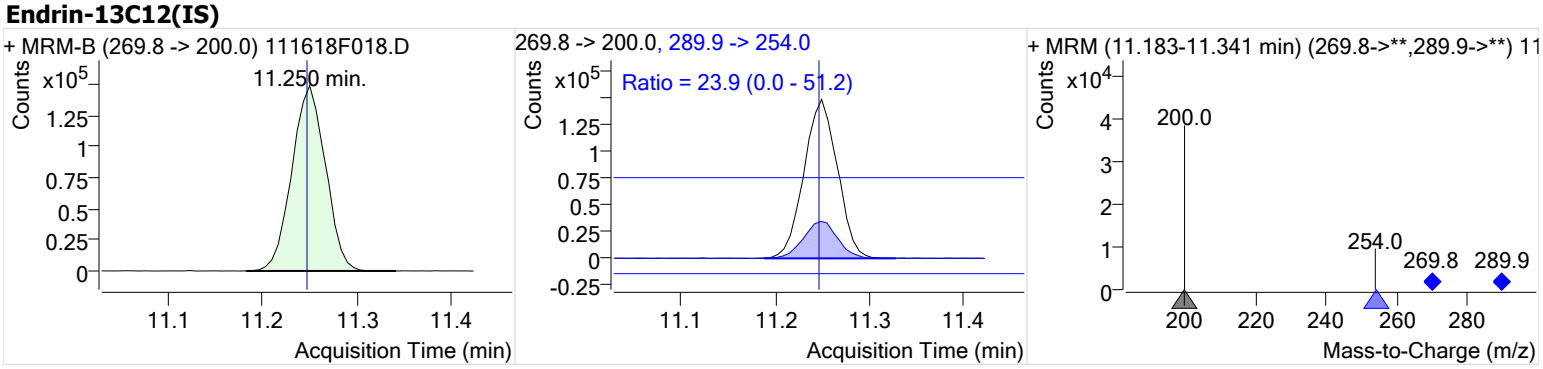


Quantitative Analysis Sample Report

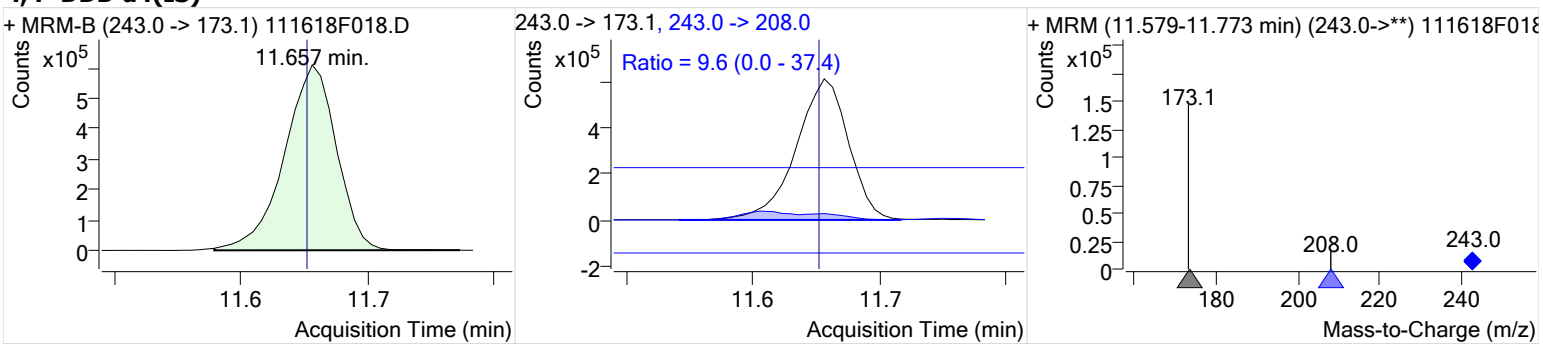
Pyrene-d10



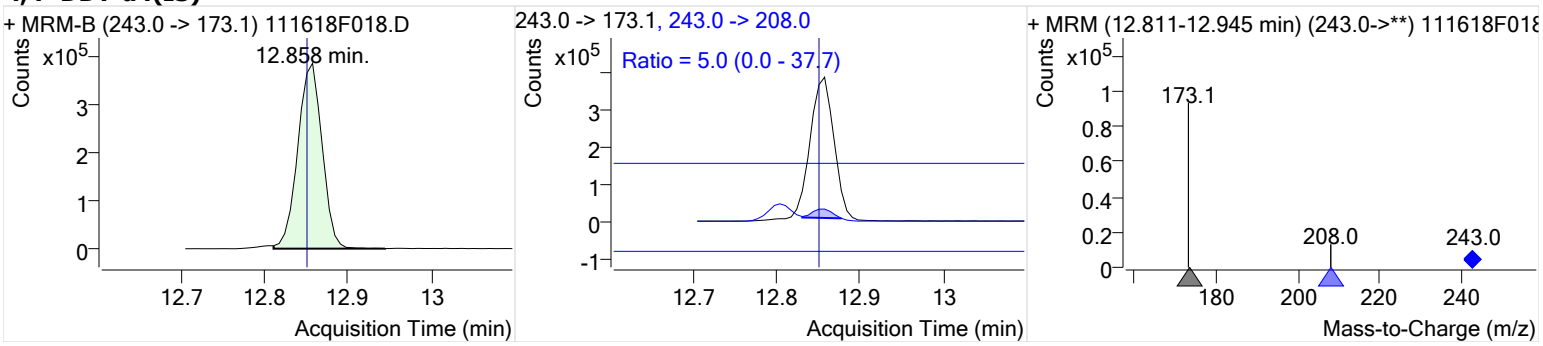
Endrin-13C12(IS)



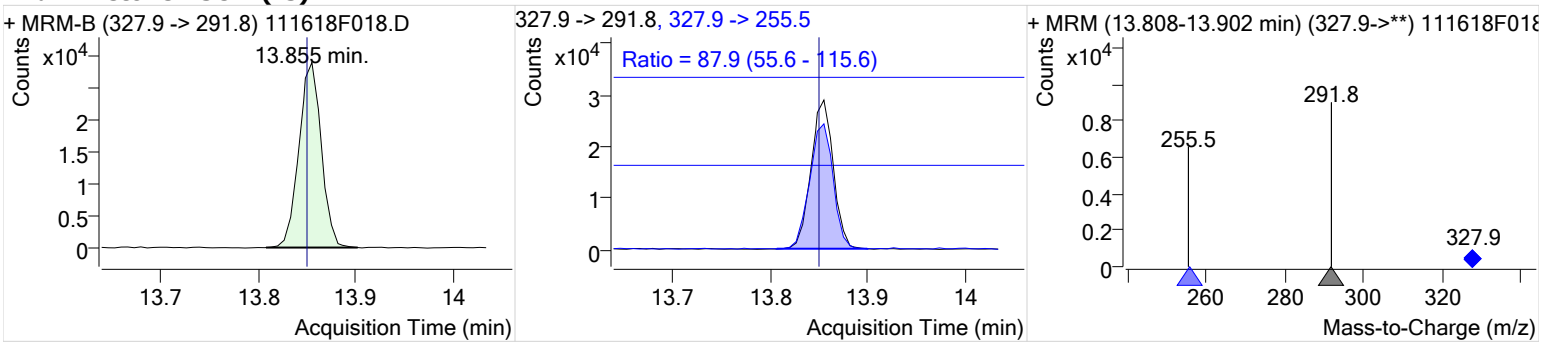
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

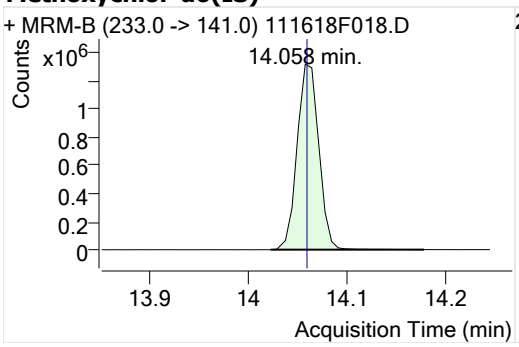


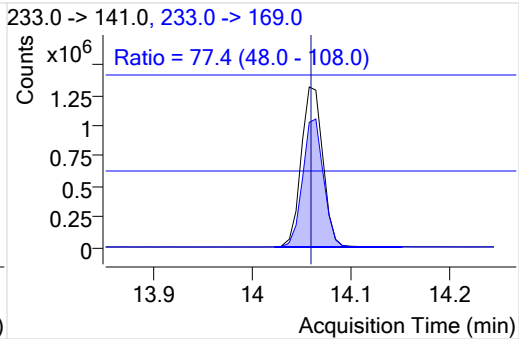
Endrin ketone-13C12(IS)

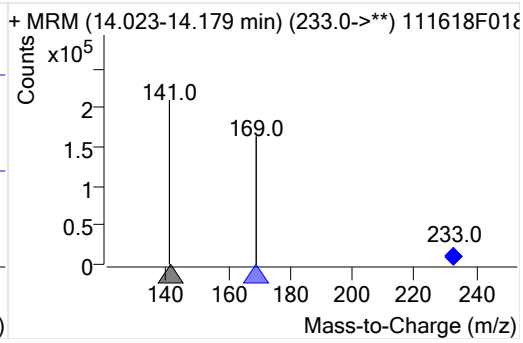


Quantitative Analysis Sample Report

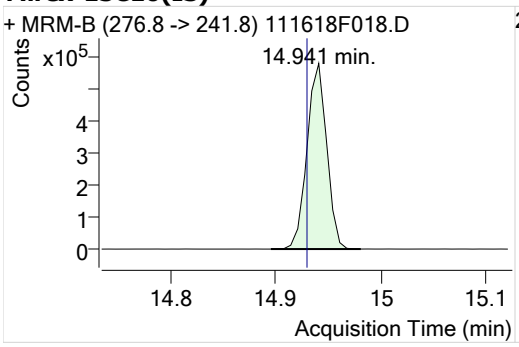
Methoxychlor-d6(IS)

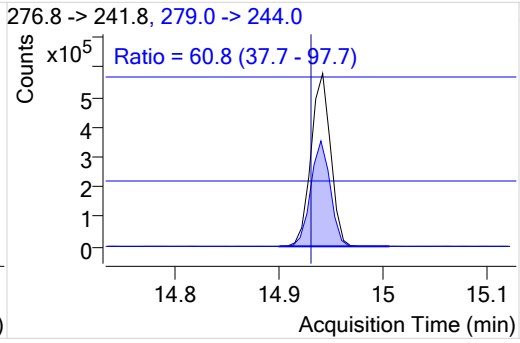


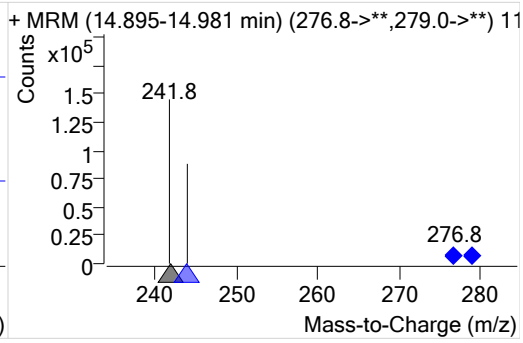




Mirex-13C10(IS)







Injection Log

Batch Data Path	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin				
Analysis Time	3/13/2019 3:26:45 PM	**Analyst Name**	CORP\elissa.bruno	**Report Generator Name**	CORP\elissa.bruno
Calibration Last Update	3/13/2019 3:26:44 PM	**Analyze Quant Version**	B.09.00	**Report Quant Version**	B.09.00

Sequence Table

Data File	Name	Type	Vial	Vol.	Level	Acq. Method File	Acq. Date-Time
110618F012.D	OC PEST ICAL 0.5ng/mL SVM59-48A	Cal	3	1	0.5	OC Pest_dMRM	11/6/2018 5:23:04 PM
110618F013.D	OC PEST ICAL 1ng/mL SVM59-48B	Cal	4	1	1	OC Pest_dMRM	11/6/2018 5:40:42 PM
110618F014.D	OC PEST ICAL 2ng/mL SVM59-48C	Cal	5	1	2	OC Pest_dMRM	11/6/2018 5:58:16 PM
110618F015.D	OC PEST ICAL5ng/mL SVM59-48D	Cal	6	1	5	OC Pest_dMRM	11/6/2018 6:15:54 PM
110618F016.D	OC PEST ICAL 10ng/mL SVM59-48E	Cal	7	1	10	OC Pest_dMRM	11/6/2018 6:33:35 PM
110618F017.D	OC PEST ICAL 20ng/mL SVM59-48F	Cal	8	1	20	OC Pest_dMRM	11/6/2018 6:51:13 PM
110618F018.D	OC PEST ICAL 40ng/mL SVM59-48G	Cal	9	1	40	OC Pest_dMRM	11/6/2018 7:08:48 PM
110618F019.D	OC PEST ICAL 60ng/mL SVM59-48H	Cal	10	1	60	OC Pest_dMRM	11/6/2018 7:26:24 PM
110618F020.D	OC PEST ICAL 80ng/mL SVM59-48I	Cal	11	1	80	OC Pest_dMRM	11/6/2018 7:44:05 PM
110618F021.D	OC PEST ICAL 100ng/mL SVM59-48J	Cal	12	1	100	OC Pest_dMRM	11/6/2018 8:01:40 PM
110618F022.D	OC PEST ICV 20ng/mL SVM59-48K	CC	13	1	20	OC Pest_dMRM	11/6/2018 8:19:16 PM

Revision
OC Post ICAL KC1900099

MAR 1 3 2019 LD

PL 4/20/19

Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F012.D	**Vial**	3
Acq. Date-Time	11/6/2018 5:23:04 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 0.5ng/mL SVM59-48A	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	4776053	20.000 ng/ml	0.001
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	10001482	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.219	276.8 -> 241.8	4748027	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	4882121	20.000 ng/ml	0.000
Aldrin-13C(IS)	7.948	269.8 -> 200.0	3591257	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	2500150	20.000 ng/ml	0.002
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4113870	20.000 ng/ml	0.001
Heptachlor epoxide-13C10(IS)	8.812	362.8 -> 270.0	1286374	20.000 ng/ml	0.003
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	2644175	20.000 ng/ml	0.003
Pyrene-d10	9.719	212.0 -> 208.0	33939024	100.000 ng/ml	0.000
Endrin-13C12(IS)	11.240	269.8 -> 200.0	1269050	20.000 ng/ml	0.007
4,4'-DDD d4(IS)	11.646	243.0 -> 173.1	6174134	5.000 ng/ml	0.007
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	3368059	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	157581	20.000 ng/ml	0.000
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	10328834	20.000 ng/ml	0.007
Mirex-13C10(IS)	14.930	276.8 -> 241.8	2546896	5.000 ng/ml	0.003

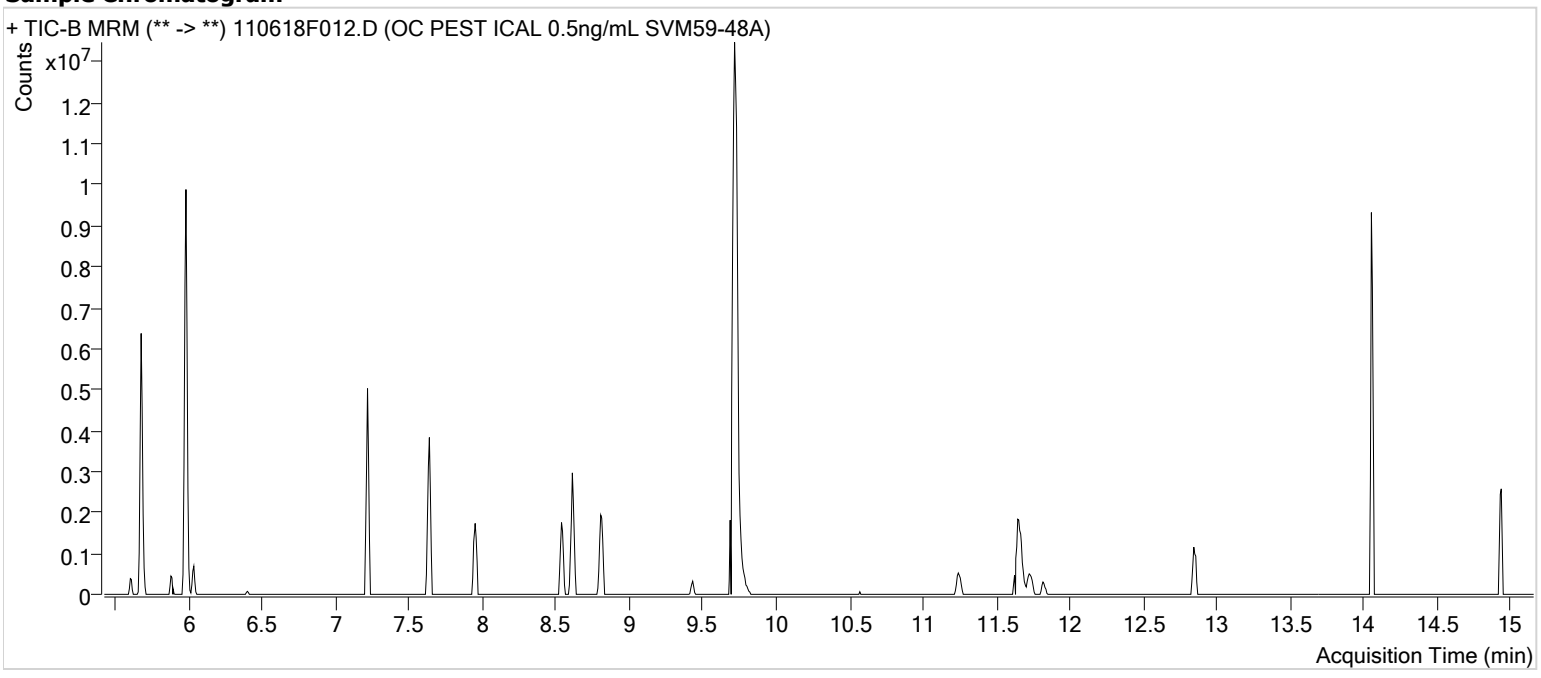
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	4776053	18.455 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.3 %*
γ-BHC-d6	5.983	223.9 -> 187.0	10001482	20.144 ng/ml	
		Spiked Amount =	20.0	Recovery =	*100.7 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	4748027	18.994 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.0 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	4882121	19.048 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.2 %*
Aldrin-13C	7.952	269.8 -> 200.0	3591257	20.244 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.2 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	2500150	19.212 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.1 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4113870	20.978 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.9 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1286374	19.930 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.7 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	2644175	19.391 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.0 %*
Endrin-13C12	11.247	269.8 -> 200.0	1269050	18.946 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.7 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	6174134	4.465 ng/ml	
		Spiked Amount =	5.0	Recovery =	*89.3 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	3368059	4.270 ng/ml	
		Spiked Amount =	5.0	Recovery =	*85.4 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	157581	18.719 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.6 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	10328834	17.182 ng/ml	
		Spiked Amount =	20.0	Recovery =	*85.9 %*
Mirex-13C10	14.930	276.8 -> 241.8	2546896	4.124 ng/ml	
		Spiked Amount =	5.0	Recovery =	*82.5 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc. Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	348694	0.496 ng/ml	94
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	244001	0.589 ng/ml	99
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	479129	0.517 ng/ml	87
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.040	181.1 -> 145.1	568385	0.510 ng/ml	98
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	195035	0.468 ng/ml	96
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	154635	0.583 ng/ml	1
Chorpyrifos	Chorpyrifos-d10(IS)	7.724	196.9 -> 169.0	189468	0.569 ng/ml	92
Aldrin	Aldrin-13C(IS)	7.955	254.9 -> 220.0	366028	0.548 ng/ml	9
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	167645	0.527 ng/ml	90
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	110091	0.525 ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	34787	0.497 ng/ml	97
Oxychlordane	Oxychlordane-13C10(IS)	8.824	114.9 -> 51.1	217058	0.591 ng/ml	86
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	63486	0.522 ng/ml	96
2,4'-DDE	4,4'-DDD d4(IS)	9.436	246.0 -> 176.2	605188	0.604 ng/ml	94
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	156860	0.531 ng/ml	97
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	35922	0.539 ng/ml	93
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	102118	0.508 ng/ml	99
4,4' -DDE	4,4'-DDD d4(IS)	10.358	246.0 -> 176.2	531567	0.590 ng/ml	93
2,4'-DDD	4,4'-DDD d4(IS)	10.574	235.0 -> 165.1	773172	0.594 ng/ml	97
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	54973	0.614 ng/ml	98
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	112165	0.617 ng/ml	82
Endrin	Endrin-13C12(IS)	11.248	262.8 -> 193.0	43333	0.523 ng/ml	88
2,4'-DDT	4,4'-DDT-d4(IS)	11.820	235.0 -> 165.1	838130 ***m***	0.611 ng/ml	84
cis-Nonachlor	Oxychlordane-13C10(IS)	11.743	271.8 -> 236.9	39642	0.512 ng/ml	96
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	1140878 ***m***	0.582 ng/ml	95
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	8149	0.450 ng/ml	90
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	62027	0.489 ng/ml	90
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	382764	0.515 ng/ml	98
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	27935	0.540 ng/ml	94
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	329471	0.550 ng/ml	97
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	400221	0.489 ng/ml	87

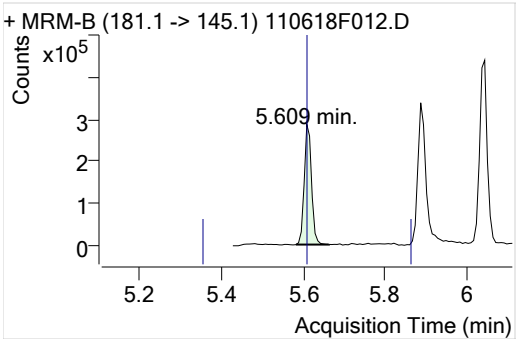
(m) = manual integration ND = Not Detected NC = Not Calculated

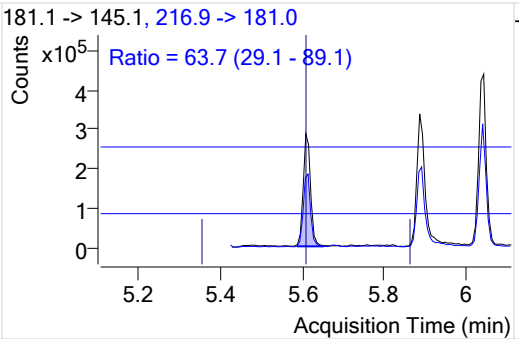
Sample Chromatogram

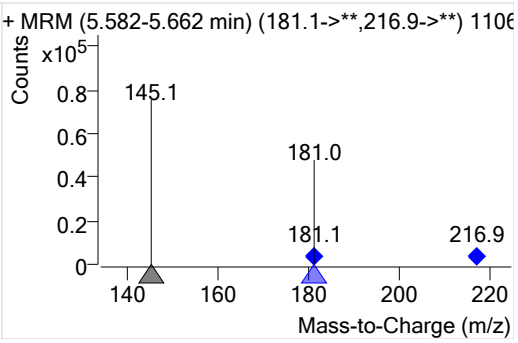


Quantitative Analysis Sample Report

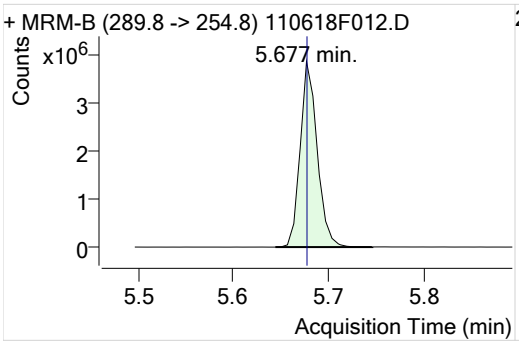
α-BHC

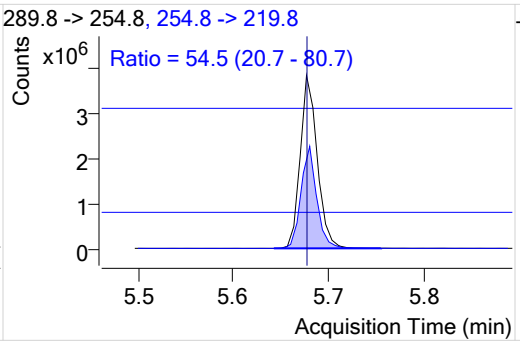


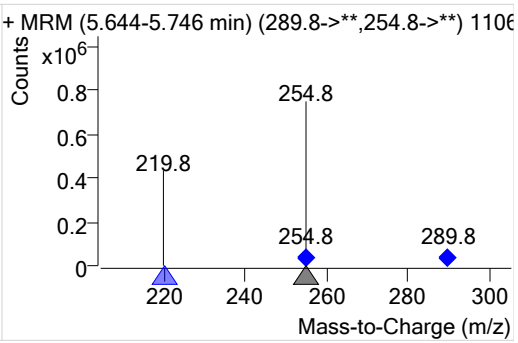




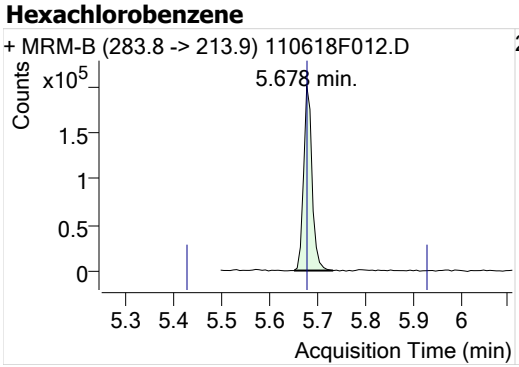
Hexachlorobenzene-13C6

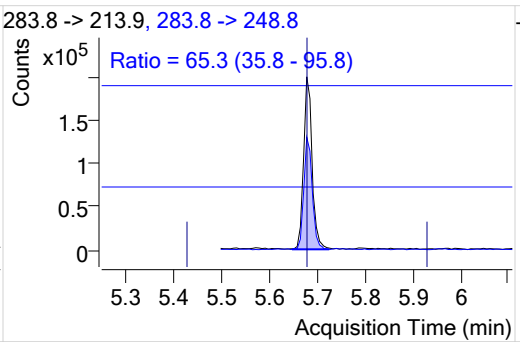


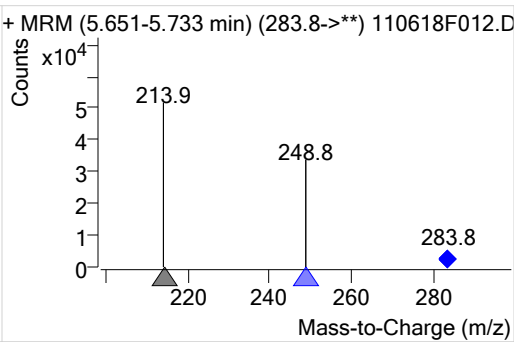




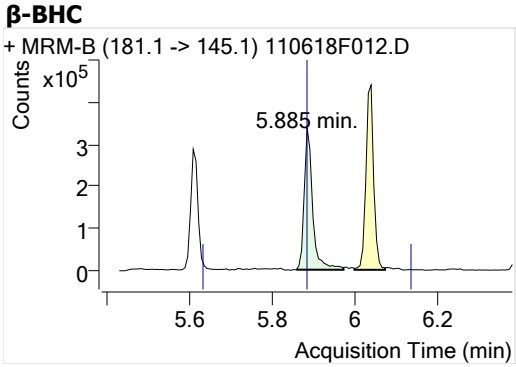
Hexachlorobenzene

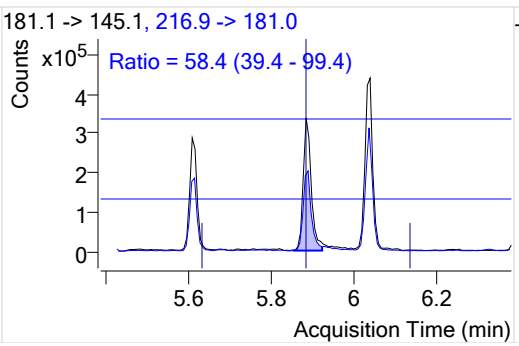


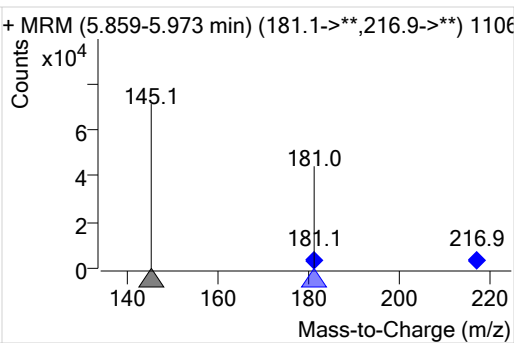




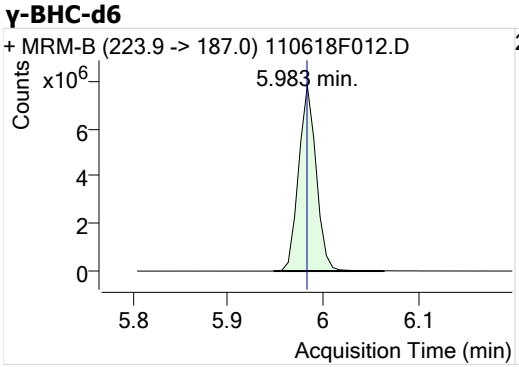
β-BHC

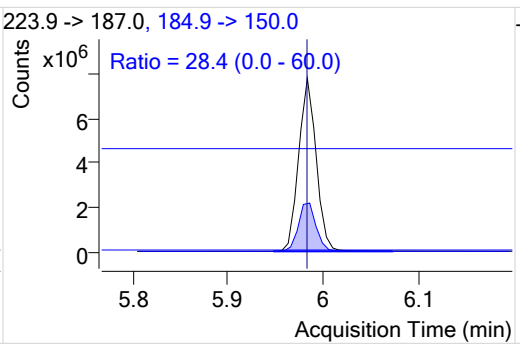


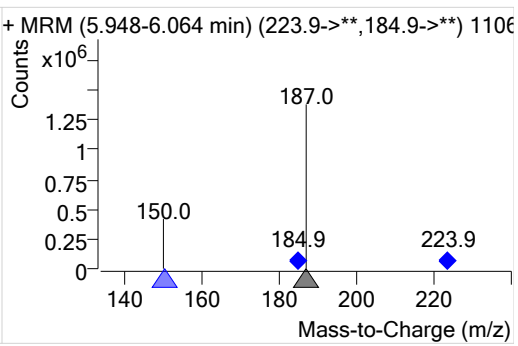




γ-BHC-d6

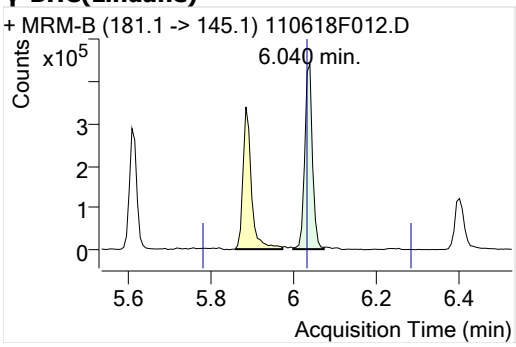


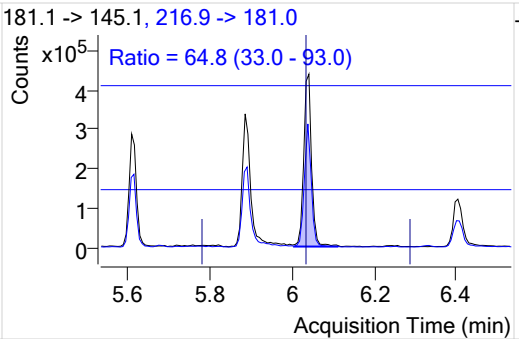


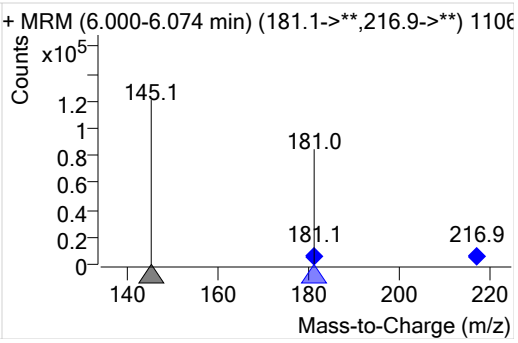


Quantitative Analysis Sample Report

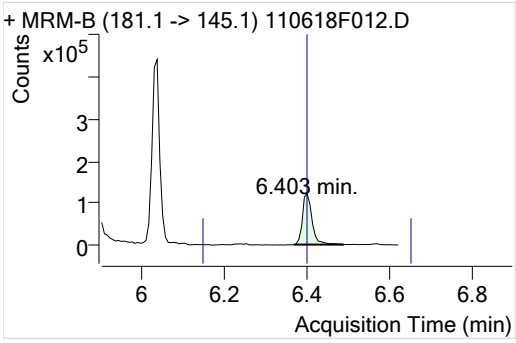
γ-BHC(Lindane)

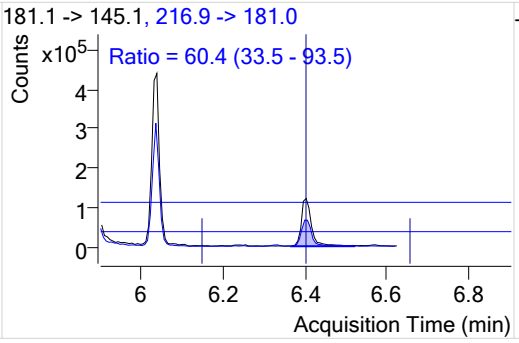


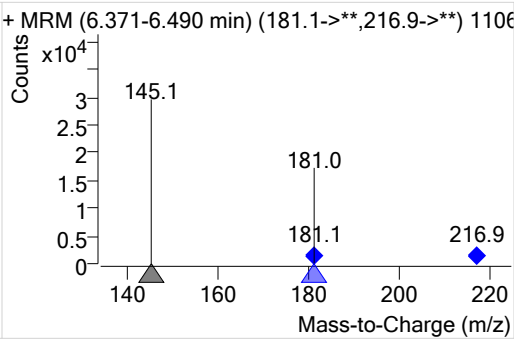




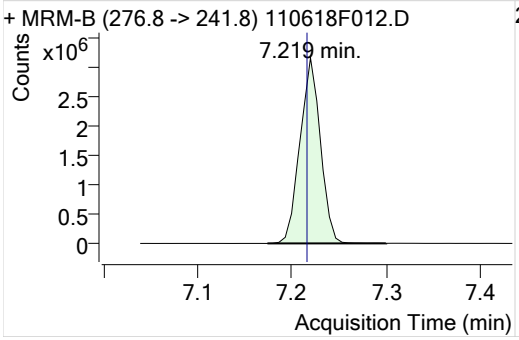
δ-BHC

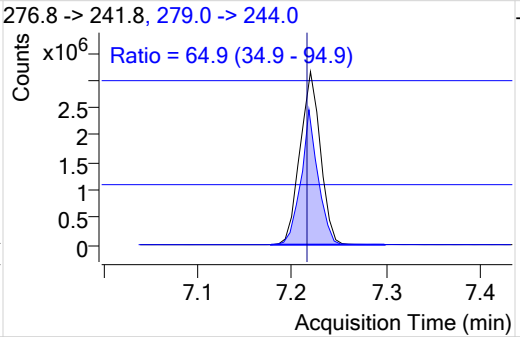


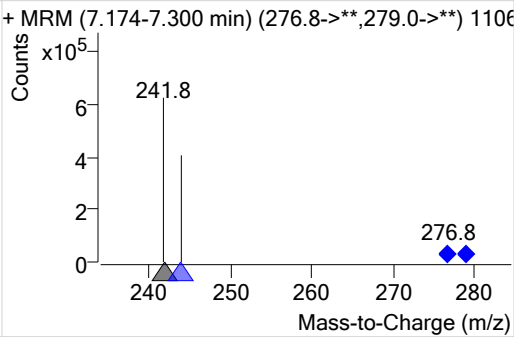




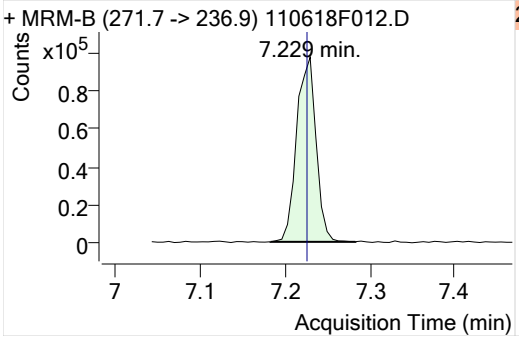
Heptachlor-13C10

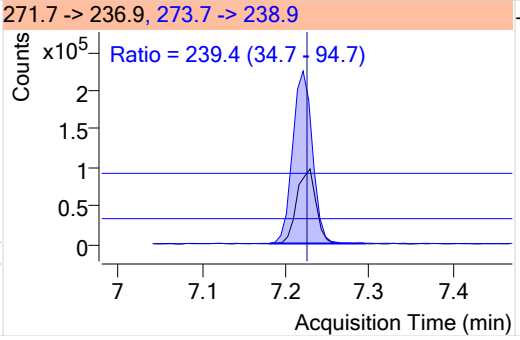


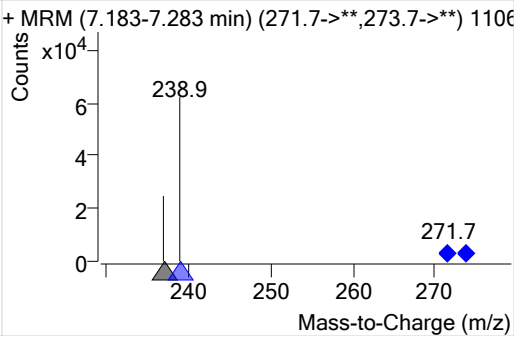




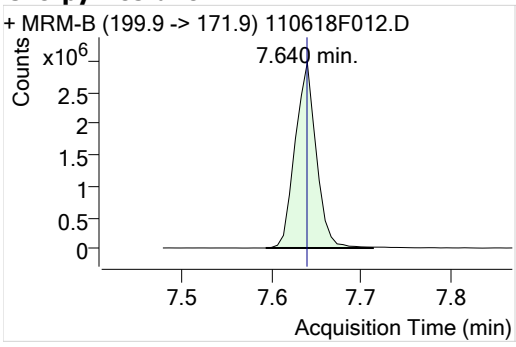
Heptachlor

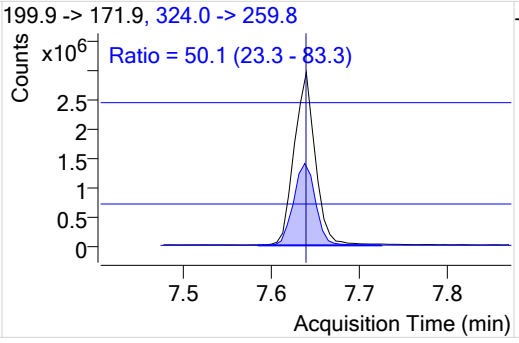


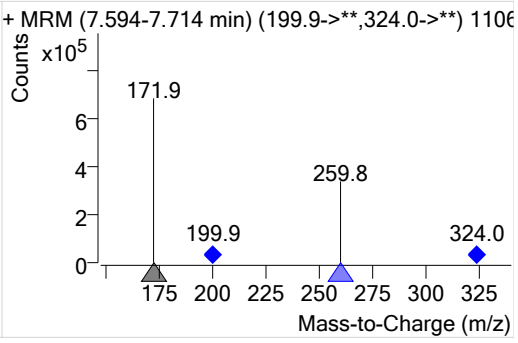




Chorpyrifos-d10

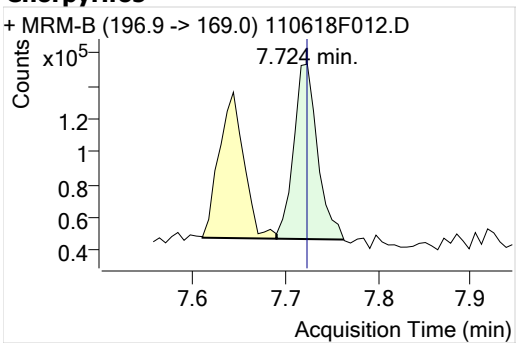


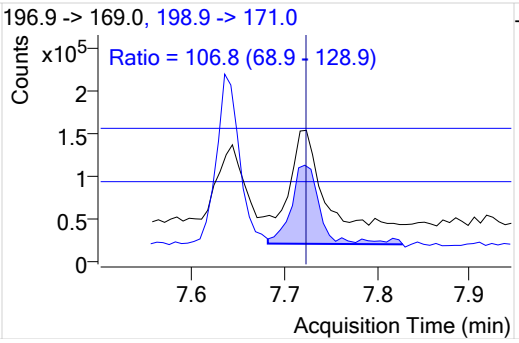


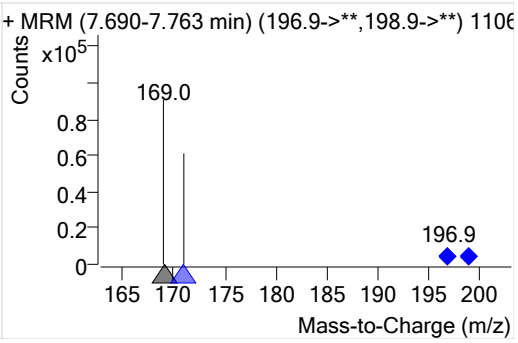


Quantitative Analysis Sample Report

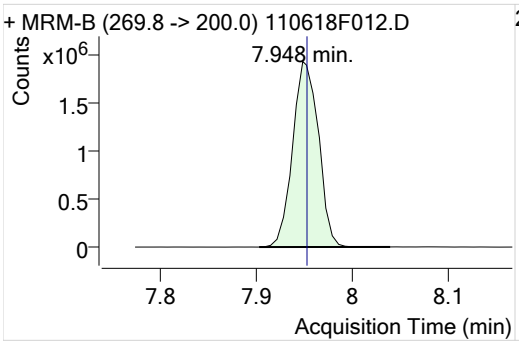
Chorpyrifos

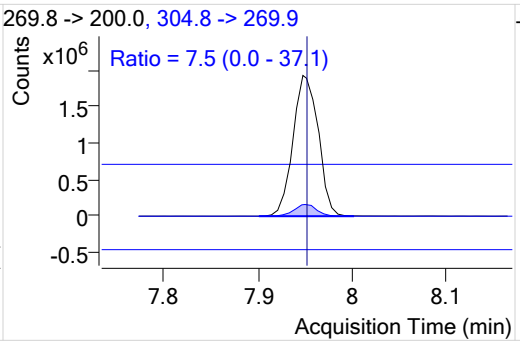


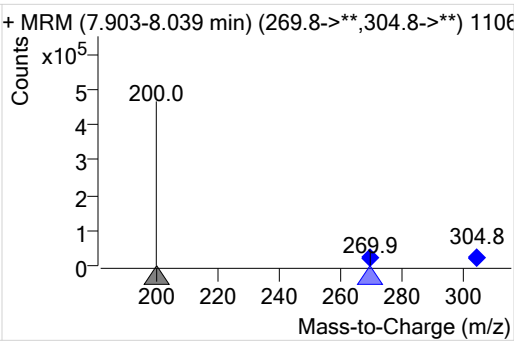




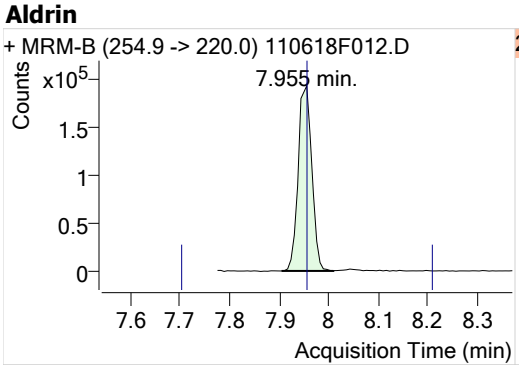
Aldrin-13C

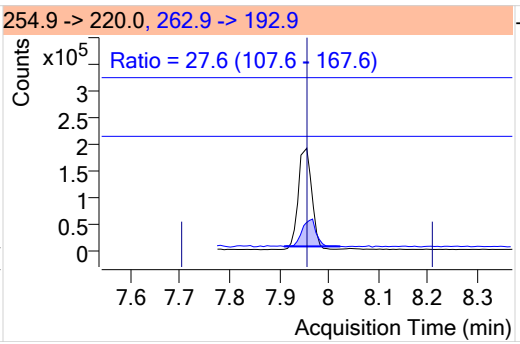


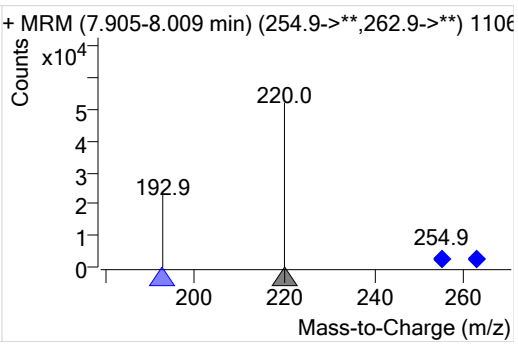




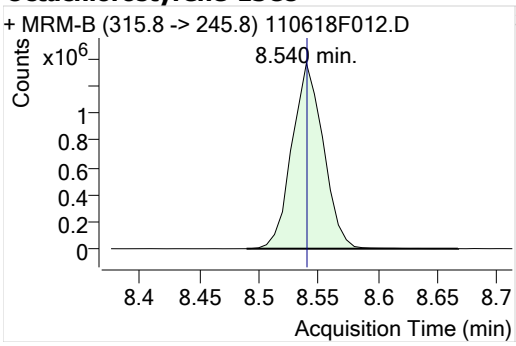
Aldrin

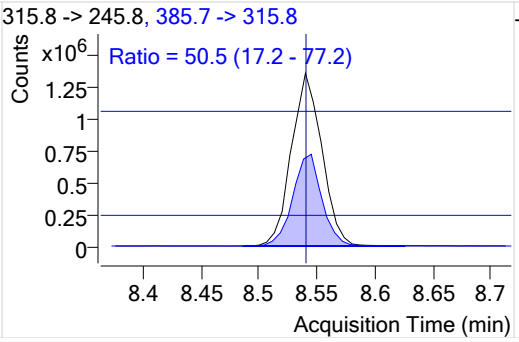


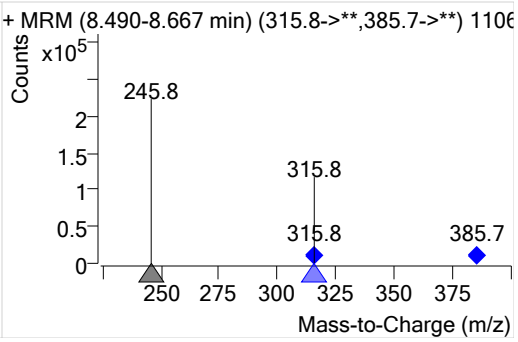




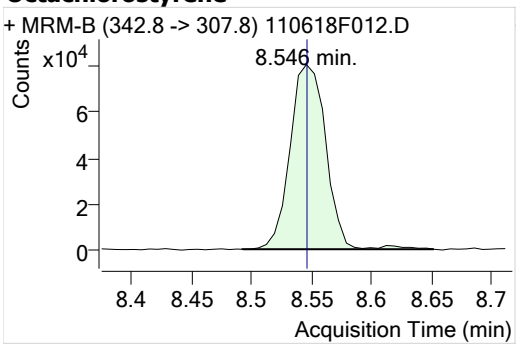
Octachlorostyrene-13C8

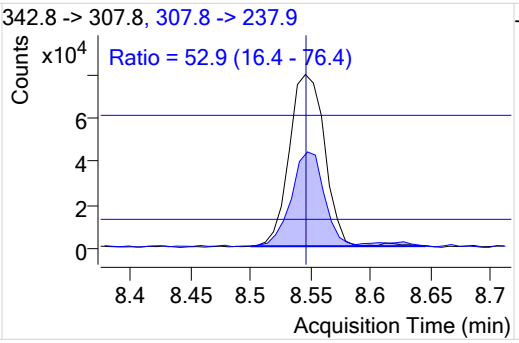


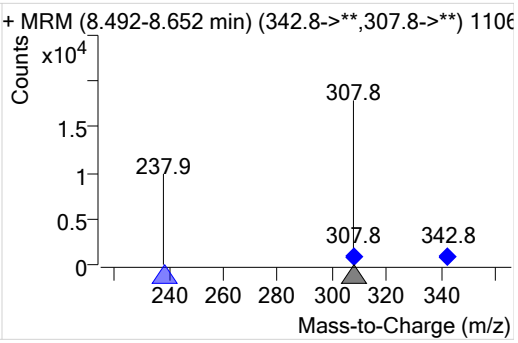




Octachlorostyrene

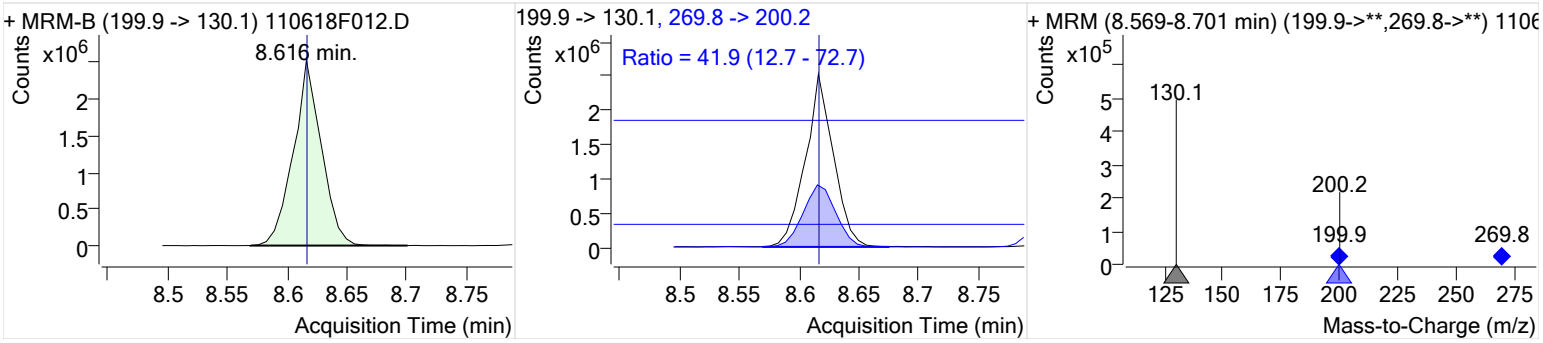




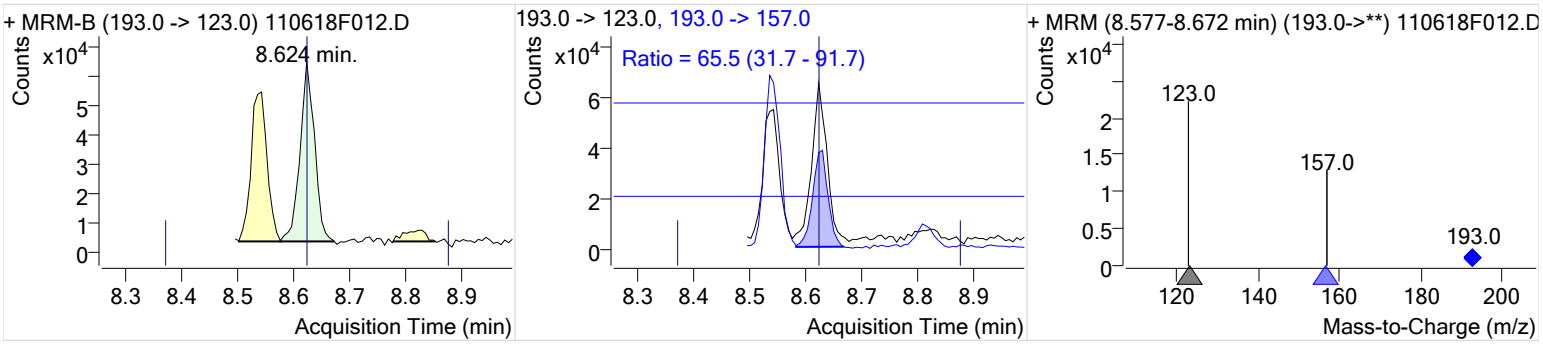


Quantitative Analysis Sample Report

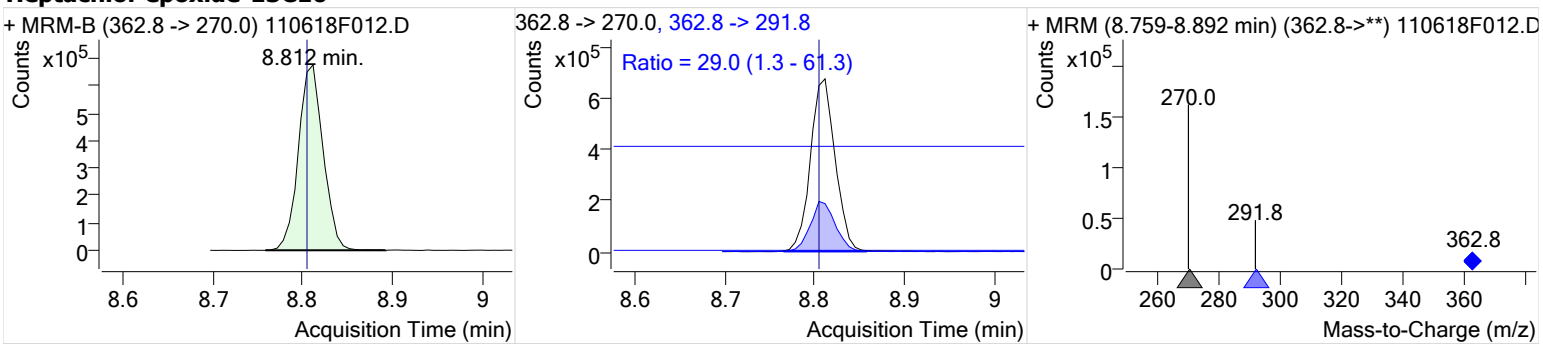
Isodrin-13C12



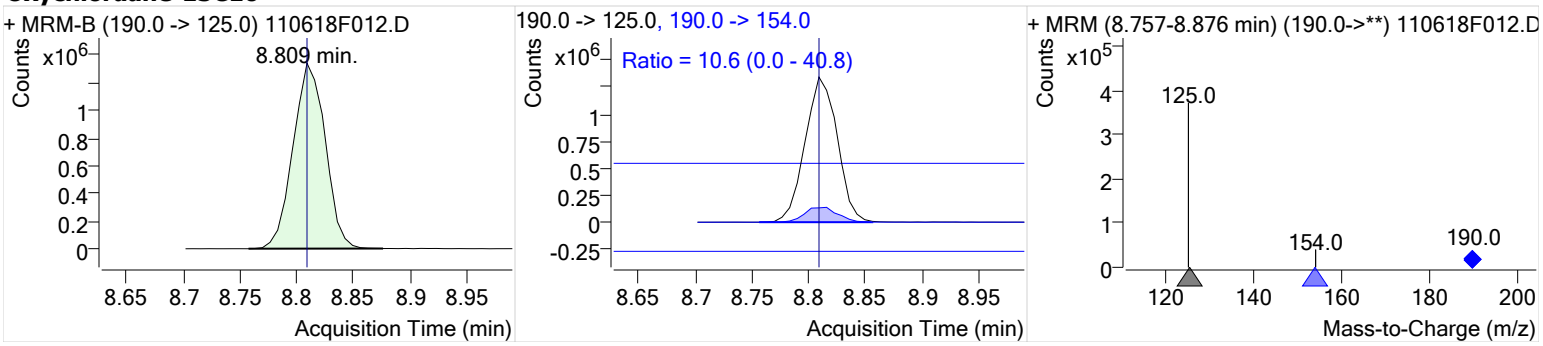
Isodrin



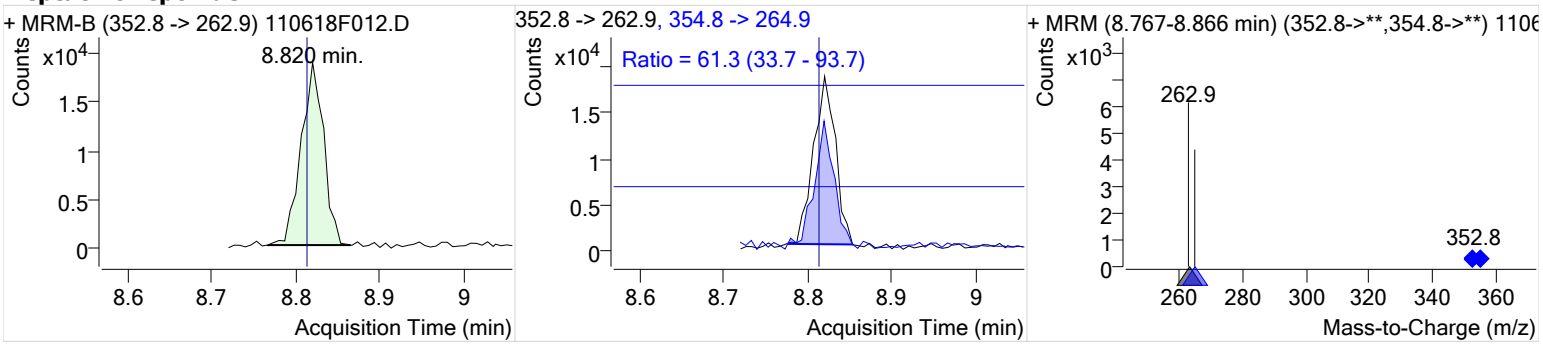
Heptachlor epoxide-13C10



Oxychlordane-13C10

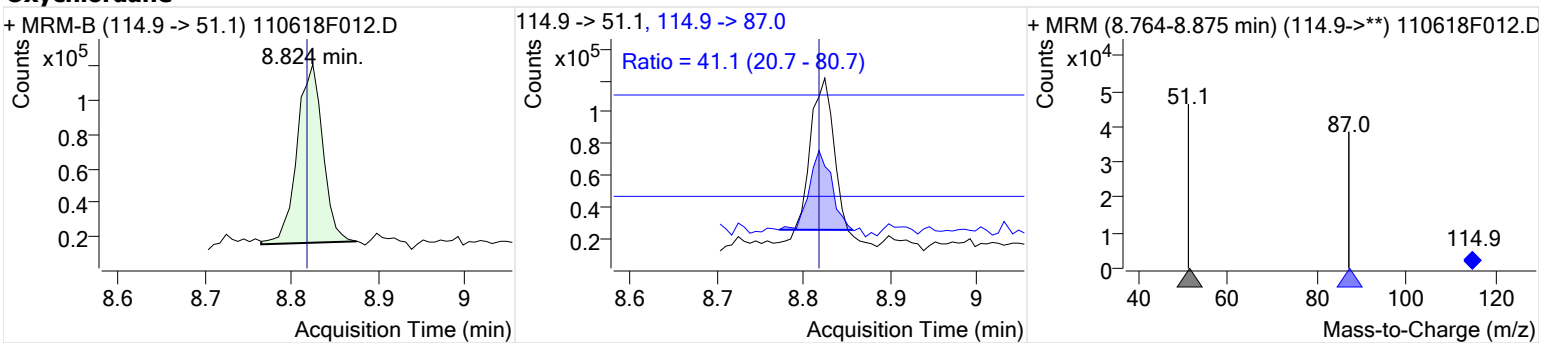


Heptachlor epoxide

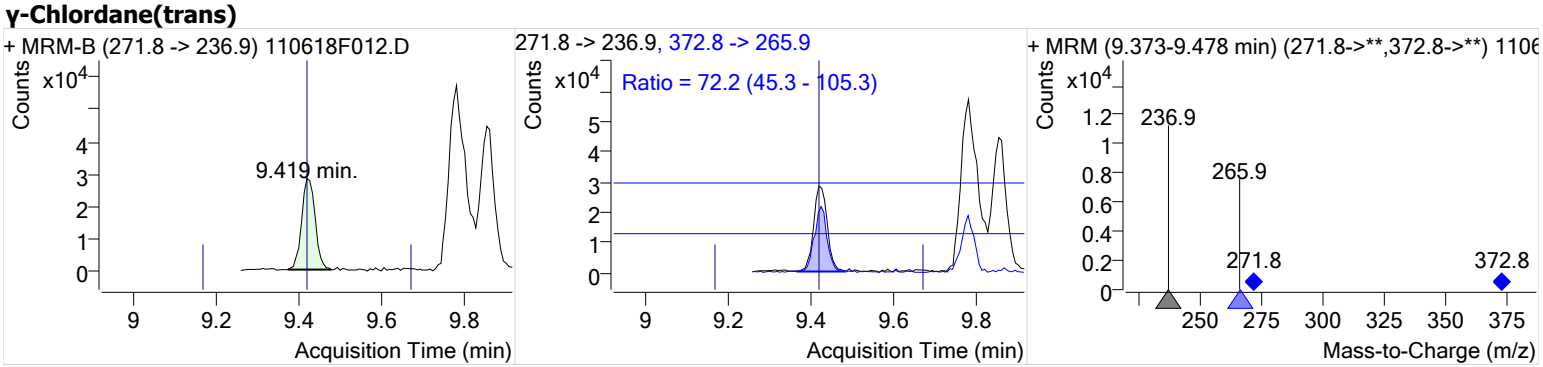


Quantitative Analysis Sample Report

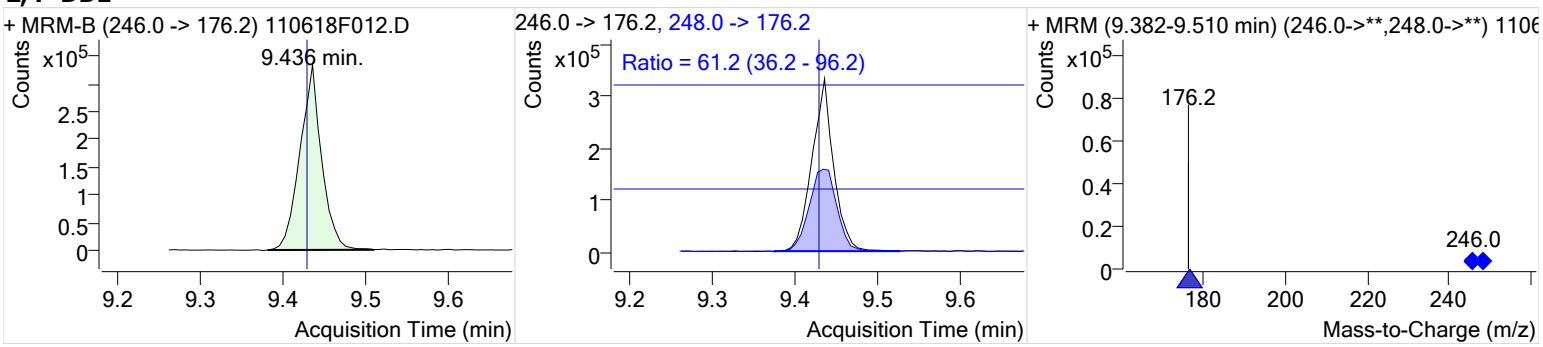
Oxychlordane



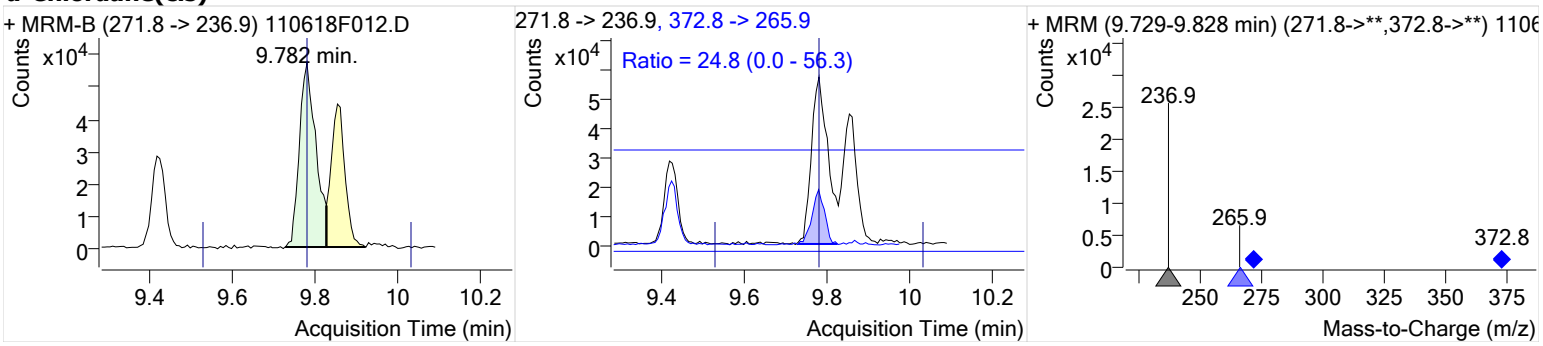
γ-Chlordane(trans)



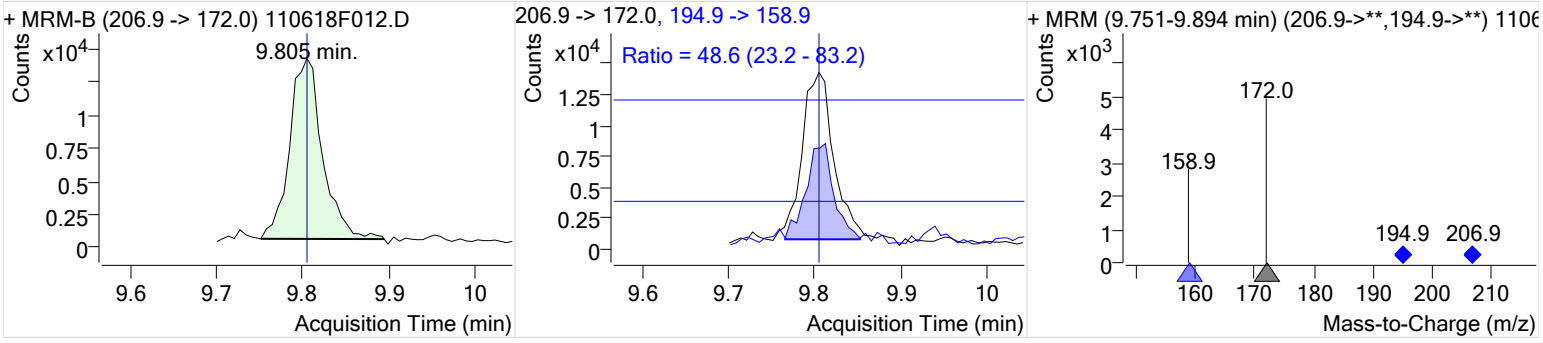
2,4'-DDE



α-Chlordane(cis)

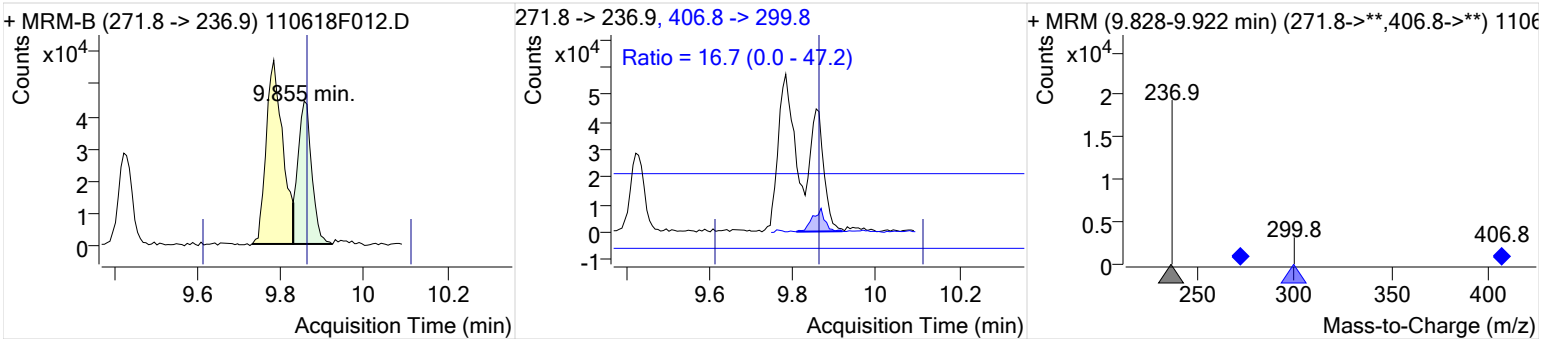


Endosulfan I

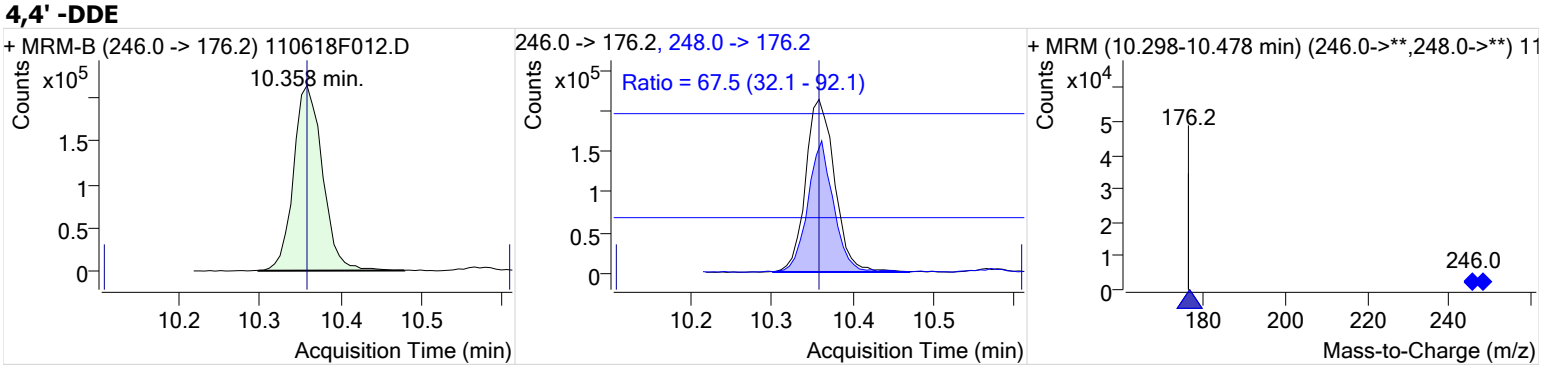


Quantitative Analysis Sample Report

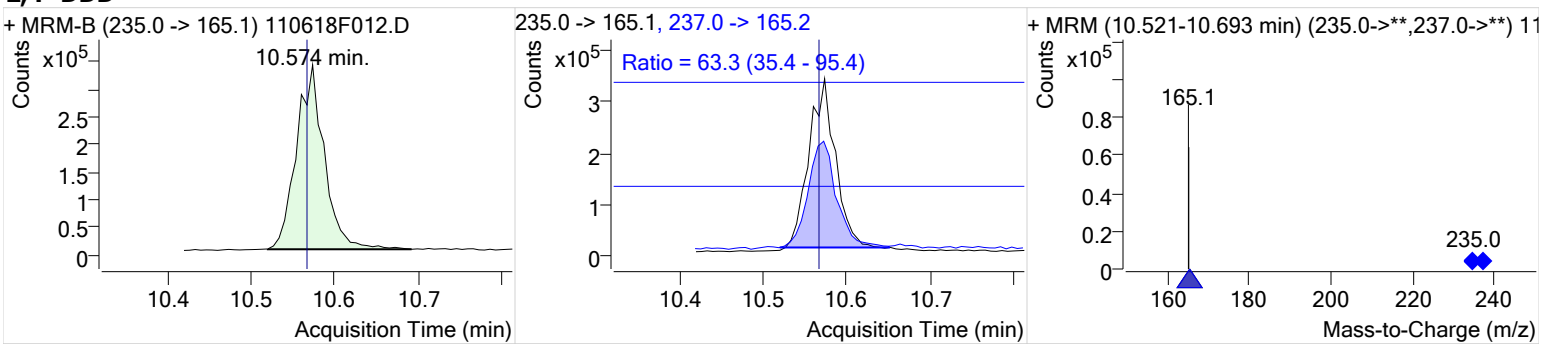
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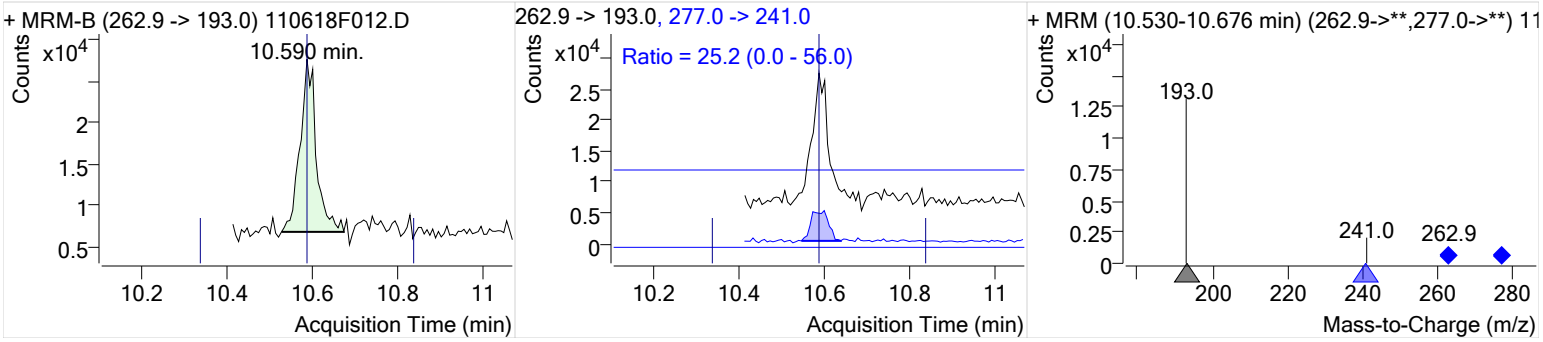
4,4' -DDE



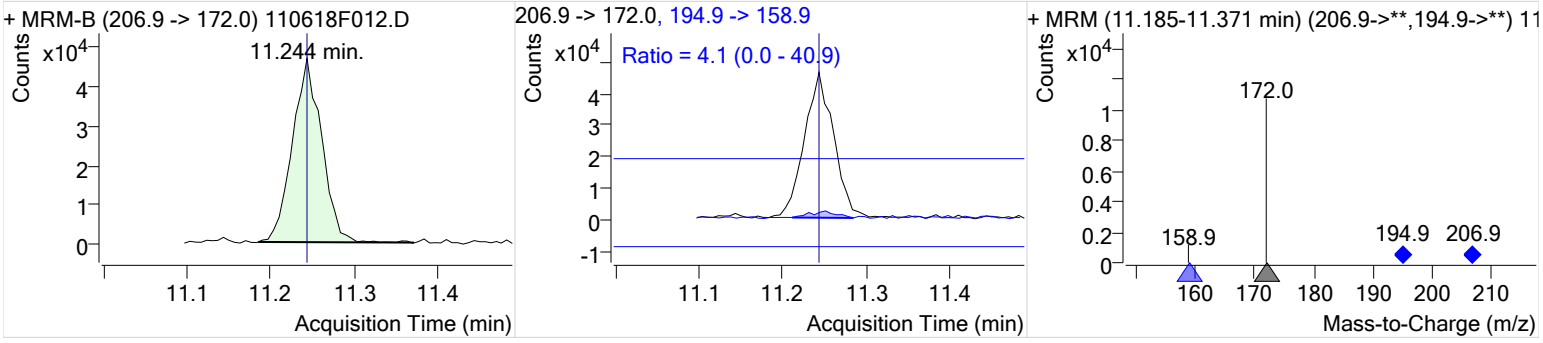
2,4'-DDD



Dieldrin

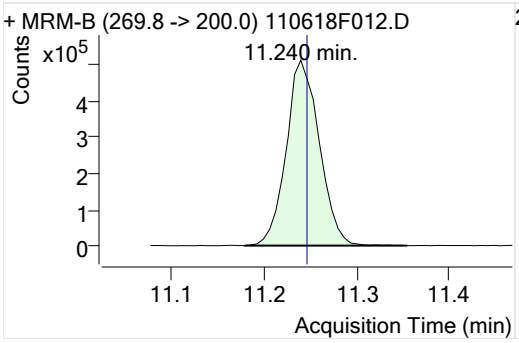


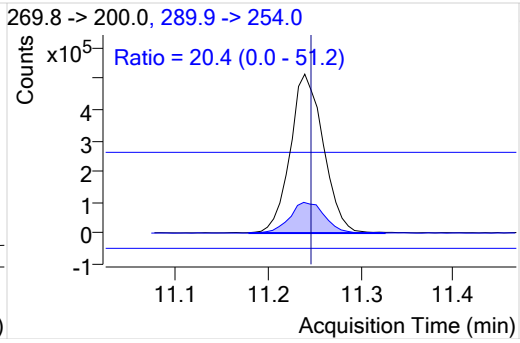
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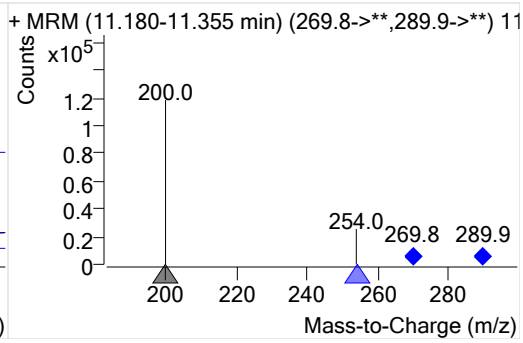


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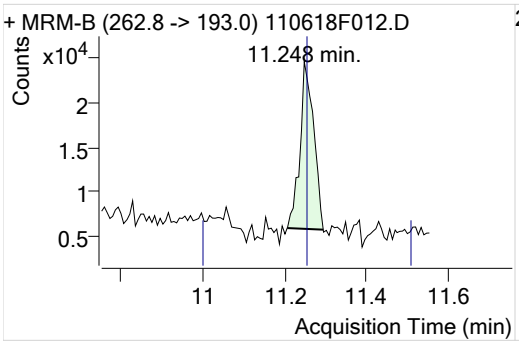
Endrin-13C12

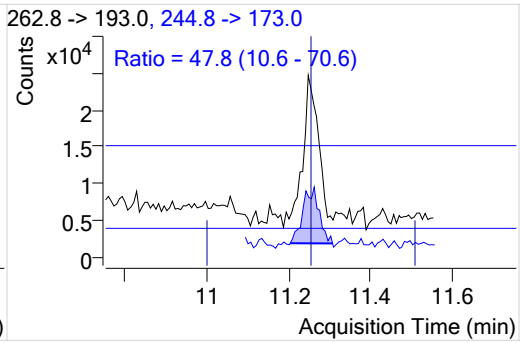


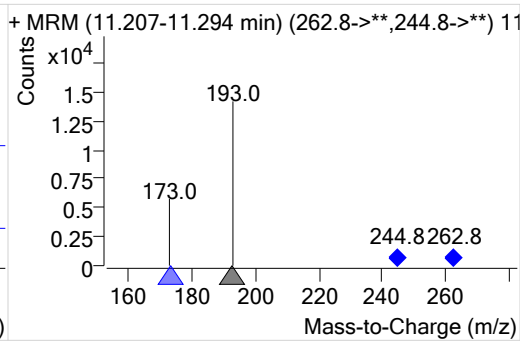




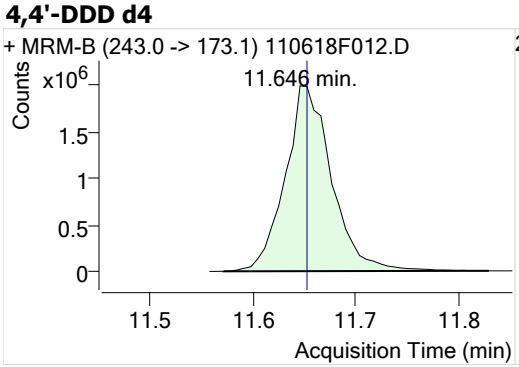
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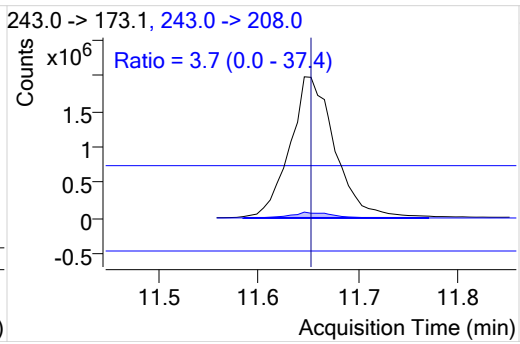


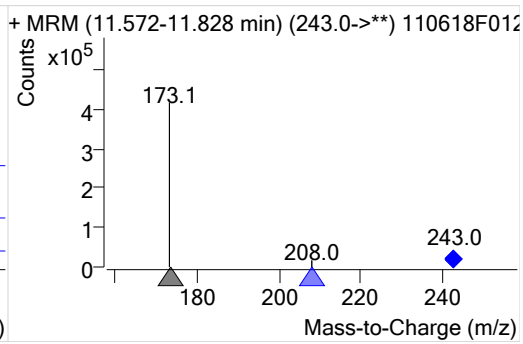




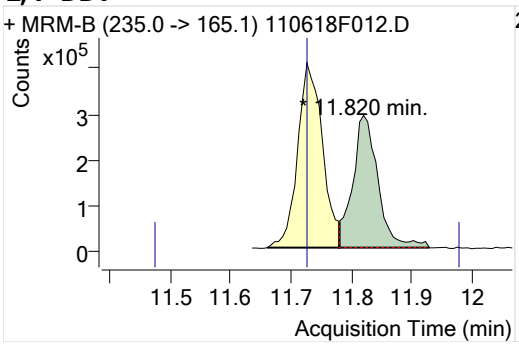
4,4'-DDD d4

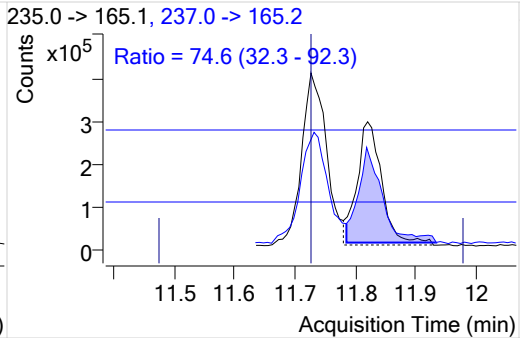


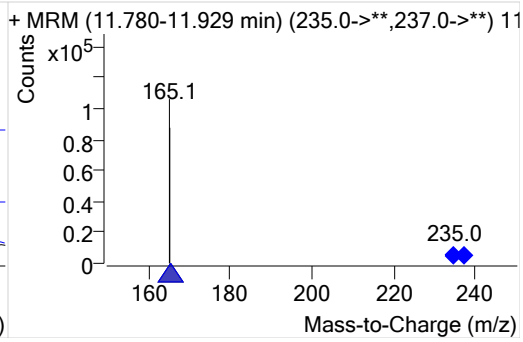




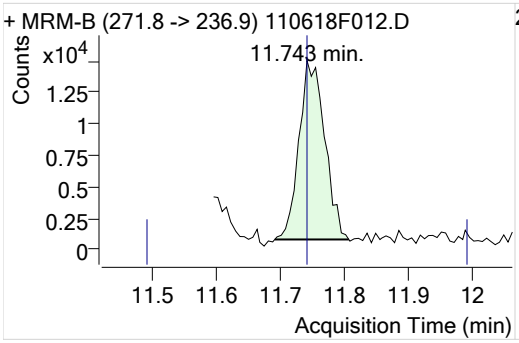
2,4'-DDT

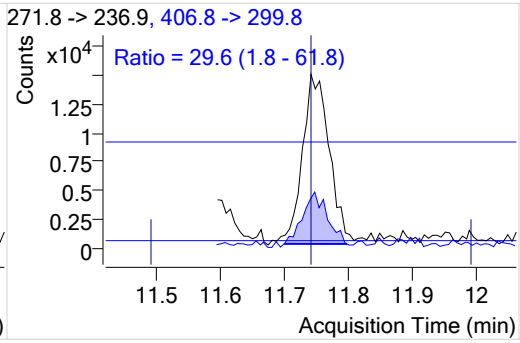


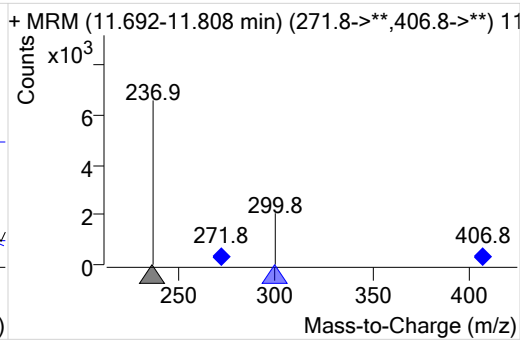




cis-Nonachlor

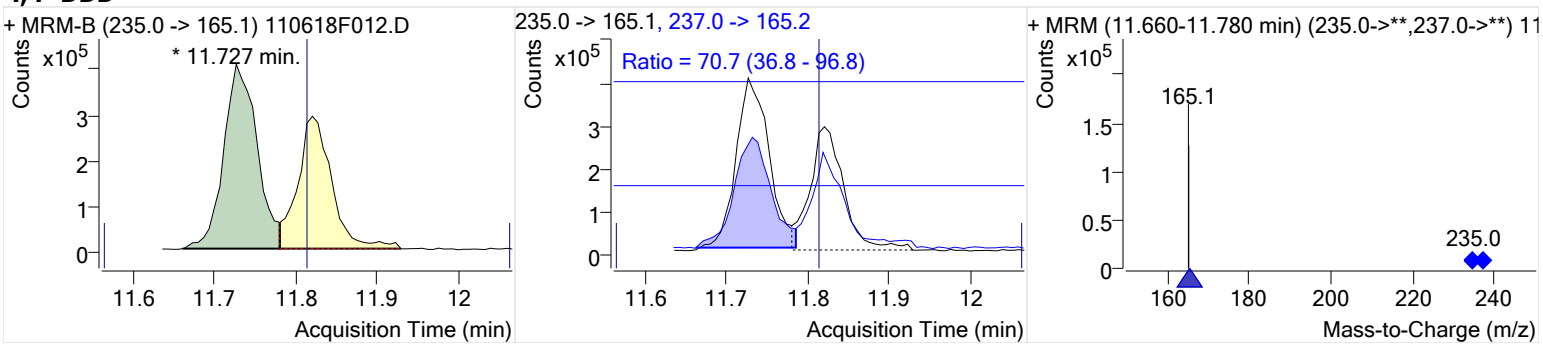




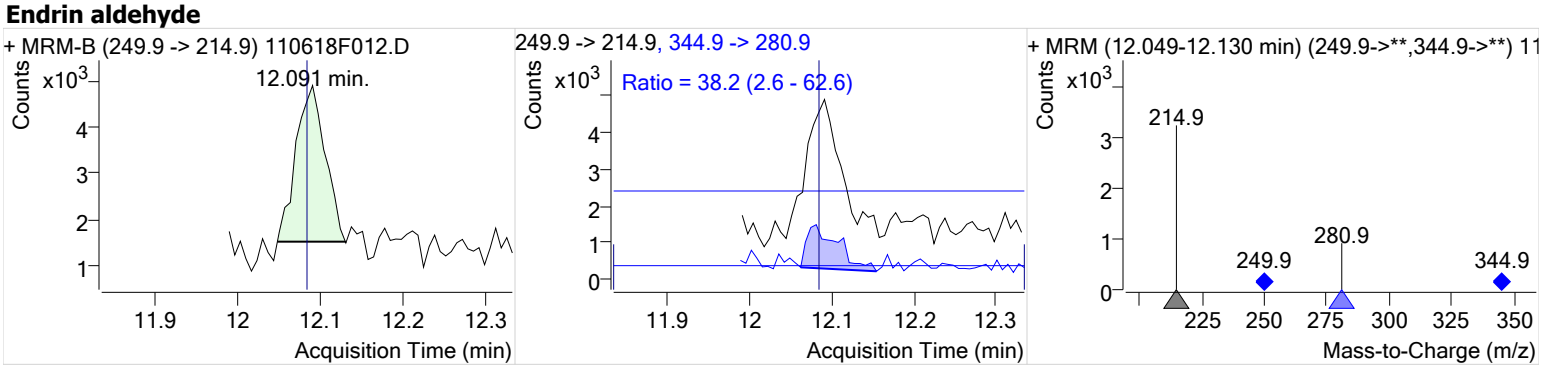


Quantitative Analysis Sample Report

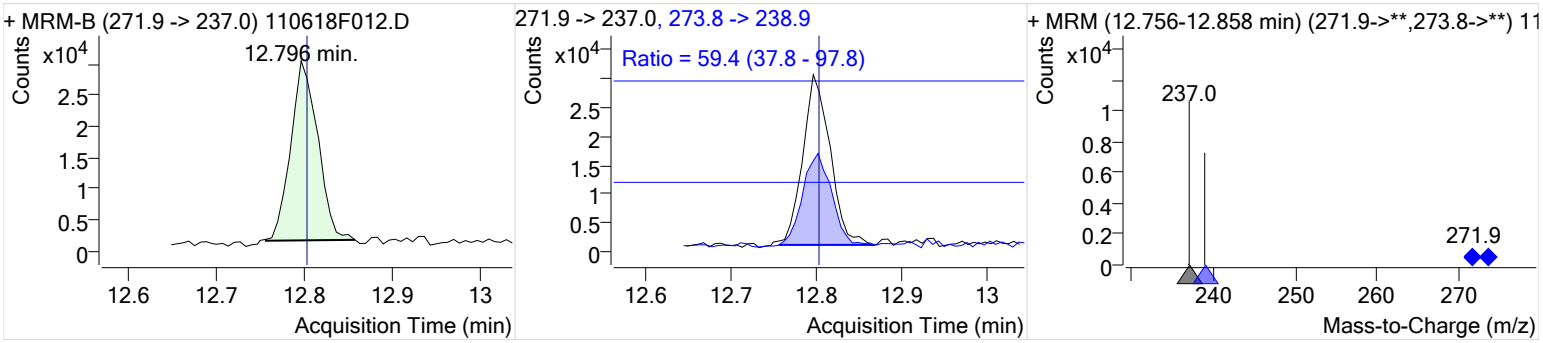
4,4'-DDD



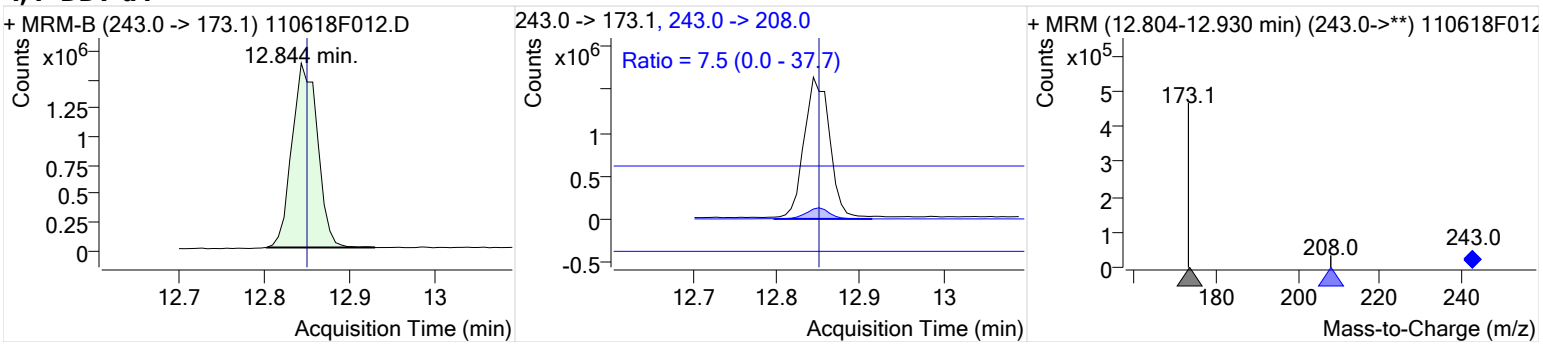
Endrin aldehyde



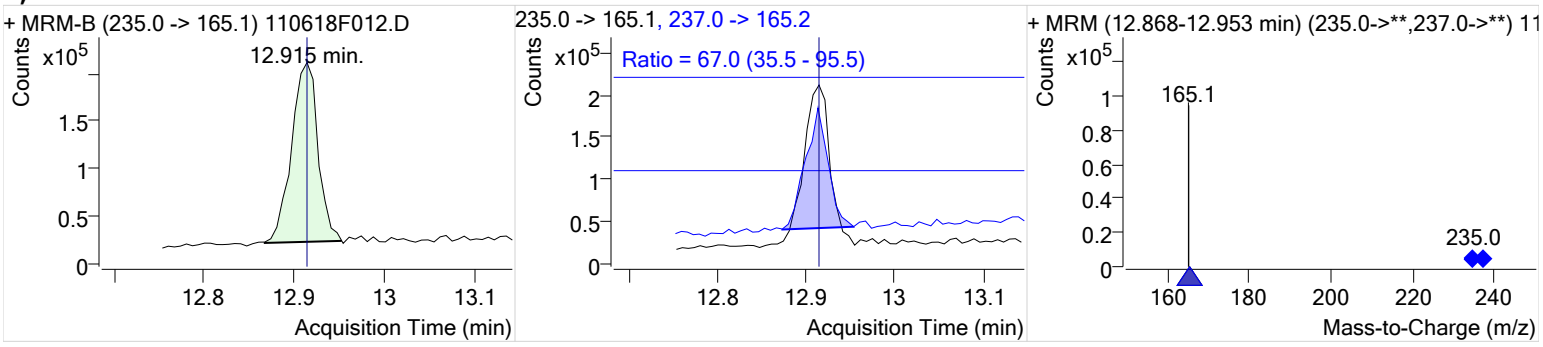
Endosulfan sulfate



4,4'-DDT-d4

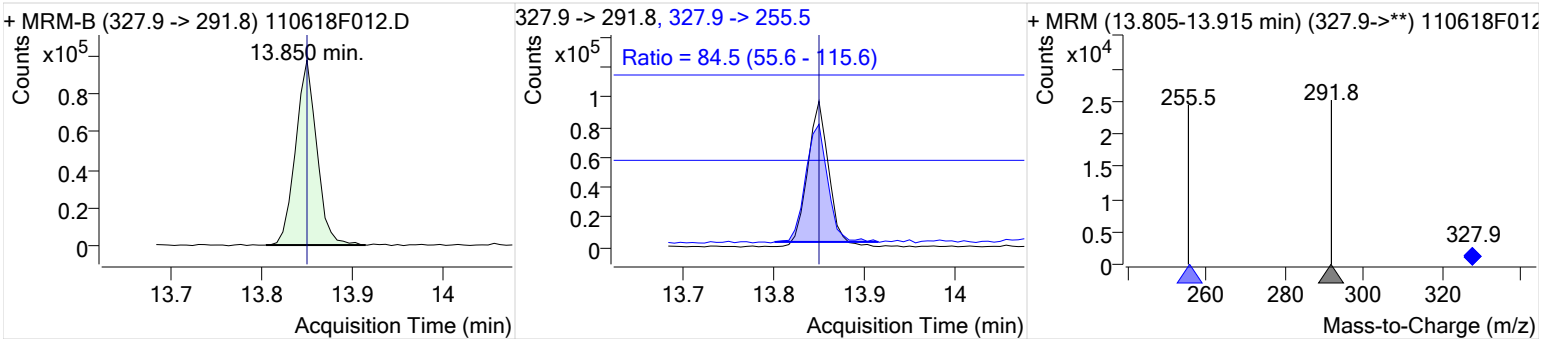


4,4'-DDT

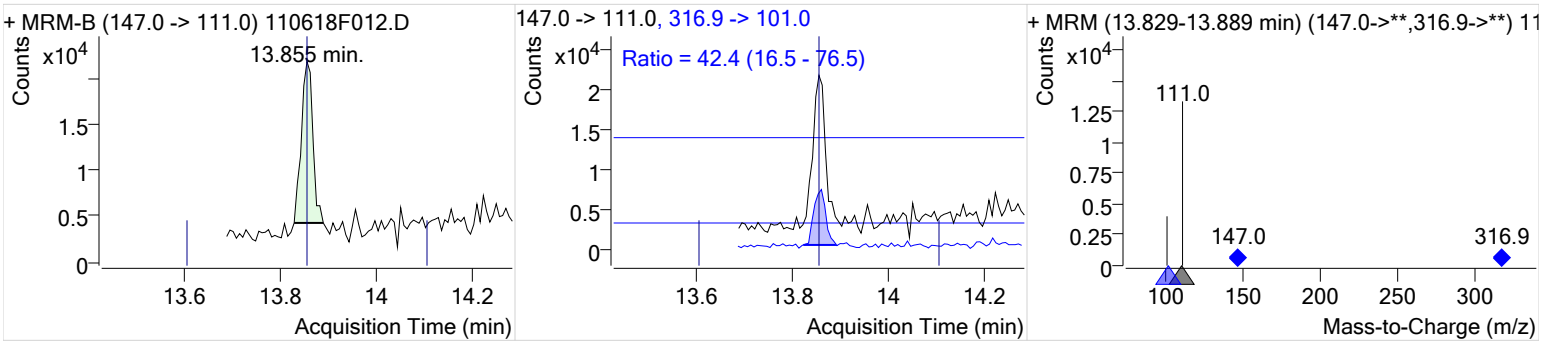


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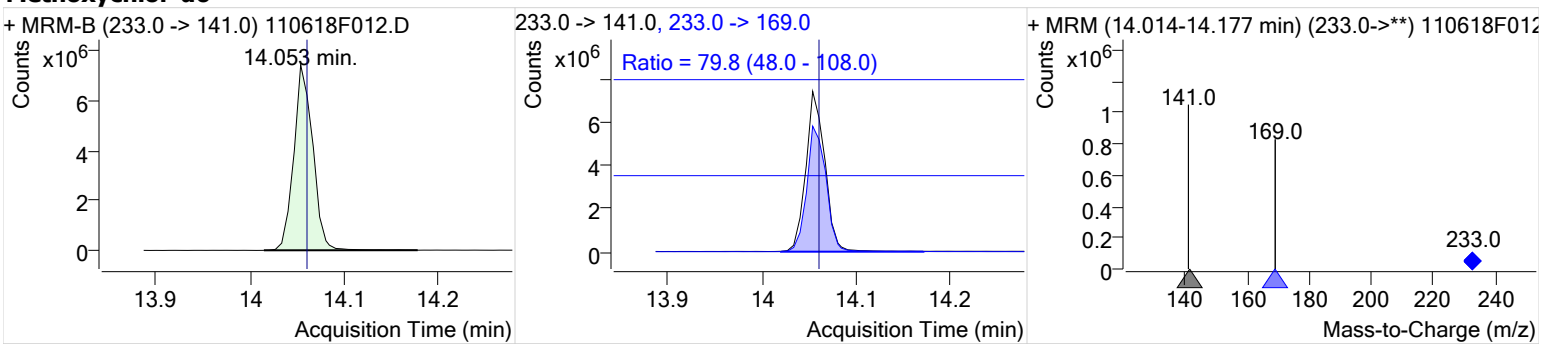
Endrin ketone-13C12



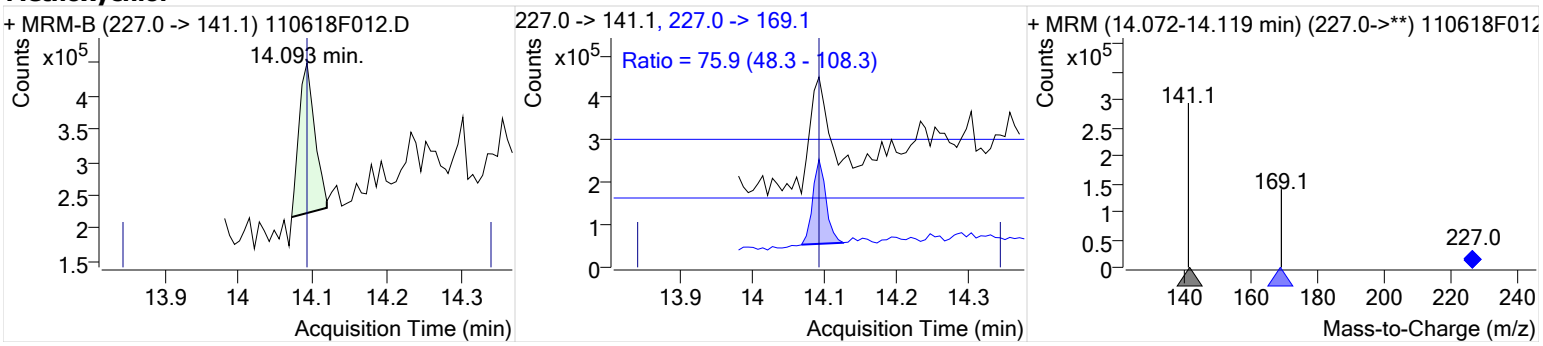
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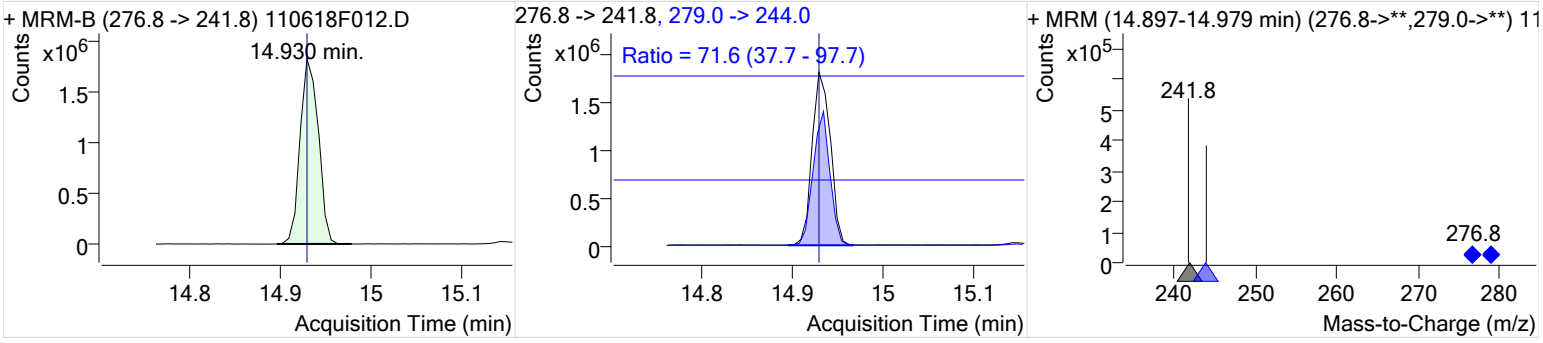
Methoxychlor-d6



Methoxychlor

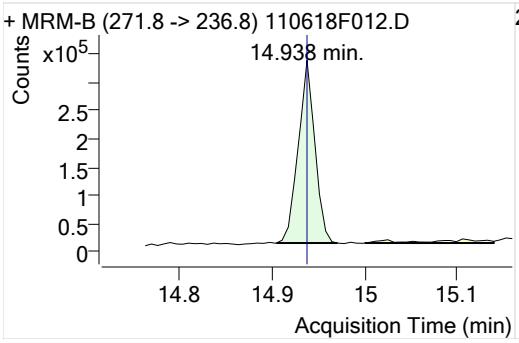


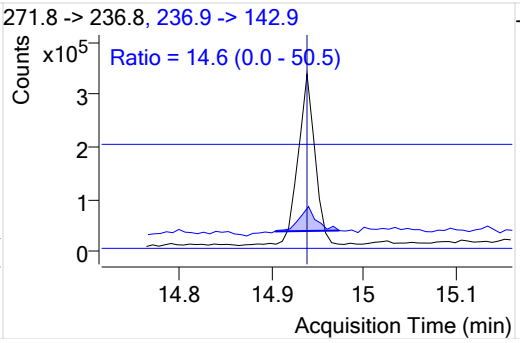
Mirex-13C10

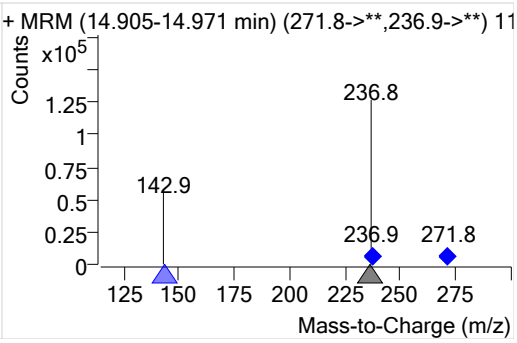


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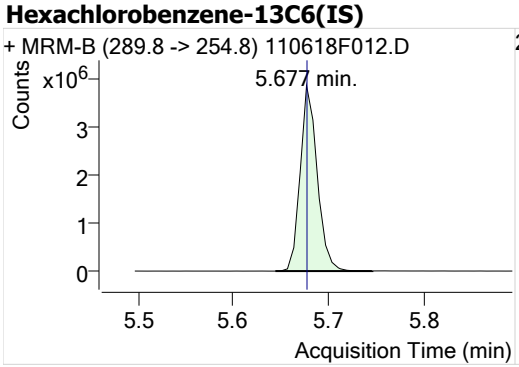
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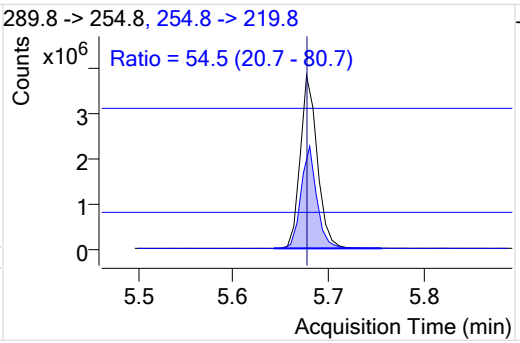


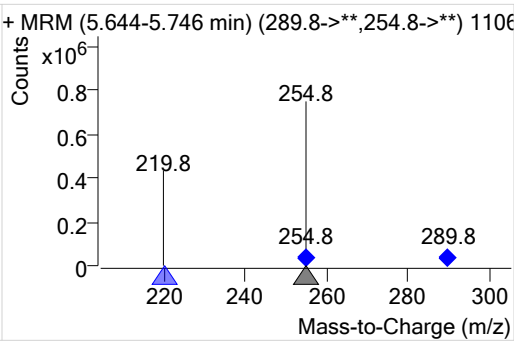




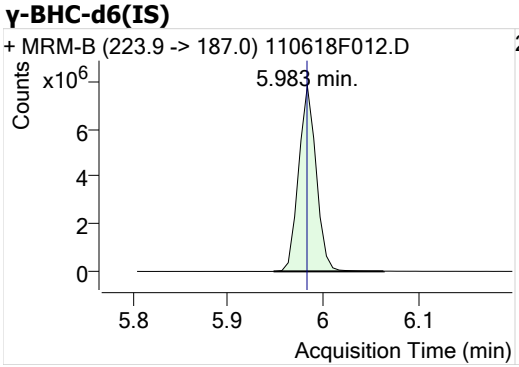
Hexachlorobenzene-13C6(IS)

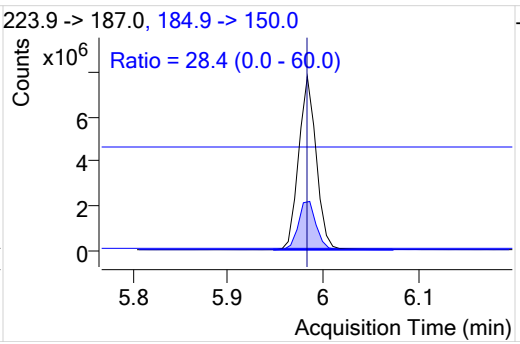


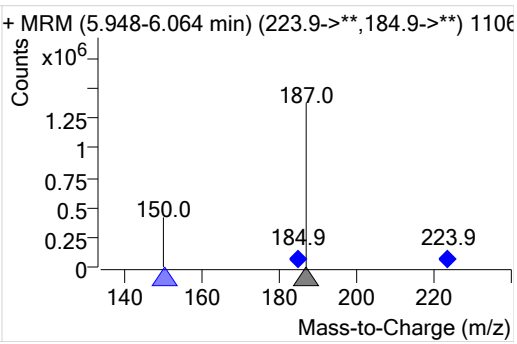




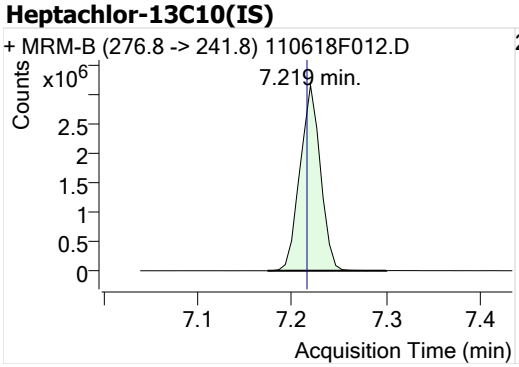
γ-BHC-d6(IS)

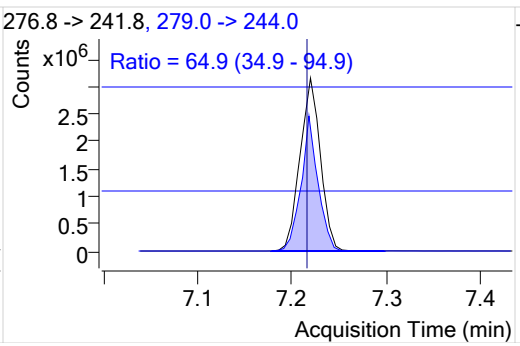


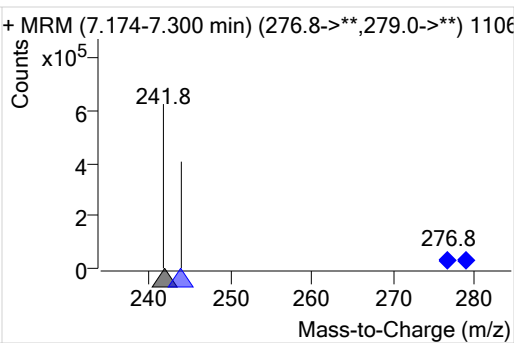




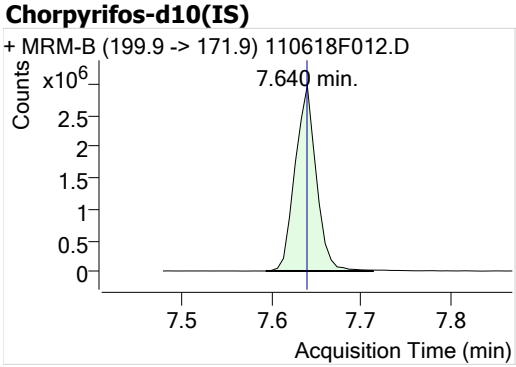
Heptachlor-13C10(IS)

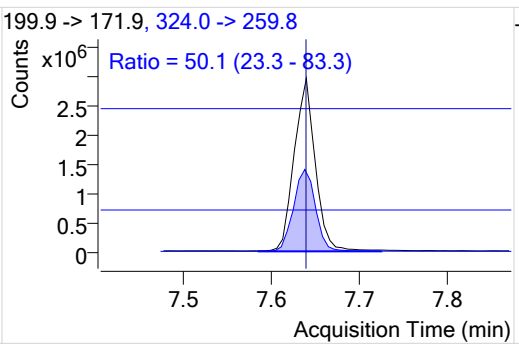


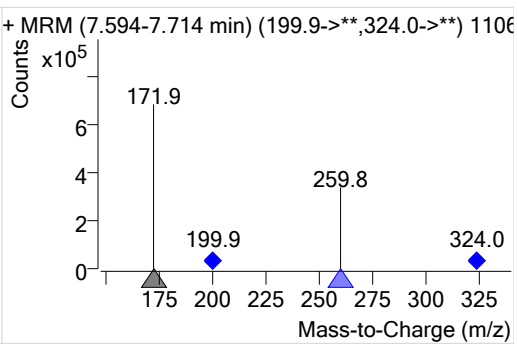




Chorpyrifos-d10(IS)

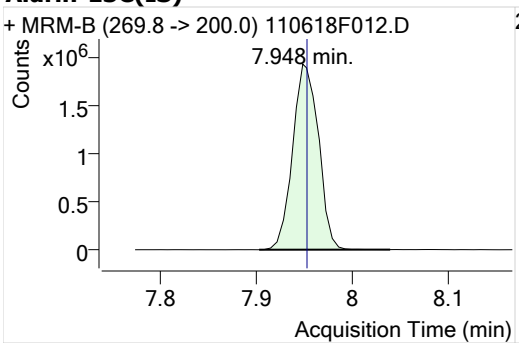


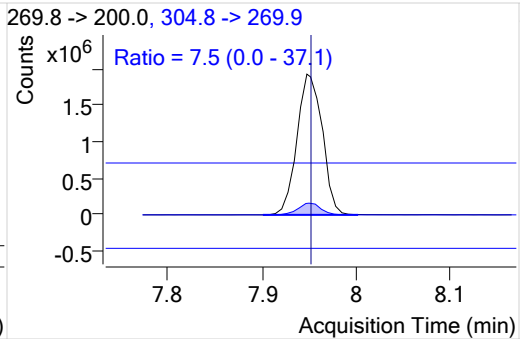


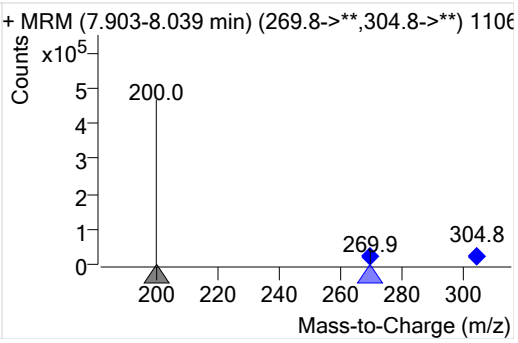


Quantitative Analysis Sample Report

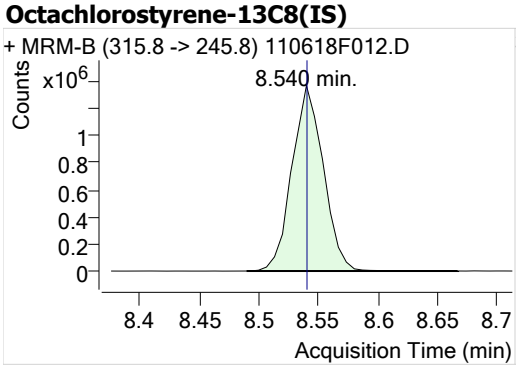
Aldrin-13C(IS)

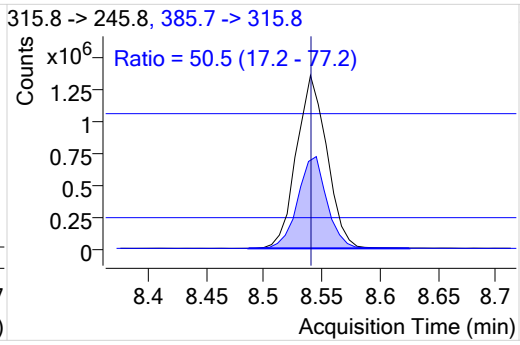


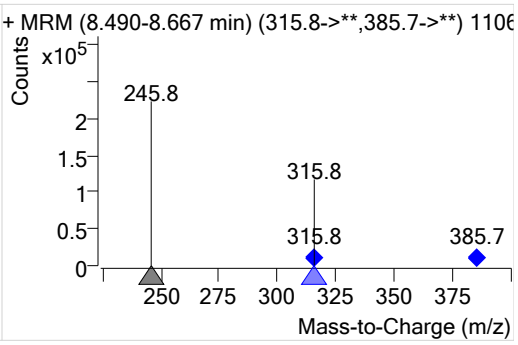




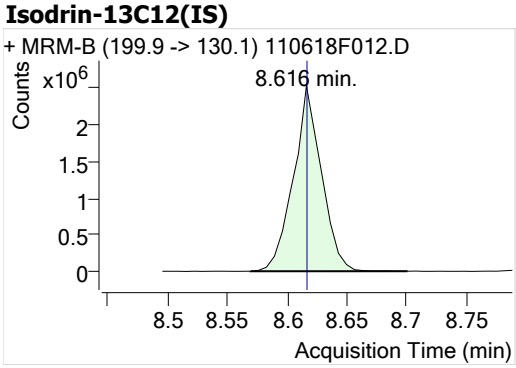
Octachlorostyrene-13C8(IS)

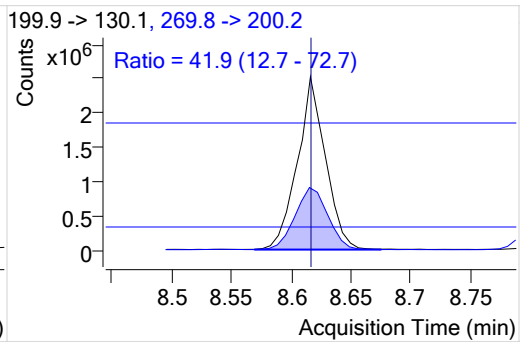


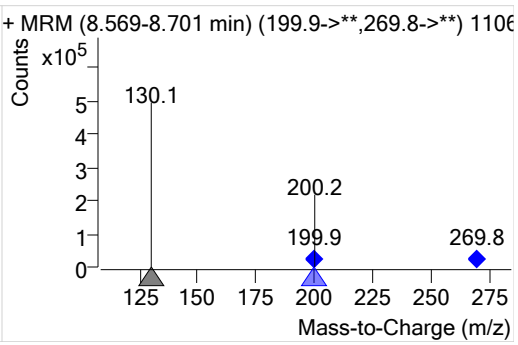




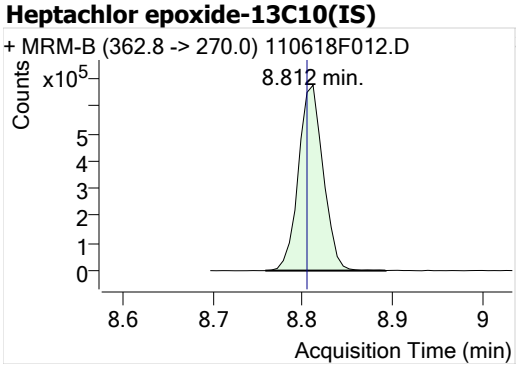
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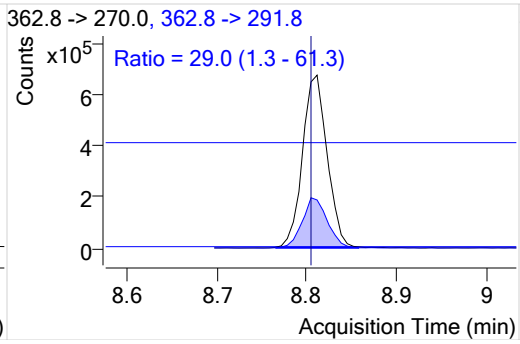


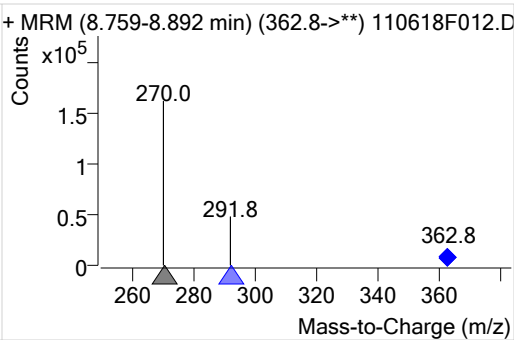




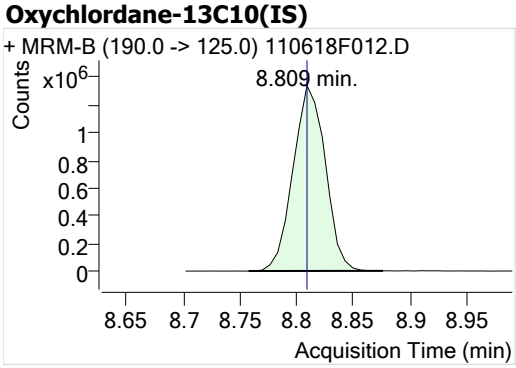
Heptachlor epoxide-13C10(IS)

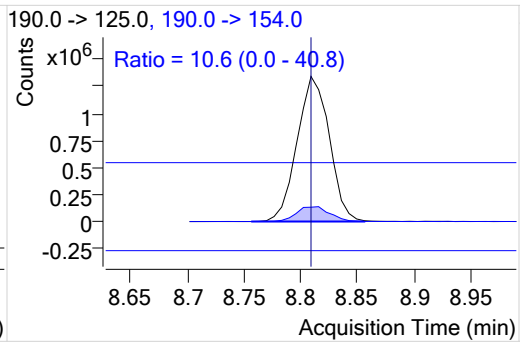


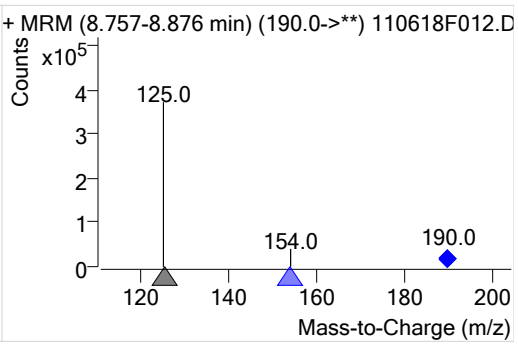




Oxychlordane-13C10(IS)

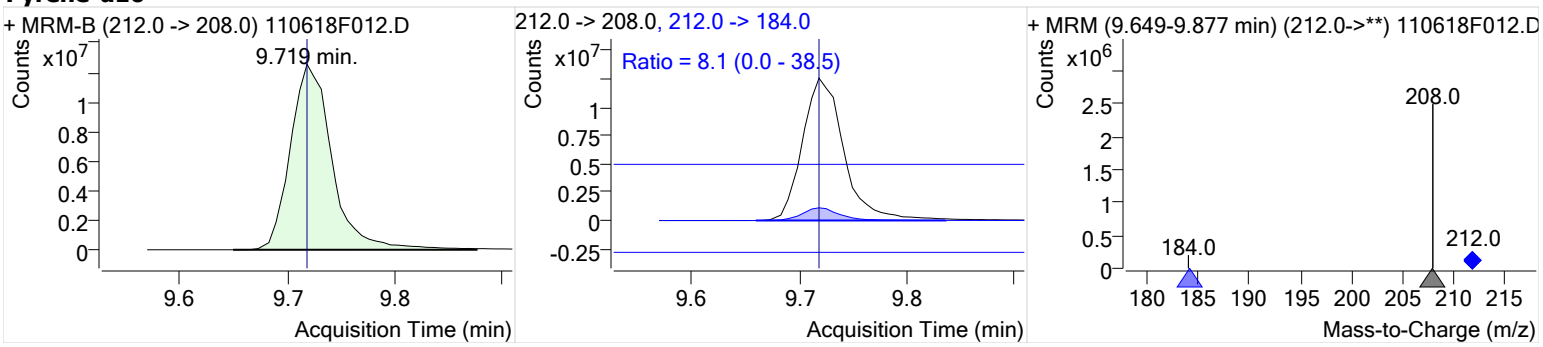




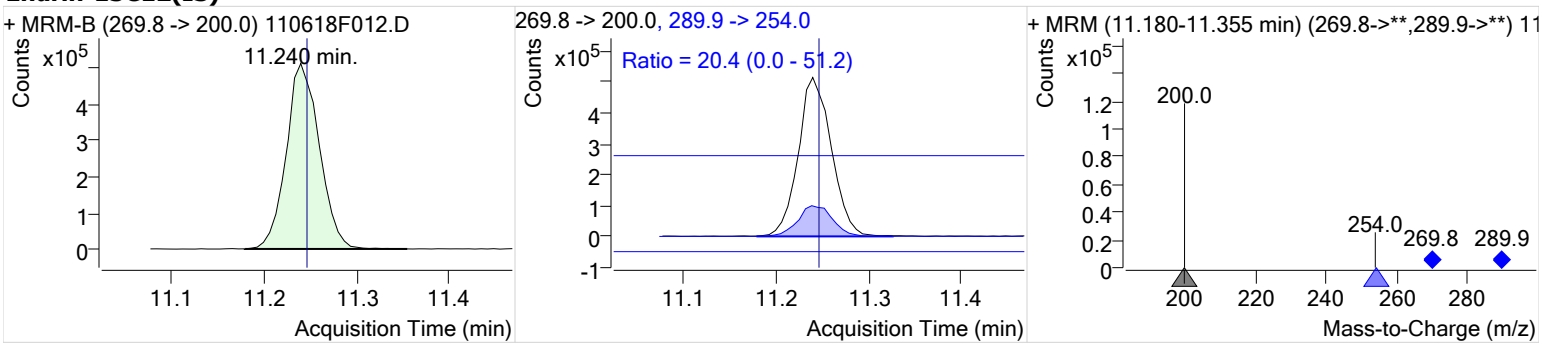


Quantitative Analysis Sample Report

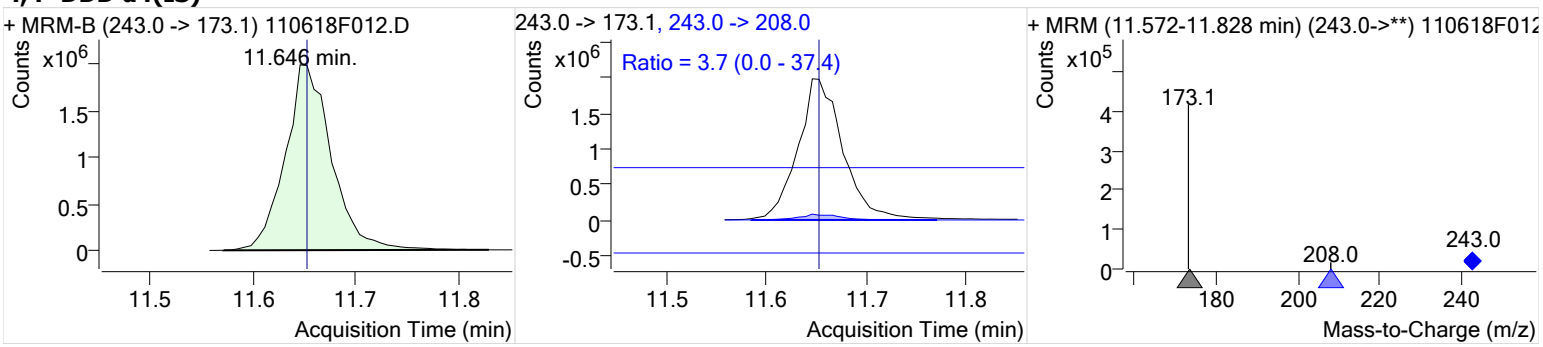
Pyrene-d10



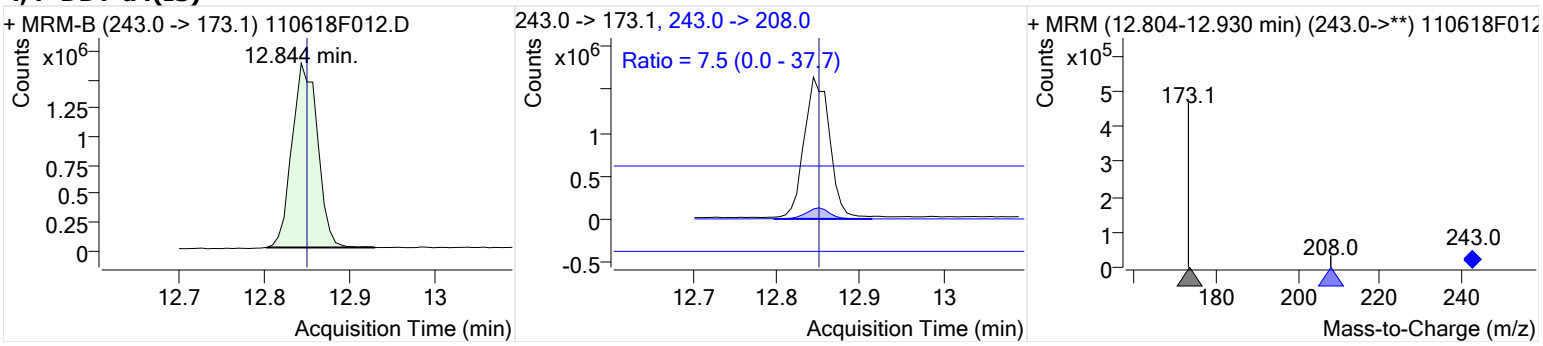
Endrin-13C12(IS)



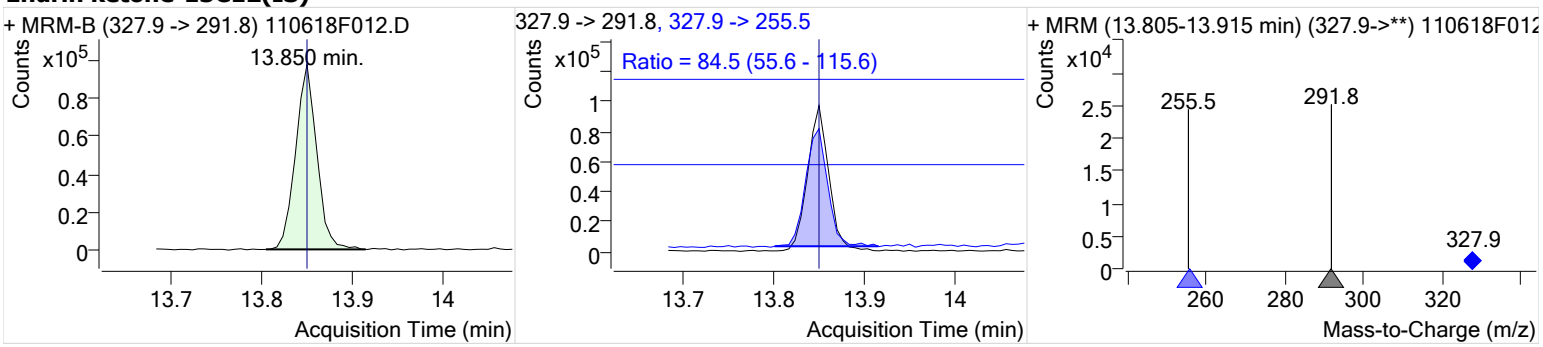
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

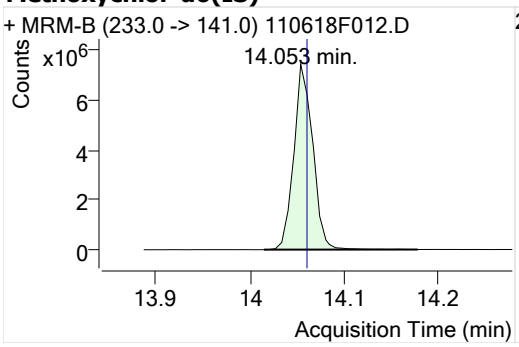


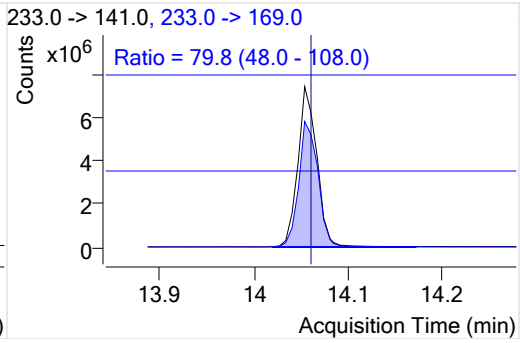
Endrin ketone-13C12(IS)

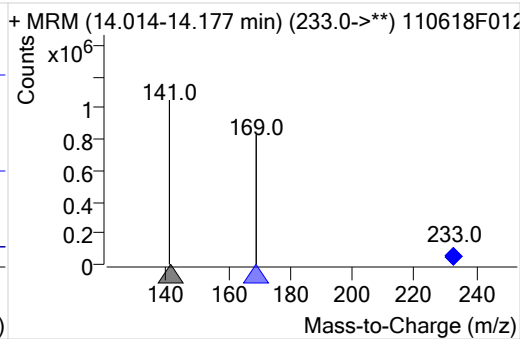


Quantitative Analysis Sample Report

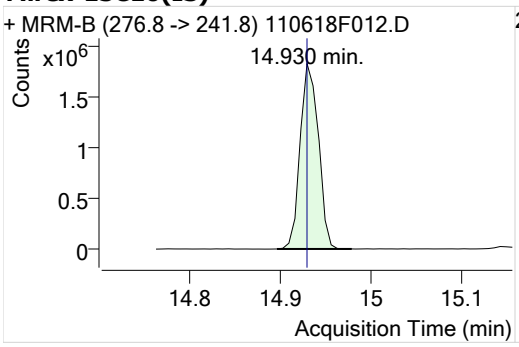
Methoxychlor-d6(IS)

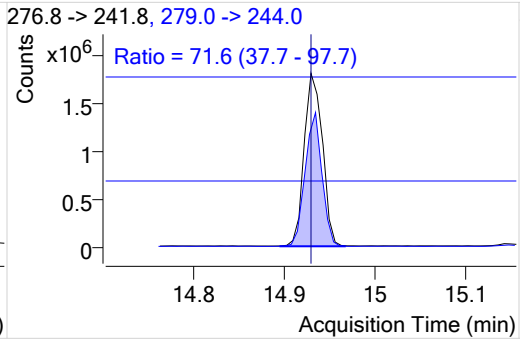


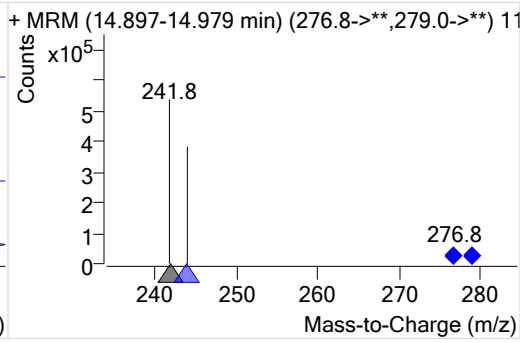




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F013.D	**Vial**	4
Acq. Date-Time	11/6/2018 5:40:42 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 1ng/mL SVM59-48B	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	5715598	20.000 ng/ml	0.002
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	12403578	20.000 ng/ml	0.001
Heptachlor-13C10(IS)	7.222	276.8 -> 241.8	6703758	20.000 ng/ml	0.006
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	7030008	20.000 ng/ml	0.001
Aldrin-13C(IS)	7.952	269.8 -> 200.0	4710510	20.000 ng/ml	0.001
Octachlorostyrene-13C8(IS)	8.541	315.8 -> 245.8	3279487	20.000 ng/ml	0.003
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	5201951	20.000 ng/ml	0.000
Heptachlor epoxide-13C10(IS)	8.805	362.8 -> 270.0	1751269	20.000 ng/ml	0.003
Oxychlordane-13C10(IS)	8.816	190.0 -> 125.0	3247897	20.000 ng/ml	0.003
Pyrene-d10	9.722	212.0 -> 208.0	48317111	100.000 ng/ml	0.002
Endrin-13C12(IS)	11.240	269.8 -> 200.0	1890116	20.000 ng/ml	0.004
4,4'-DDD d4(IS)	11.652	243.0 -> 173.1	9552583	5.000 ng/ml	0.003
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	5189842	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	243430	20.000 ng/ml	0.000
Methoxychlor-d6(IS)	14.060	233.0 -> 141.0	16022673	20.000 ng/ml	0.000
Mirex-13C10(IS)	14.937	276.8 -> 241.8	3687429	5.000 ng/ml	0.006

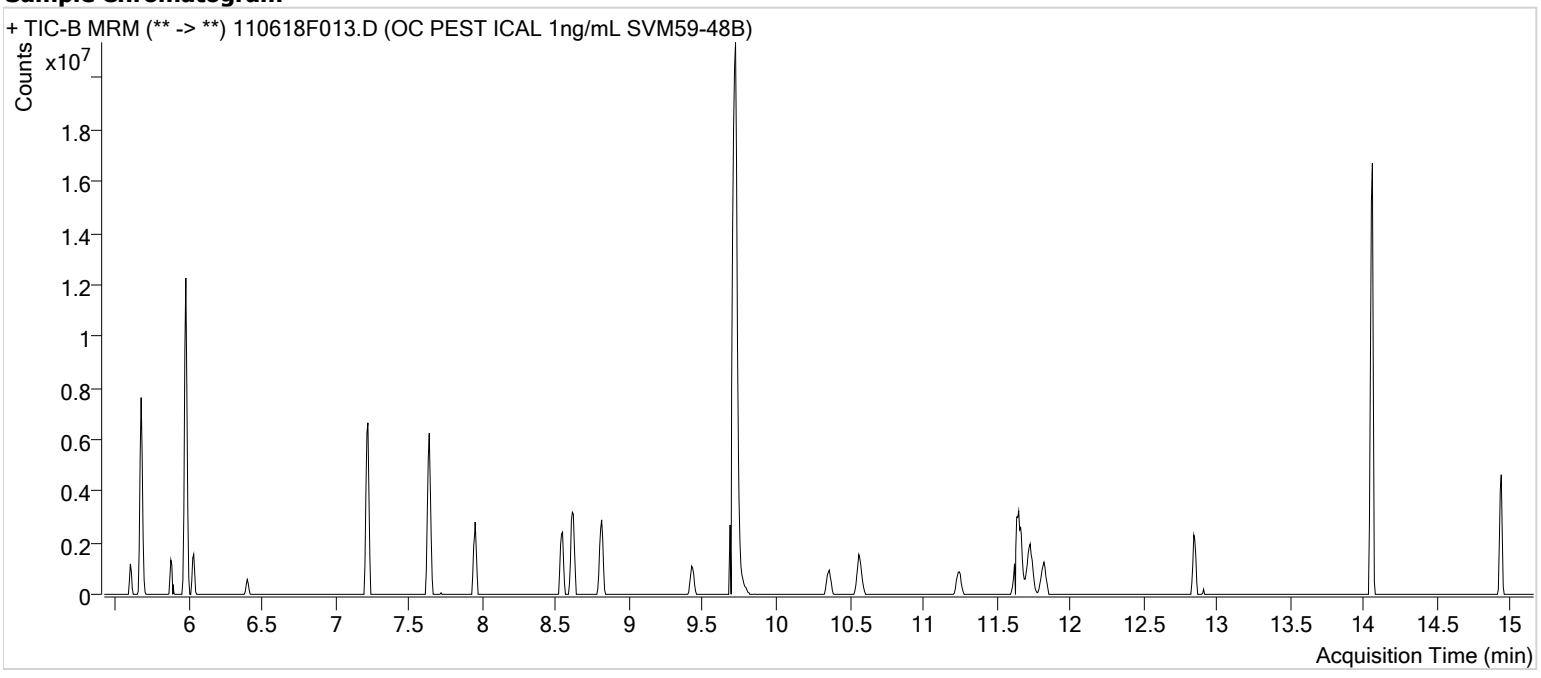
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	5715598	15.513 ng/ml	
		Spiked Amount =	20.0	Recovery =	*77.6 %*
γ-BHC-d6	5.983	223.9 -> 187.0	12403578	17.548 ng/ml	
		Spiked Amount =	20.0	Recovery =	*87.7 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	6703758	18.837 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.2 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	7030008	19.266 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.3 %*
Aldrin-13C	7.952	269.8 -> 200.0	4710510	18.652 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.3 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3279487	17.701 ng/ml	
		Spiked Amount =	20.0	Recovery =	*88.5 %*
Isodrin-13C12	8.616	199.9 -> 130.1	5201951	18.633 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.2 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1751269	19.059 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.3 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3247897	16.731 ng/ml	
		Spiked Amount =	20.0	Recovery =	*83.7 %*
Endrin-13C12	11.247	269.8 -> 200.0	1890116	19.821 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.1 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	9552583	4.852 ng/ml	
		Spiked Amount =	5.0	Recovery =	*97.0 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	5189842	4.621 ng/ml	
		Spiked Amount =	5.0	Recovery =	*92.4 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	243430	20.312 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.6 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	16022673	18.722 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.6 %*
Mirex-13C10	14.930	276.8 -> 241.8	3687429	4.194 ng/ml	
		Spiked Amount =	5.0	Recovery =	*83.9 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc. Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	882980	1.014 ng/ml	88
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	596644	1.203 ng/ml	94
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	1206825	1.050 ng/ml	99
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.040	181.1 -> 145.1	1379976	0.999 ng/ml	99
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	574517	1.111 ng/ml	94
Heptachlor	Heptachlor-13C10(IS)	7.226	271.7 -> 236.9	388810	1.039 ng/ml	1
Chorpyrifos	Chorpyrifos-d10(IS)	7.723	196.9 -> 169.0	485198	1.012 ng/ml	97
Aldrin	Aldrin-13C(IS)	7.956	254.9 -> 220.0	516267	0.785 ng/ml	26
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.553	342.8 -> 307.8	411232	0.985 ng/ml	98
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	253012	0.954 ng/ml	97
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	86458	0.907 ng/ml	99
Oxychlordane	Oxychlordane-13C10(IS)	8.824	114.9 -> 51.1	483291	1.071 ng/ml	98
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.426	271.8 -> 236.9	161919	1.084 ng/ml	97
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	1545946	0.998 ng/ml	95
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	384968	1.062 ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.798	206.9 -> 172.0	87877	0.885 ng/ml	95
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	258428	1.047 ng/ml	99
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	1533473	1.100 ng/ml	97
2,4'-DDD	4,4'-DDD d4(IS)	10.567	235.0 -> 165.1	2255767	1.119 ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.583	262.9 -> 193.0	129781	0.973 ng/ml	98
Endosulfan II	Endrin-13C12(IS)	11.250	206.9 -> 172.0	167691	0.667 ng/ml	80
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	125171	1.015 ng/ml	94
2,4'-DDT	4,4'-DDT-d4(IS)	11.827	235.0 -> 165.1	2128810 ***m***	1.008 ng/ml	91
cis-Nonachlor	Oxychlordane-13C10(IS)	11.756	271.8 -> 236.9	102196	1.075 ng/ml	99
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	3308417 ***m***	1.091 ng/ml	97
Endrin aldehyde	Endrin-13C12(IS)	12.084	249.9 -> 214.9	24856	0.921 ng/ml	89
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	179543	0.949 ng/ml	97
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	1235219	1.078 ng/ml	99
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	81577	1.021 ng/ml	94
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	916600	0.987 ng/ml	96
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	943055	0.935 ng/ml	97

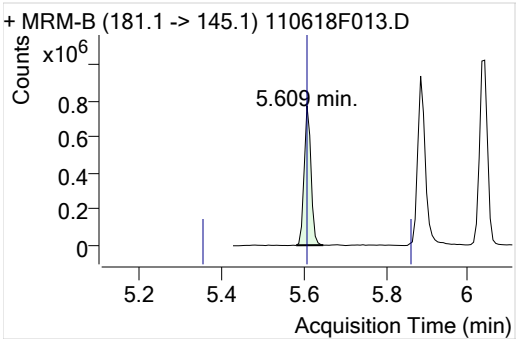
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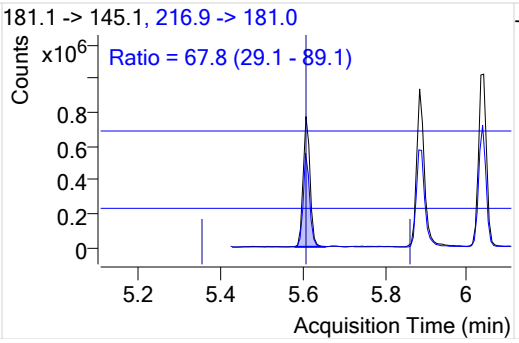
Sample Chromatogram

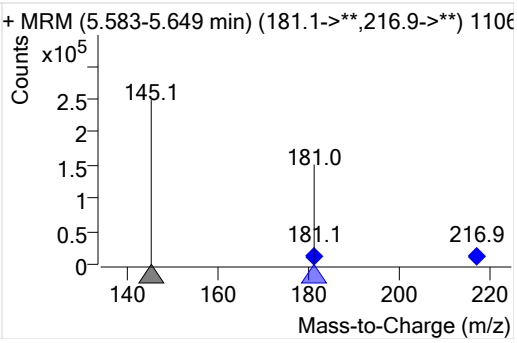


Quantitative Analysis Sample Report

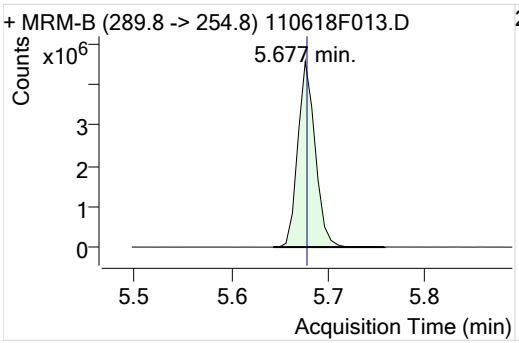
α-BHC

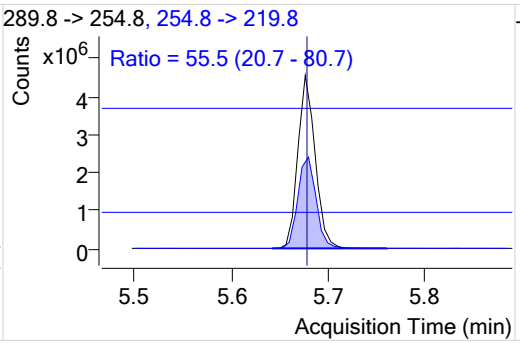


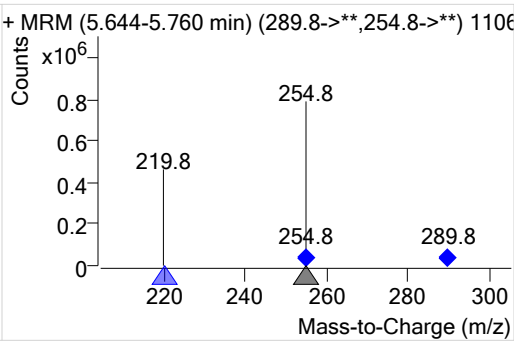




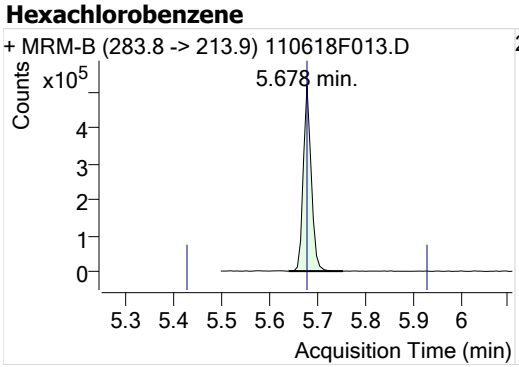
Hexachlorobenzene-13C6

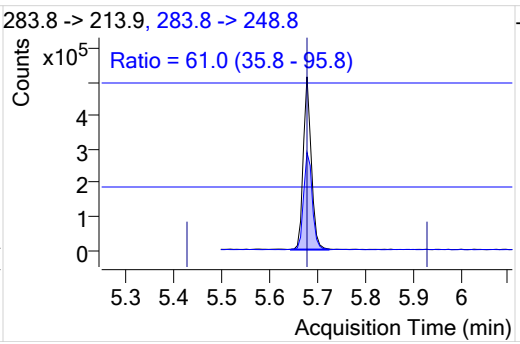


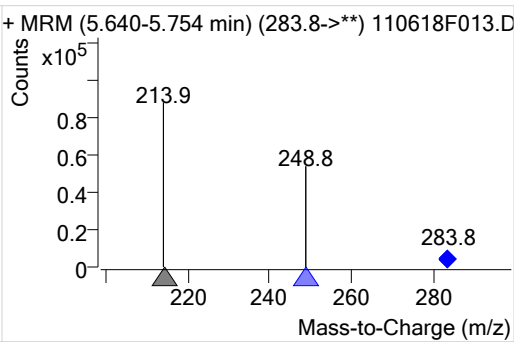




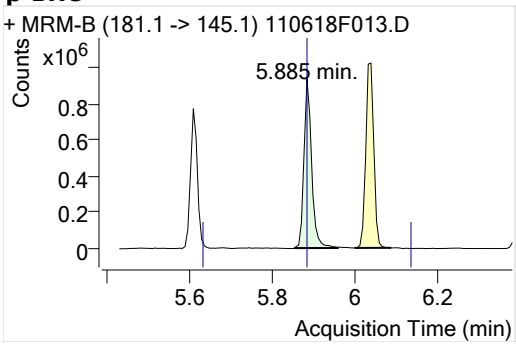
Hexachlorobenzene

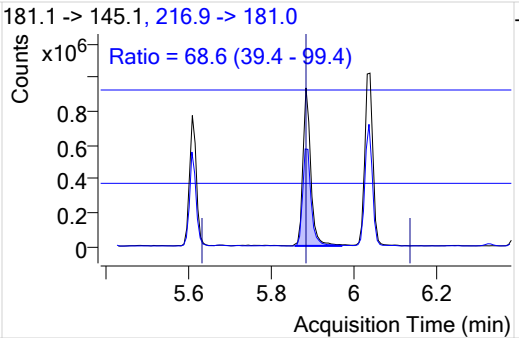


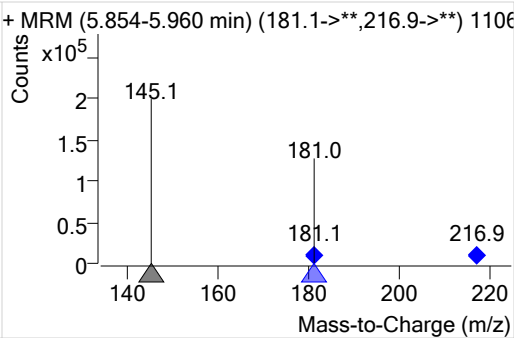




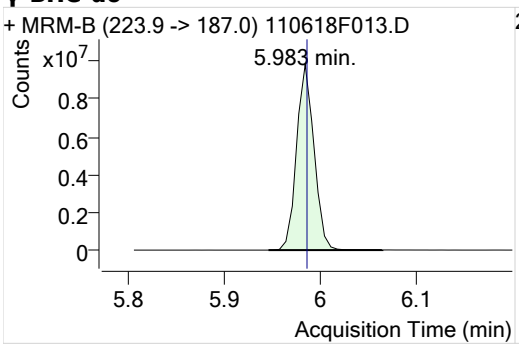
β-BHC

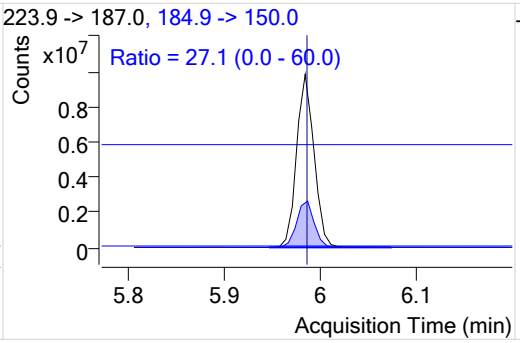


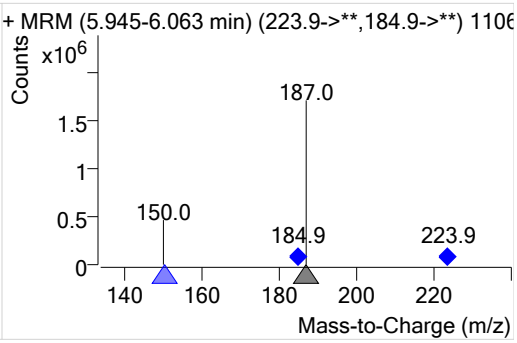




γ-BHC-d6

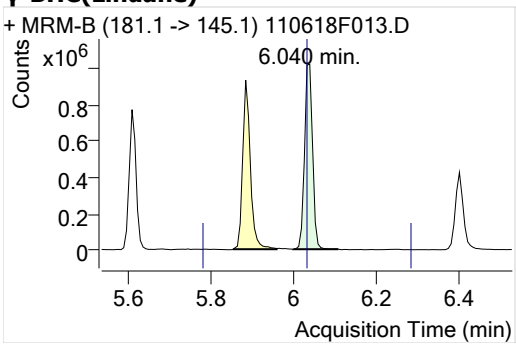


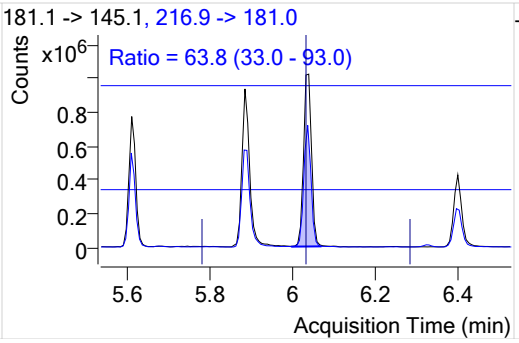


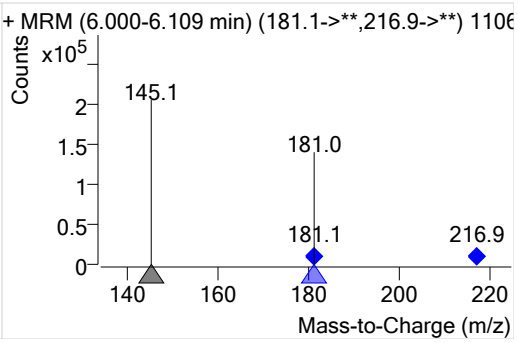


Quantitative Analysis Sample Report

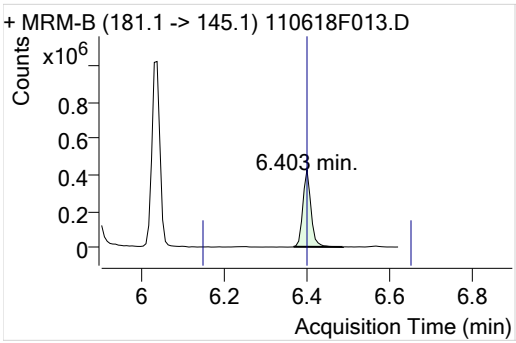
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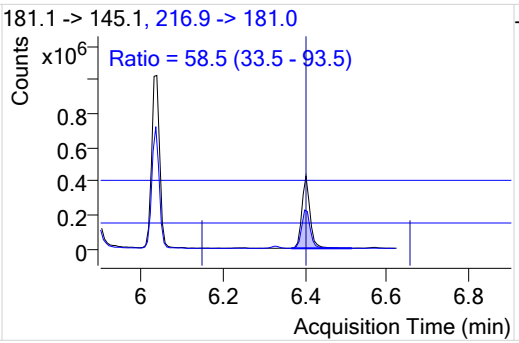


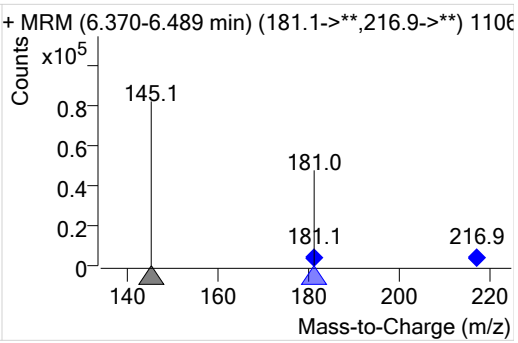




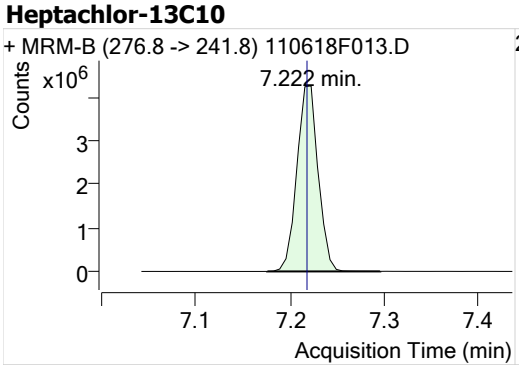
δ-BHC

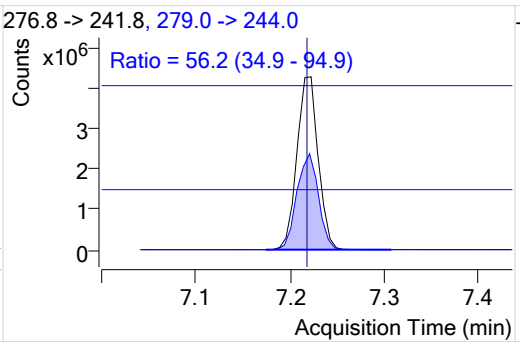


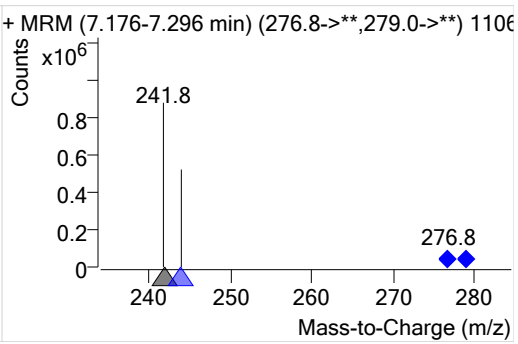




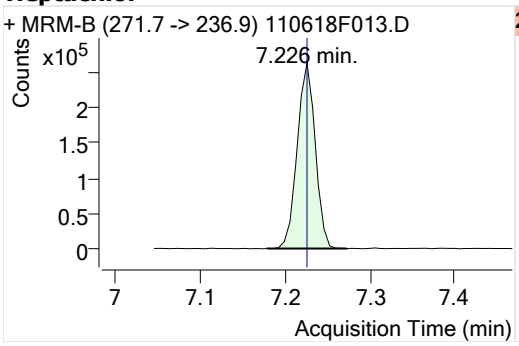
Heptachlor-13C10

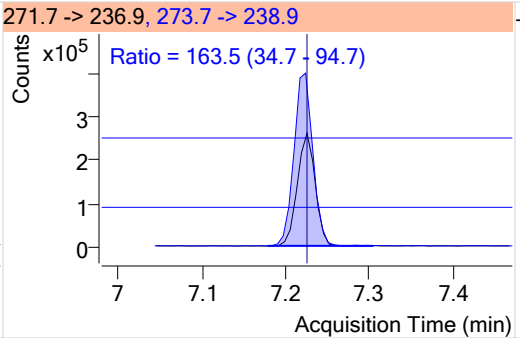


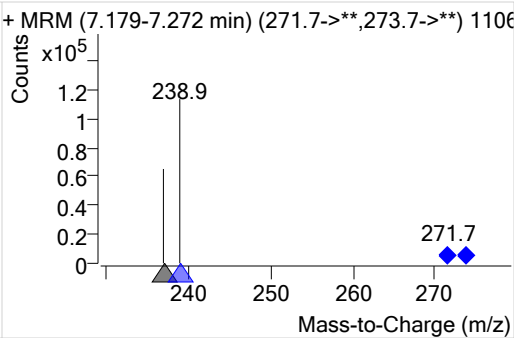




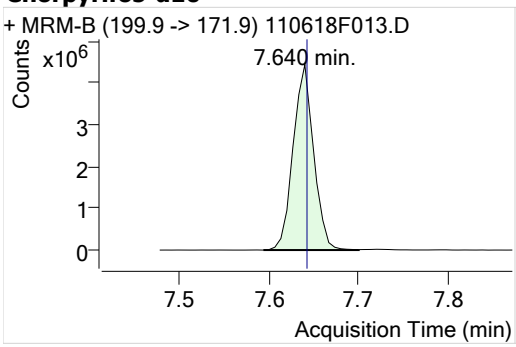
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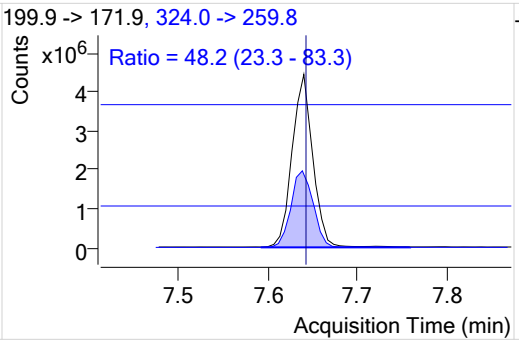


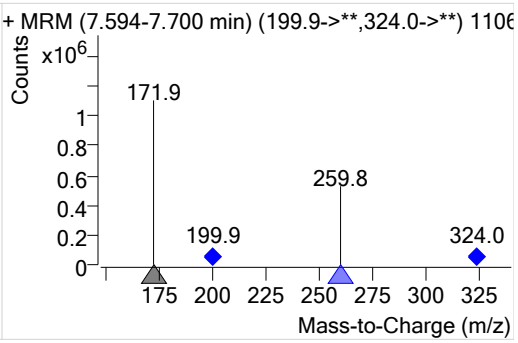




Chorpyrifos-d10

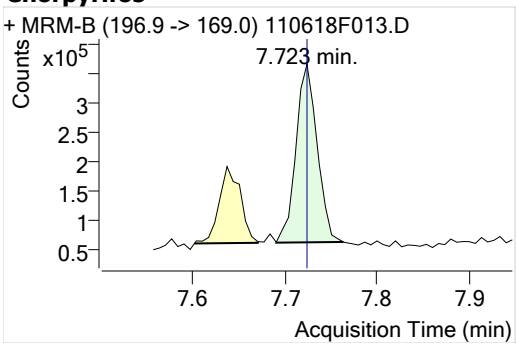


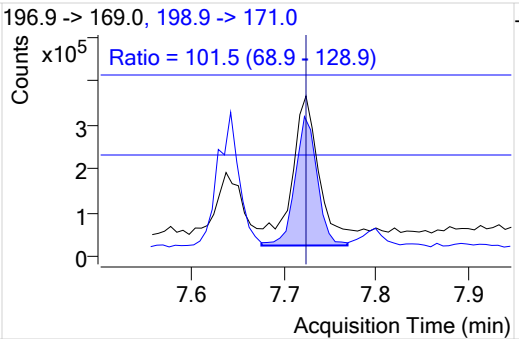


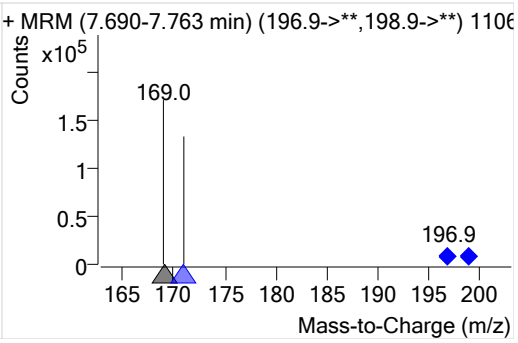


Quantitative Analysis Sample Report

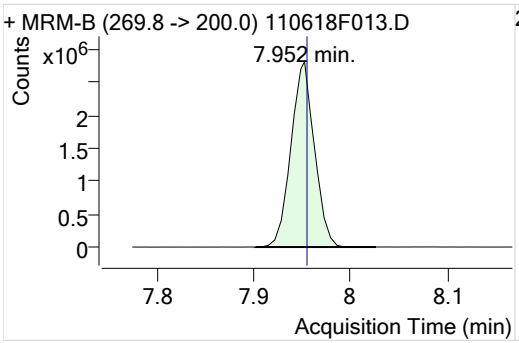
Chorpyrifos

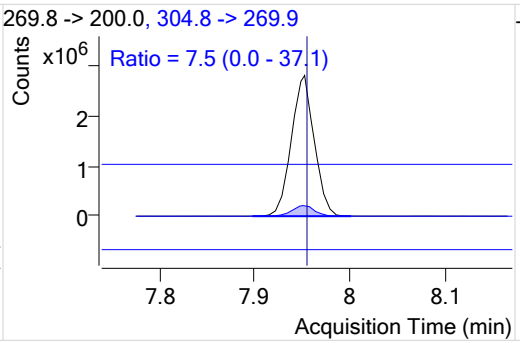


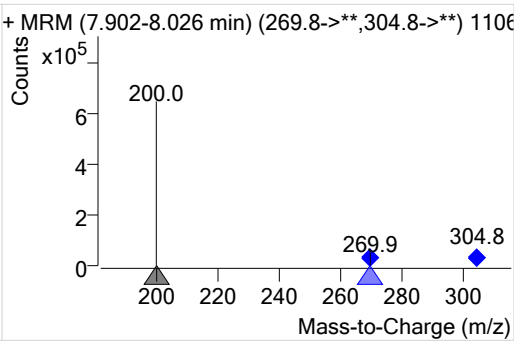




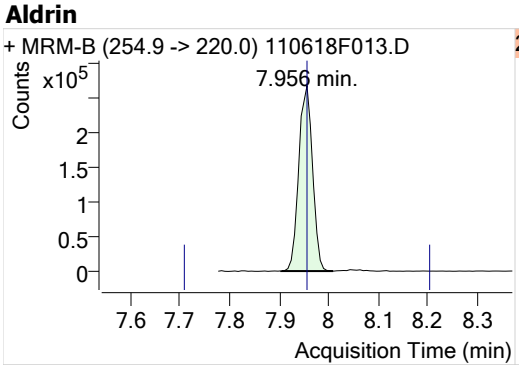
Aldrin-13C

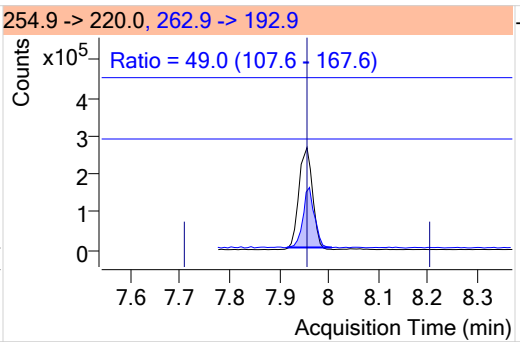


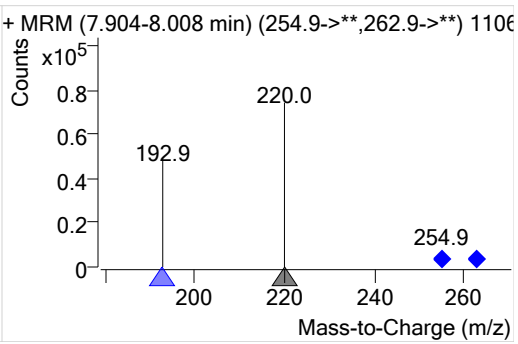




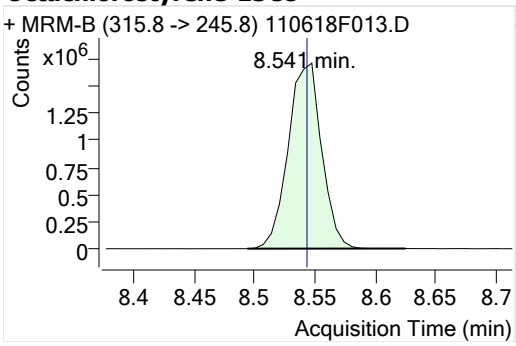
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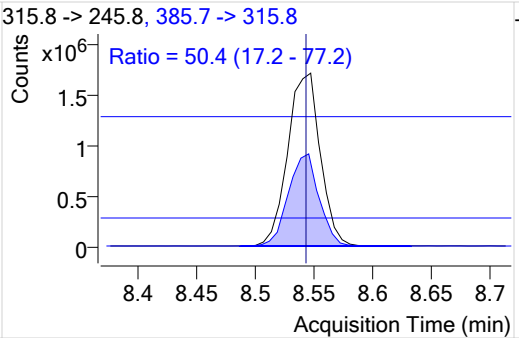


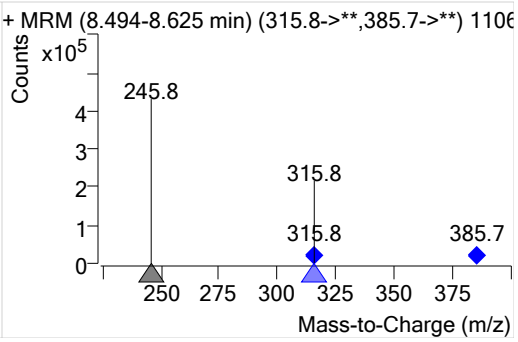




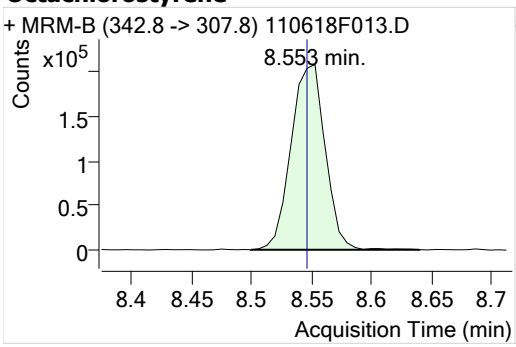
Octachlorostyrene-13C8

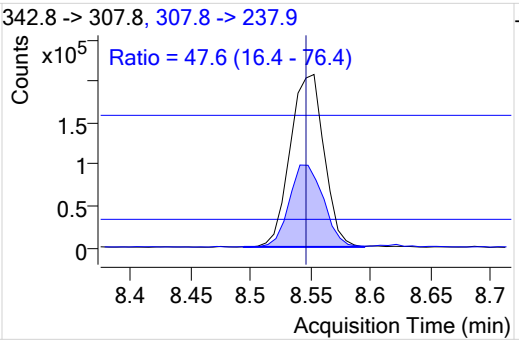


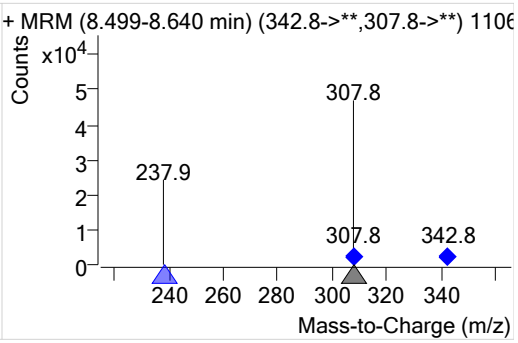




Octachlorostyrene

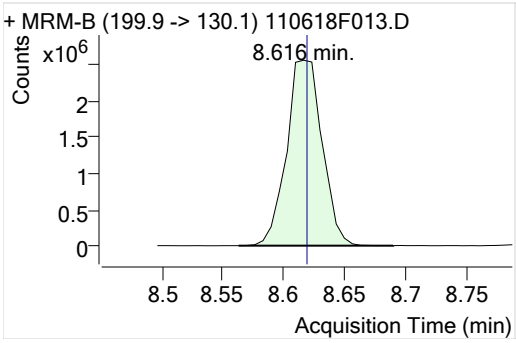


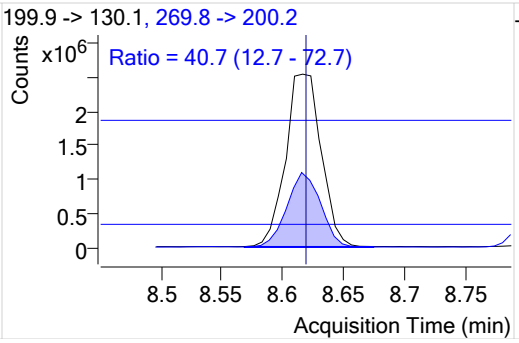


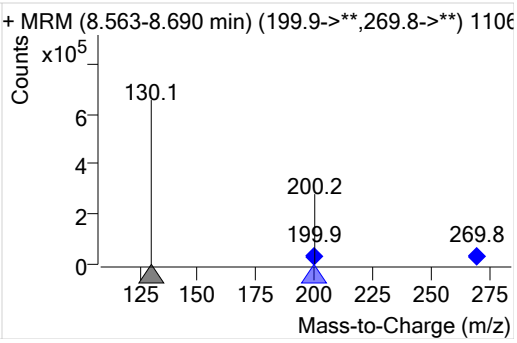


Quantitative Analysis Sample Report

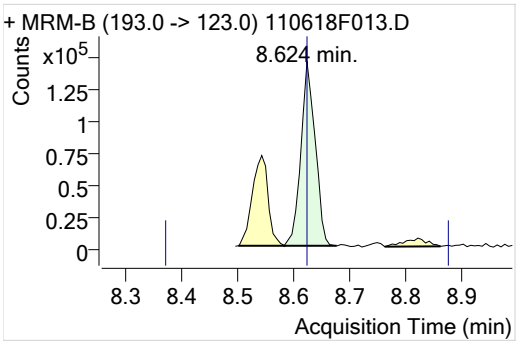
Isodrin-13C12

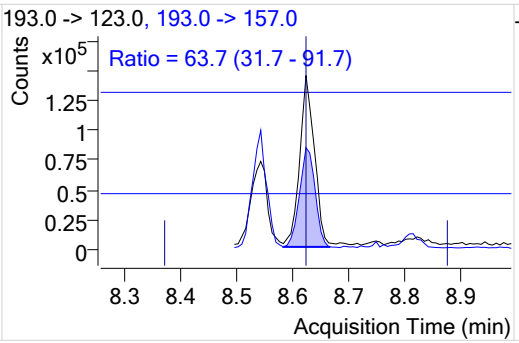


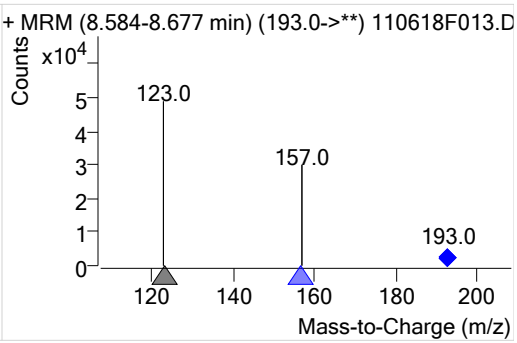




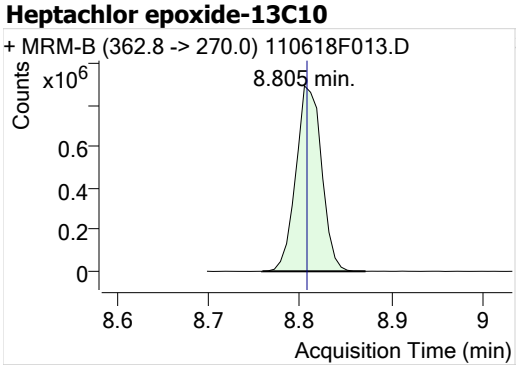
Isodrin

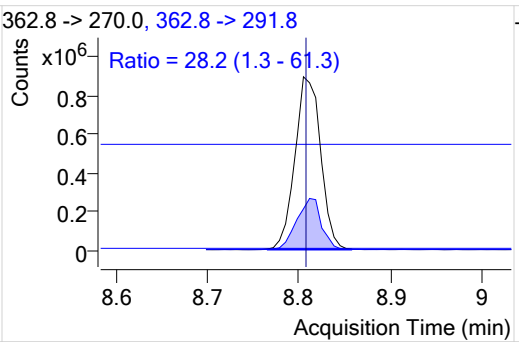


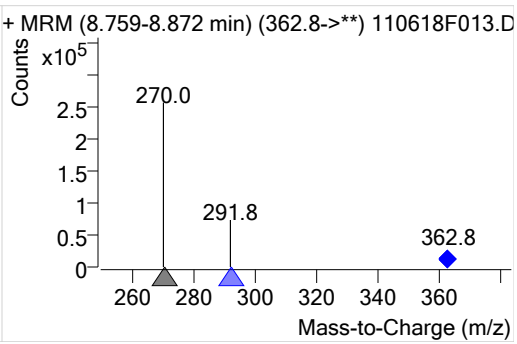




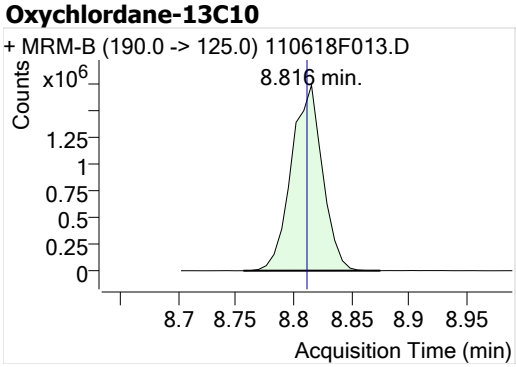
Heptachlor epoxide-13C10

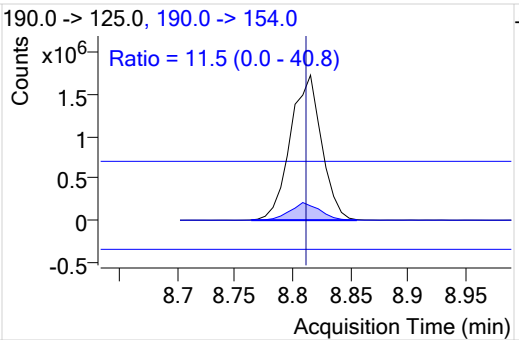


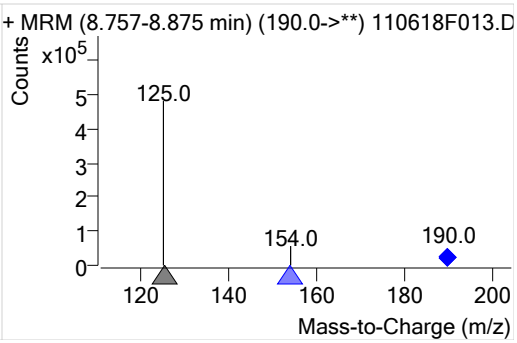




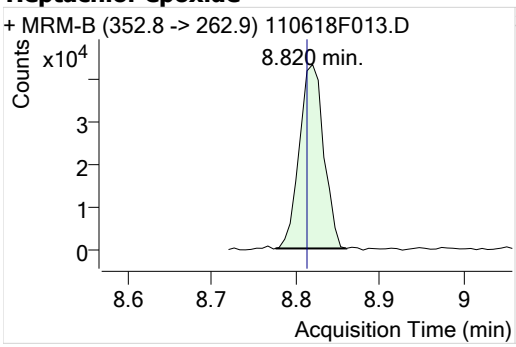
Oxychlordane-13C10

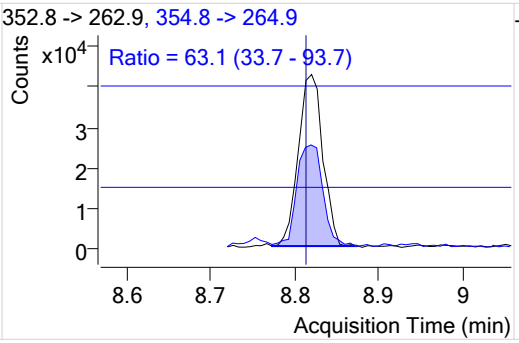


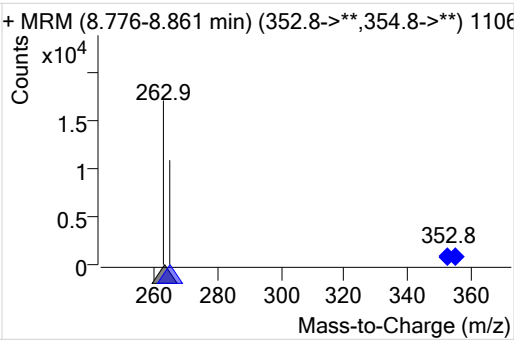




Heptachlor epoxide

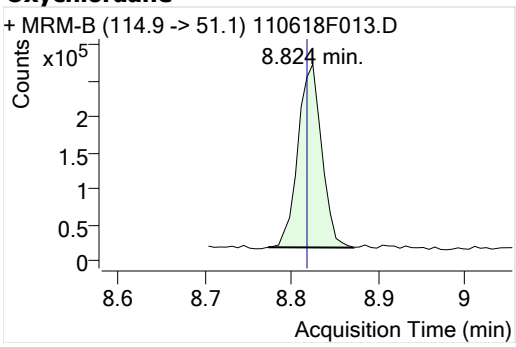


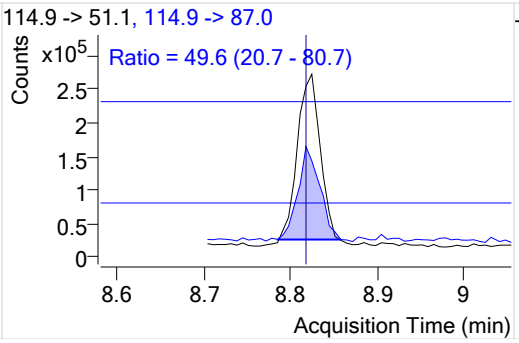


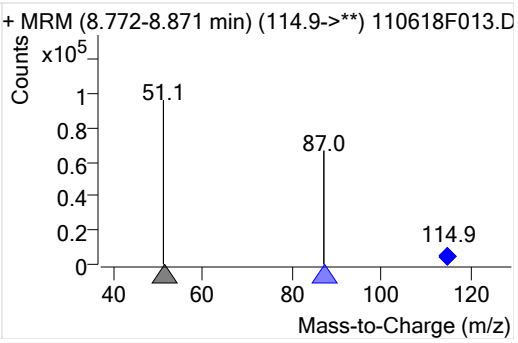


Quantitative Analysis Sample Report

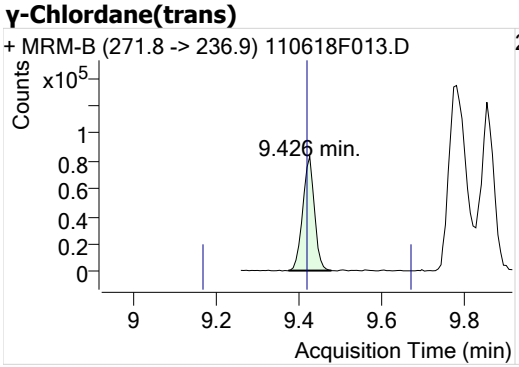
Oxychlordane

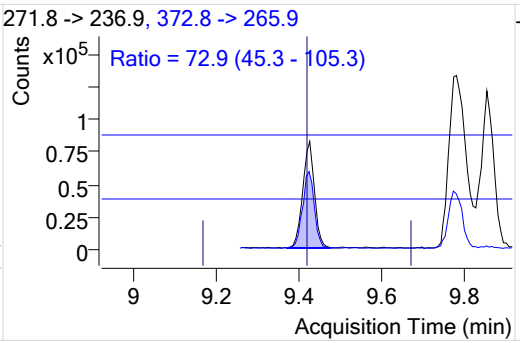


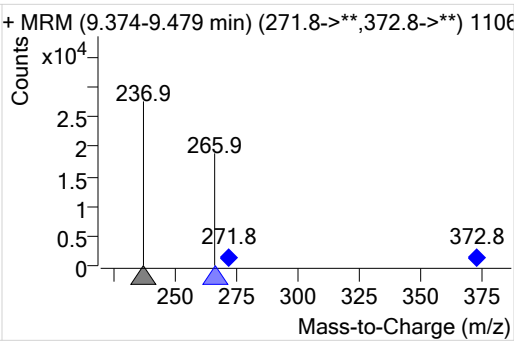




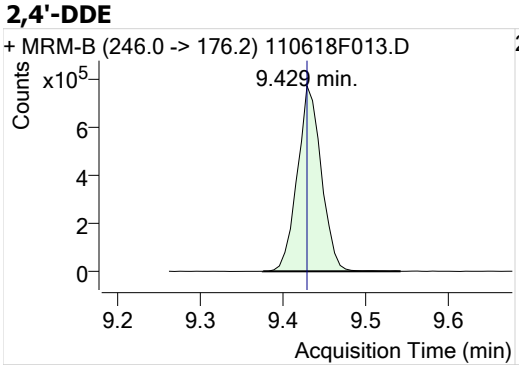
γ-Chlordane(trans)

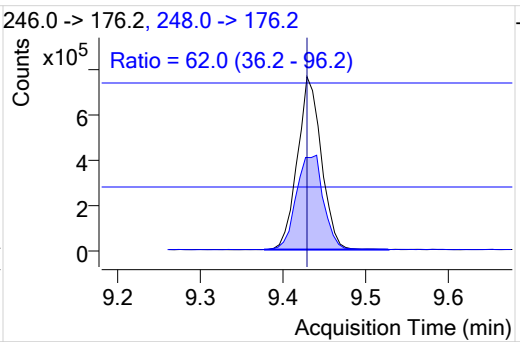


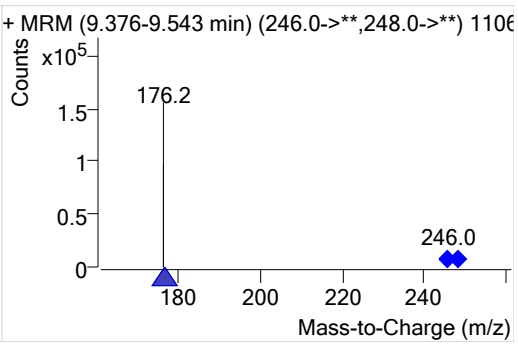




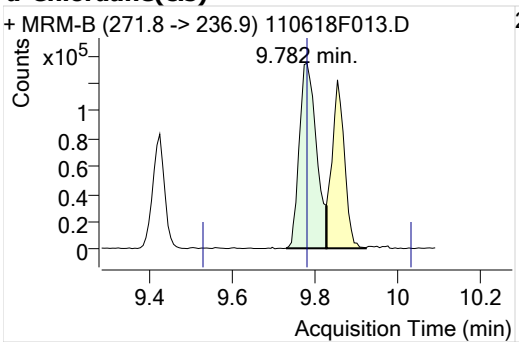
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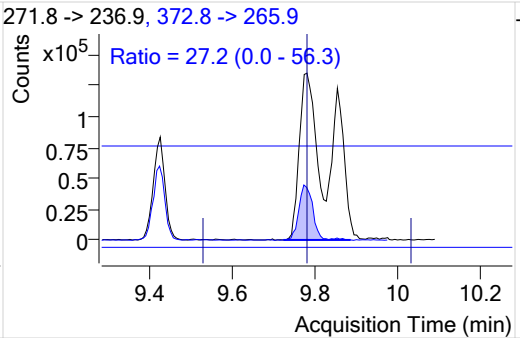


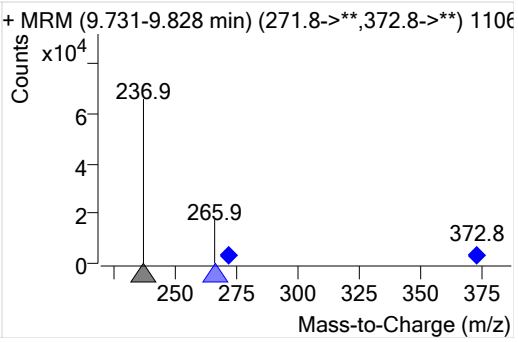




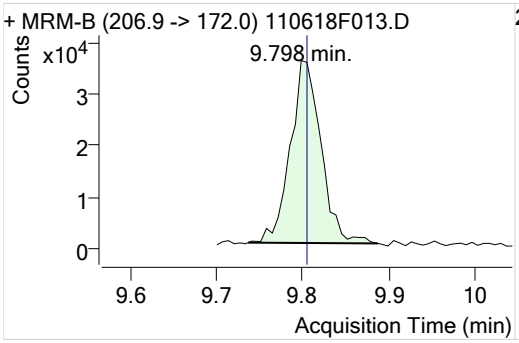
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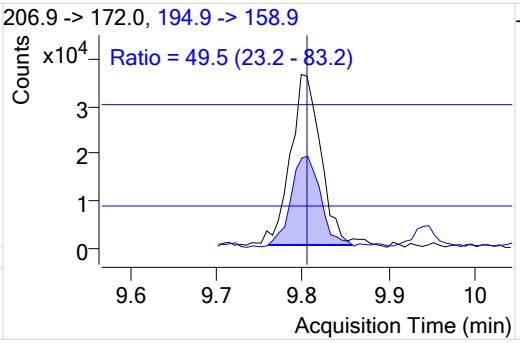


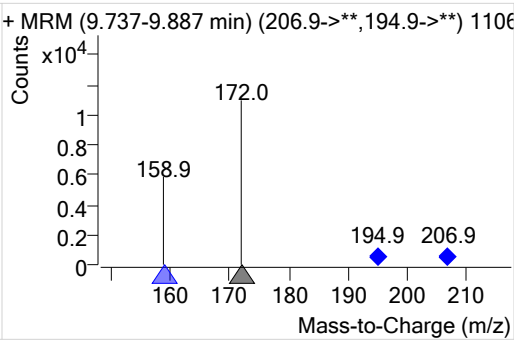




Endosulfan I

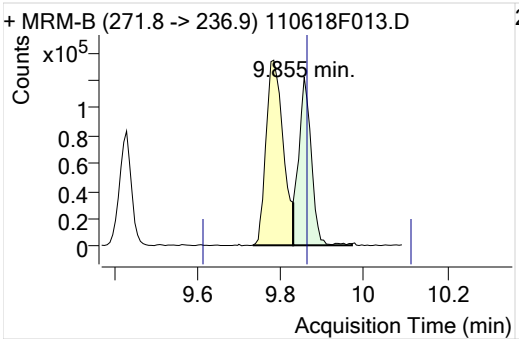


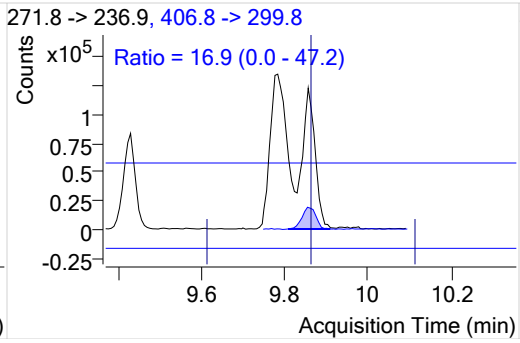


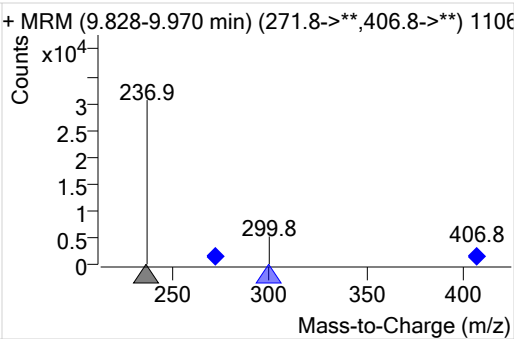


Quantitative Analysis Sample Report

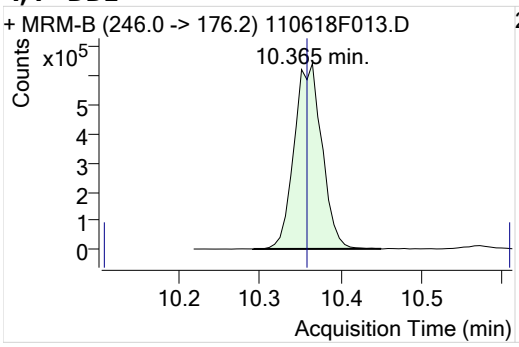
trans-Nanochlor

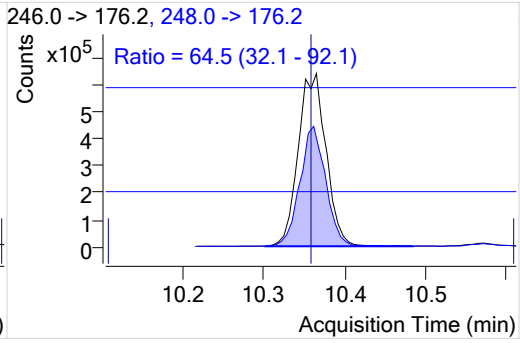


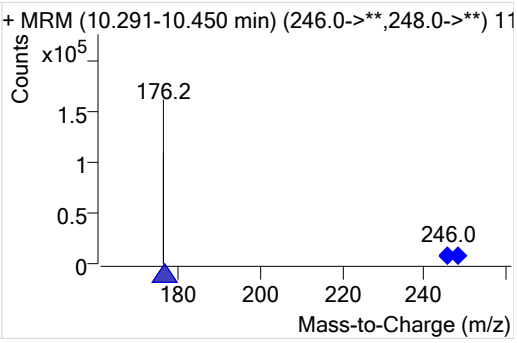




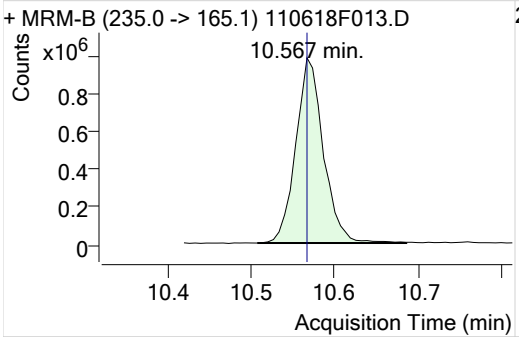
4,4' -DDE

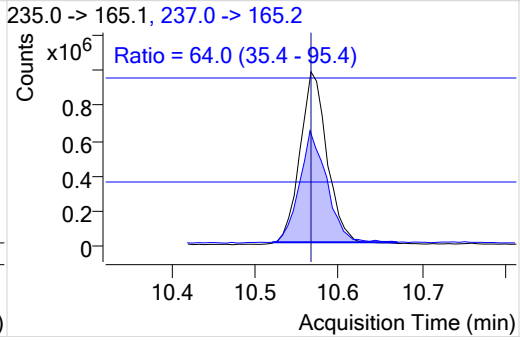


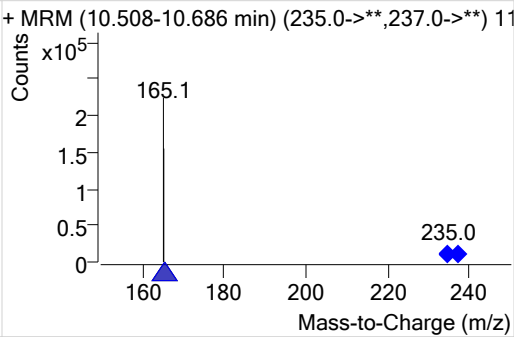




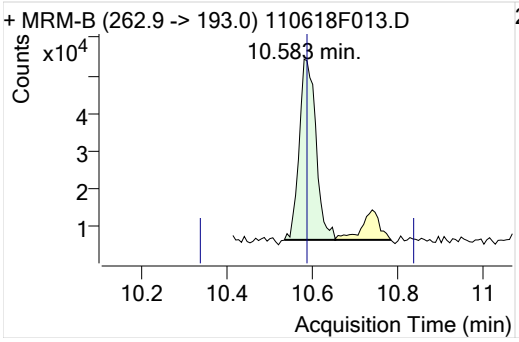
2,4'-DDD

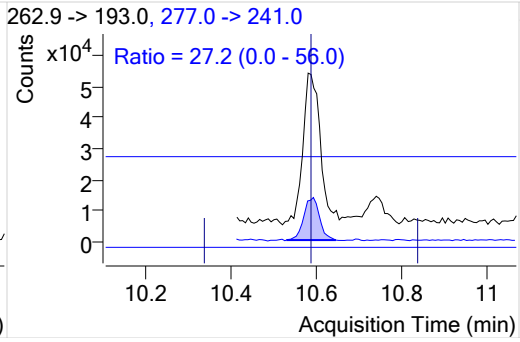


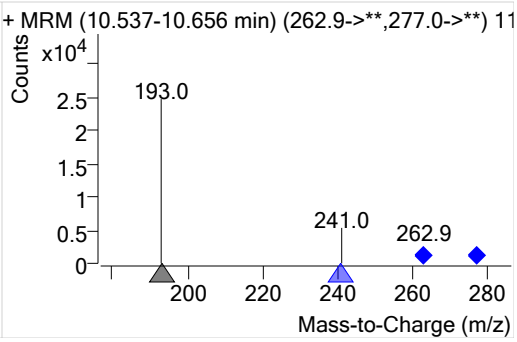




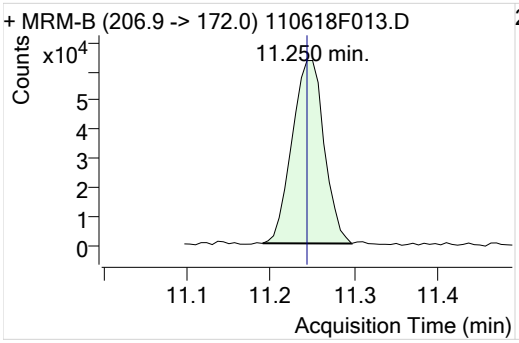
Dieldrin

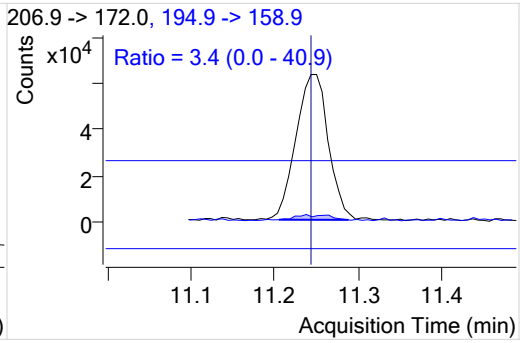


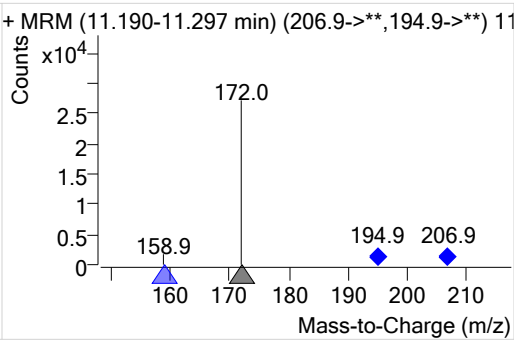




Endosulfan II

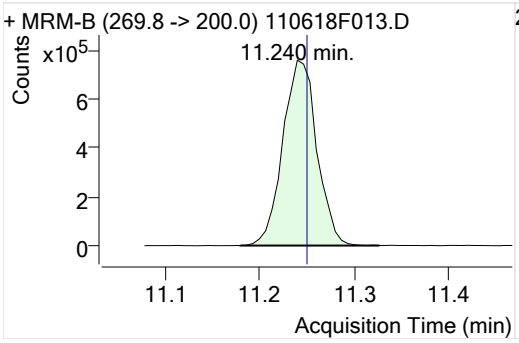


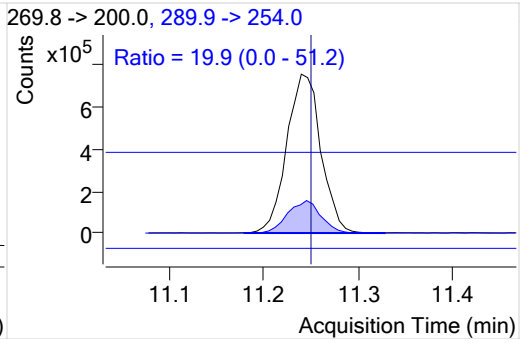


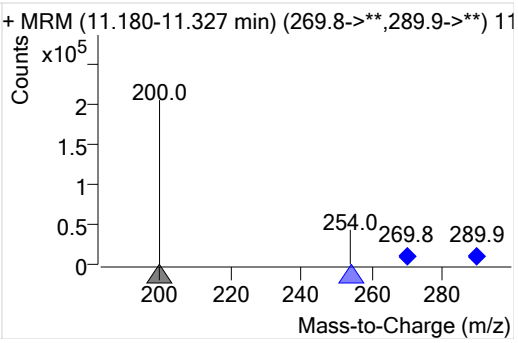


Quantitative Analysis Sample Report

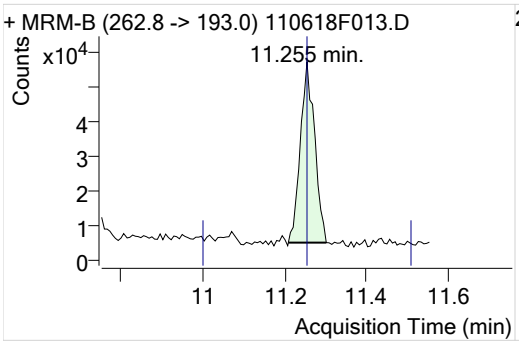
Endrin-13C12

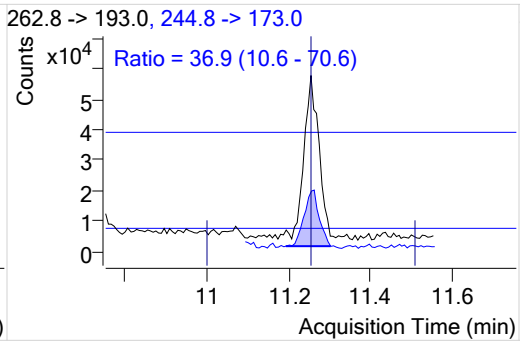


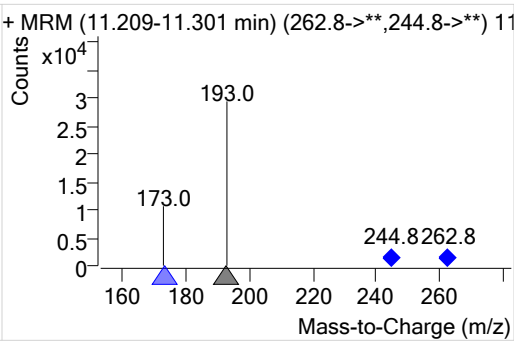




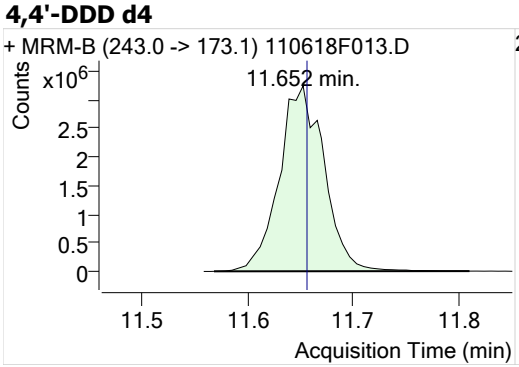
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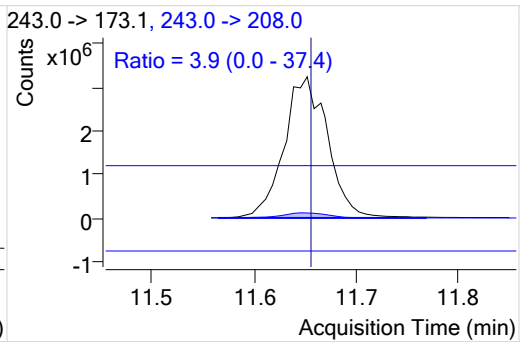


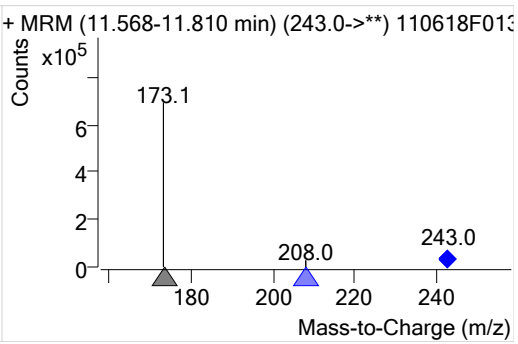




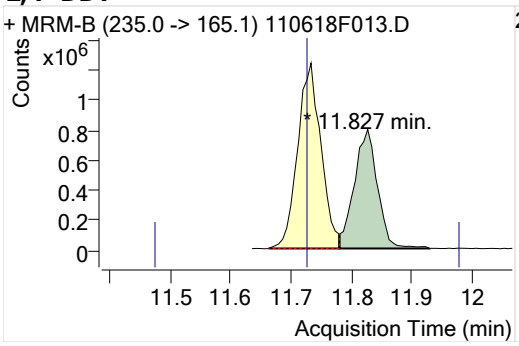
4,4'-DDD d4

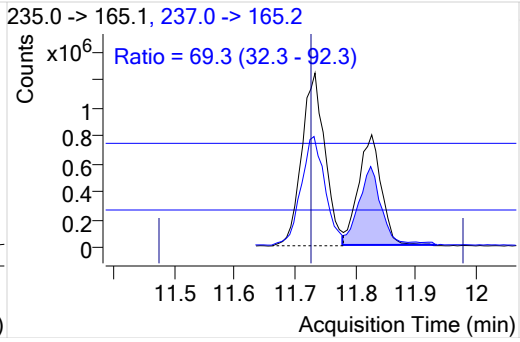


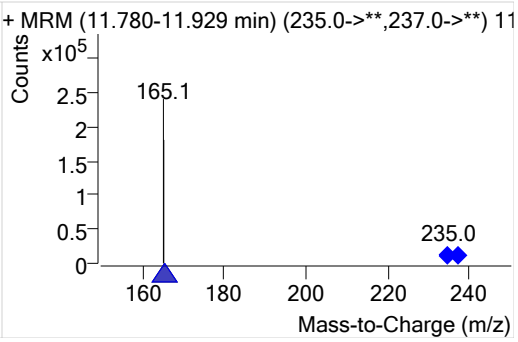




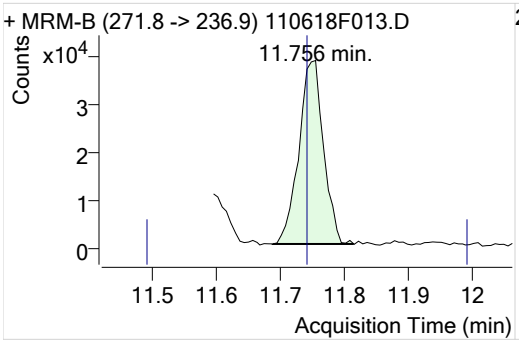
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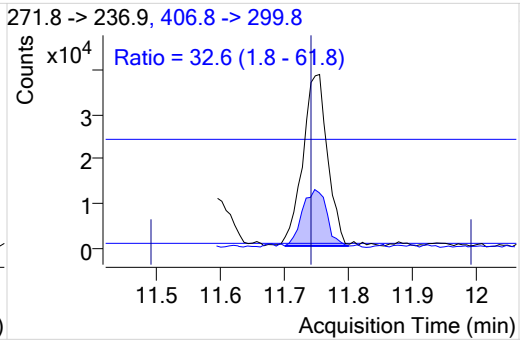


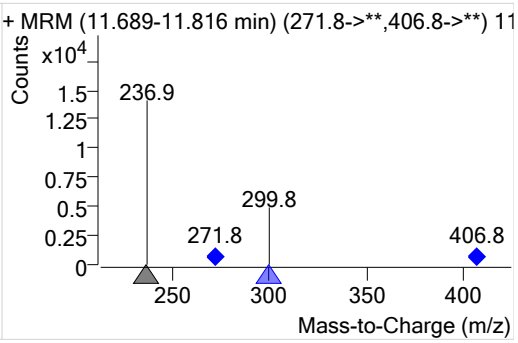




cis-Nonachlor

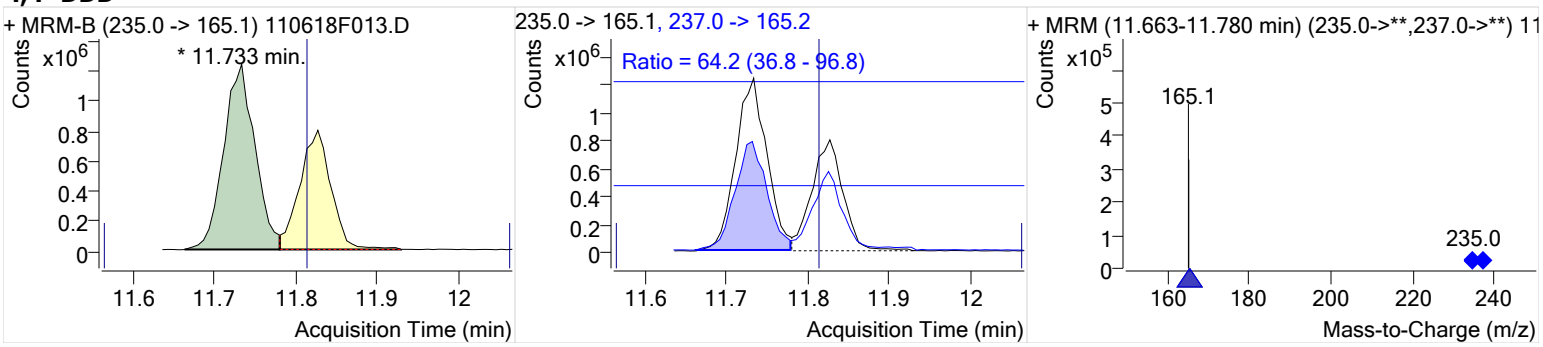




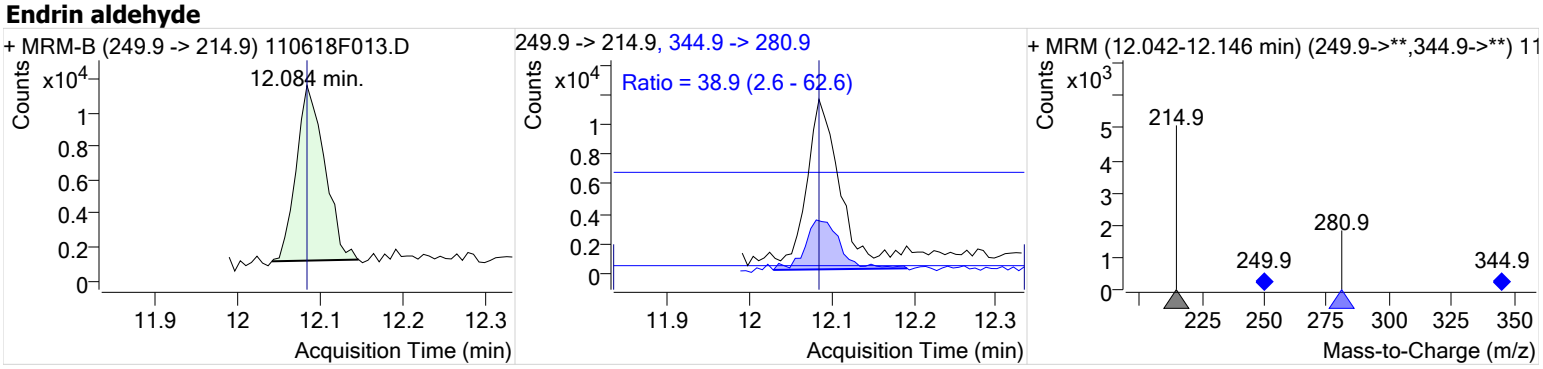


Quantitative Analysis Sample Report

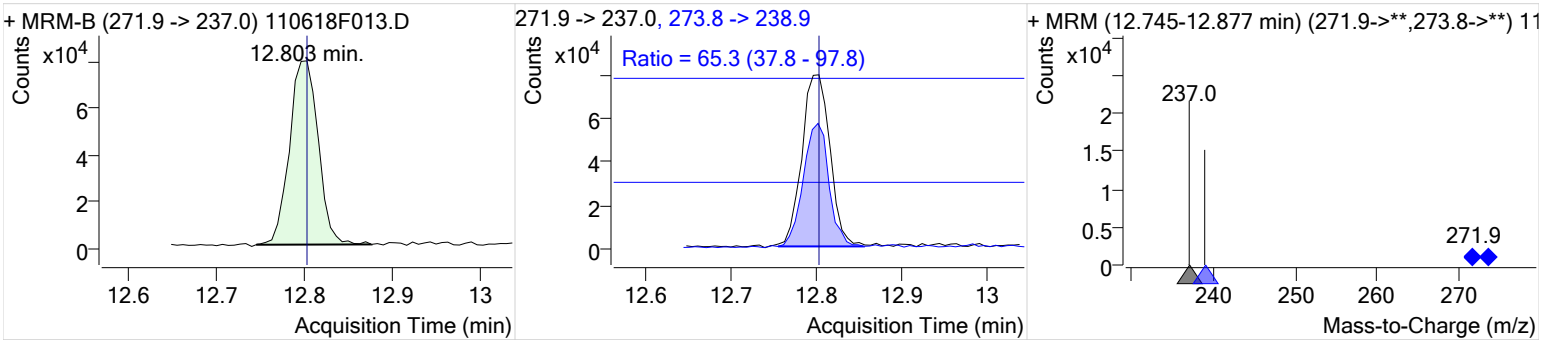
4,4'-DDD



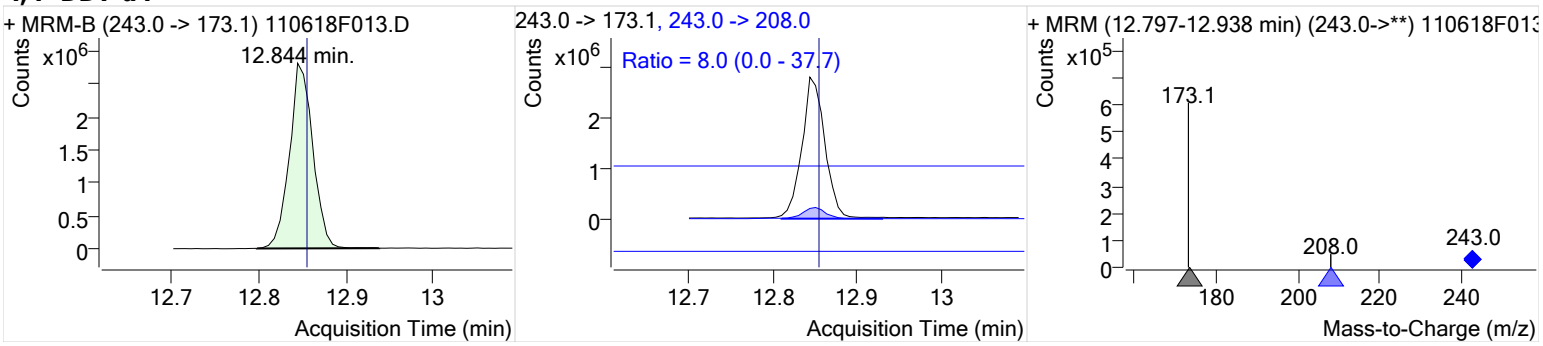
Endrin aldehyde



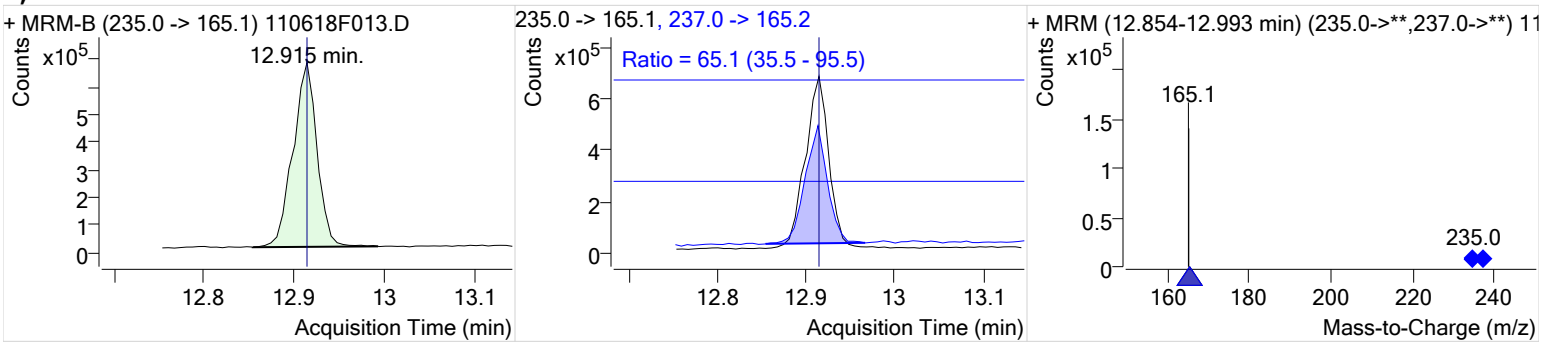
Endosulfan sulfate



4,4'-DDT-d4

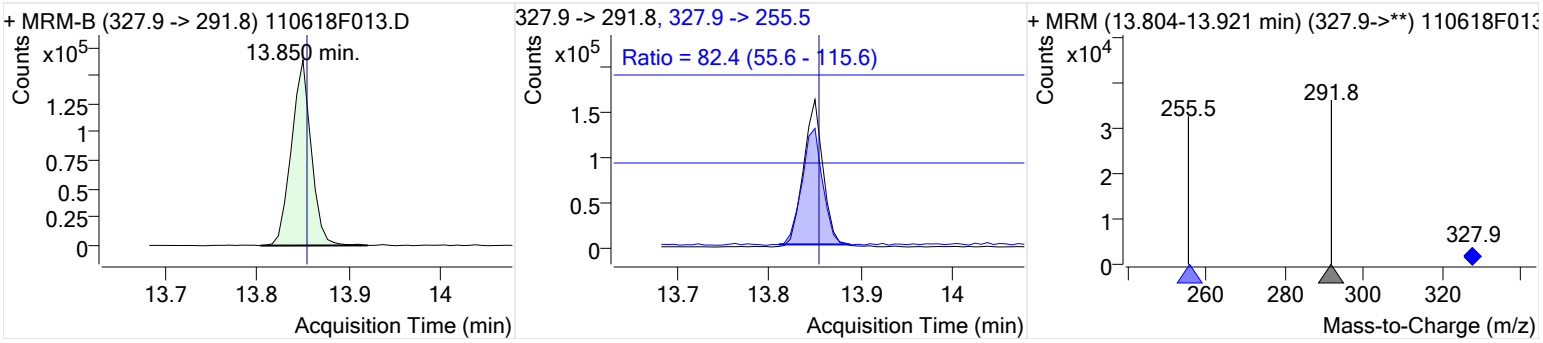


4,4'-DDT

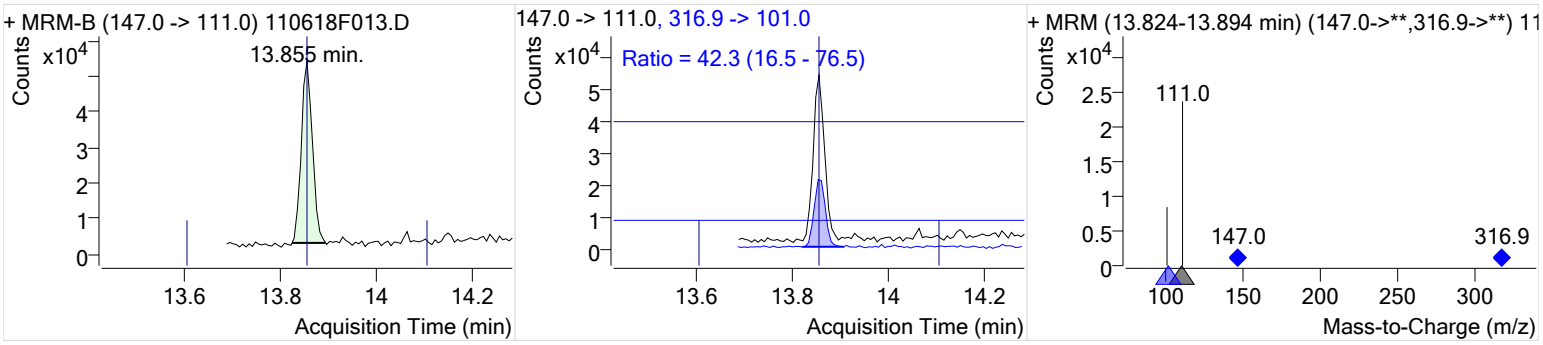


Quantitative Analysis Sample Report

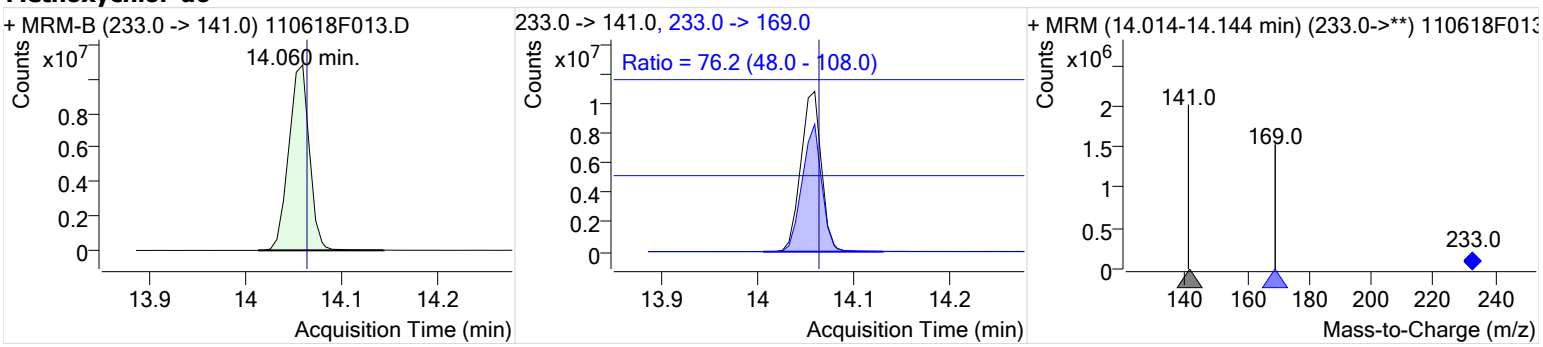
Endrin ketone-13C12



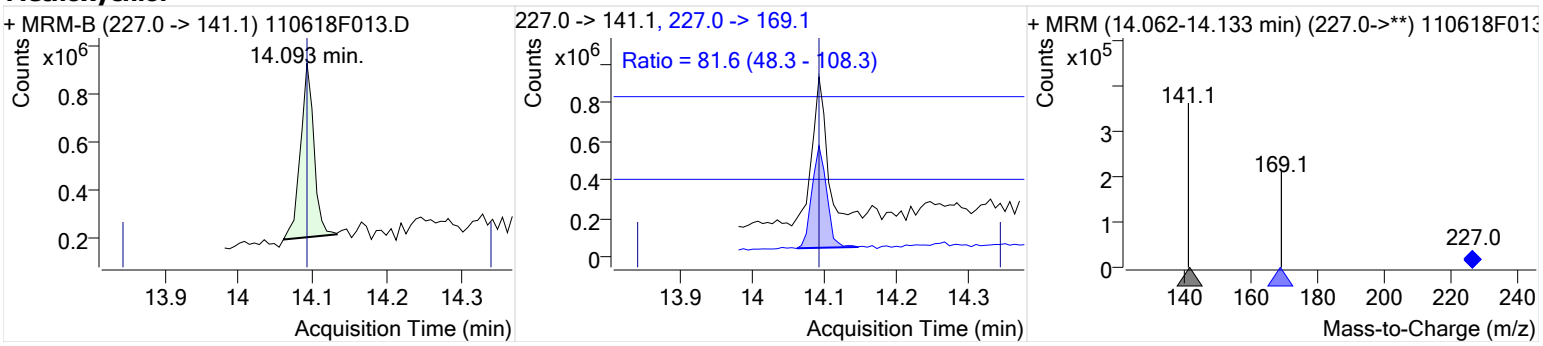
Endrin ketone



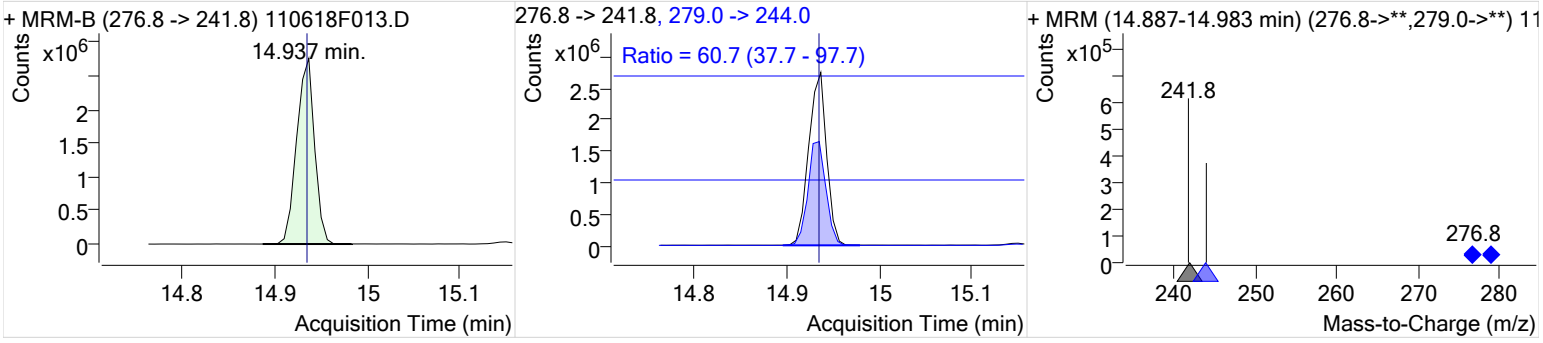
Methoxychlor-d6



Methoxychlor

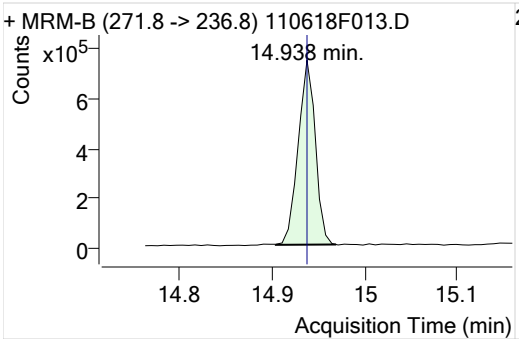


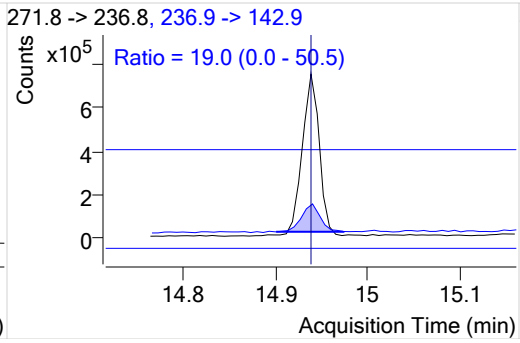
Mirex-13C10

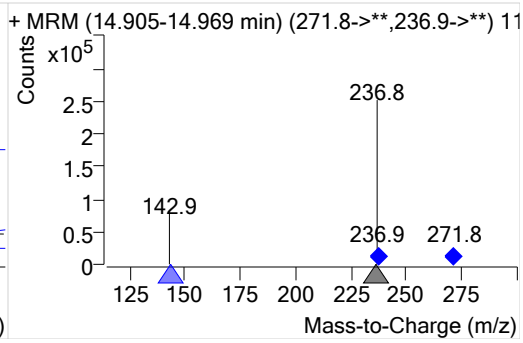


Quantitative Analysis Sample Report

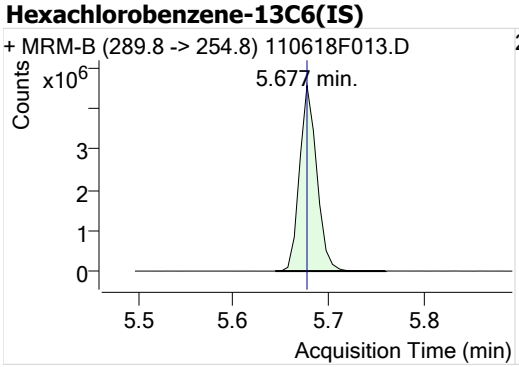
Mirex

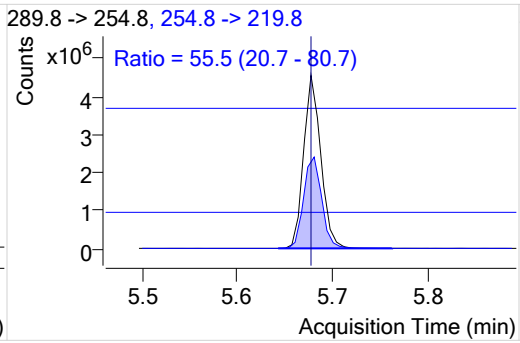


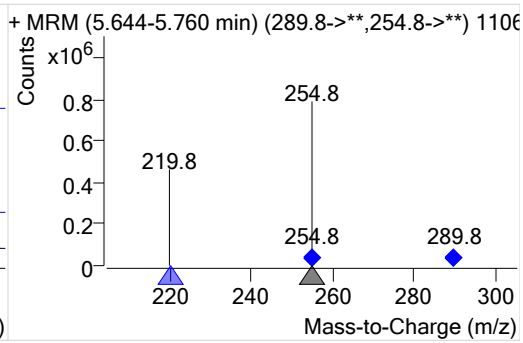




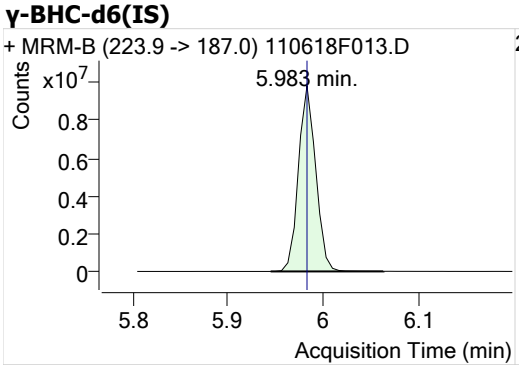
Hexachlorobenzene-13C6(IS)

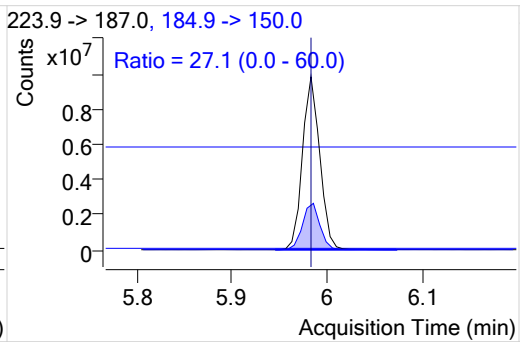


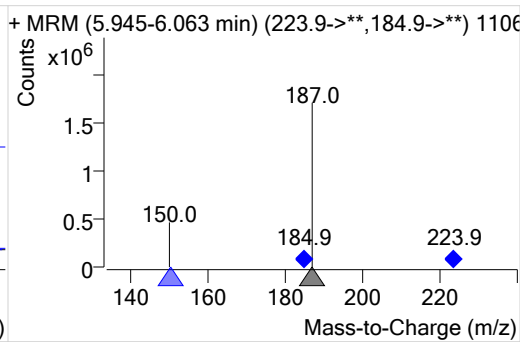




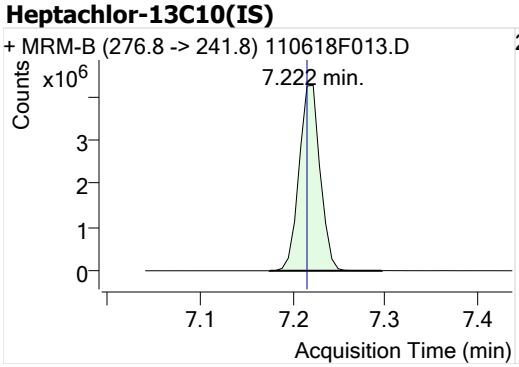
γ-BHC-d6(IS)

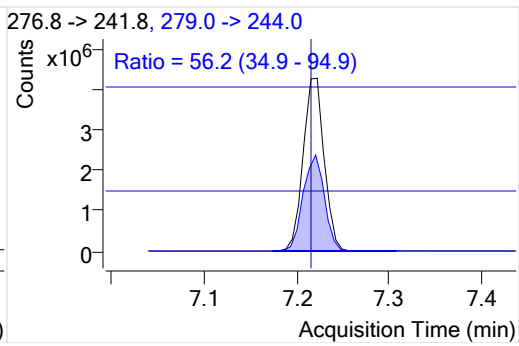


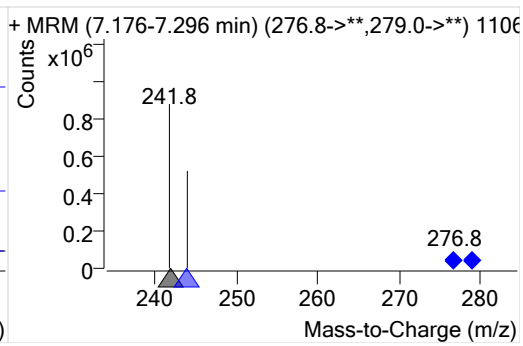




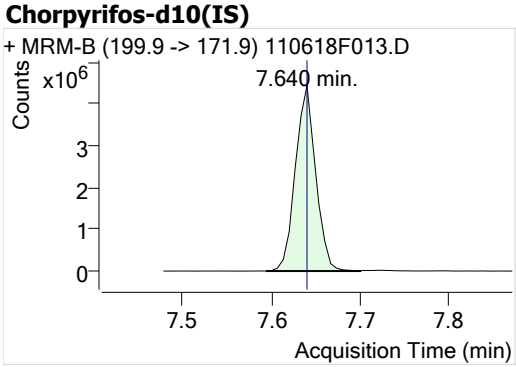
Heptachlor-13C10(IS)

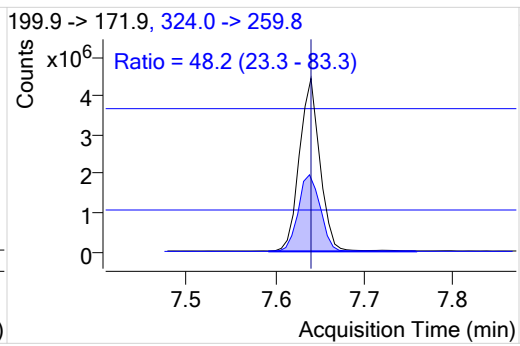


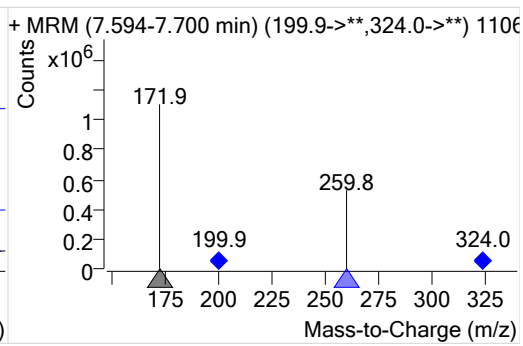




Chorpyrifos-d10(IS)

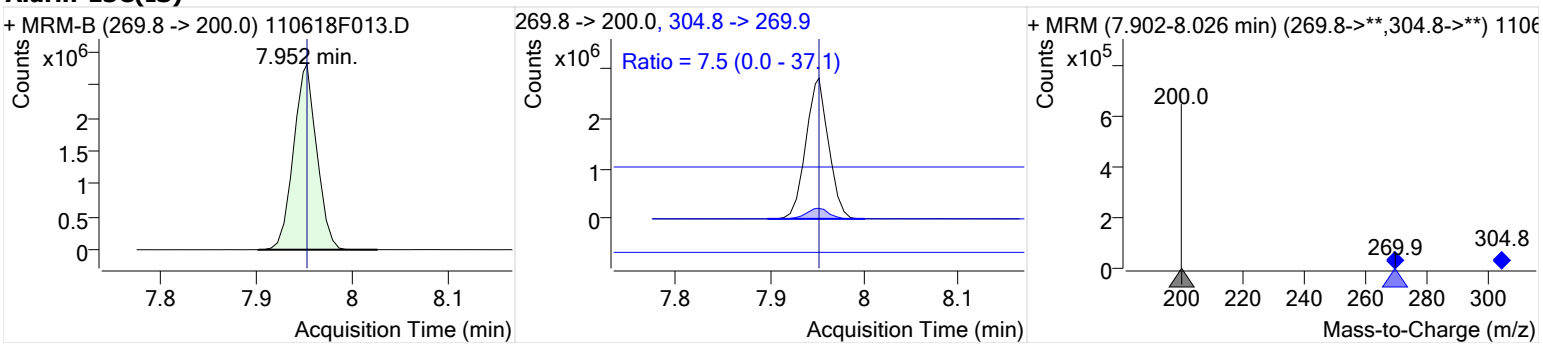




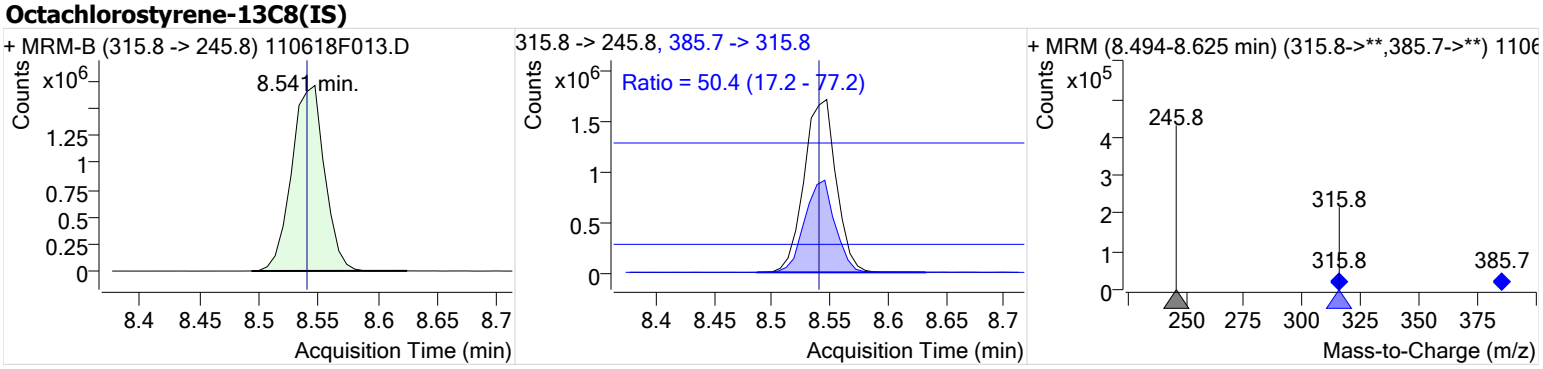


Quantitative Analysis Sample Report

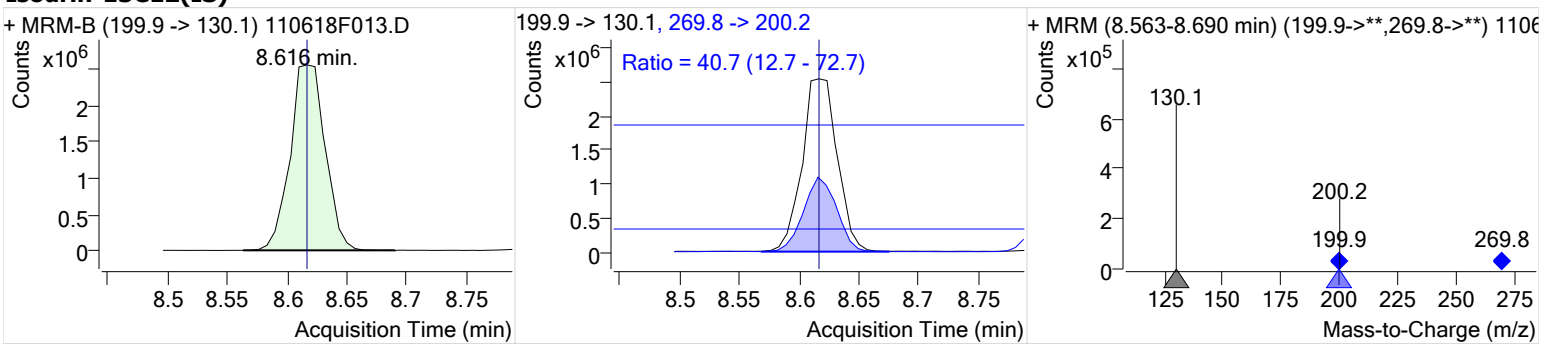
Aldrin-13C(IS)



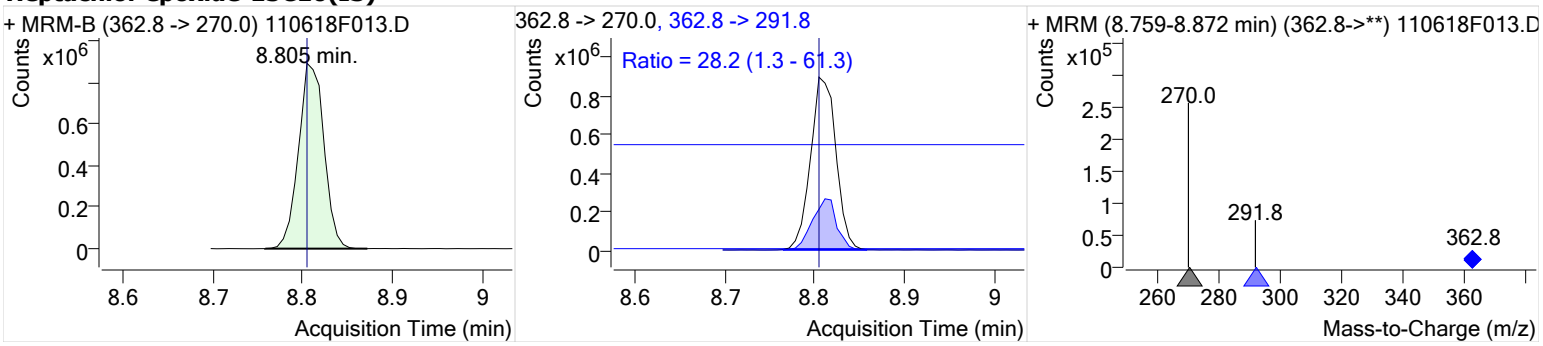
Octachlorostyrene-13C8(IS)



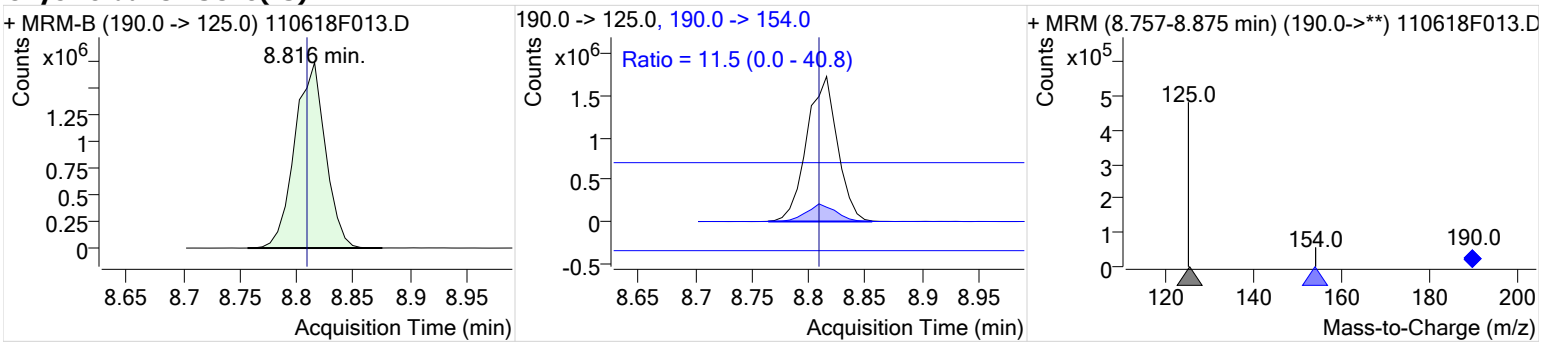
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

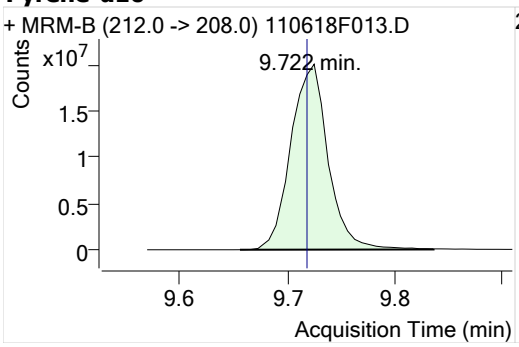


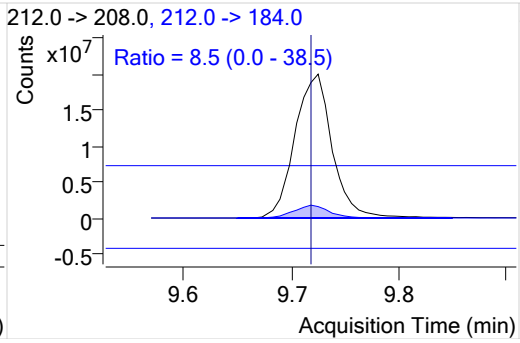
Oxychlordane-13C10(IS)

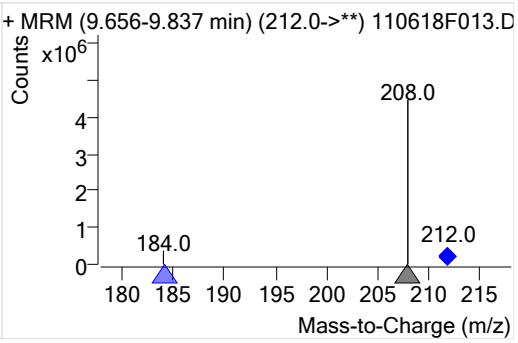


Quantitative Analysis Sample Report

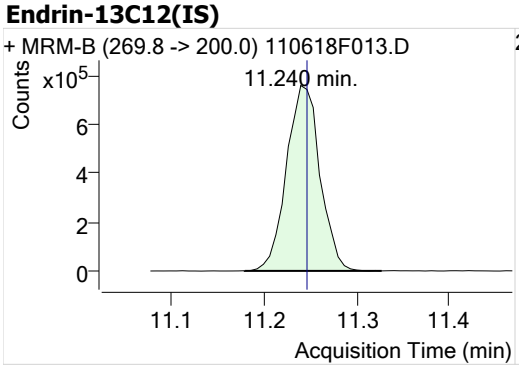
Pyrene-d10

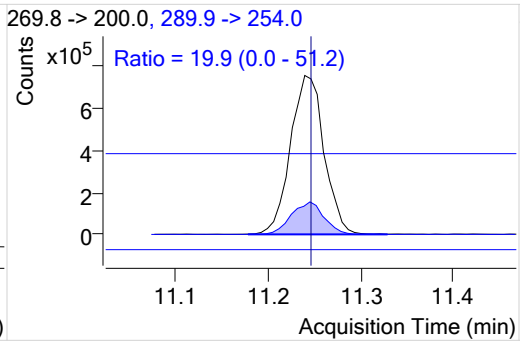


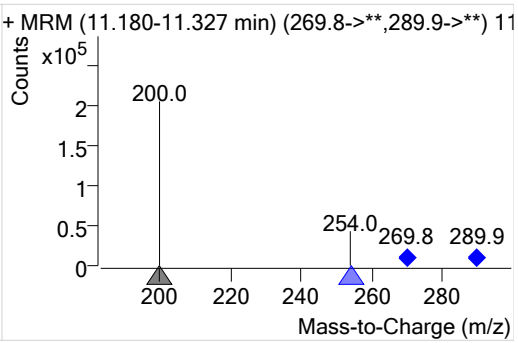




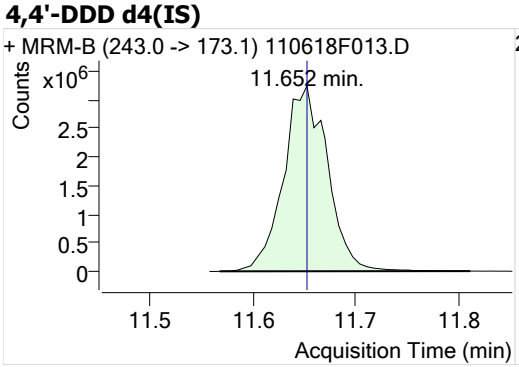
Endrin-13C12(IS)

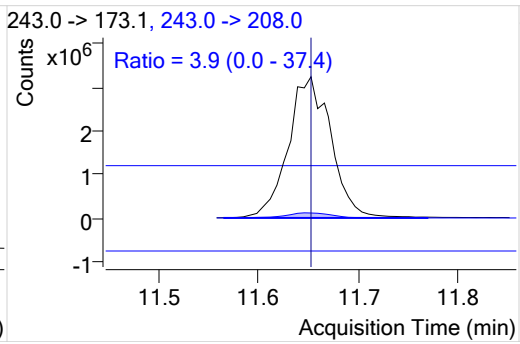


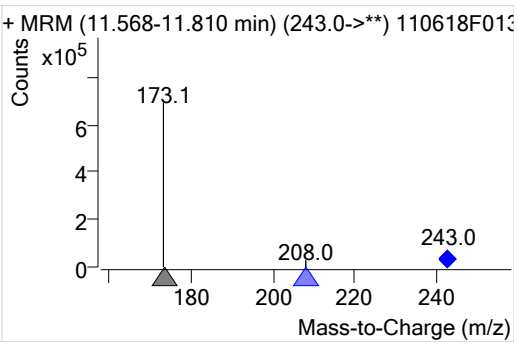




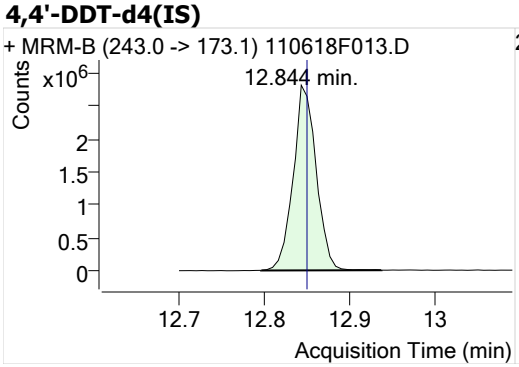
4,4'-DDD d4(IS)

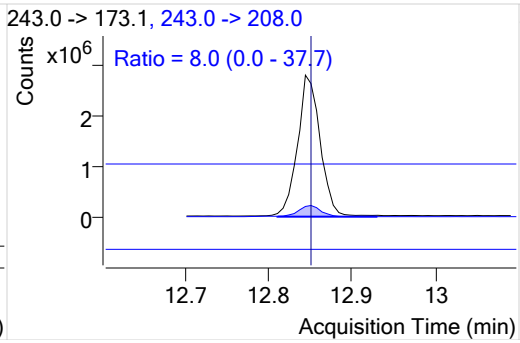


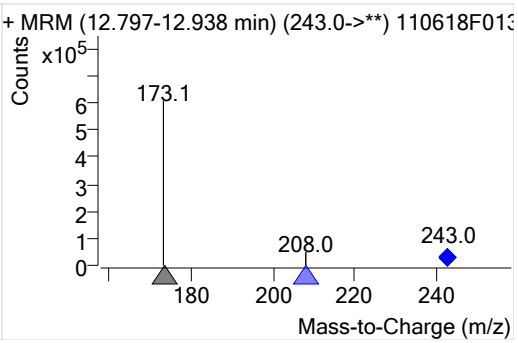




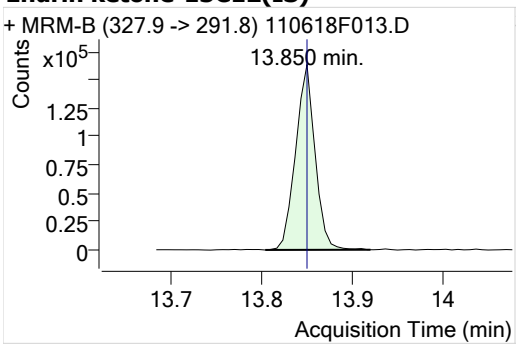
4,4'-DDT-d4(IS)

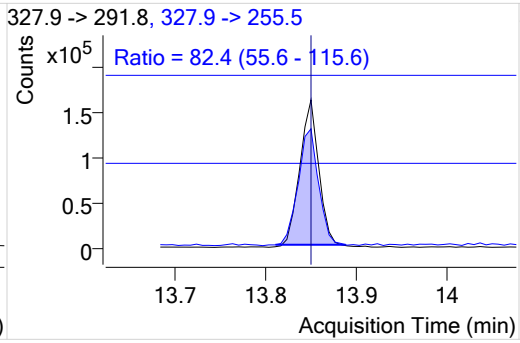


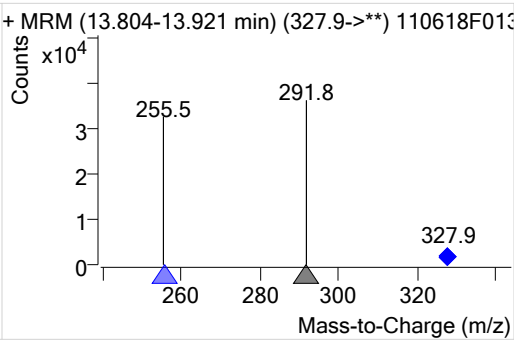




Endrin ketone-13C12(IS)

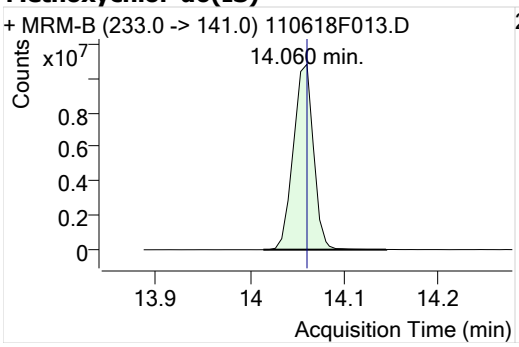


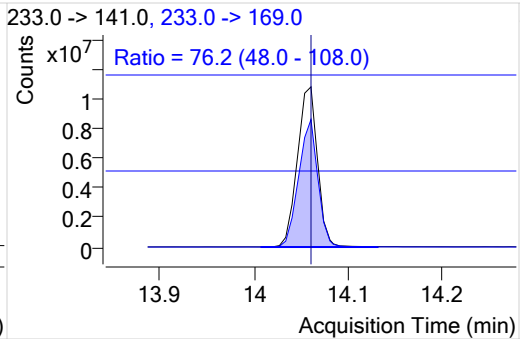


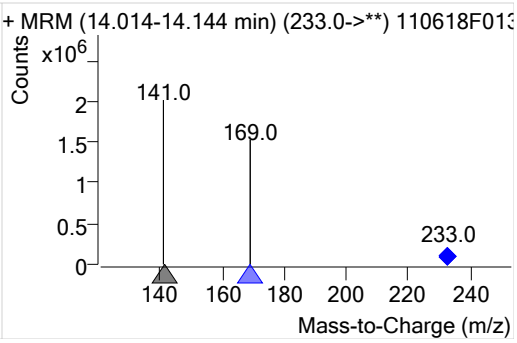


Quantitative Analysis Sample Report

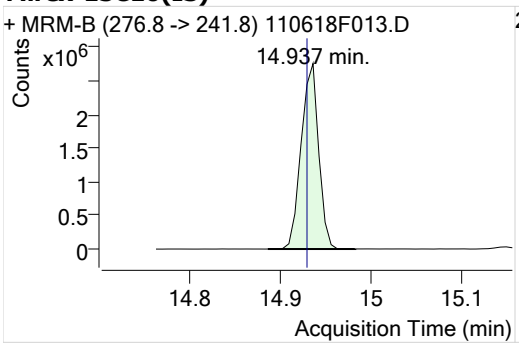
Methoxychlor-d6(IS)

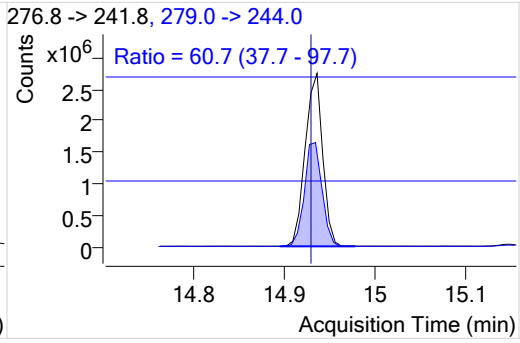


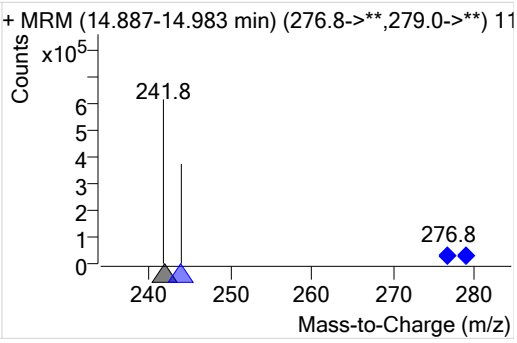




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F014.D	**Vial**	5
Acq. Date-Time	11/6/2018 5:58:16 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 2ng/mL SVM59-48C	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	6416201	20.000 ng/ml	0.001
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	13077284	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.219	276.8 -> 241.8	7092850	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.634	199.9 -> 171.9	7997803	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.952	269.8 -> 200.0	4594176	20.000 ng/ml	0.001
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	3515134	20.000 ng/ml	0.001
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4939751	20.000 ng/ml	0.001
Heptachlor epoxide-13C10(IS)	8.805	362.8 -> 270.0	1775671	20.000 ng/ml	0.003
Oxychlordane-13C10(IS)	8.802	190.0 -> 125.0	3714786	20.000 ng/ml	0.000
Pyrene-d10	9.725	212.0 -> 208.0	50176825	100.000 ng/ml	0.003
Endrin-13C12(IS)	11.240	269.8 -> 200.0	1892261	20.000 ng/ml	0.007
4,4'-DDD d4(IS)	11.652	243.0 -> 173.1	9928356	5.000 ng/ml	0.007
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	6148527	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	242959	20.000 ng/ml	0.003
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	18347649	20.000 ng/ml	0.003
Mirex-13C10(IS)	14.930	276.8 -> 241.8	3779858	5.000 ng/ml	0.003

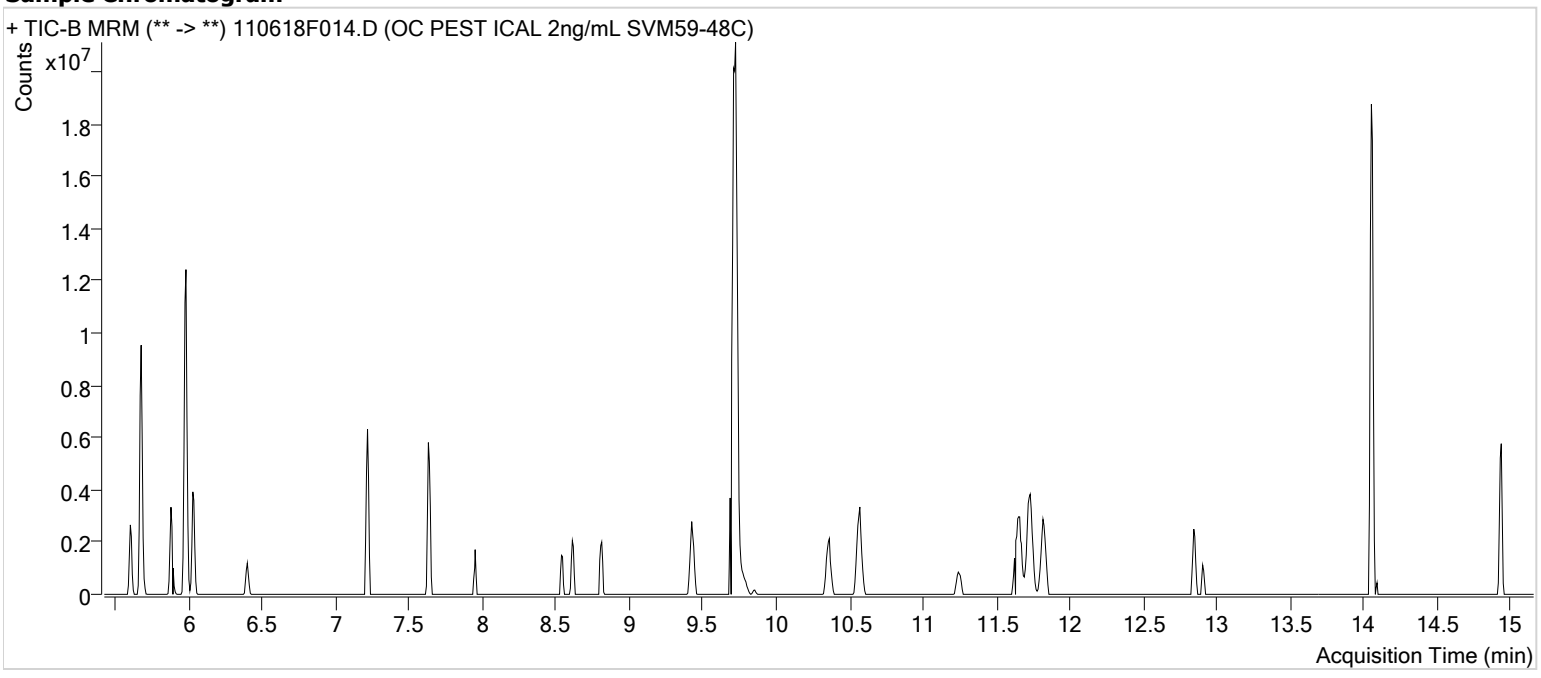
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	6416201	16.769 ng/ml	
		Spiked Amount =	20.0	Recovery =	*83.8 %*
γ-BHC-d6	5.983	223.9 -> 187.0	13077284	17.815 ng/ml	
		Spiked Amount =	20.0	Recovery =	*89.1 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	7092850	19.192 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.0 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	7997803	21.106 ng/ml	
		Spiked Amount =	20.0	Recovery =	*105.5 %*
Aldrin-13C	7.952	269.8 -> 200.0	4594176	17.517 ng/ml	
		Spiked Amount =	20.0	Recovery =	*87.6 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3515134	18.270 ng/ml	
		Spiked Amount =	20.0	Recovery =	*91.4 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4939751	17.038 ng/ml	
		Spiked Amount =	20.0	Recovery =	*85.2 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1775671	18.608 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.0 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3714786	18.427 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.1 %*
Endrin-13C12	11.247	269.8 -> 200.0	1892261	19.108 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.5 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	9928356	4.856 ng/ml	
		Spiked Amount =	5.0	Recovery =	*97.1 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	6148527	5.272 ng/ml	
		Spiked Amount =	5.0	Recovery =	*105.4 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	242959	19.521 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.6 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	18347649	20.644 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.2 %*
Mirex-13C10	14.930	276.8 -> 241.8	3779858	4.140 ng/ml	
		Spiked Amount =	5.0	Recovery =	*82.8 %*

Quantitative Analysis Sample Report

Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	2019400	2.199	ng/ml	98
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	1200804	2.157	ng/ml	96
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	2593069	2.140	ng/ml	97
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.034	181.1 -> 145.1	3127867	2.148	ng/ml	98
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	1162775	2.133	ng/ml	97
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	794012	2.005	ng/ml	27
Chorpyrifos	Chorpyrifos-d10(IS)	7.717	196.9 -> 169.0	1070116	1.961	ng/ml	96
Aldrin	Aldrin-13C(IS)	7.955	254.9 -> 220.0	730099	2.310	ng/ml	43
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	899486	2.010	ng/ml	98
Isodrin	Isodrin-13C12(IS)	8.630	193.0 -> 123.0	549188	2.180	ng/ml	98
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	187549	1.941	ng/ml	99
Oxychlordane	Oxychlordane-13C10(IS)	8.817	114.9 -> 51.1	1063432	2.060	ng/ml	95
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	336276	1.969	ng/ml	95
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	3250556	2.018	ng/ml	100
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.775	271.8 -> 236.9	844659	2.037	ng/ml	96
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	189952	1.911	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	544551	1.929	ng/ml	99
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	3109367	2.146	ng/ml	95
2,4'-DDD	4,4'-DDD d4(IS)	10.574	235.0 -> 165.1	4755696	2.271	ng/ml	100
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	272383	2.040	ng/ml	100
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	191505	2.506	ng/ml	83
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	255528	2.069	ng/ml	100
2,4'-DDT	4,4'-DDT-d4(IS)	11.820	235.0 -> 165.1	4754755 ***m***	1.900	ng/ml	95
cis-Nonachlor	Oxychlordane-13C10(IS)	11.749	271.8 -> 236.9	216373	1.989	ng/ml	99
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	6833223 ***m***	2.169	ng/ml	97
Endrin aldehyde	Endrin-13C12(IS)	12.084	249.9 -> 214.9	55019	2.036	ng/ml	100
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	423628	2.238	ng/ml	92
4,4'-DDT	4,4'-DDT-d4(IS)	12.908	235.0 -> 165.1	2787715	2.054	ng/ml	95
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	164846	2.067	ng/ml	98
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	2066480	1.942	ng/ml	98
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	2138417	2.341	ng/ml	90

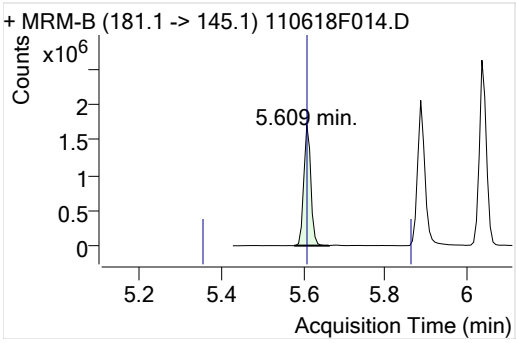
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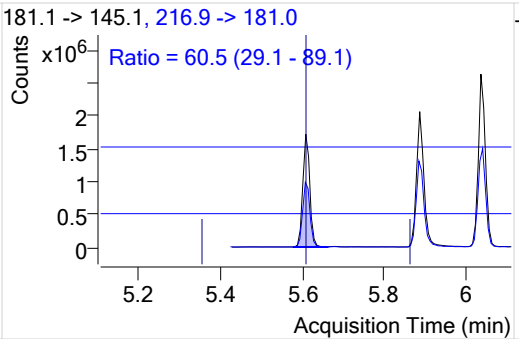
Sample Chromatogram

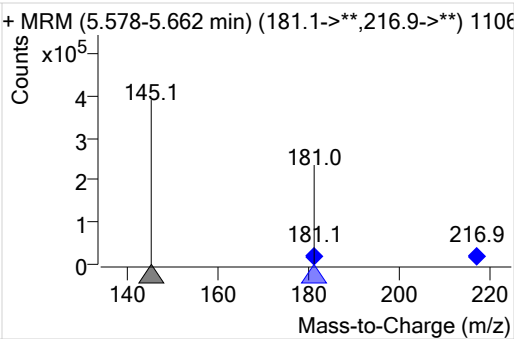


Quantitative Analysis Sample Report

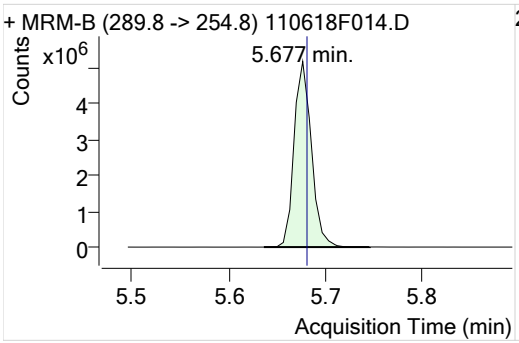
α-BHC

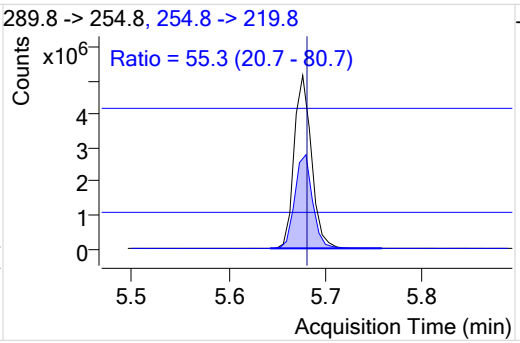


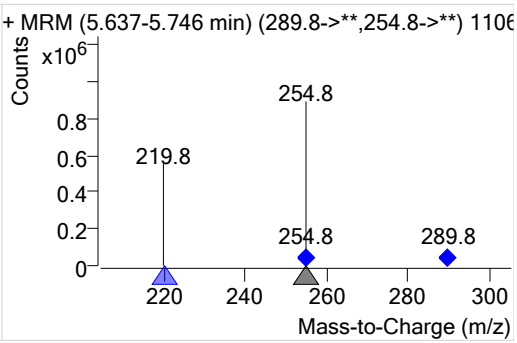




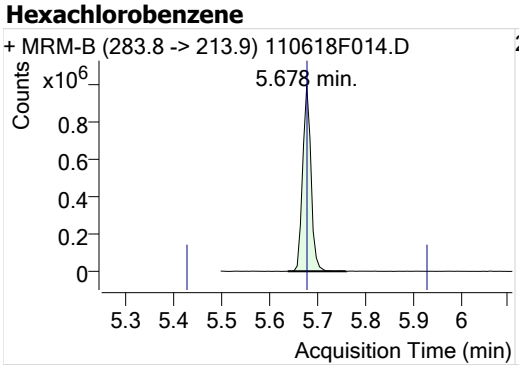
Hexachlorobenzene-13C6

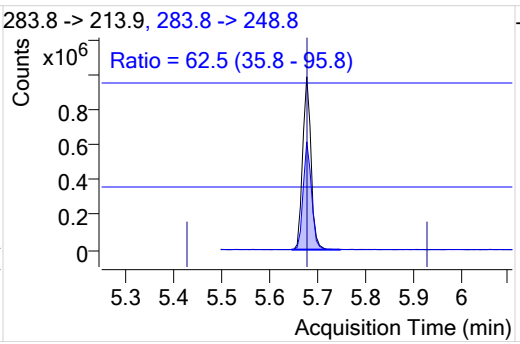


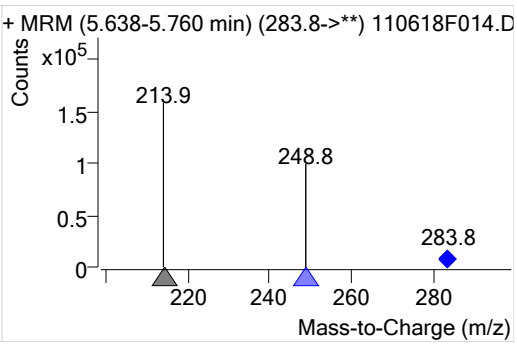




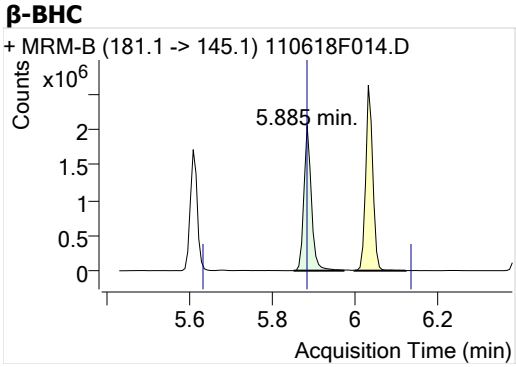
Hexachlorobenzene

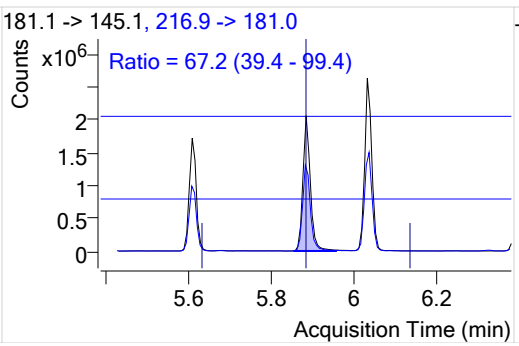


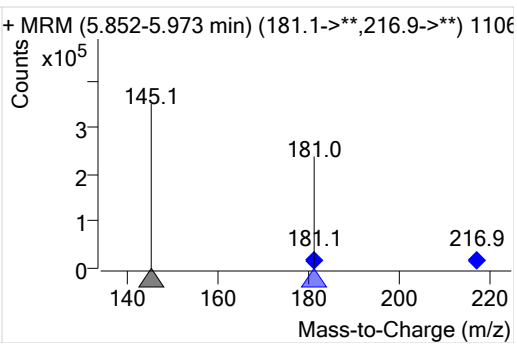




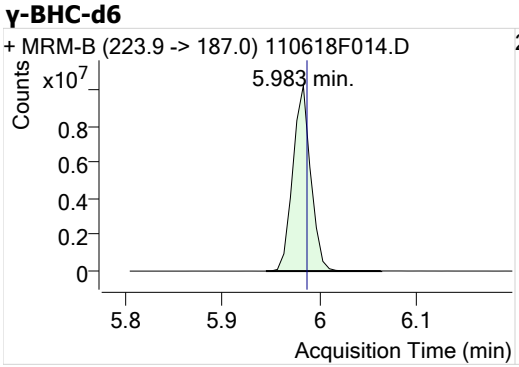
β-BHC

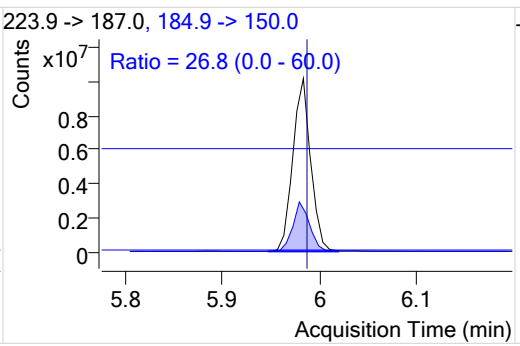


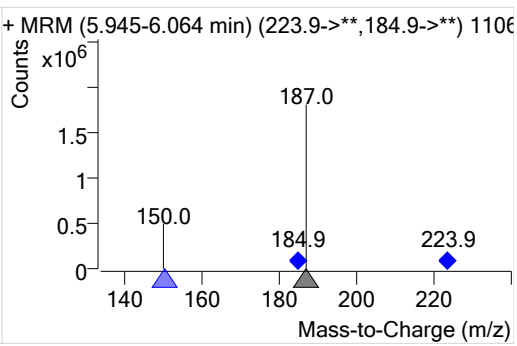




γ-BHC-d6

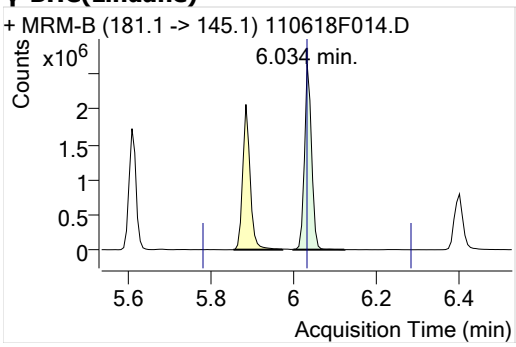


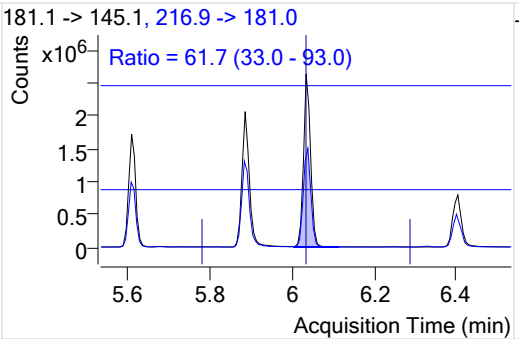


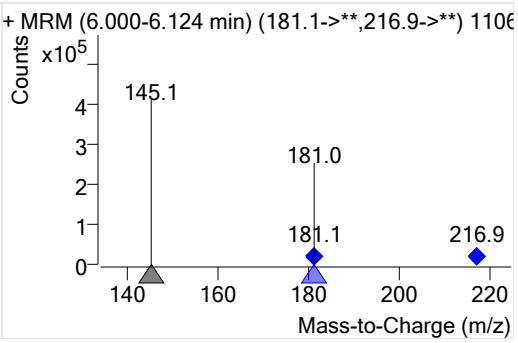


Quantitative Analysis Sample Report

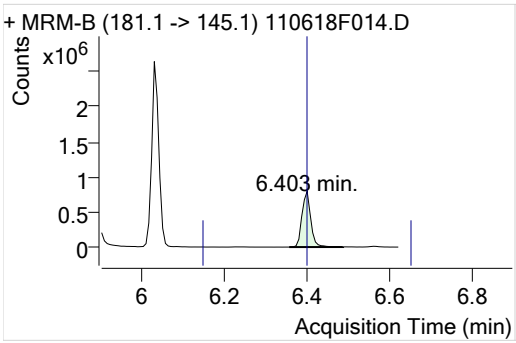
γ-BHC(Lindane)

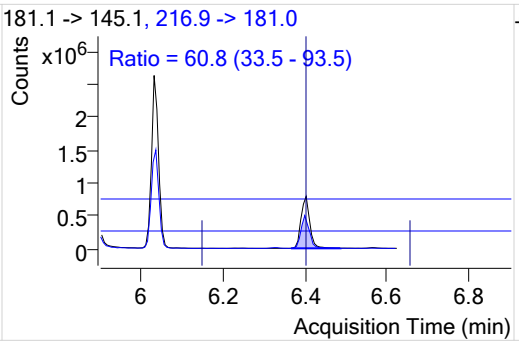


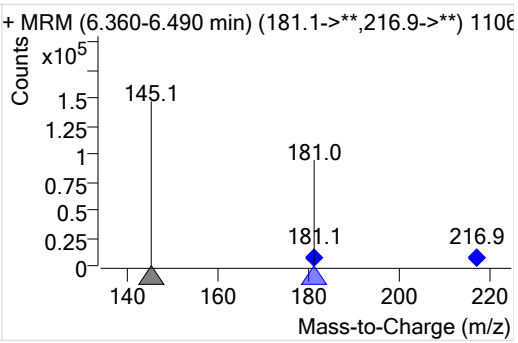




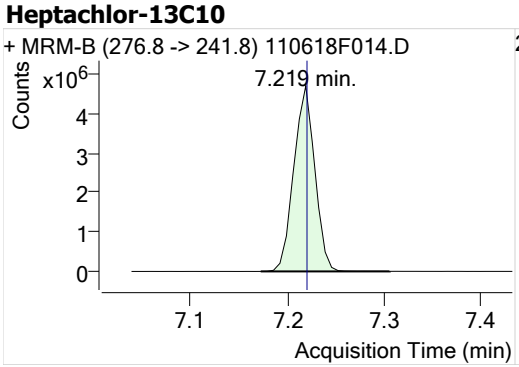
δ-BHC

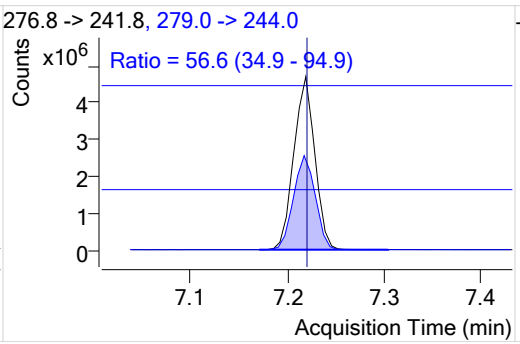


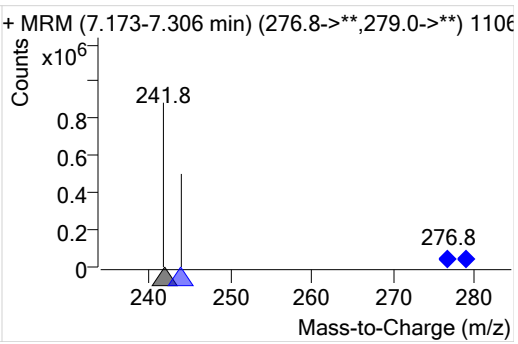




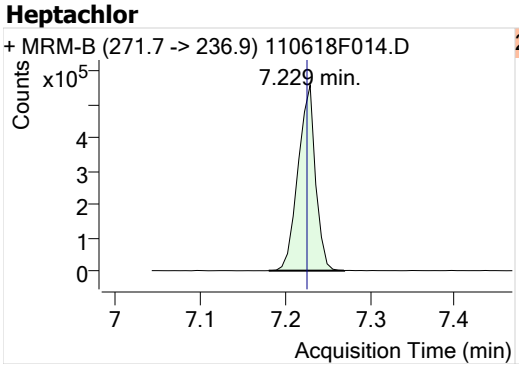
Heptachlor-13C10

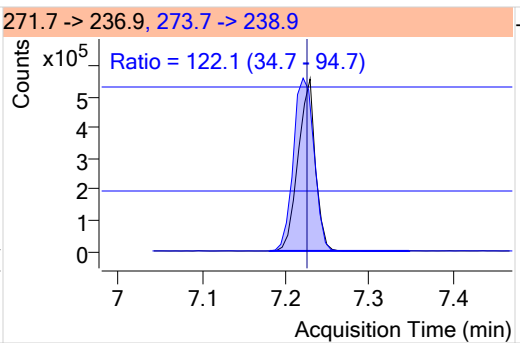


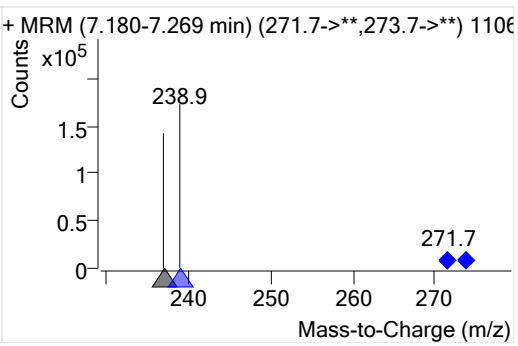




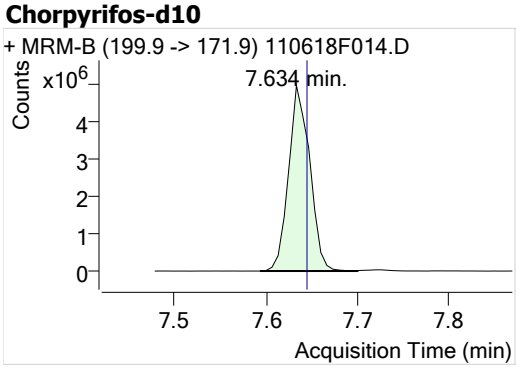
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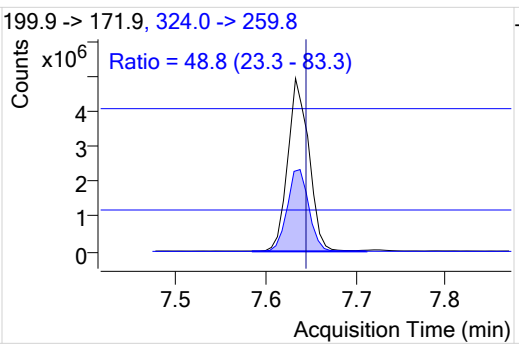


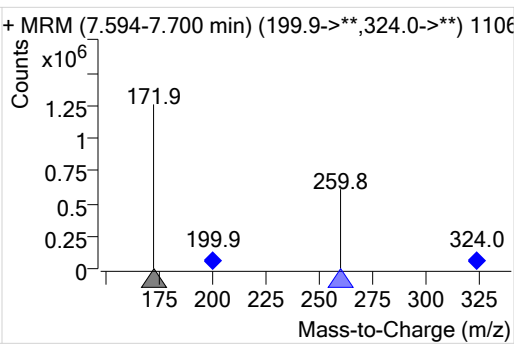




Chorpyrifos-d10

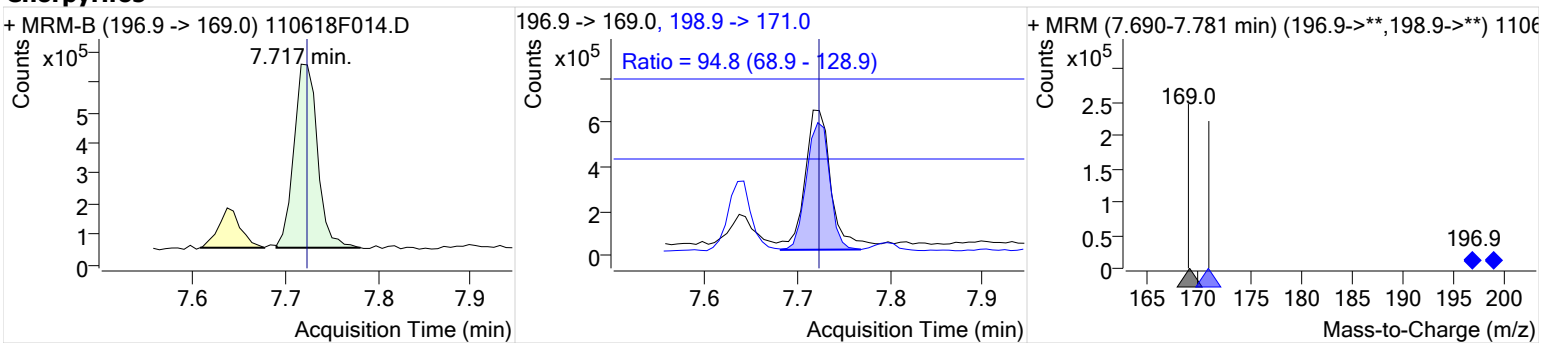




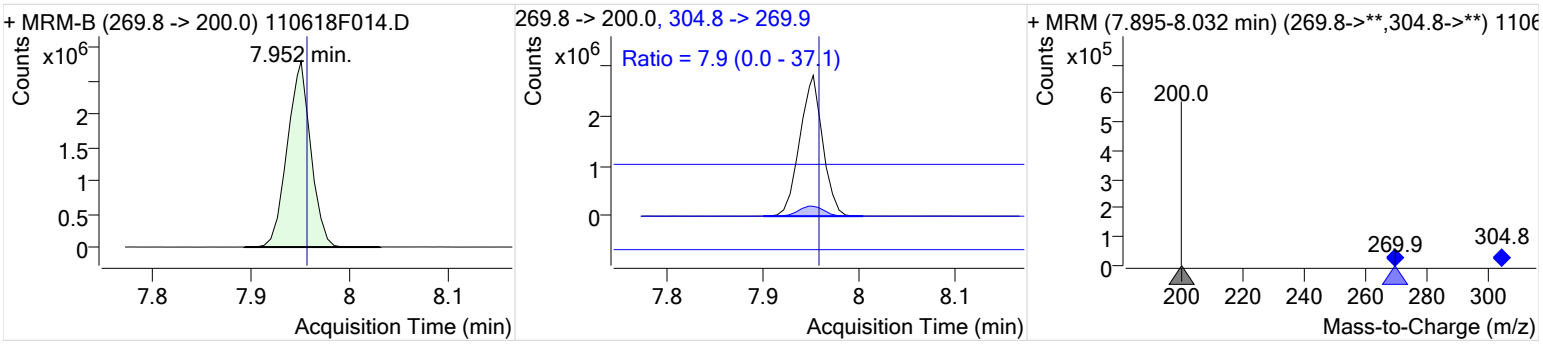


Quantitative Analysis Sample Report

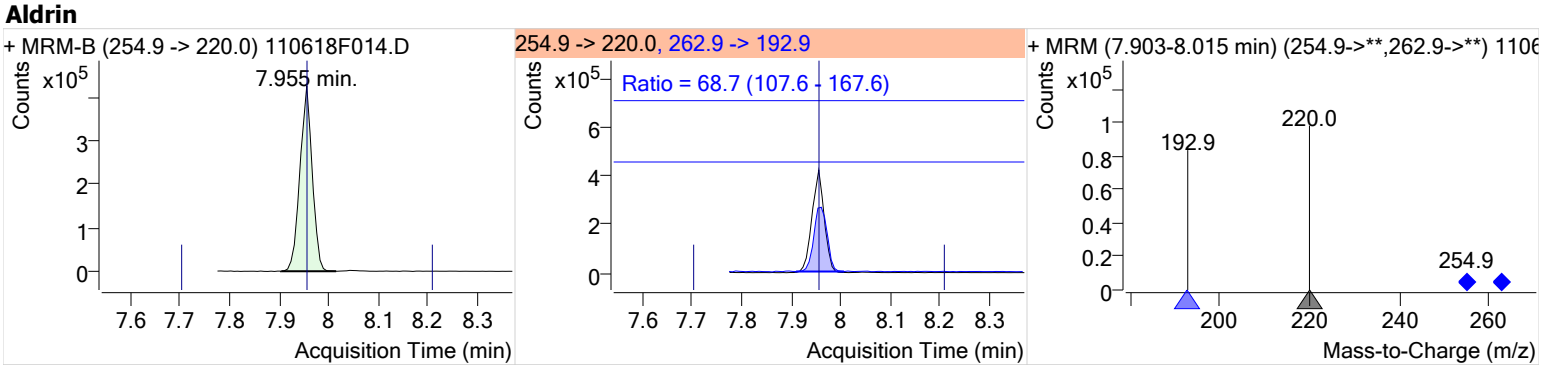
Chorpyrifos



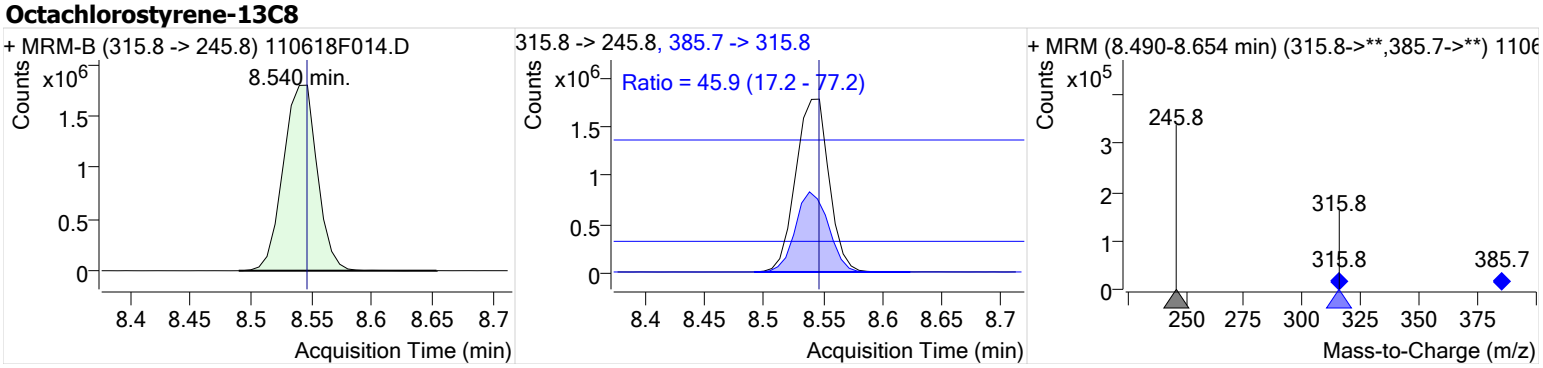
Aldrin-13C



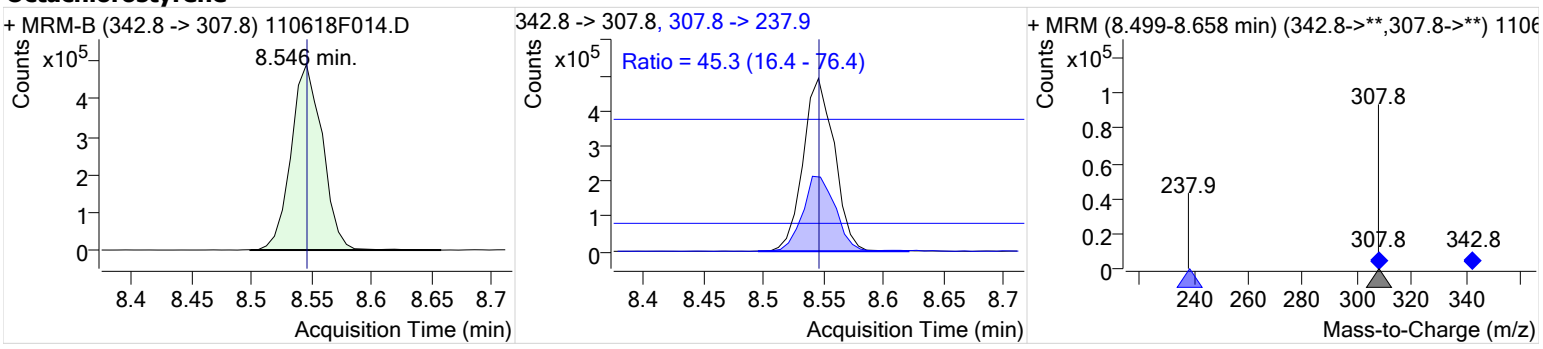
Aldrin



Octachlorostyrene-13C8

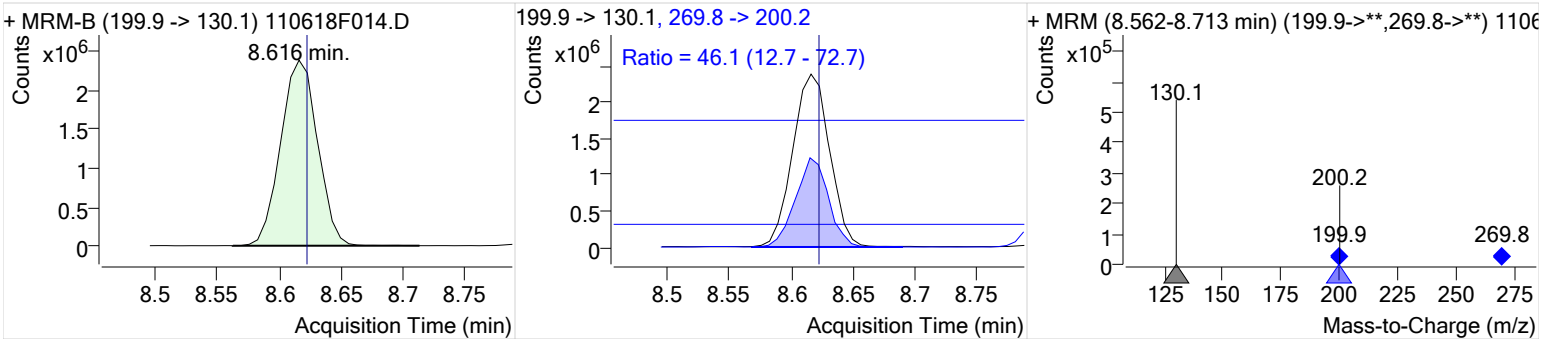


Octachlorostyrene

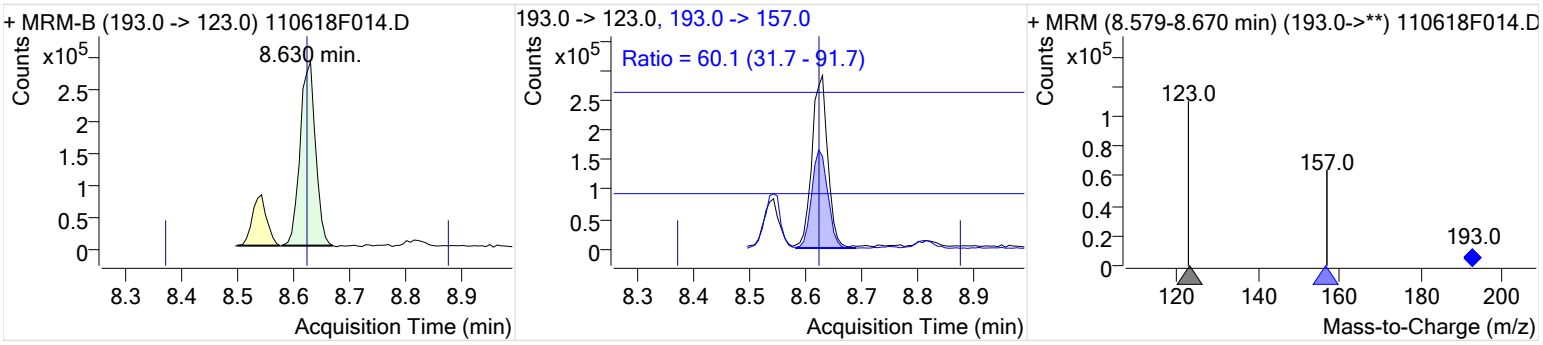


Quantitative Analysis Sample Report

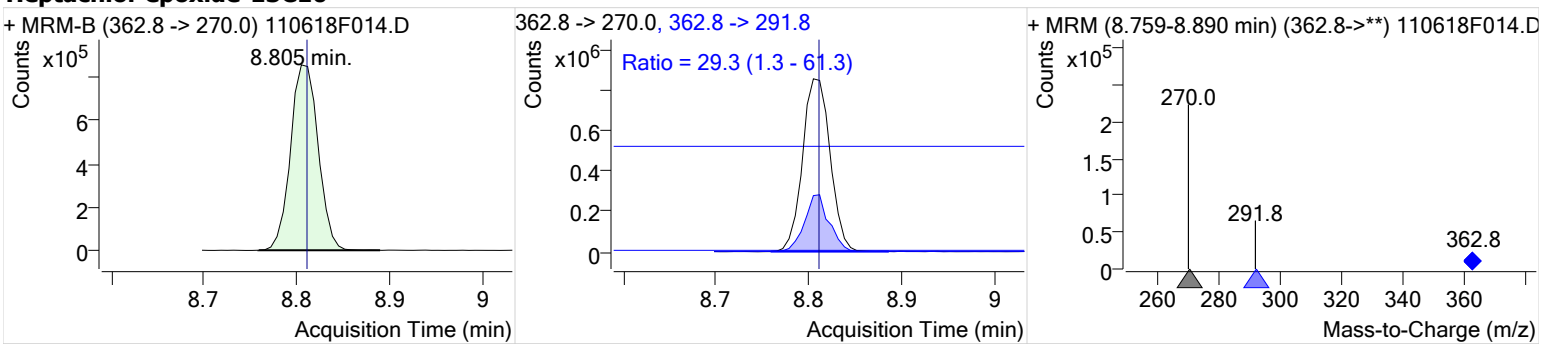
Isodrin-13C12



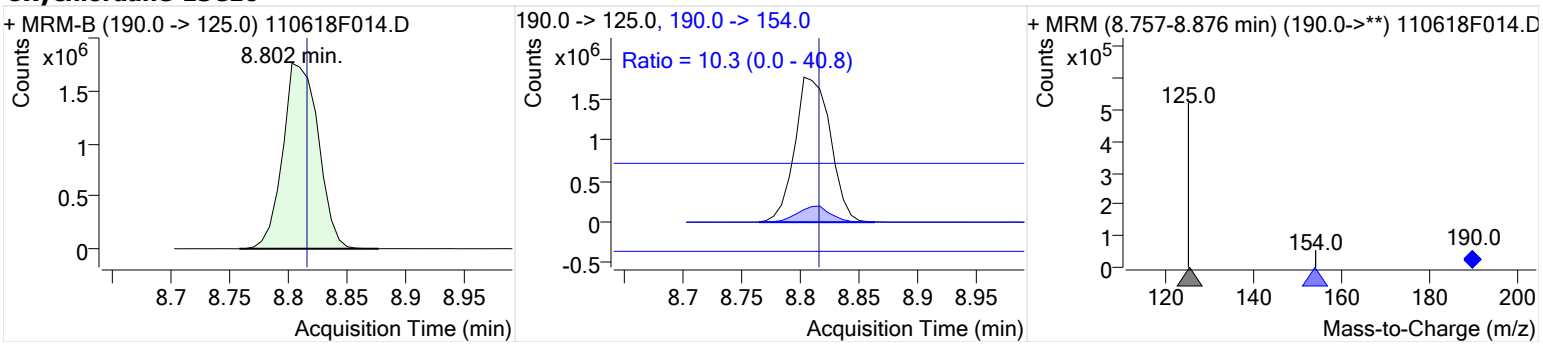
Isodrin



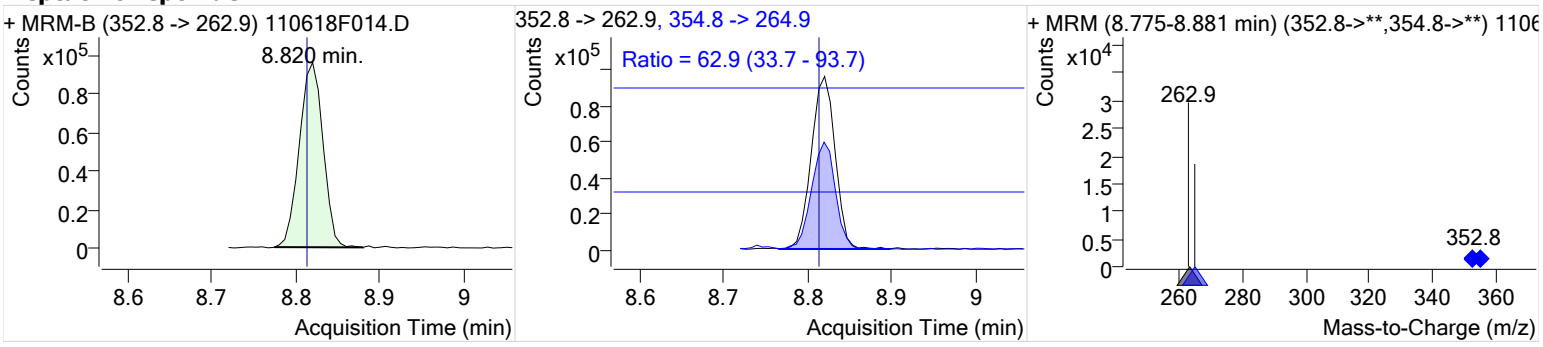
Heptachlor epoxide-13C10



Oxychlordane-13C10

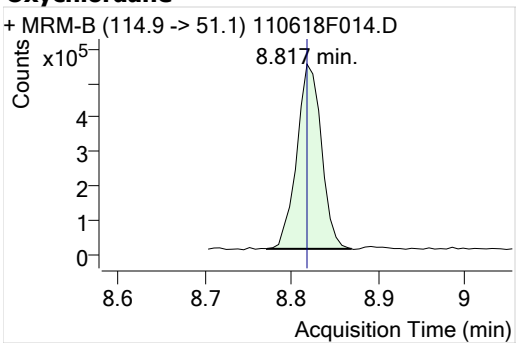


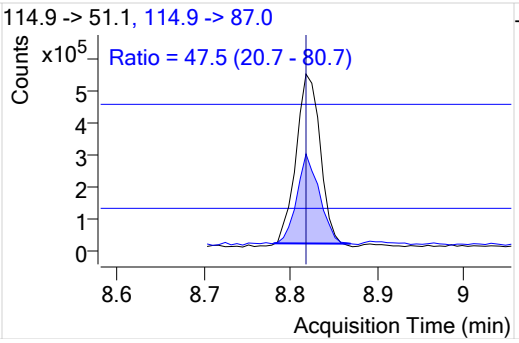
Heptachlor epoxide

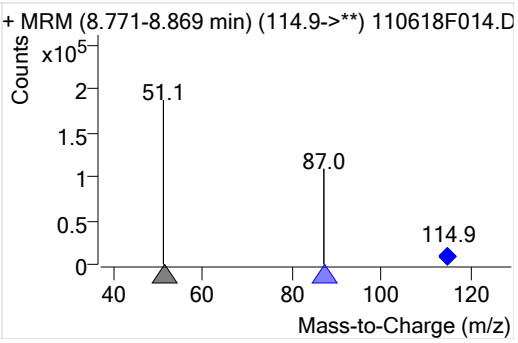


Quantitative Analysis Sample Report

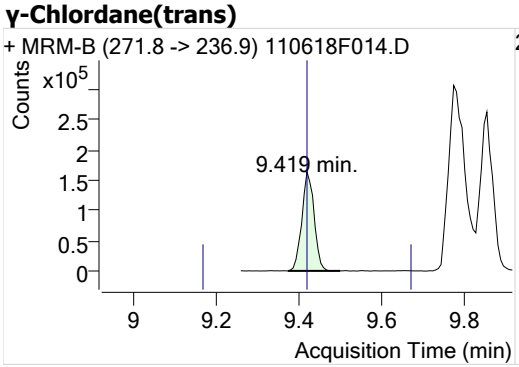
Oxychlordane

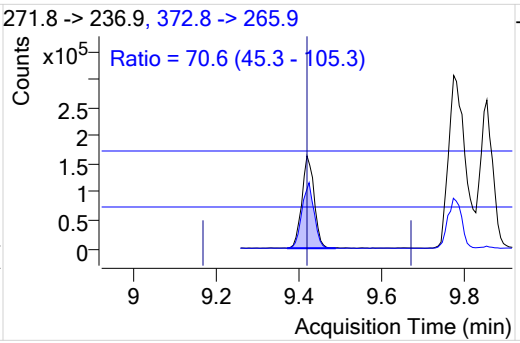


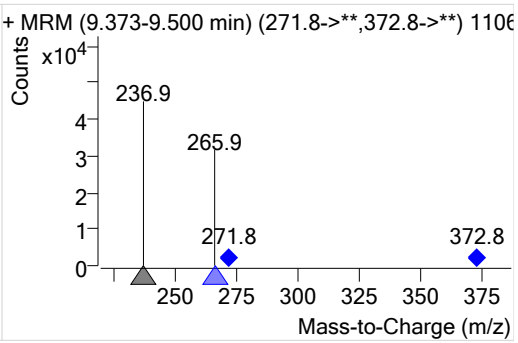




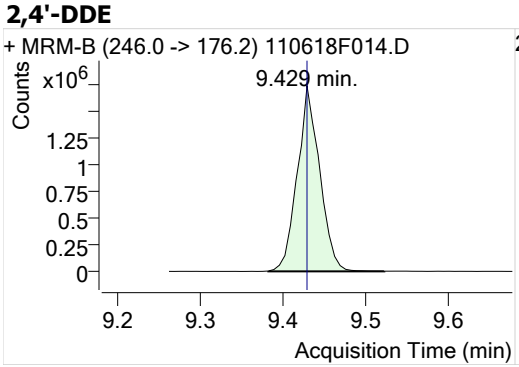
γ-Chlordane(trans)

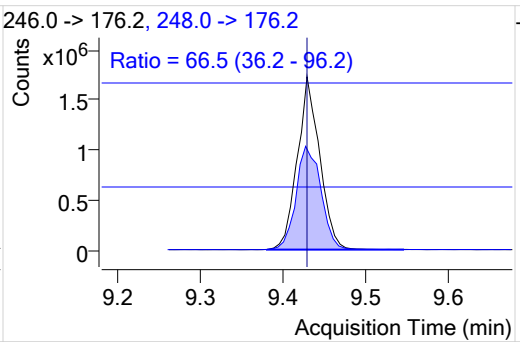


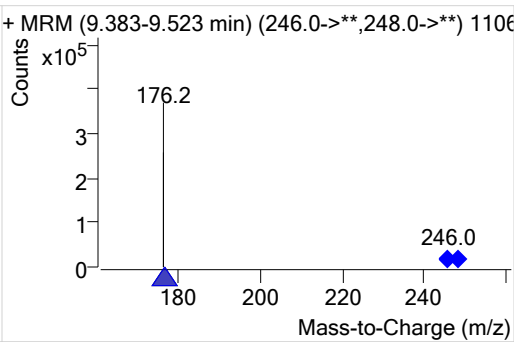




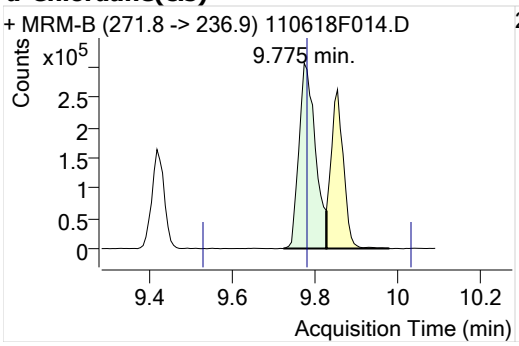
2,4'-DDE

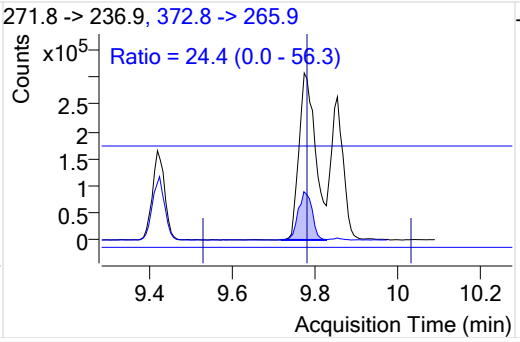


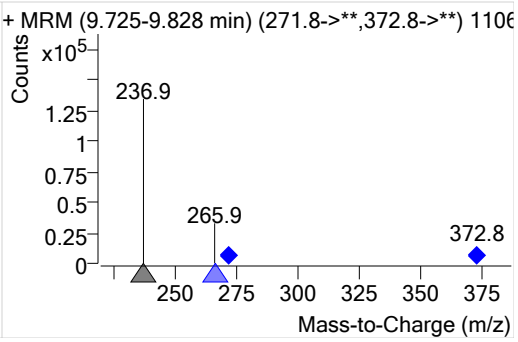




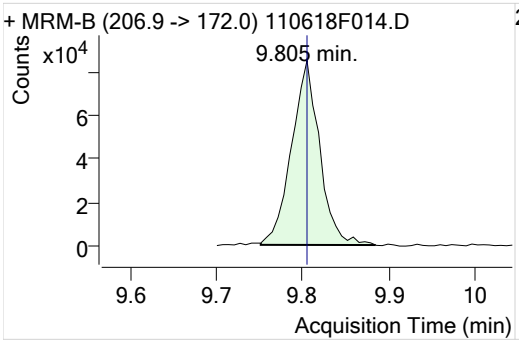
α-Chlordane(cis)

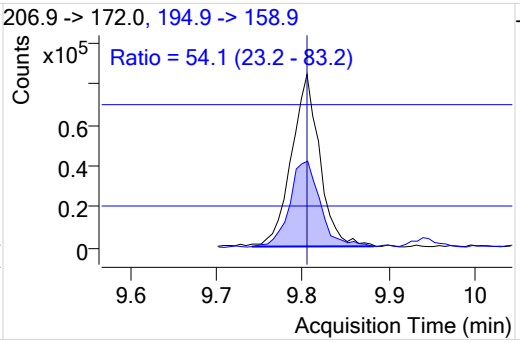


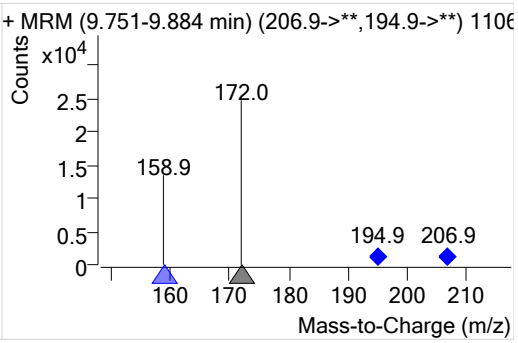




Endosulfan I

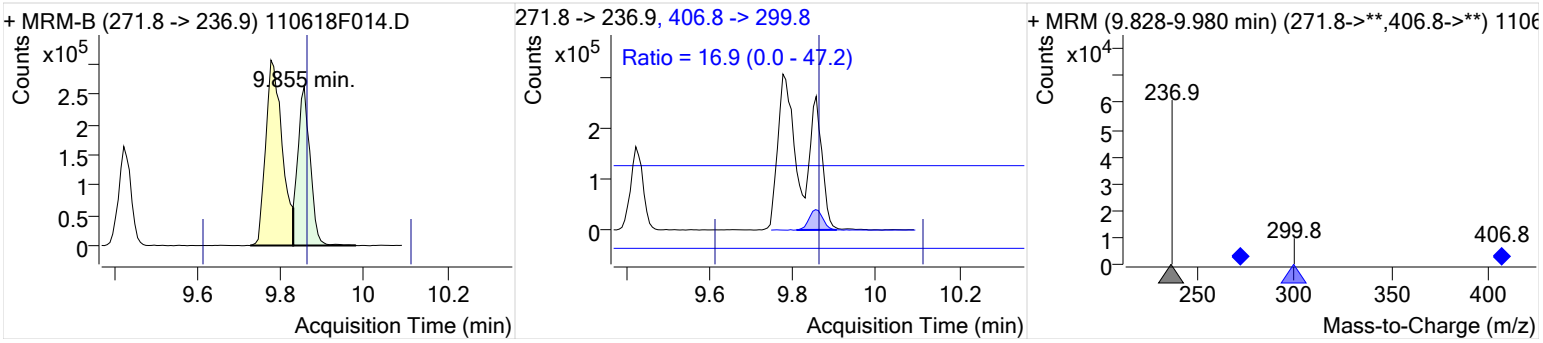




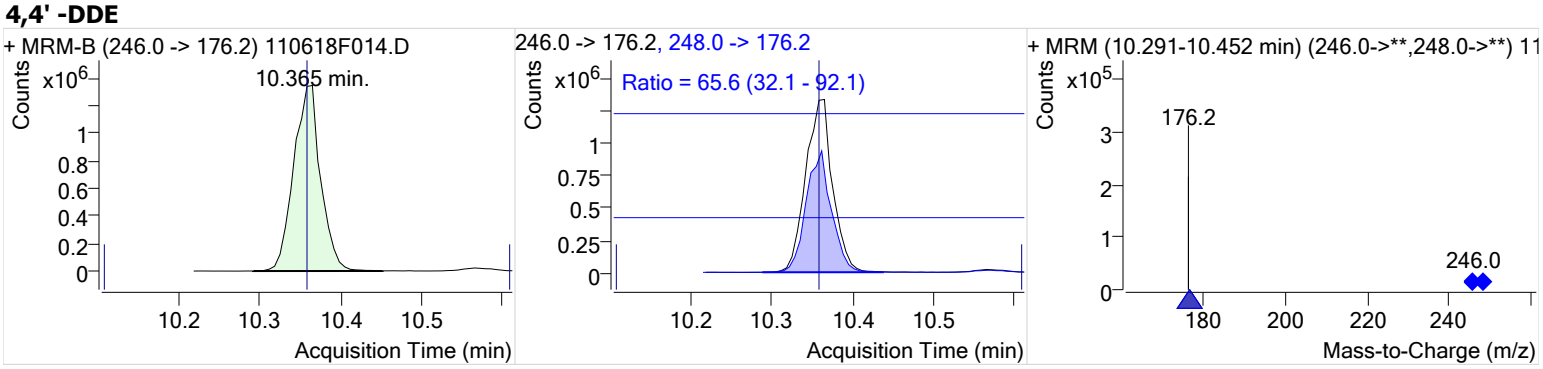


Quantitative Analysis Sample Report

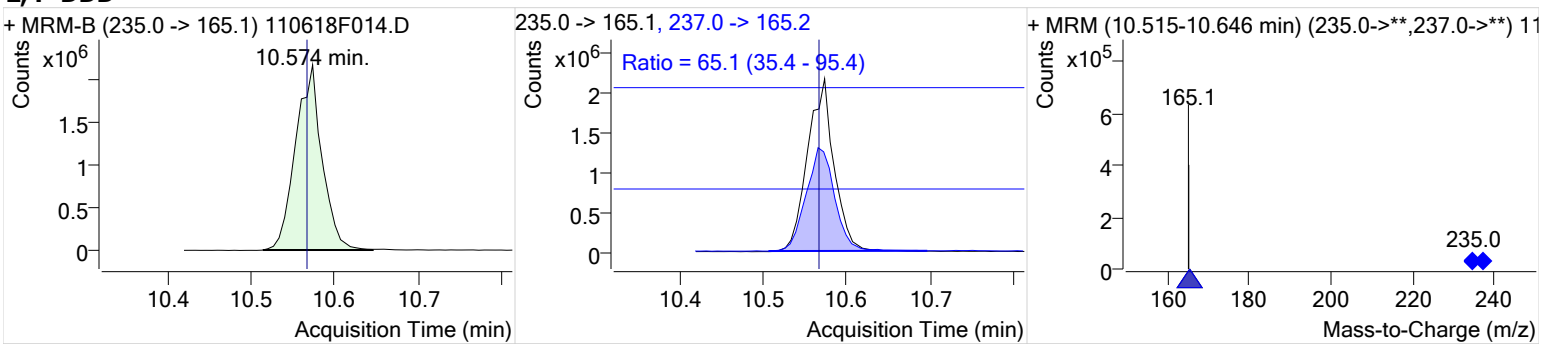
trans-Nanochlor



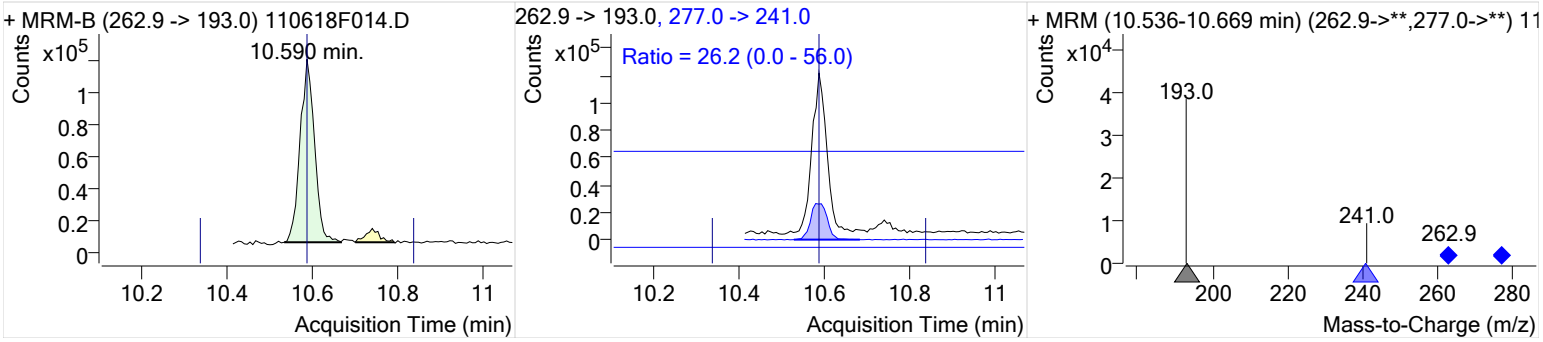
4,4' -DDE



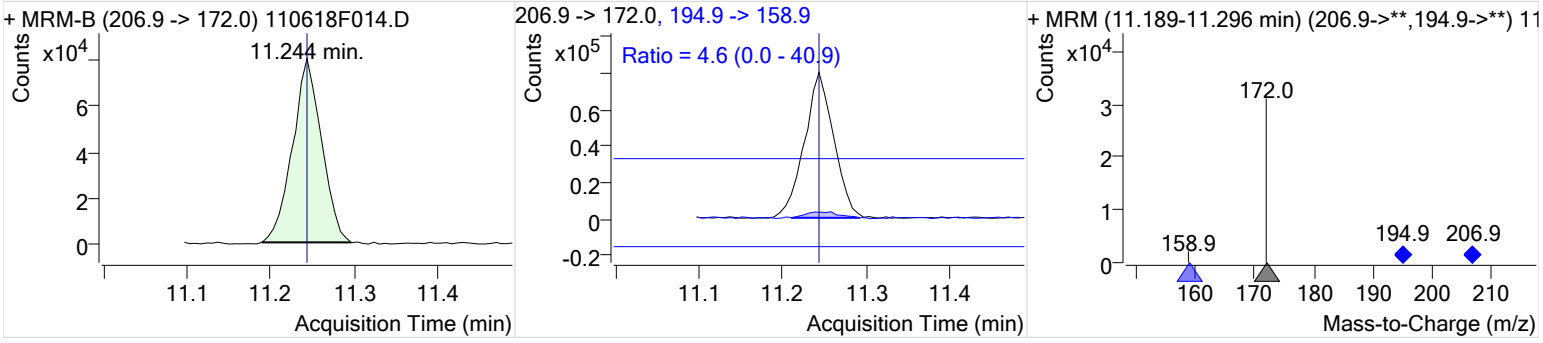
2,4'-DDD



Dieldrin

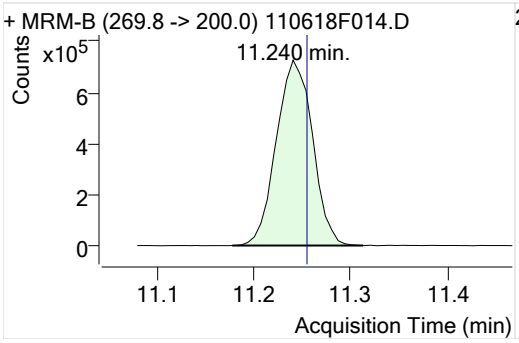


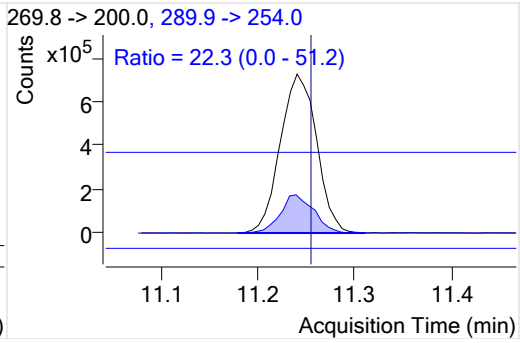
Endosulfan II

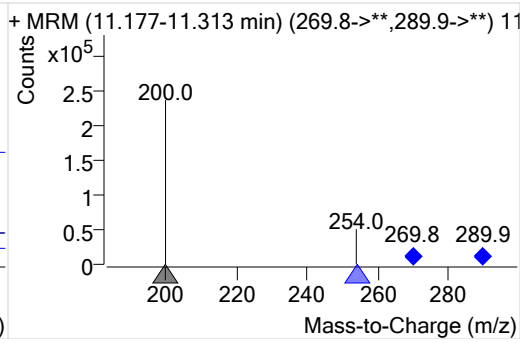


Quantitative Analysis Sample Report

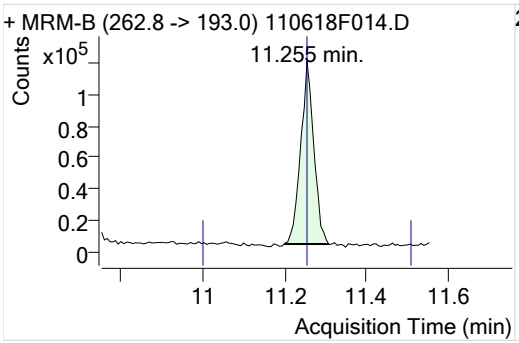
Endrin-13C12

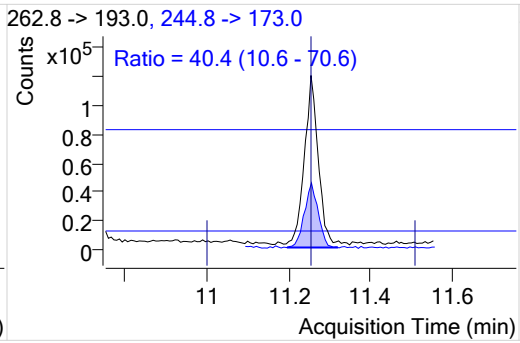


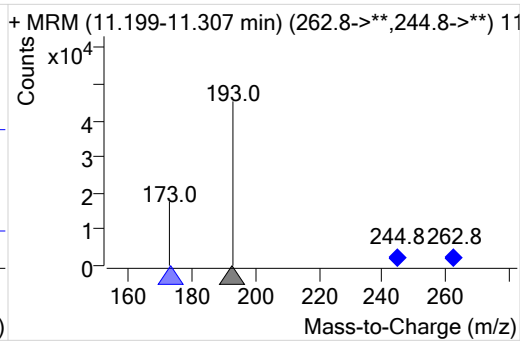




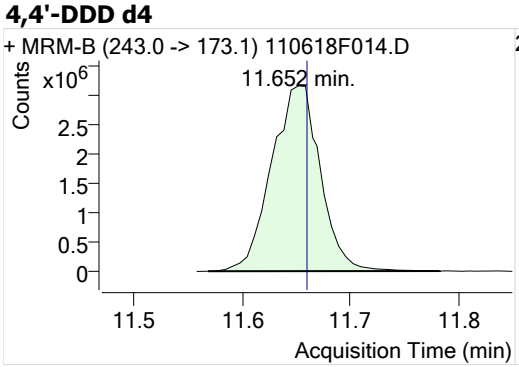
Endrin

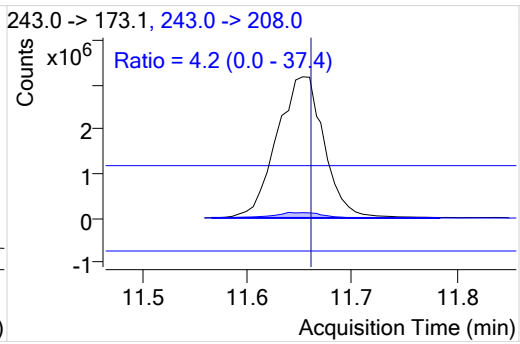


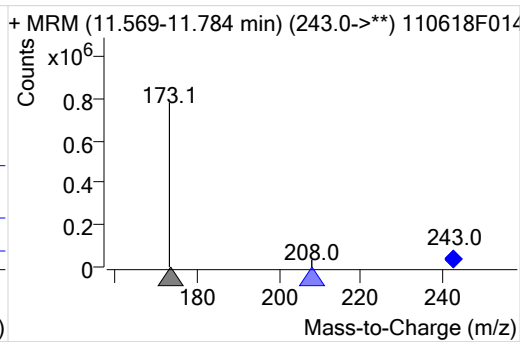




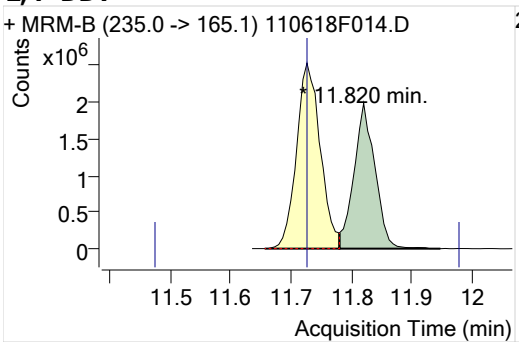
4,4'-DDD d4

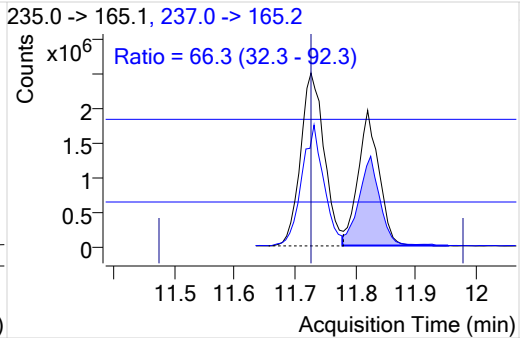


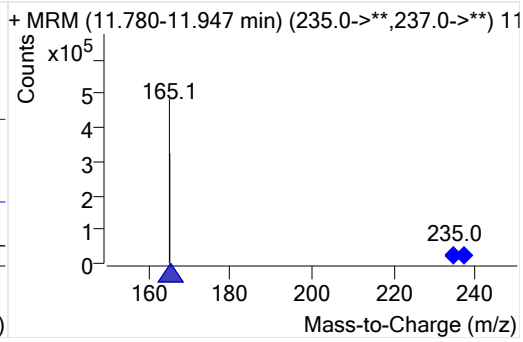




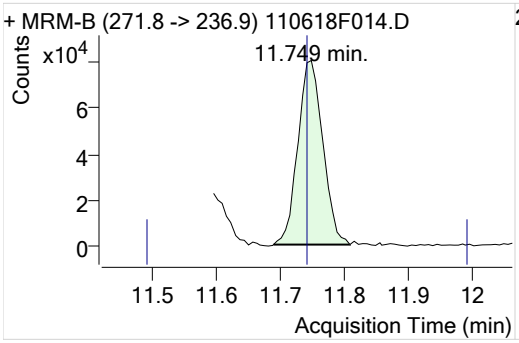
2,4'-DDT

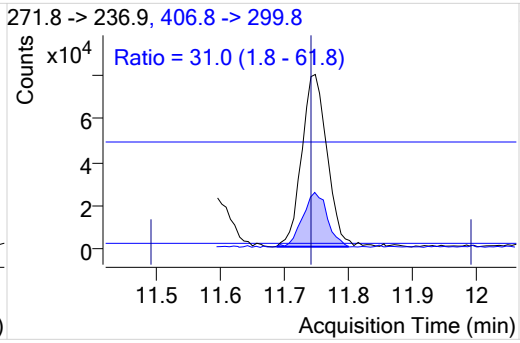


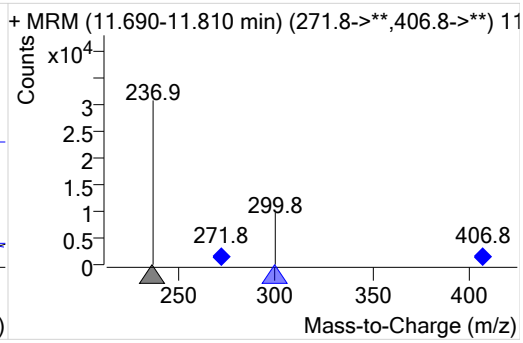




cis-Nonachlor

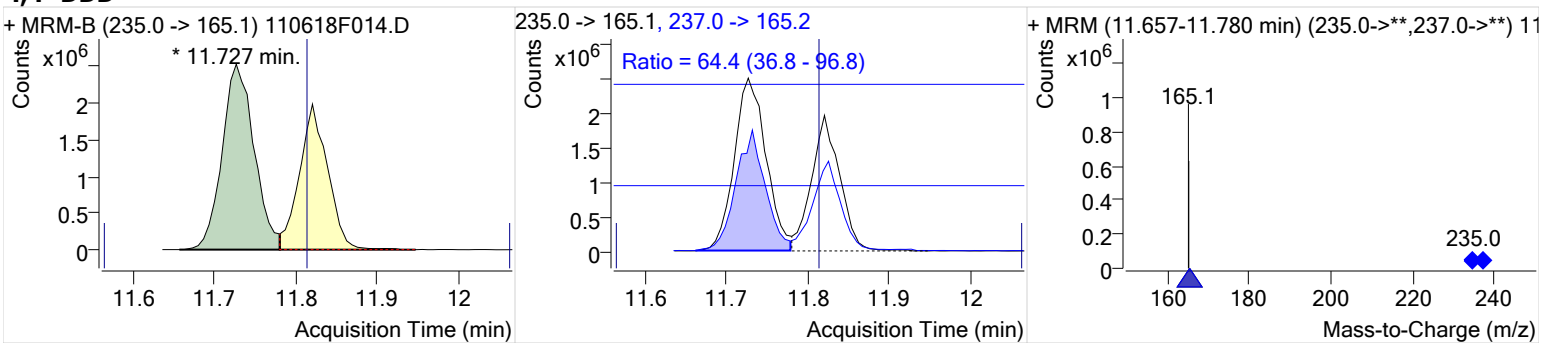




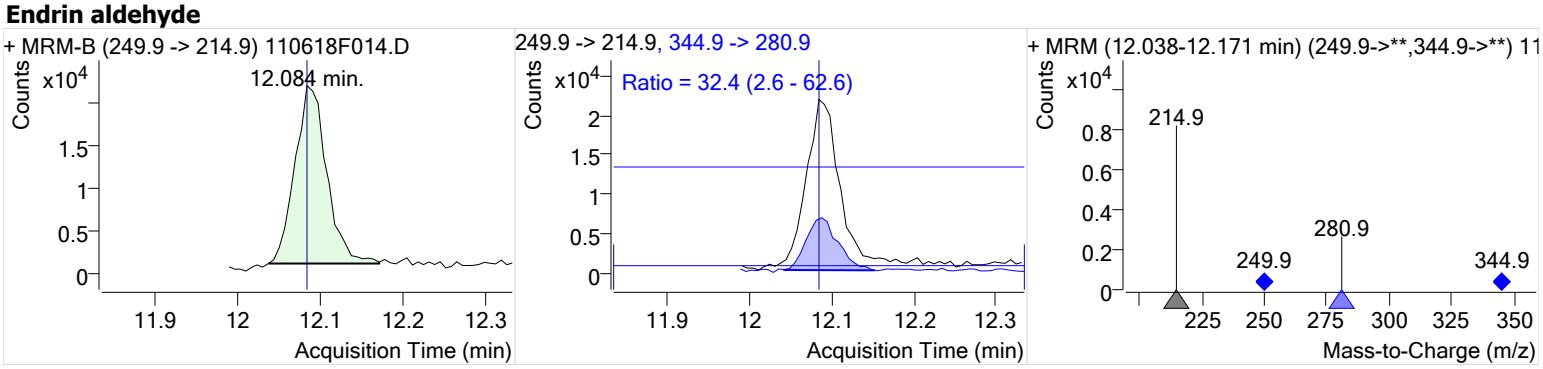


Quantitative Analysis Sample Report

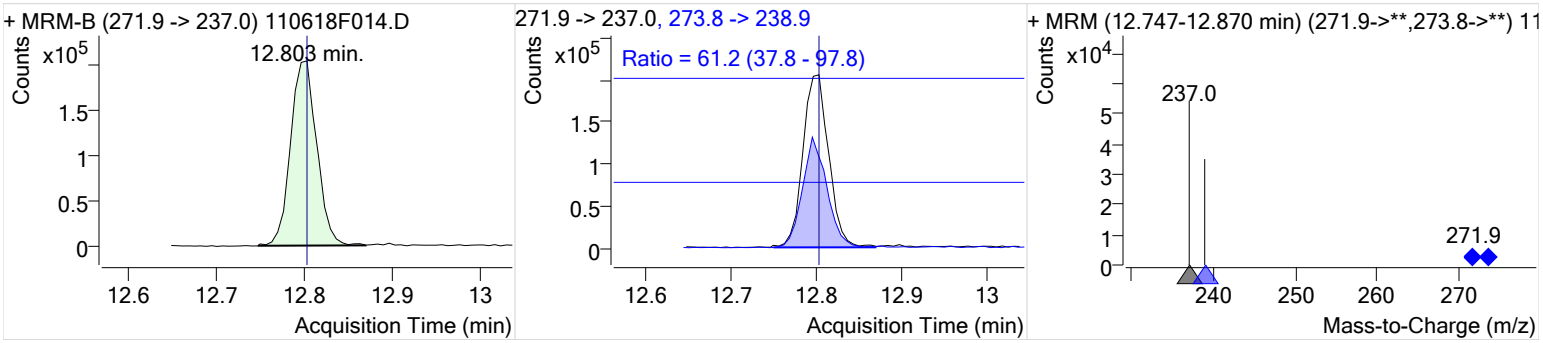
4,4'-DDD



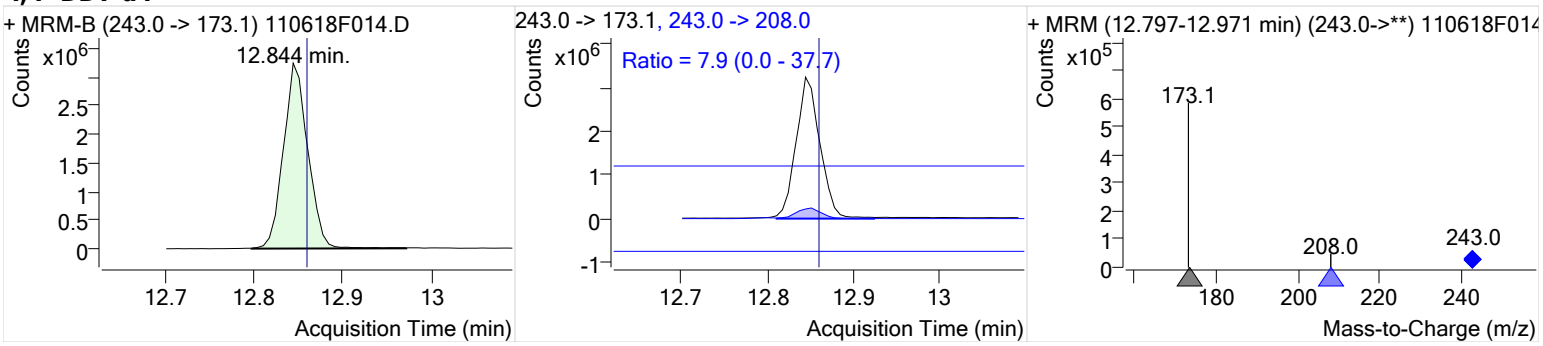
Endrin aldehyde



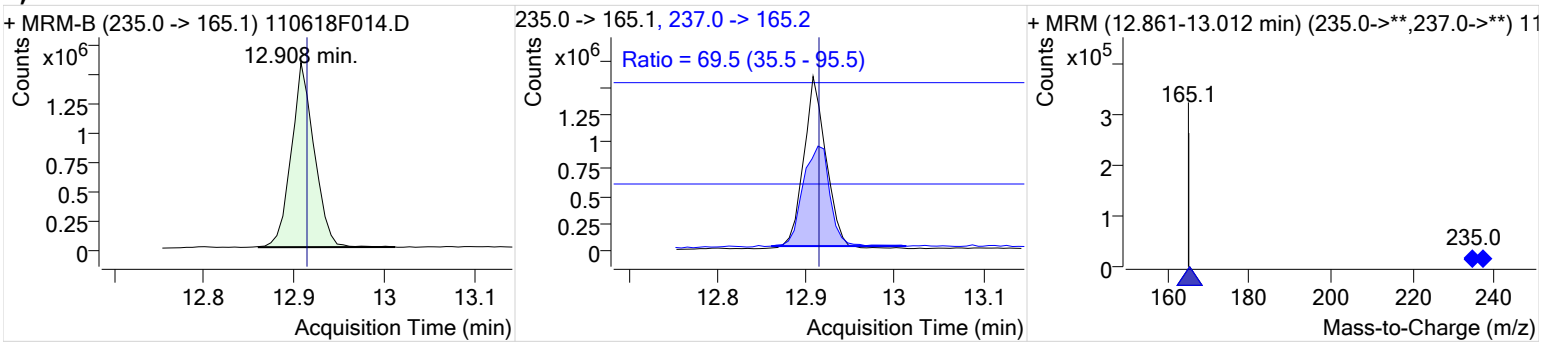
Endosulfan sulfate



4,4'-DDT-d4

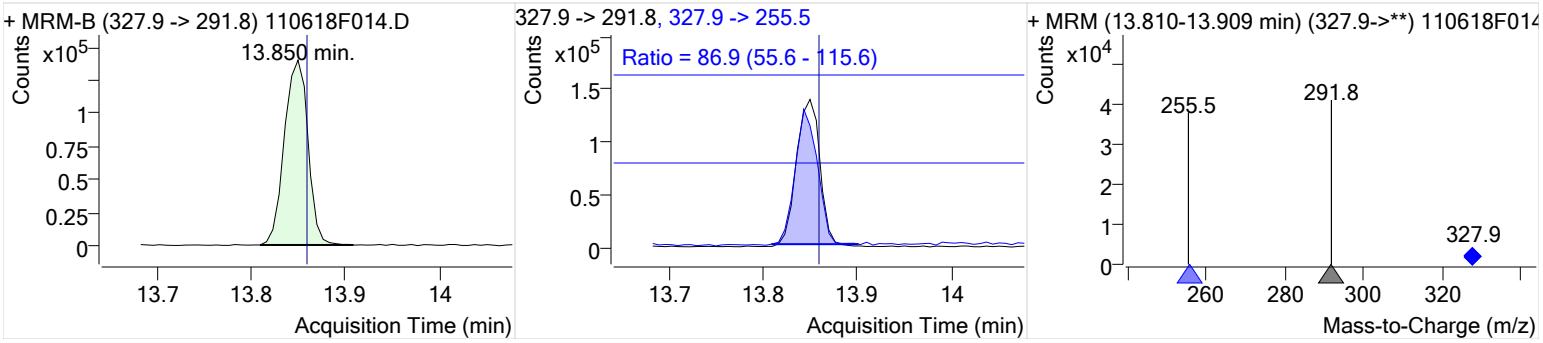


4,4'-DDT

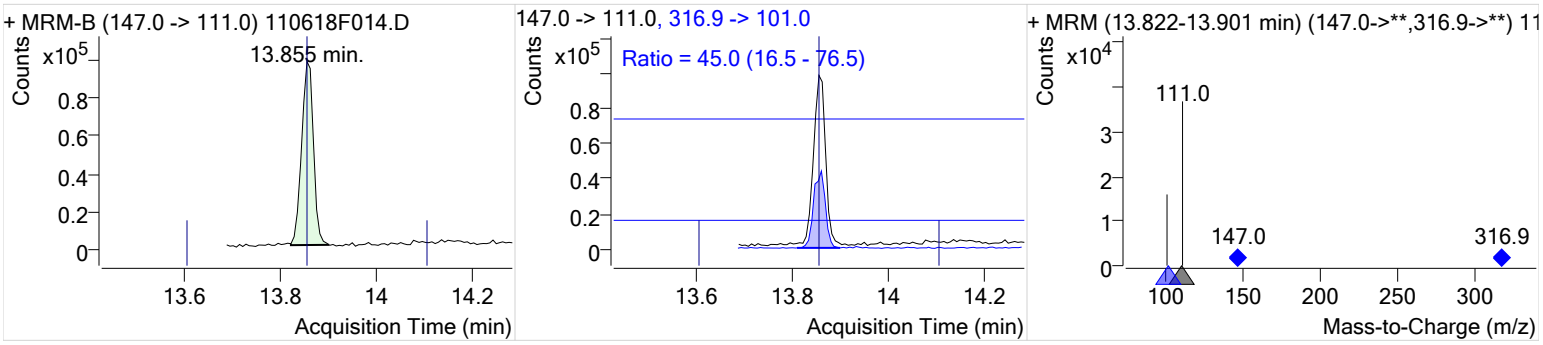


Quantitative Analysis Sample Report

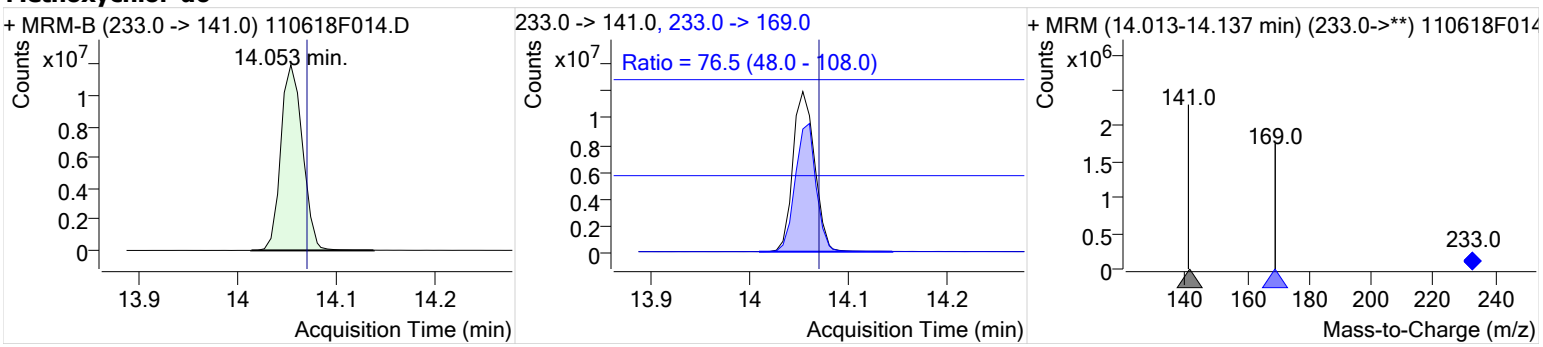
Endrin ketone-13C12



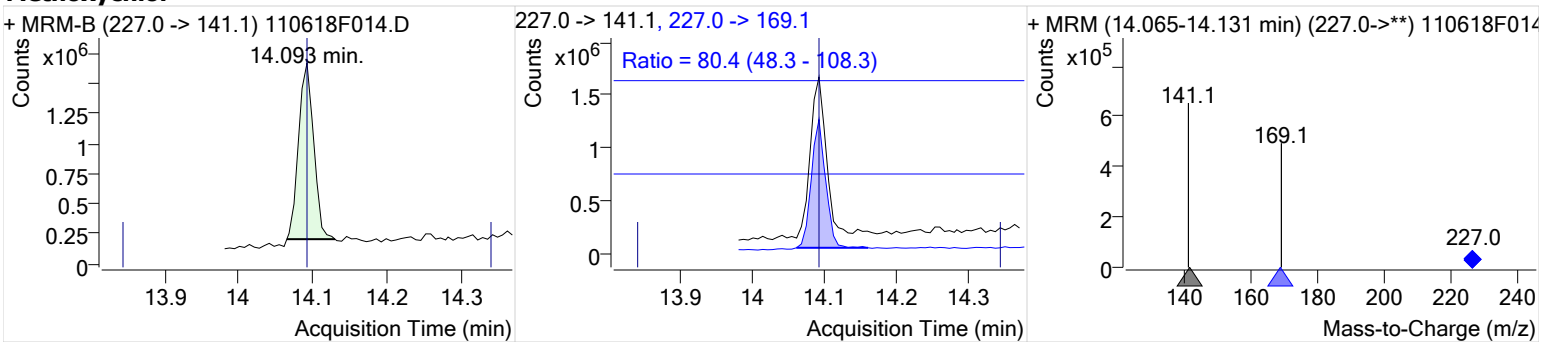
Endrin ketone



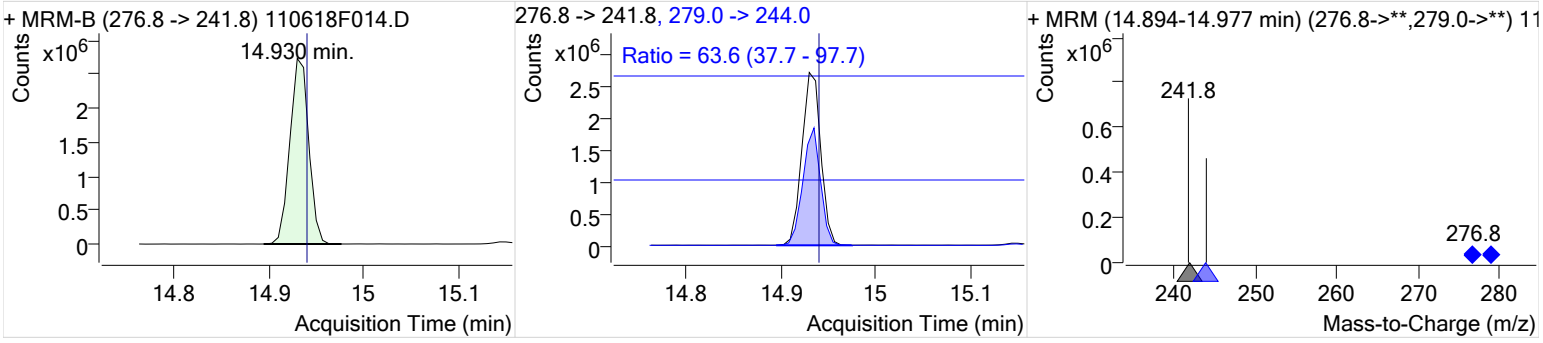
Methoxychlor-d6



Methoxychlor

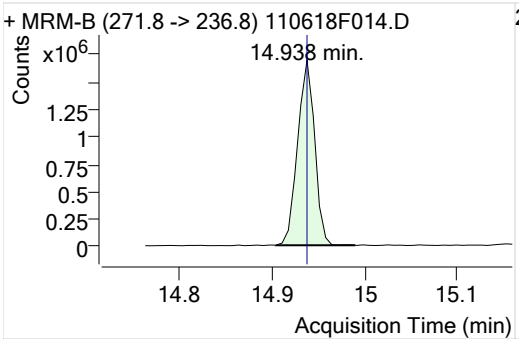


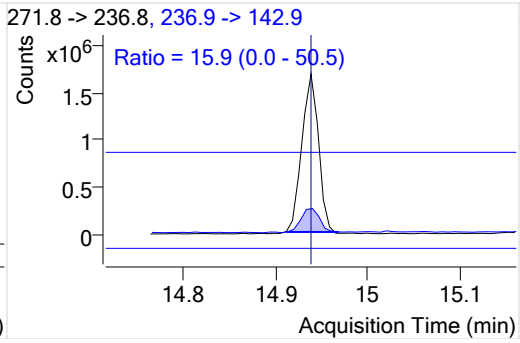
Mirex-13C10

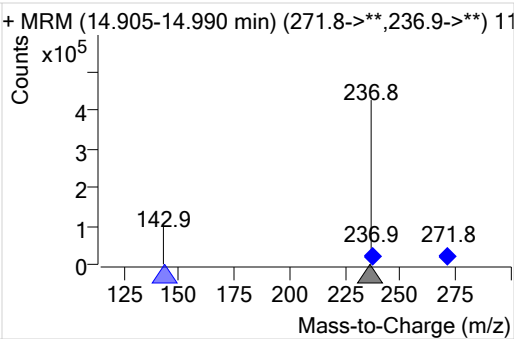


Quantitative Analysis Sample Report

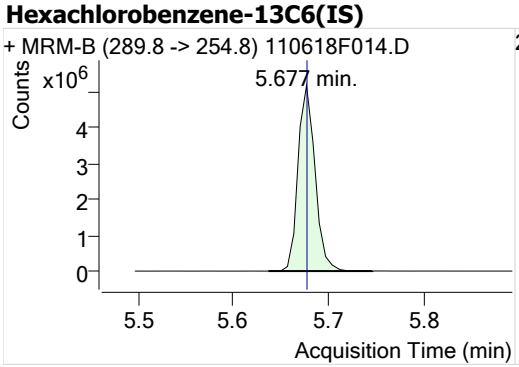
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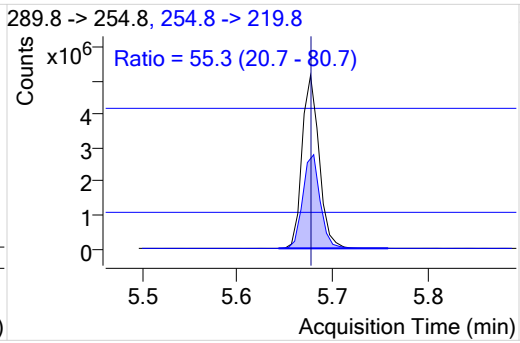


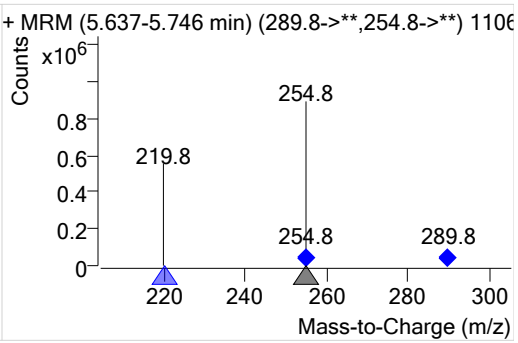




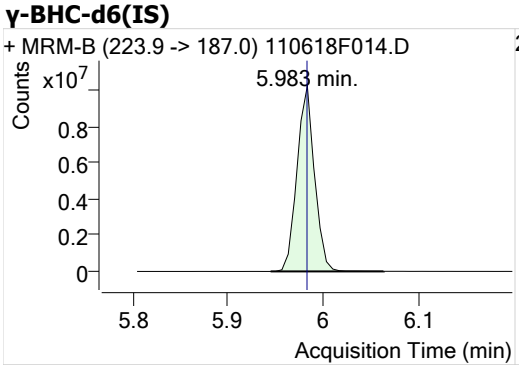
Hexachlorobenzene-13C6(IS)

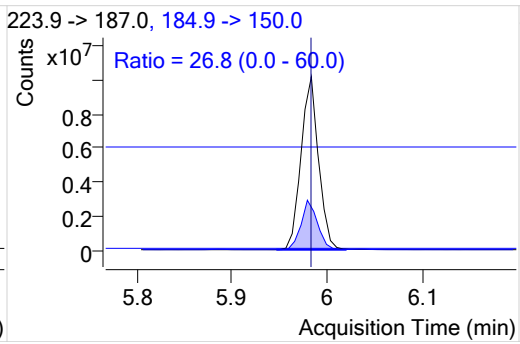


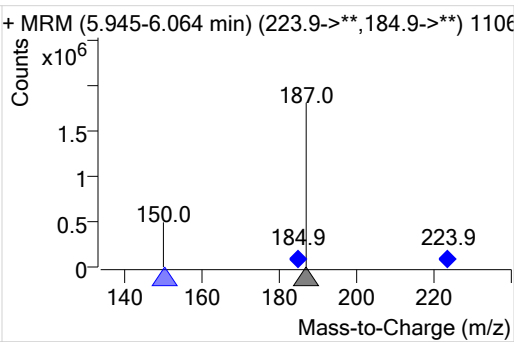




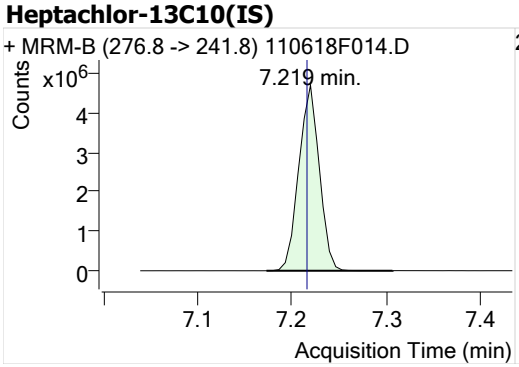
γ-BHC-d6(IS)

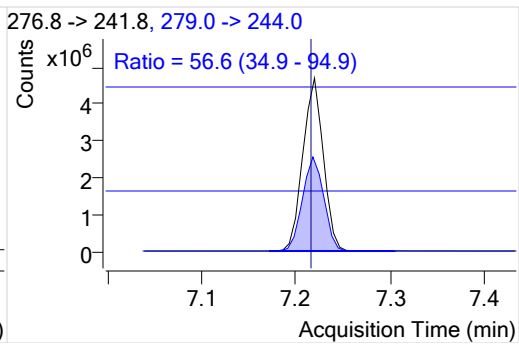


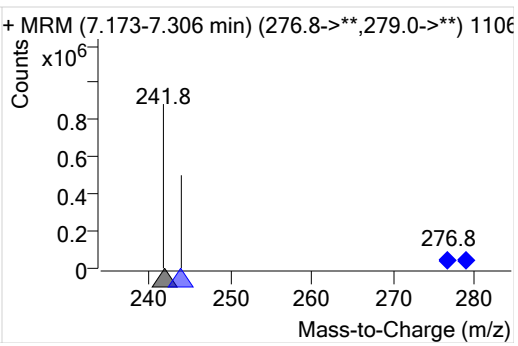




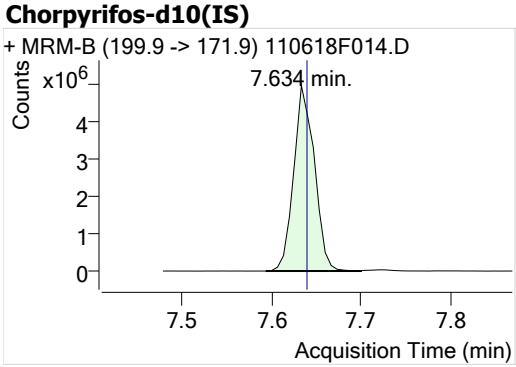
Heptachlor-13C10(IS)

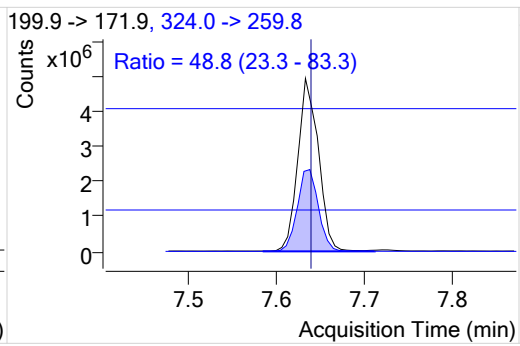


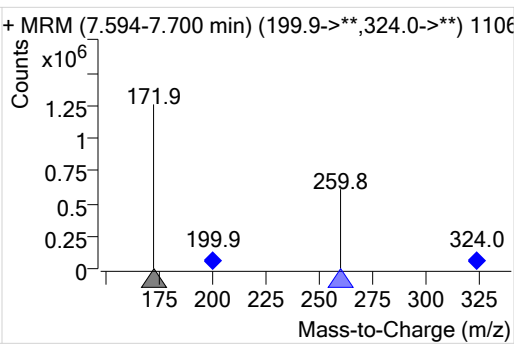




Chorpyrifos-d10(IS)

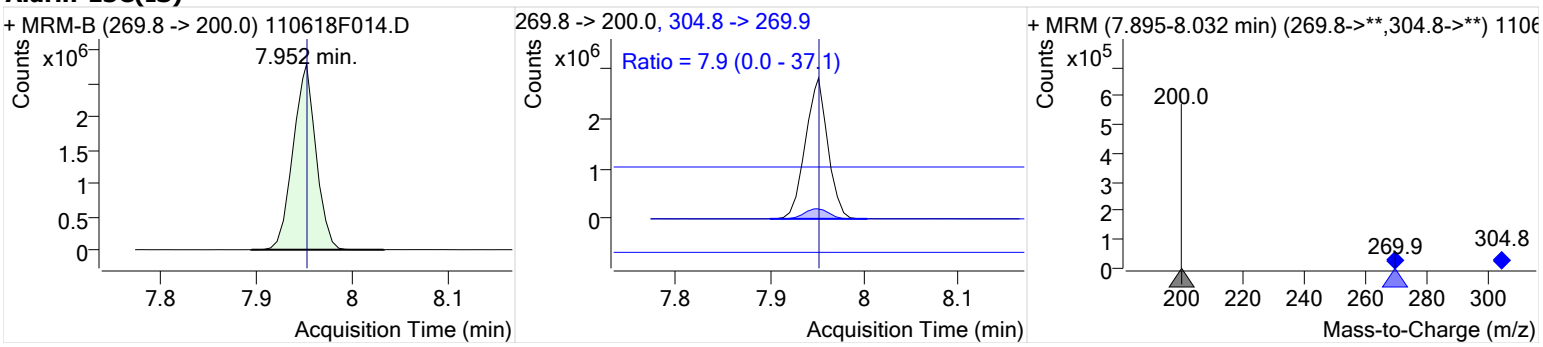




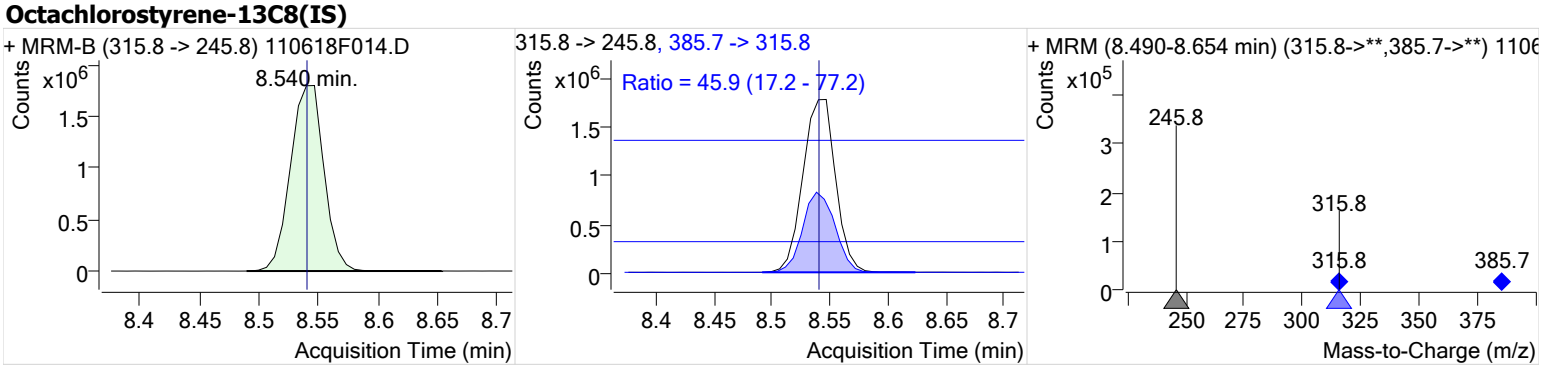


Quantitative Analysis Sample Report

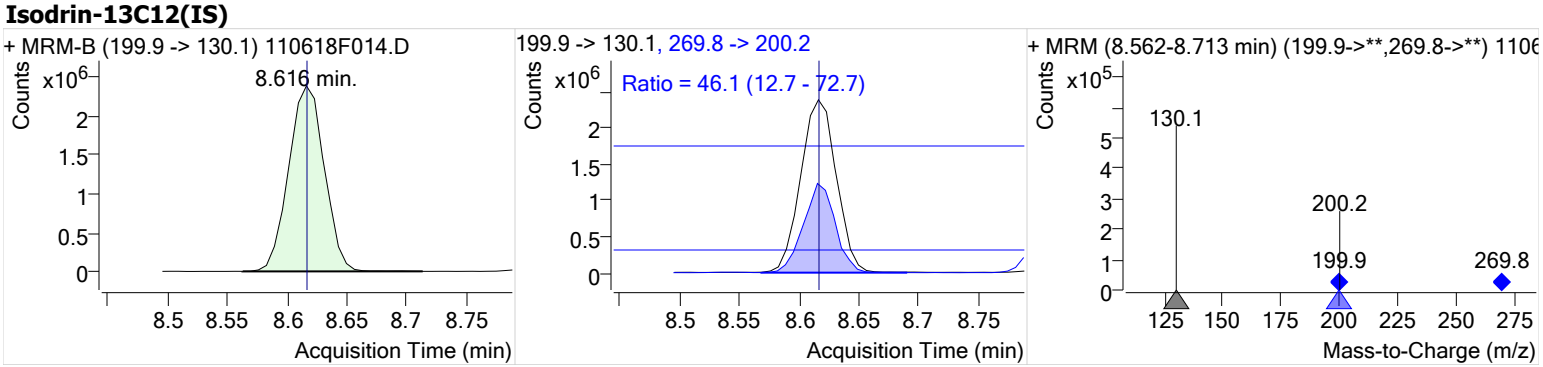
Aldrin-13C(IS)



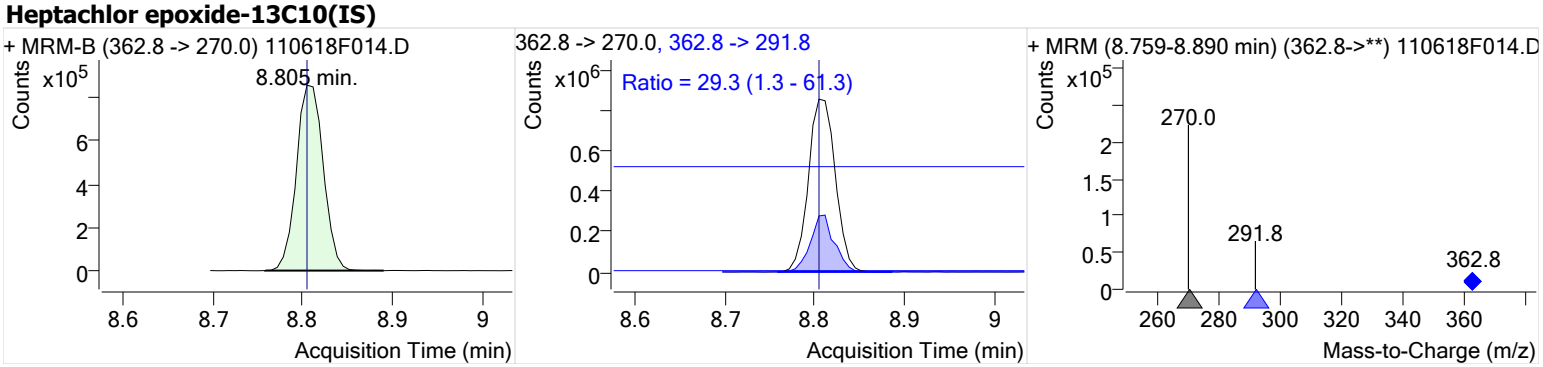
Octachlorostyrene-13C8(IS)



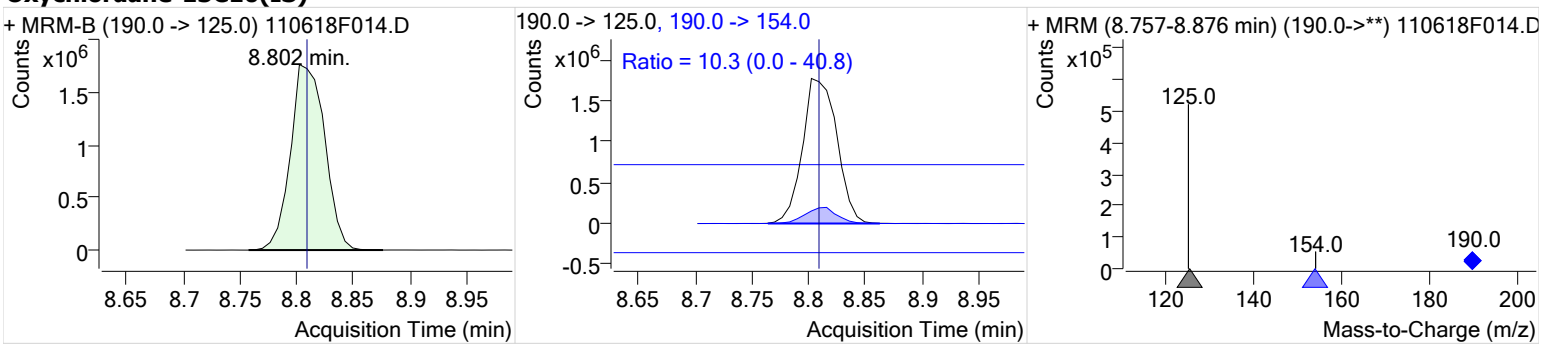
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

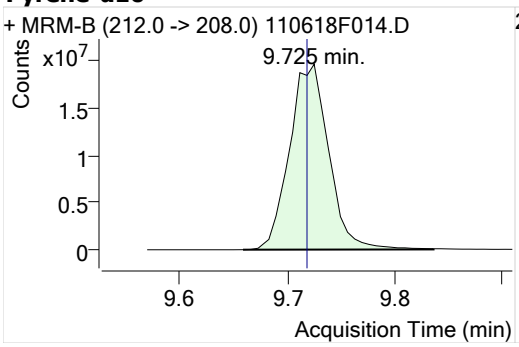


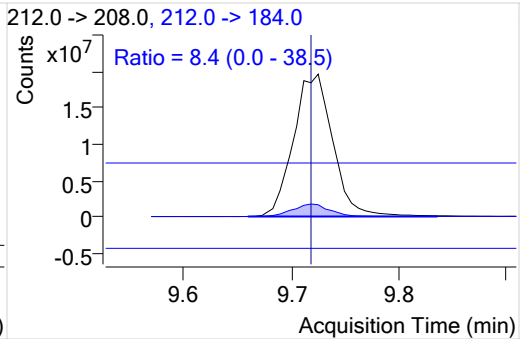
Oxychlordane-13C10(IS)

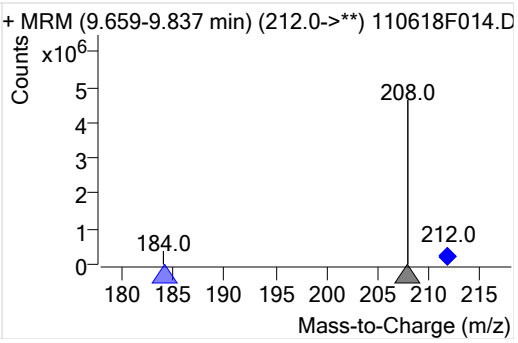


Quantitative Analysis Sample Report

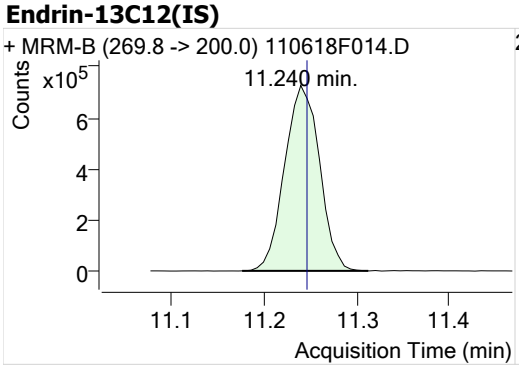
Pyrene-d10

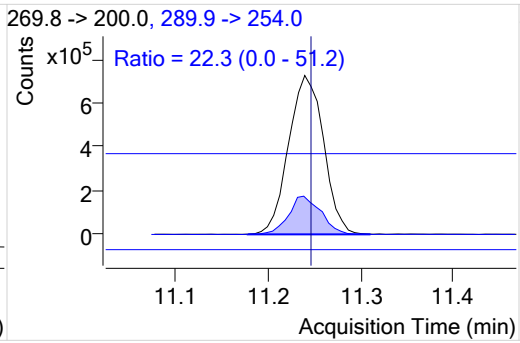


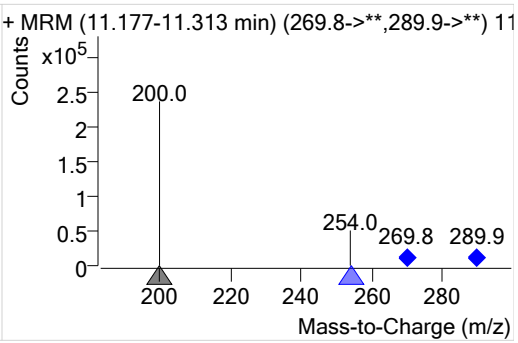




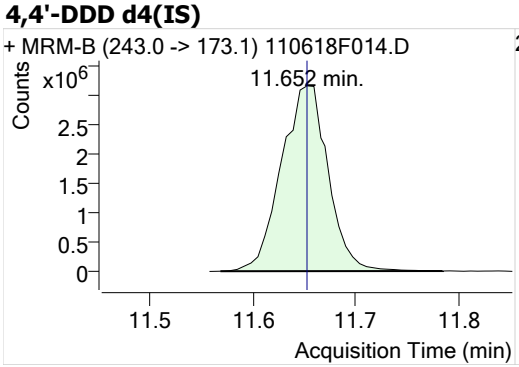
Endrin-13C12(IS)

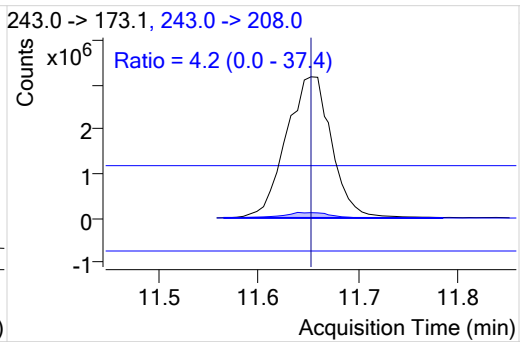


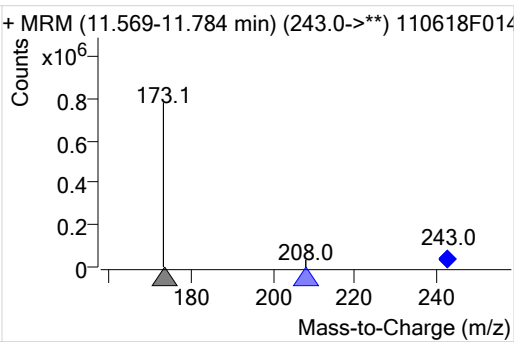




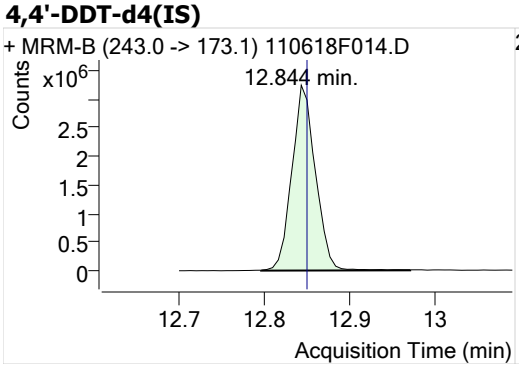
4,4'-DDD d4(IS)

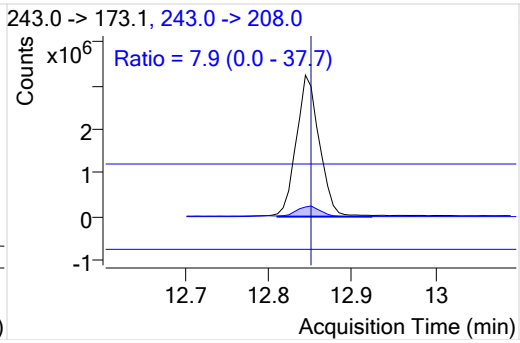


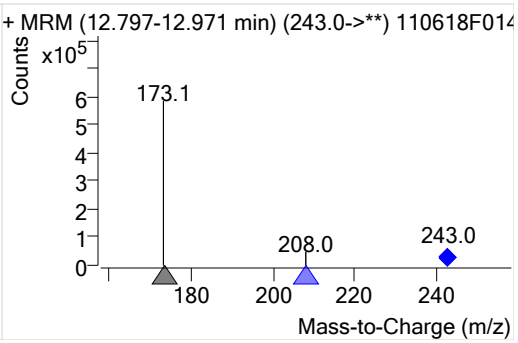




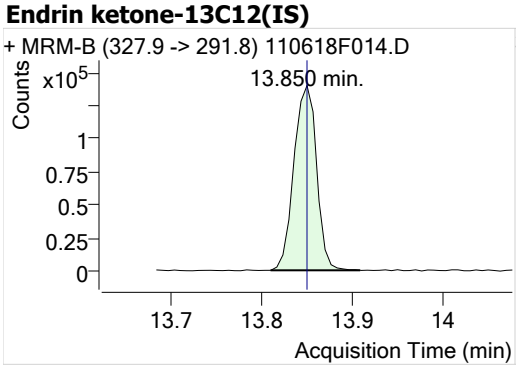
4,4'-DDT-d4(IS)

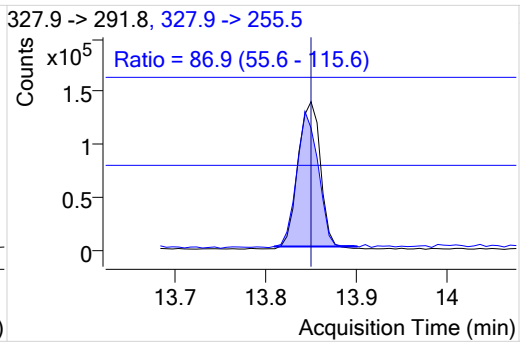


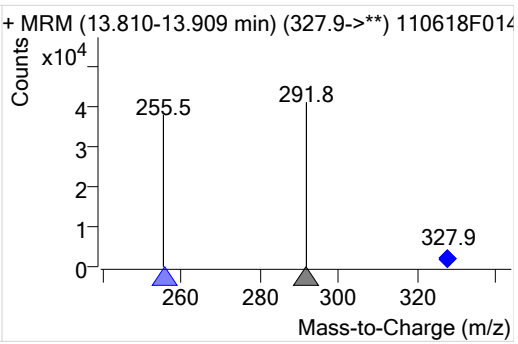




Endrin ketone-13C12(IS)

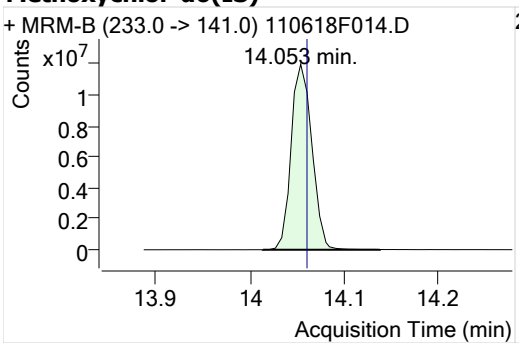


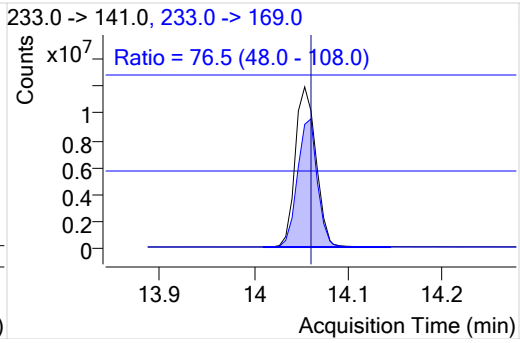


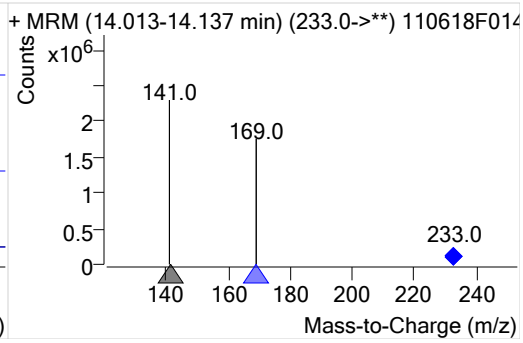


Quantitative Analysis Sample Report

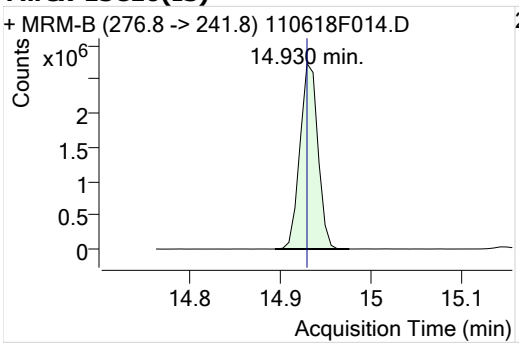
Methoxychlor-d6(IS)

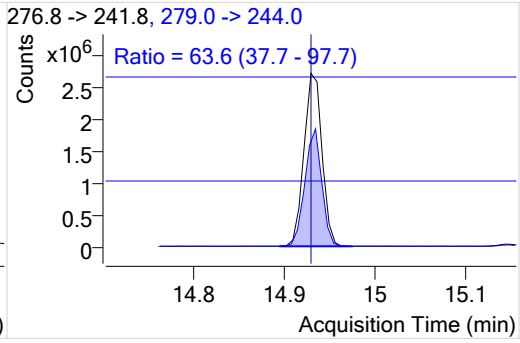


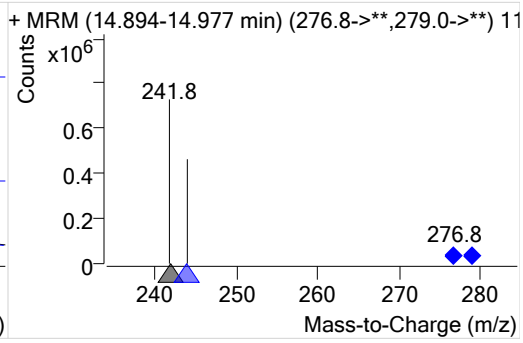




Mirex-13C10(IS)







1st 03/14/19
2nd 03/20/19

Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F015.D	**Vial**	6
Acq. Date-Time	11/6/2018 6:15:54 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL5ng/mL SVM59-48D	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	6203186	20.000 ng/ml	0.002
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	12019383	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.216	276.8 -> 241.8	6681987	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	7602333	20.000 ng/ml	0.001
Aldrin-13C(IS)	7.952	269.8 -> 200.0	4452000	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.534	315.8 -> 245.8	3449148	20.000 ng/ml	0.004
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4982610	20.000 ng/ml	0.000
Heptachlor epoxide-13C10(IS)	8.805	362.8 -> 270.0	1654796	20.000 ng/ml	0.003
Oxychlordane-13C10(IS)	8.816	190.0 -> 125.0	3568928	20.000 ng/ml	0.003
Pyrene-d10	9.719	212.0 -> 208.0	47999486	100.000 ng/ml	0.001
Endrin-13C12(IS)	11.247	269.8 -> 200.0	1895960	20.000 ng/ml	0.001
4,4'-DDD d4(IS)	11.652	243.0 -> 173.1	9358713	5.000 ng/ml	0.003
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	5530080	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	234017	20.000 ng/ml	0.003
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	18096067	20.000 ng/ml	0.003
Mirex-13C10(IS)	14.930	276.8 -> 241.8	4007580	5.000 ng/ml	0.003

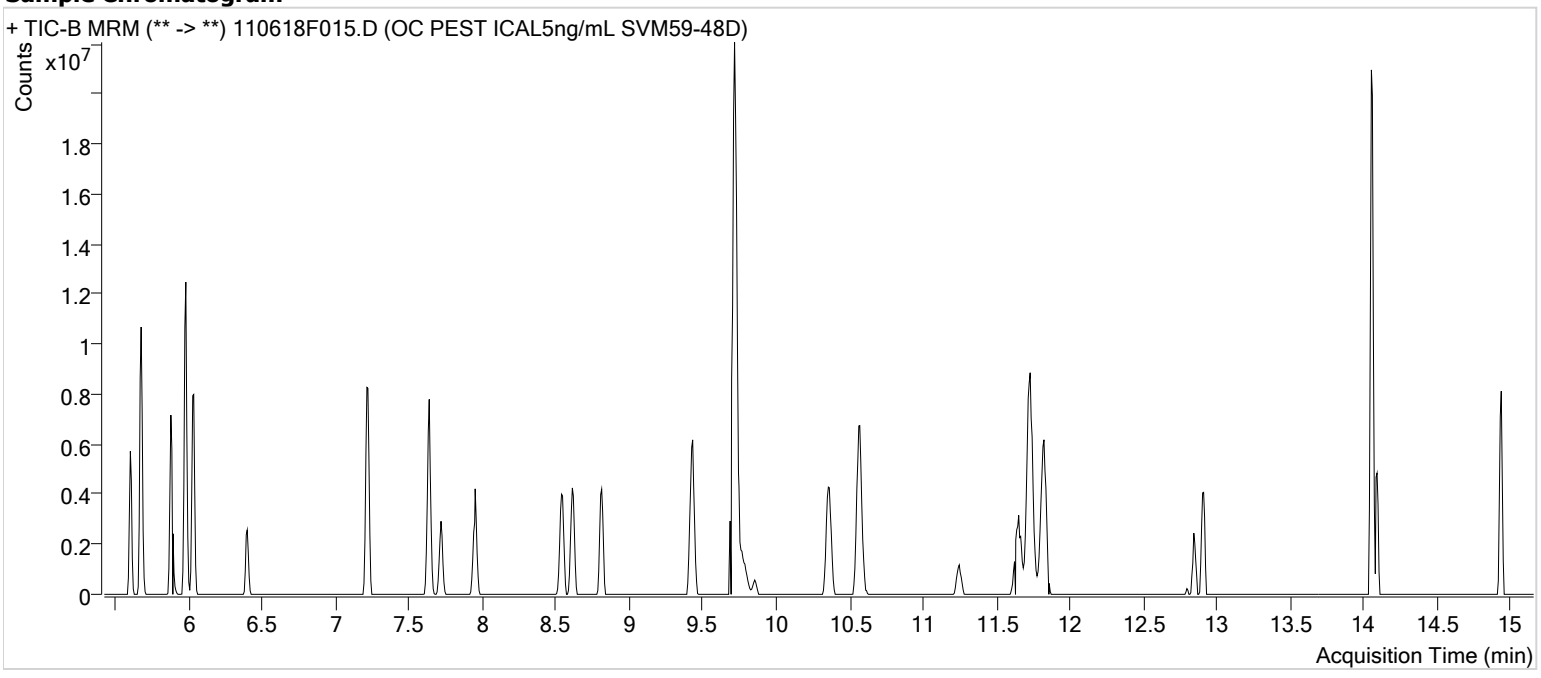
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	6203186	16.948 ng/ml	
		Spiked Amount =	20.0	Recovery =	*84.7 %*
γ-BHC-d6	5.983	223.9 -> 187.0	12019383	17.117 ng/ml	
		Spiked Amount =	20.0	Recovery =	*85.6 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	6681987	18.900 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.5 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	7602333	20.973 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.9 %*
Aldrin-13C	7.952	269.8 -> 200.0	4452000	17.745 ng/ml	
		Spiked Amount =	20.0	Recovery =	*88.7 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3449148	18.740 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.7 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4982610	17.965 ng/ml	
		Spiked Amount =	20.0	Recovery =	*89.8 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1654796	18.128 ng/ml	
		Spiked Amount =	20.0	Recovery =	*90.6 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3568928	18.506 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.5 %*
Endrin-13C12	11.247	269.8 -> 200.0	1895960	20.014 ng/ml	
		Spiked Amount =	20.0	Recovery =	*100.1 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	9358713	4.785 ng/ml	
		Spiked Amount =	5.0	Recovery =	*95.7 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	5530080	4.957 ng/ml	
		Spiked Amount =	5.0	Recovery =	*99.1 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	234017	19.655 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.3 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	18096067	21.285 ng/ml	
		Spiked Amount =	20.0	Recovery =	*106.4 %*
Mirex-13C10	14.930	276.8 -> 241.8	4007580	4.588 ng/ml	
		Spiked Amount =	5.0	Recovery =	*91.8 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	4207440	4.984	ng/ml	93
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	2812854	5.225	ng/ml	94
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	5856802	5.259	ng/ml	94
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.033	181.1 -> 145.1	6781615	5.068	ng/ml	99
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	2628041	5.244	ng/ml	94
Heptachlor	Heptachlor-13C10(IS)	7.226	271.7 -> 236.9	1764899	4.730	ng/ml	70
Chorpyrifos	Chorpyrifos-d10(IS)	7.723	196.9 -> 169.0	2461974	4.747	ng/ml	91
Aldrin	Aldrin-13C(IS)	7.956	254.9 -> 220.0	1055333	4.735	ng/ml	75
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.540	342.8 -> 307.8	1921710	4.376	ng/ml	93
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	1167594	4.595	ng/ml	98
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	429487	4.771	ng/ml	98
Oxychlordane	Oxychlordane-13C10(IS)	8.824	114.9 -> 51.1	2402884	4.844	ng/ml	98
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.426	271.8 -> 236.9	787624	4.801	ng/ml	97
2,4'-DDE	4,4'-DDD d4(IS)	9.436	246.0 -> 176.2	7287584	4.801	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.775	271.8 -> 236.9	1918287	4.815	ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	417259	4.190	ng/ml	97
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	1186580	4.374	ng/ml	97
4,4' -DDE	4,4'-DDD d4(IS)	10.360	246.0 -> 176.2	6820960	4.993	ng/ml	97
2,4'-DDD	4,4'-DDD d4(IS)	10.567	235.0 -> 165.1	10156632	5.145	ng/ml	95
Dieldrin	Endrin-13C12(IS)	10.596	262.9 -> 193.0	590974	4.418	ng/ml	98
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	227897	5.261	ng/ml	88
Endrin	Endrin-13C12(IS)	11.261	262.8 -> 193.0	574809	4.645	ng/ml	96
2,4'-DDT	4,4'-DDT-d4(IS)	11.827	235.0 -> 165.1	10119376 ***m***	4.496	ng/ml	97
cis-Nonachlor	Oxychlordane-13C10(IS)	11.749	271.8 -> 236.9	505277	4.835	ng/ml	98
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	15013399 ***m***	5.055	ng/ml	93
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	132550	4.896	ng/ml	95
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	884925	4.665	ng/ml	98
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	6159684	5.047	ng/ml	98
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	369392	4.808	ng/ml	98
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	5390918	5.138	ng/ml	87
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	4343416	4.718	ng/ml	96

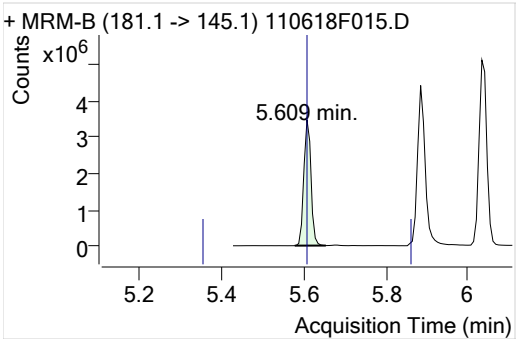
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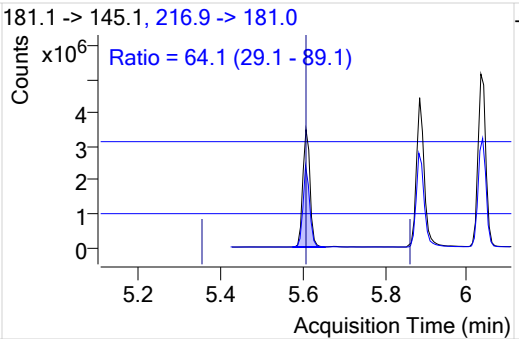
Sample Chromatogram

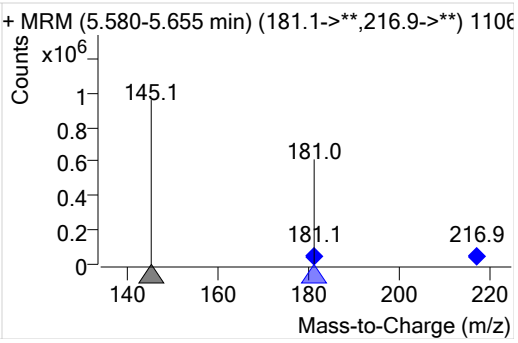


Quantitative Analysis Sample Report

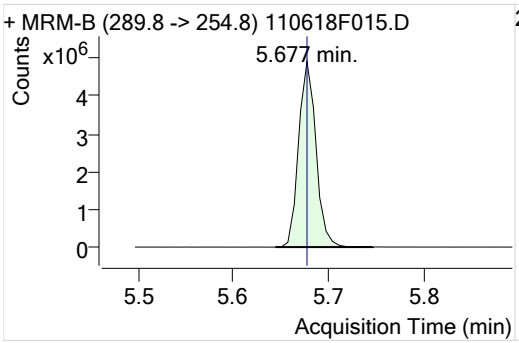
α-BHC

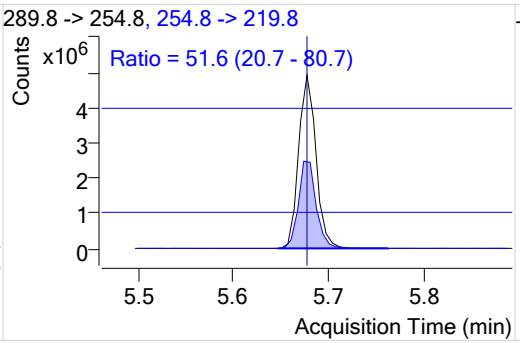


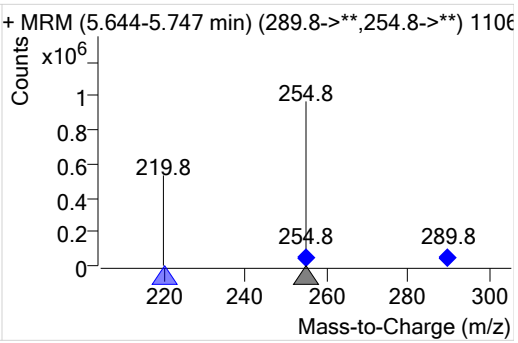




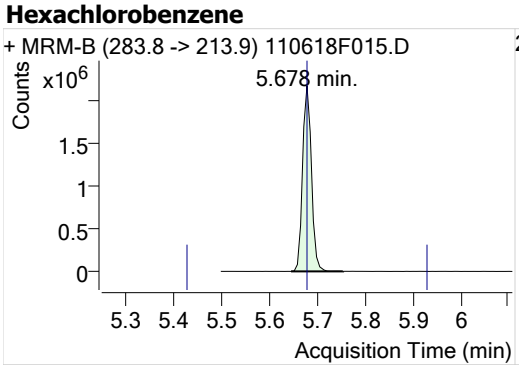
Hexachlorobenzene-13C6

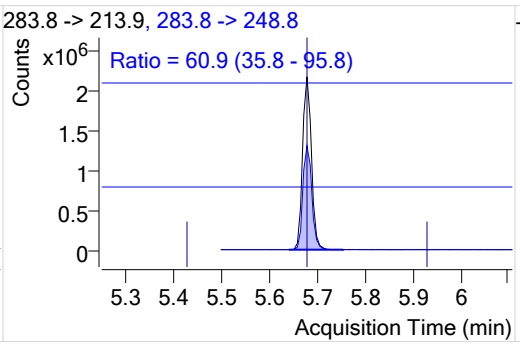


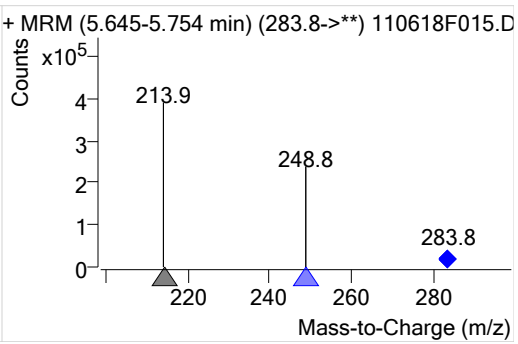




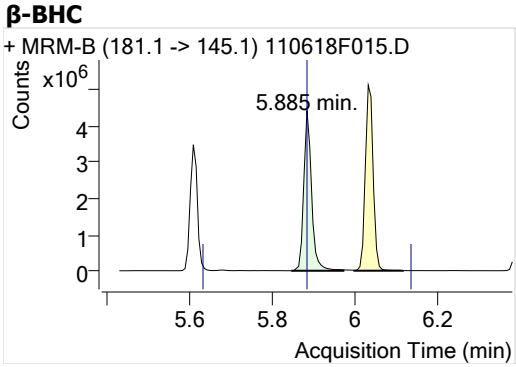
Hexachlorobenzene

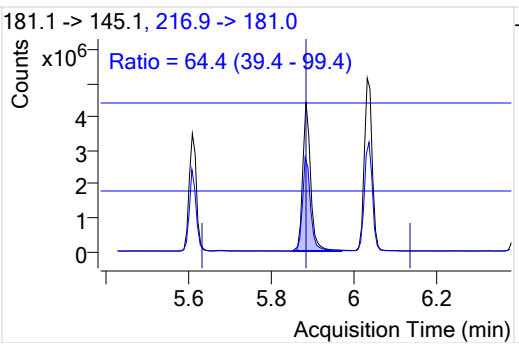


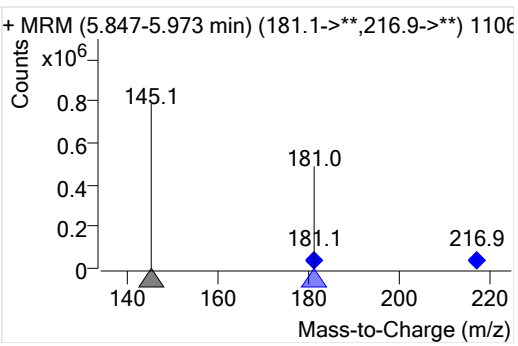




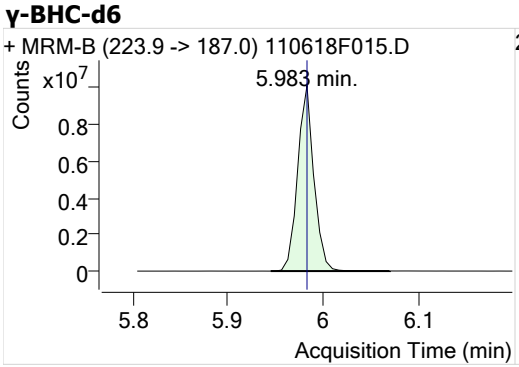
β-BHC

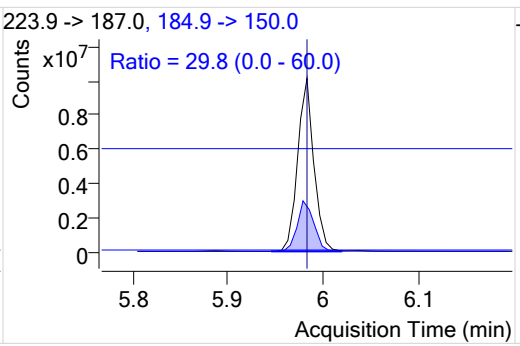


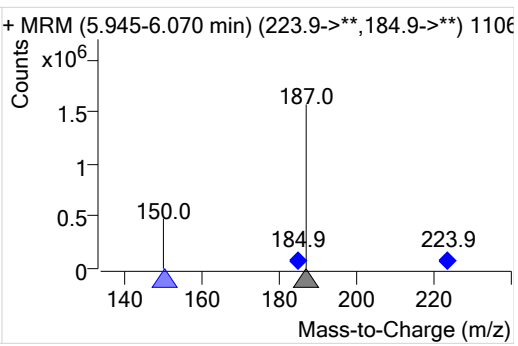




γ-BHC-d6

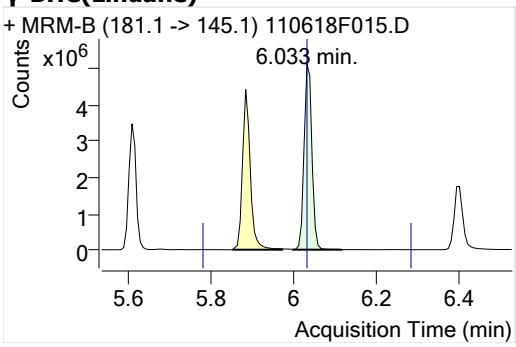


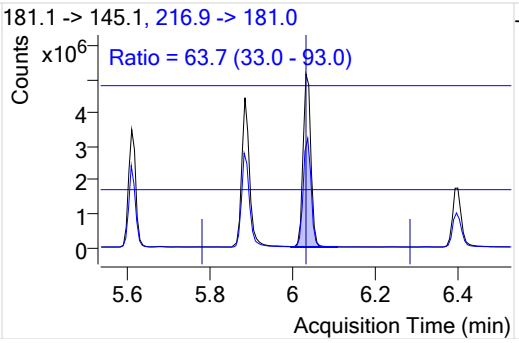


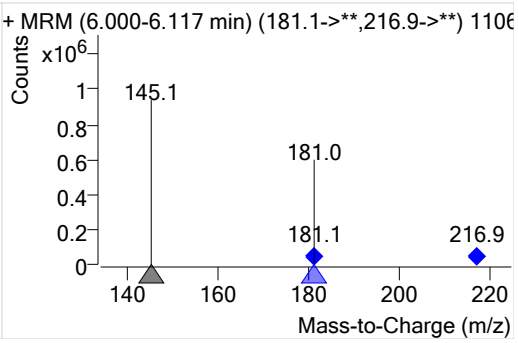


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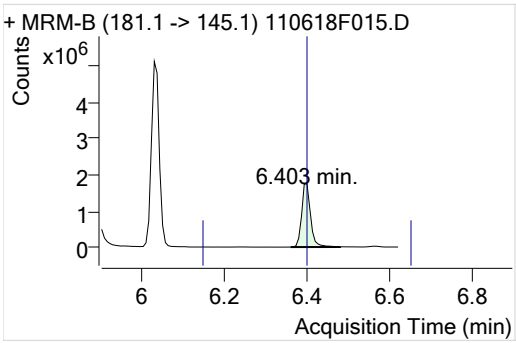
γ-BHC(Lindane)

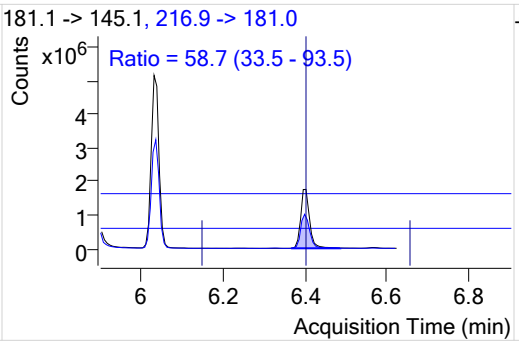


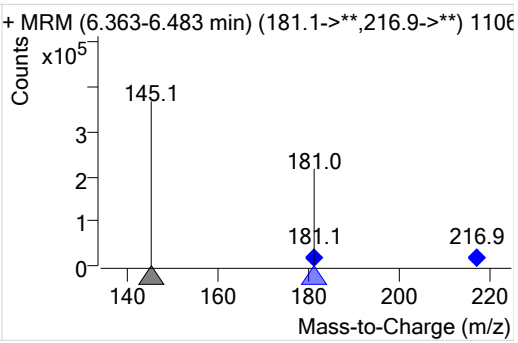




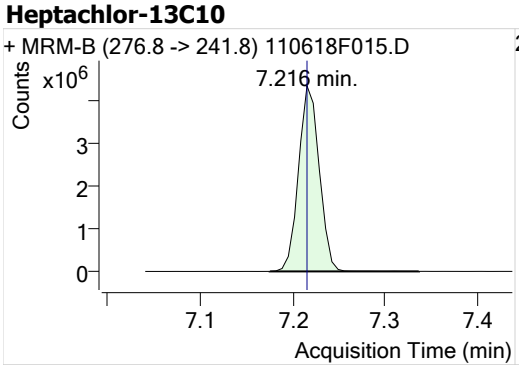
δ-BHC

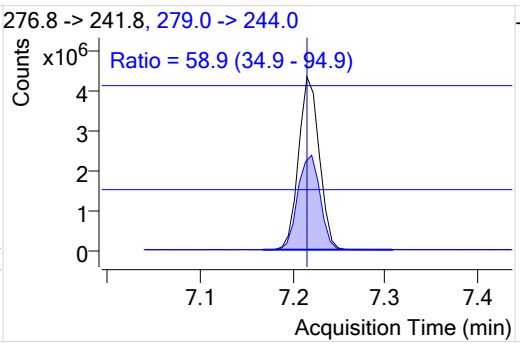


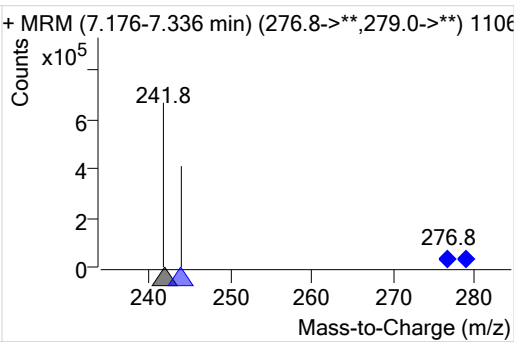




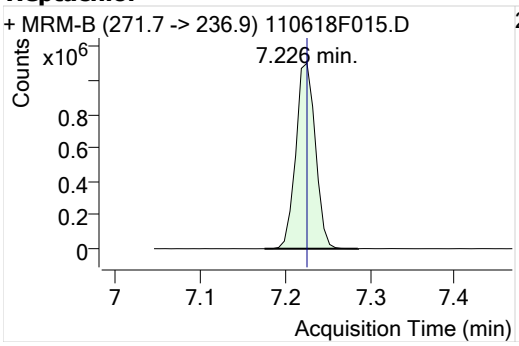
Heptachlor-13C10

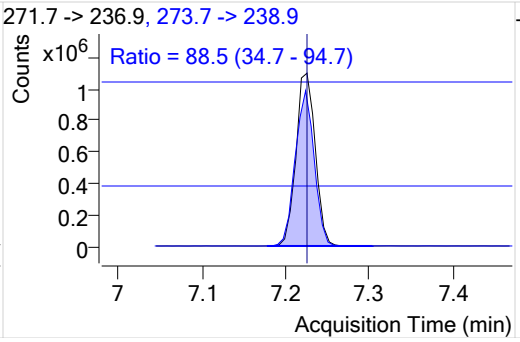


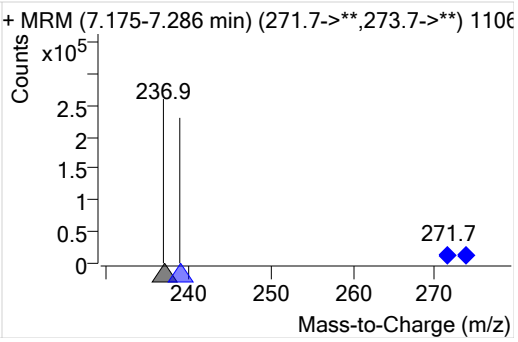




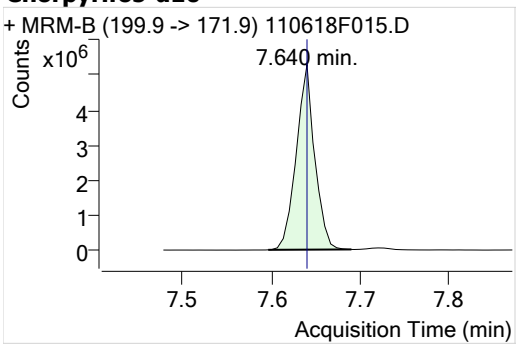
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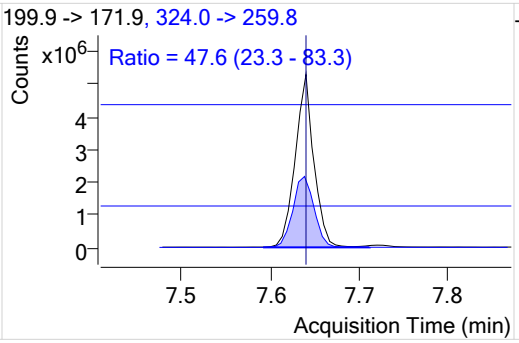


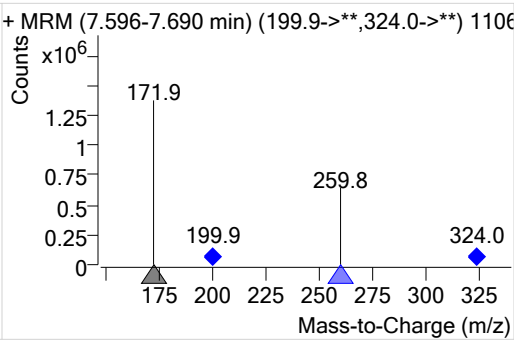




Chorpyrifos-d10

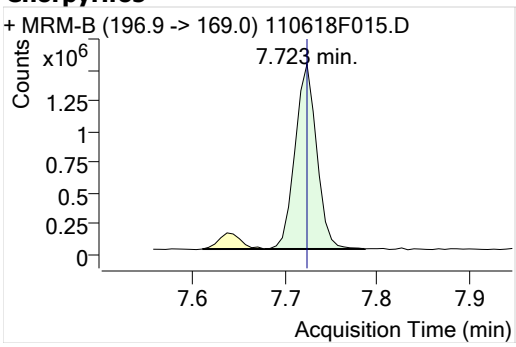


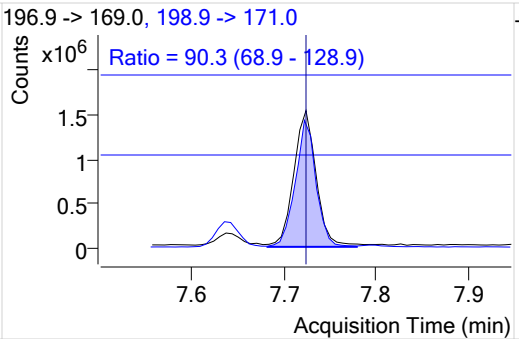


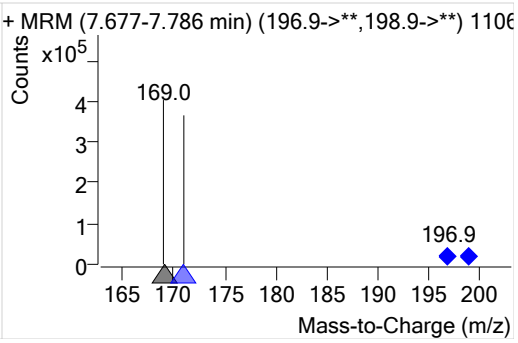


Quantitative Analysis Sample Report

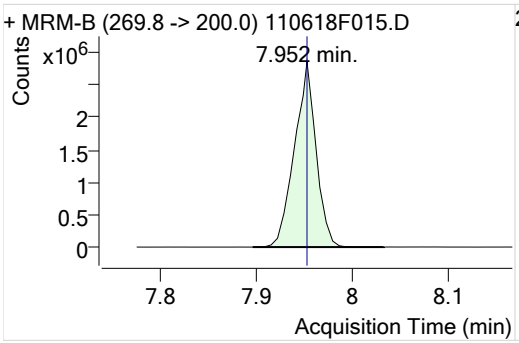
Chorpyrifos

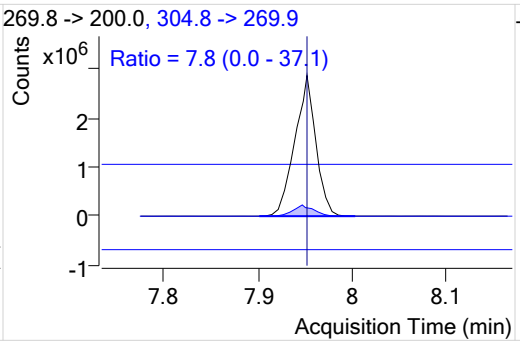


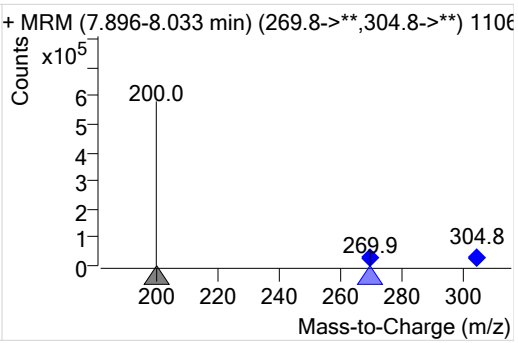




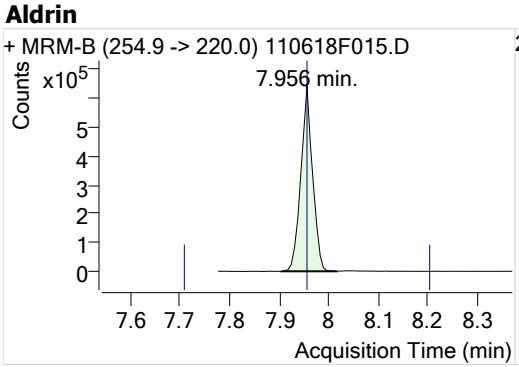
Aldrin-13C

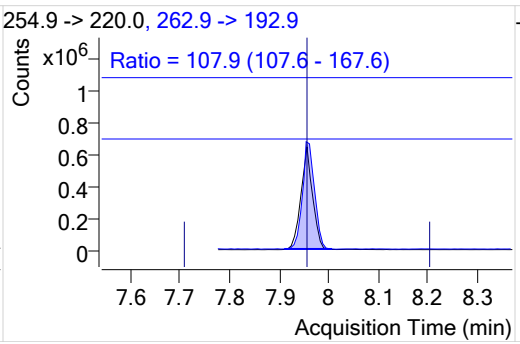


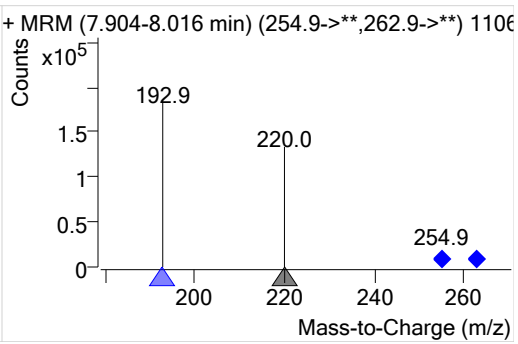




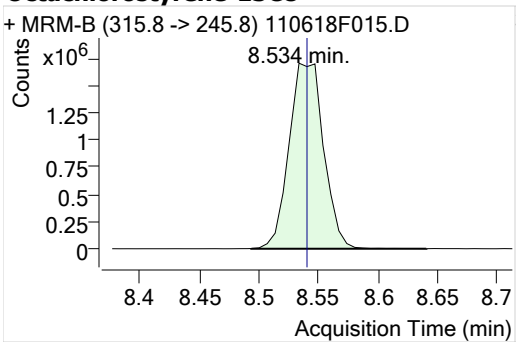
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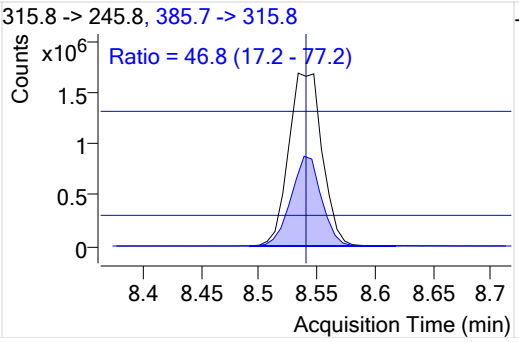


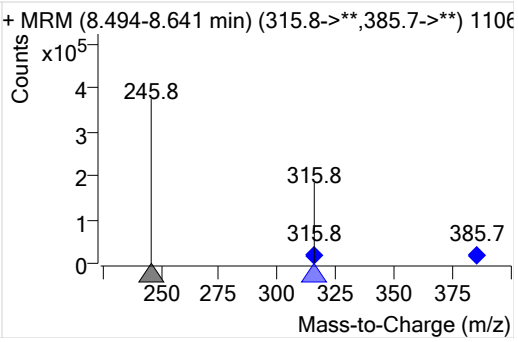




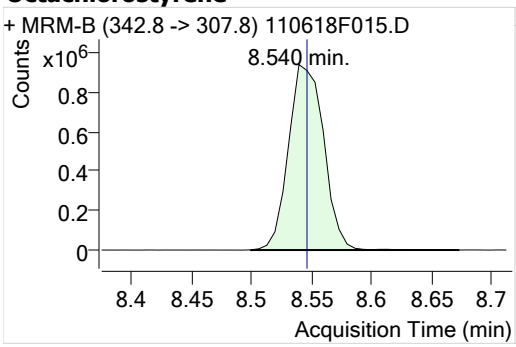
Octachlorostyrene-13C8

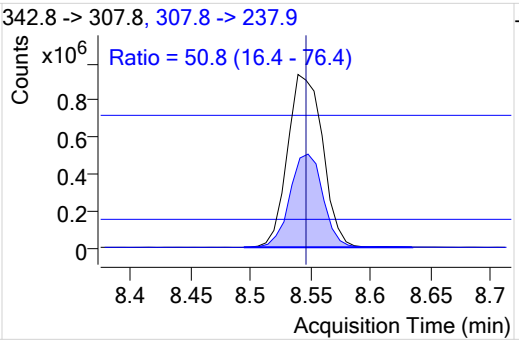


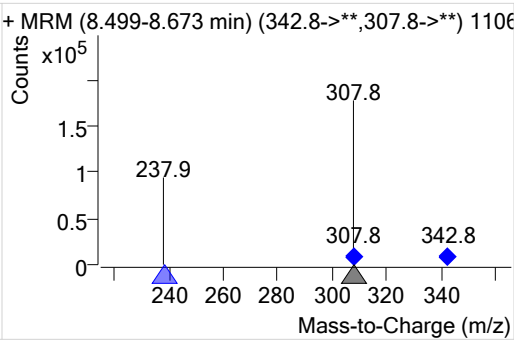




Octachlorostyrene

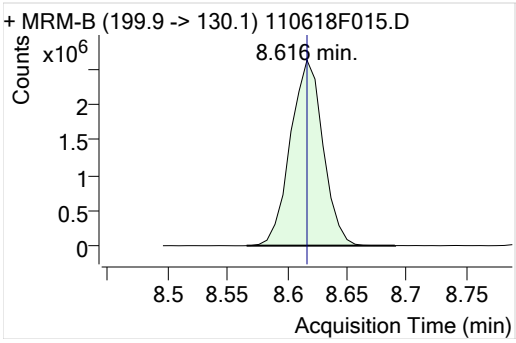


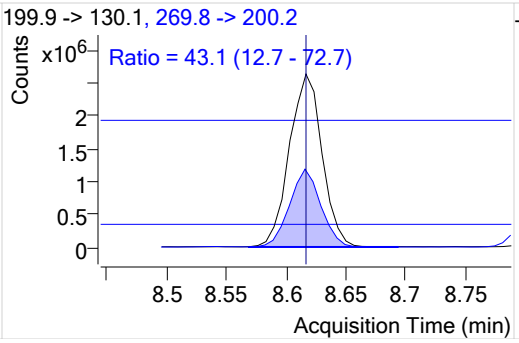


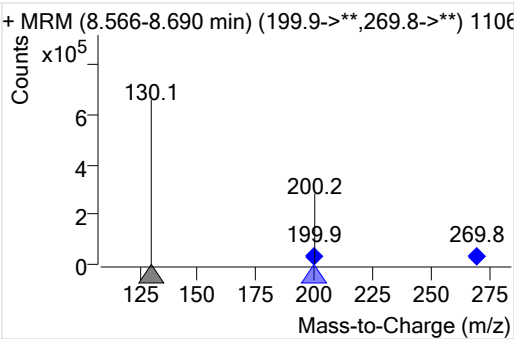


Quantitative Analysis Sample Report

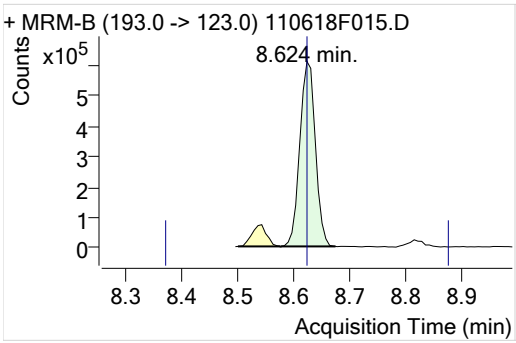
Isodrin-13C12

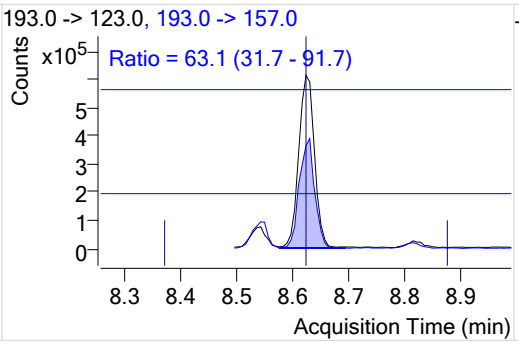


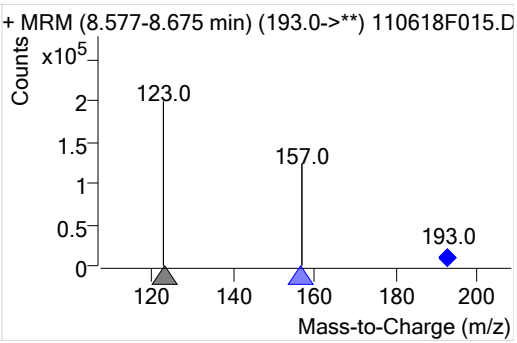




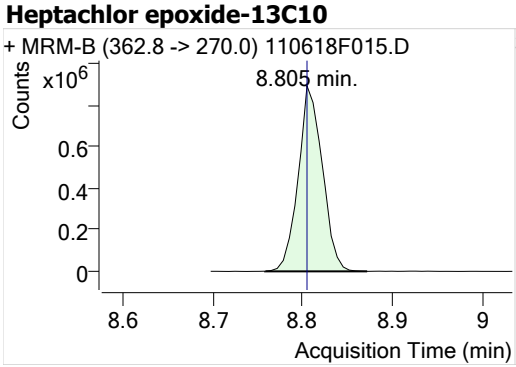
Isodrin

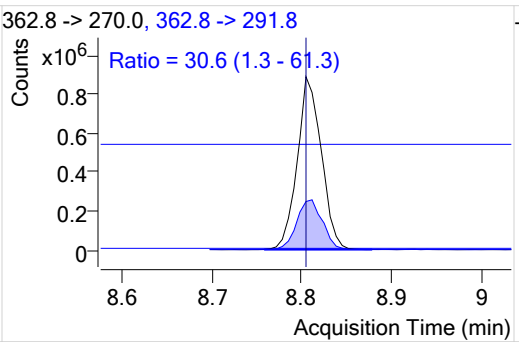


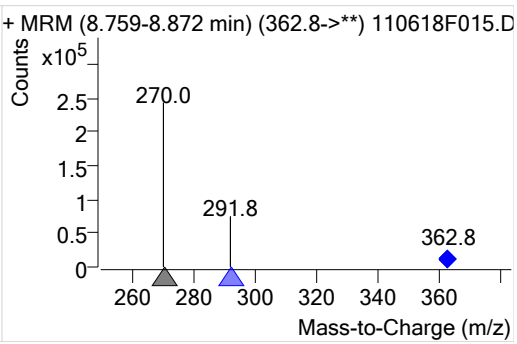




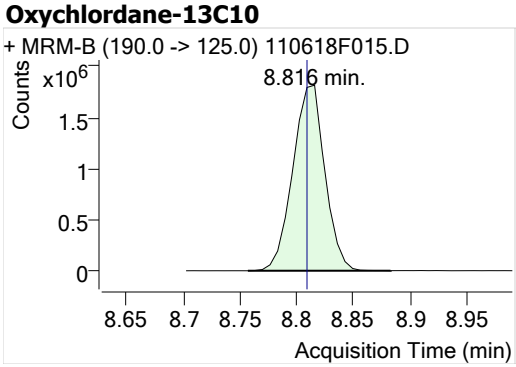
Heptachlor epoxide-13C10

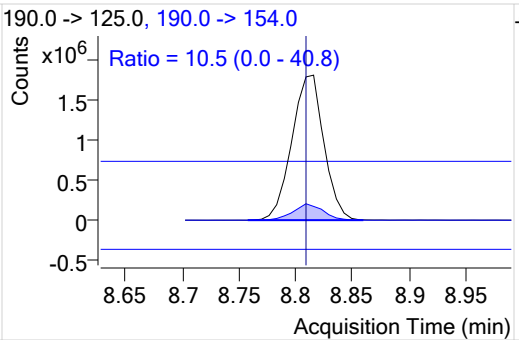


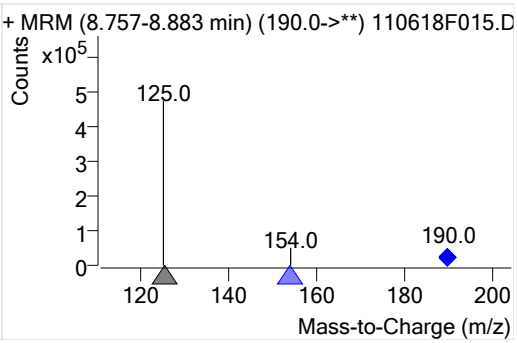




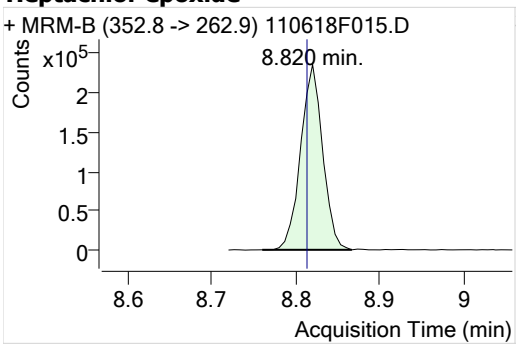
Oxychlordane-13C10

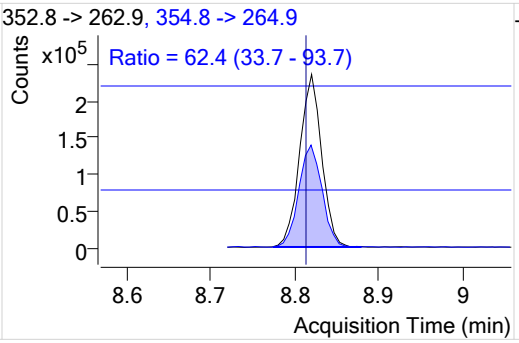


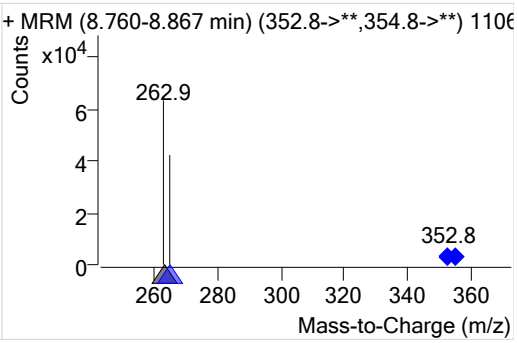




Heptachlor epoxide

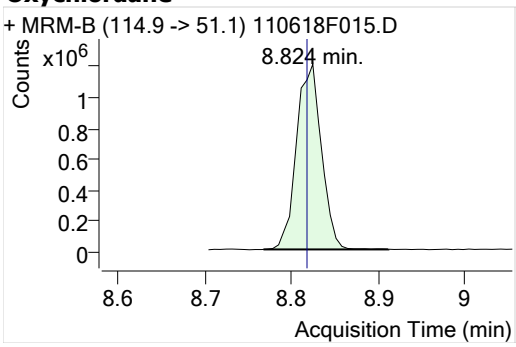


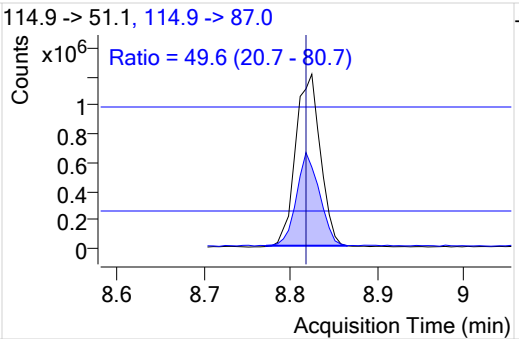


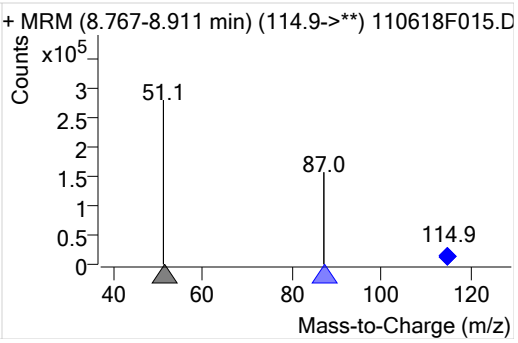


Quantitative Analysis Sample Report

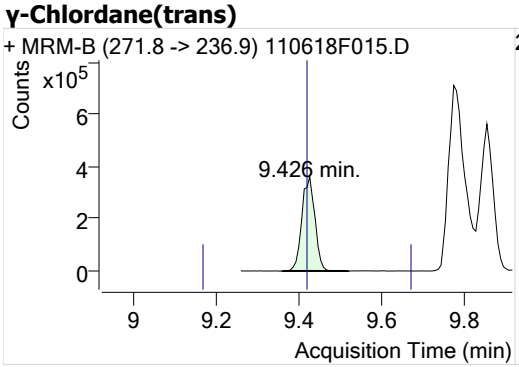
Oxychlordane

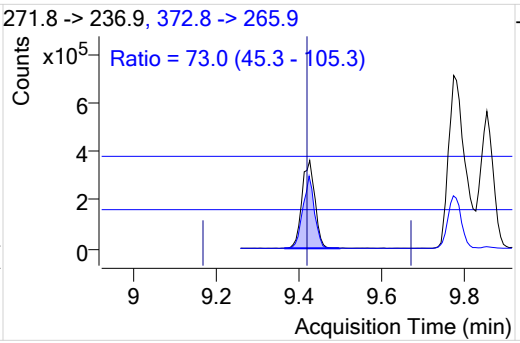


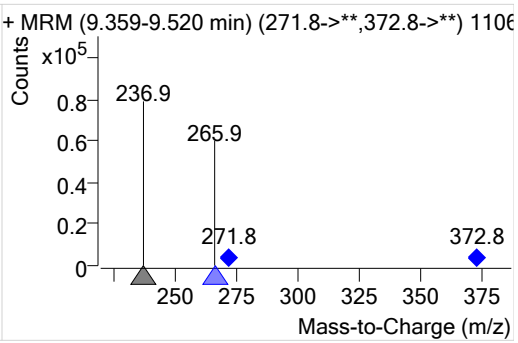




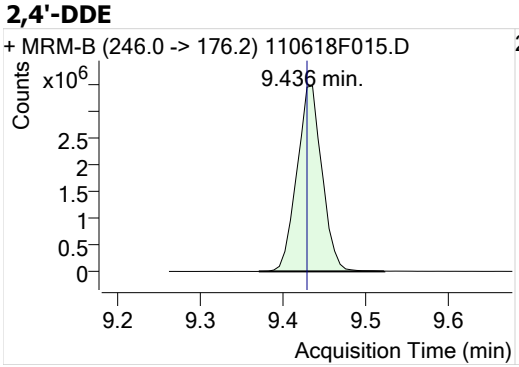
γ-Chlordane(trans)

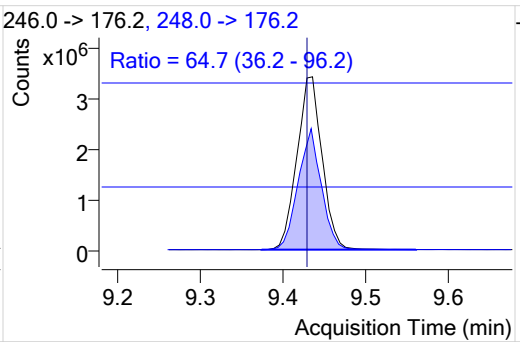


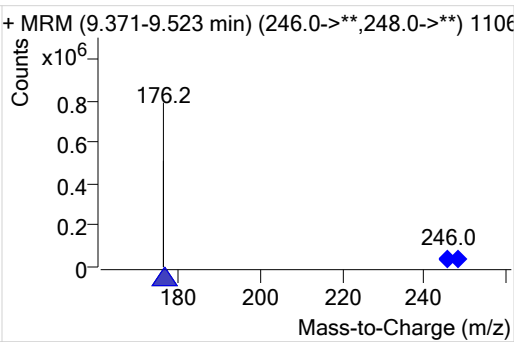




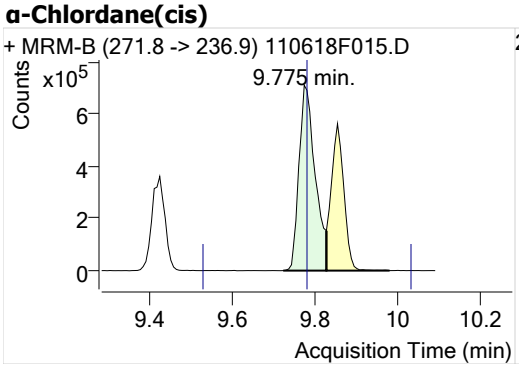
2,4'-DDE

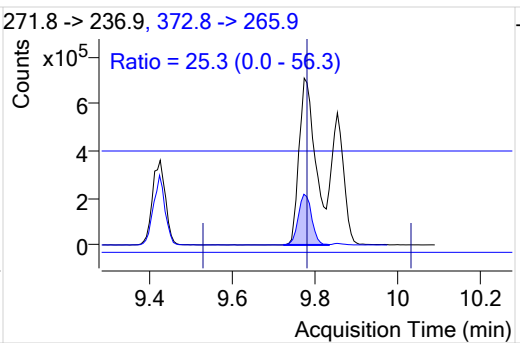


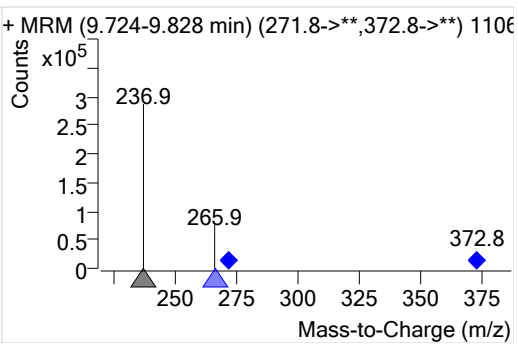




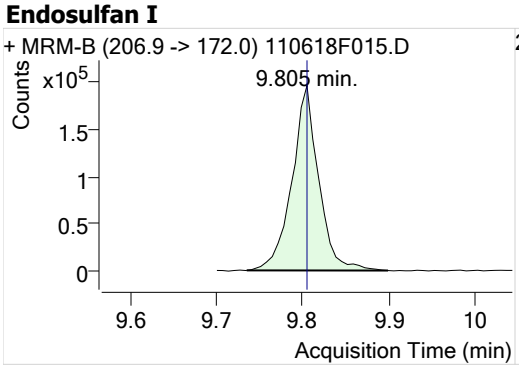
α-Chlordane(cis)

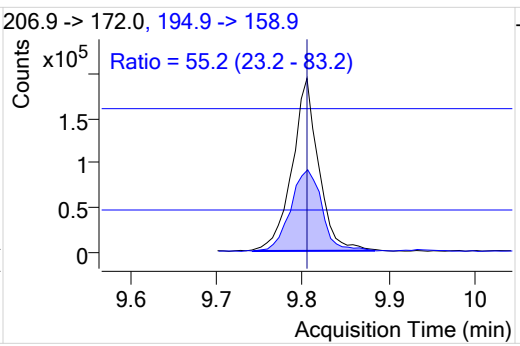


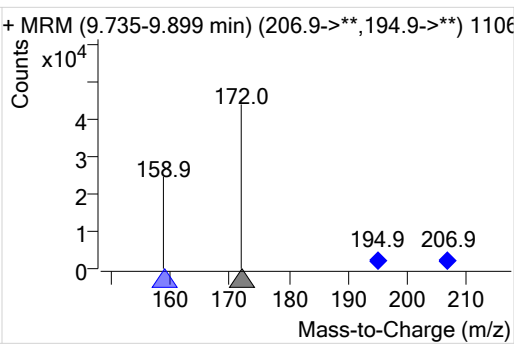




Endosulfan I

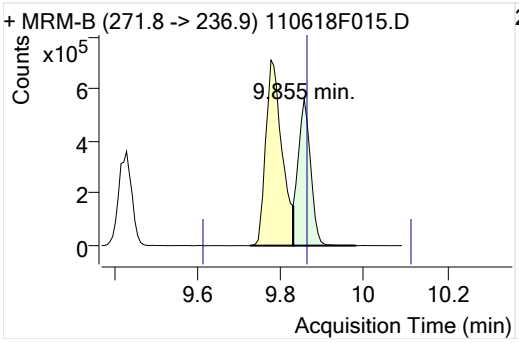


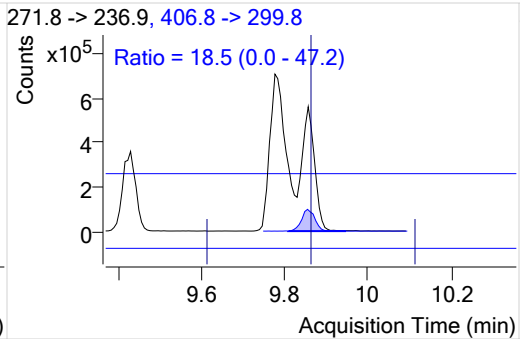


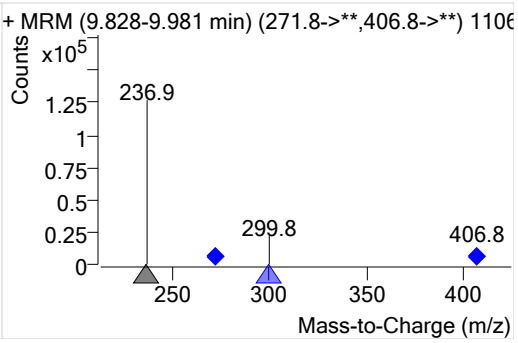


Quantitative Analysis Sample Report

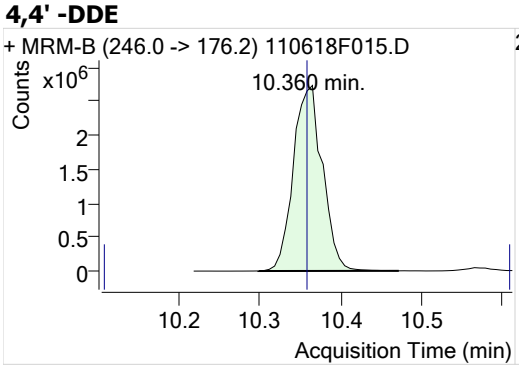
trans-Nanochlor

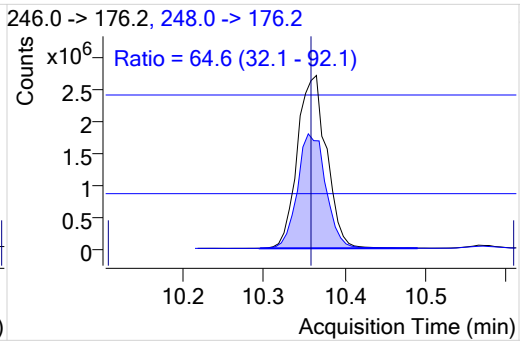


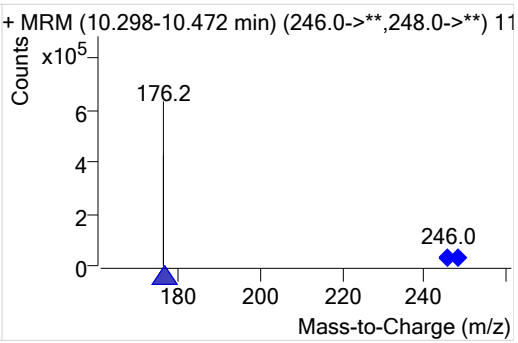




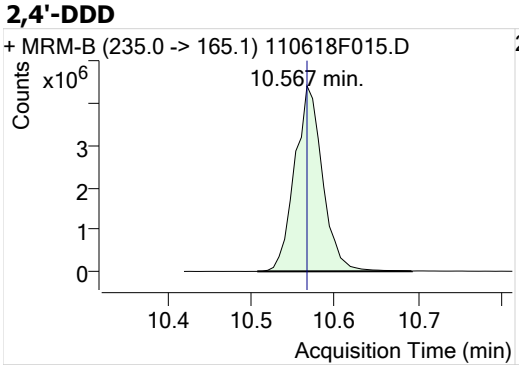
4,4' -DDE

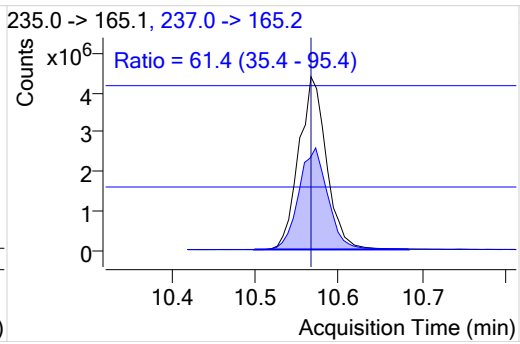


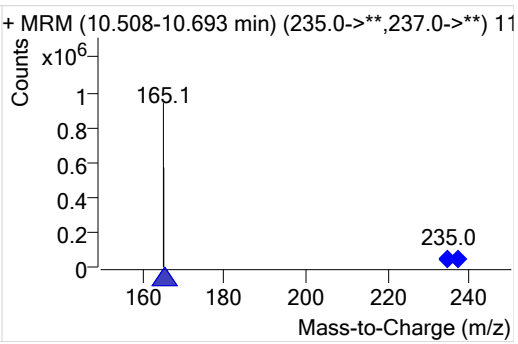




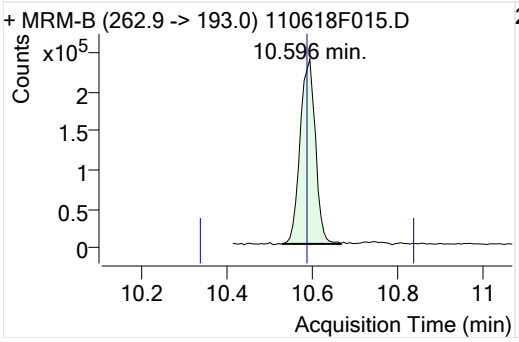
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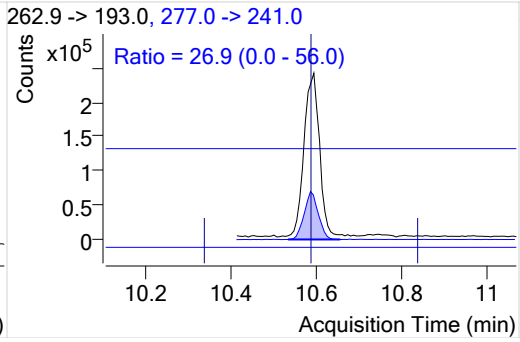


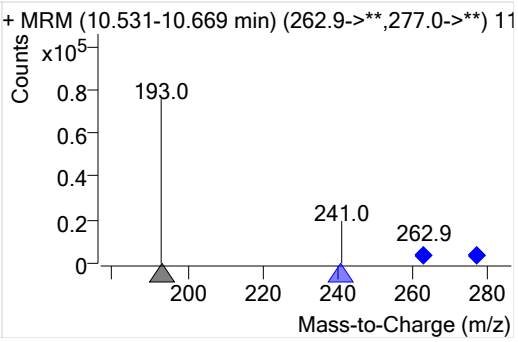




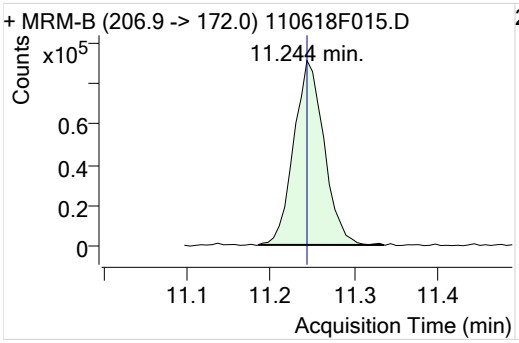
Dieldrin

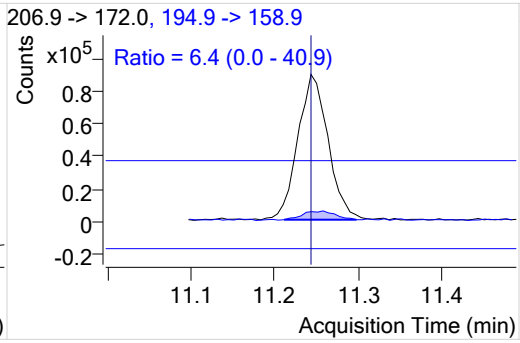


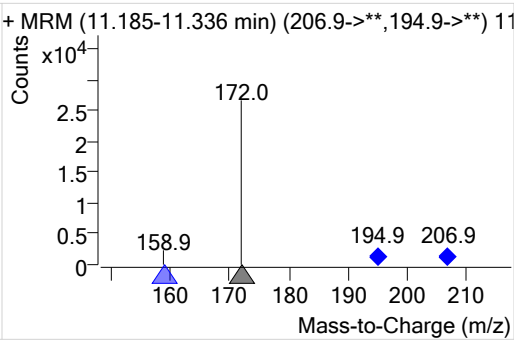




Endosulfan II

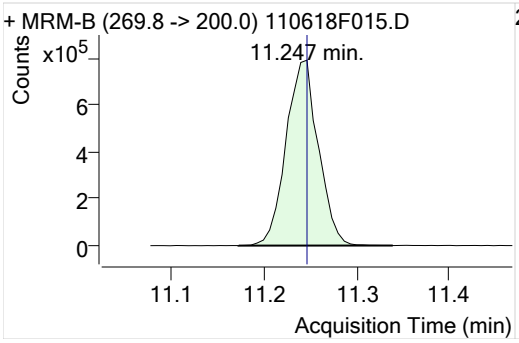


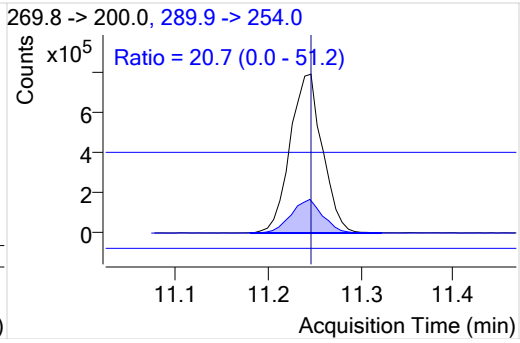


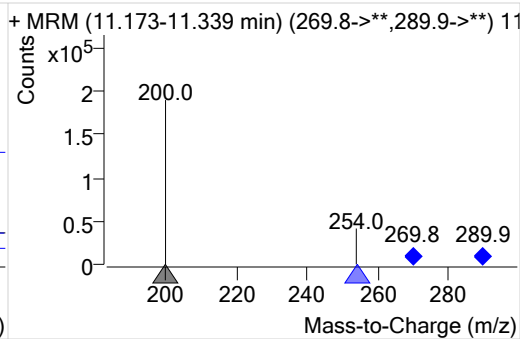


Quantitative Analysis Sample Report

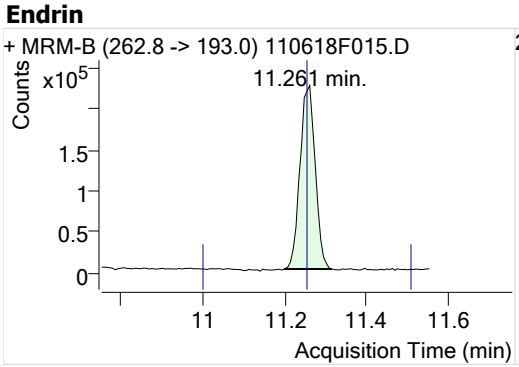
Endrin-13C12

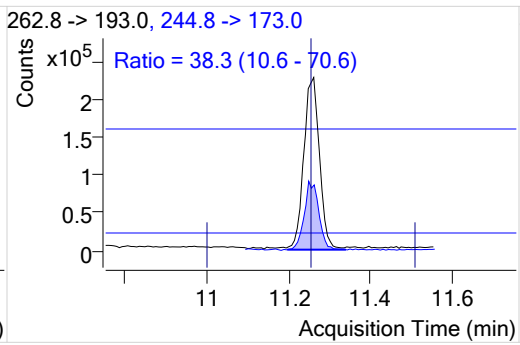


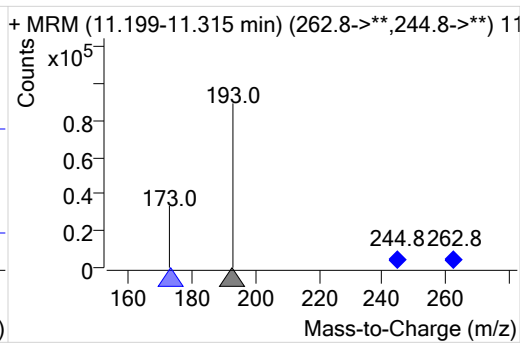




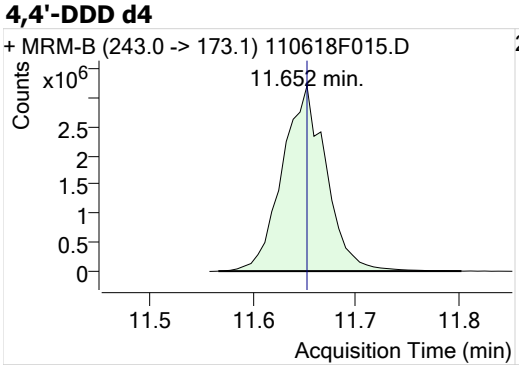
Endrin

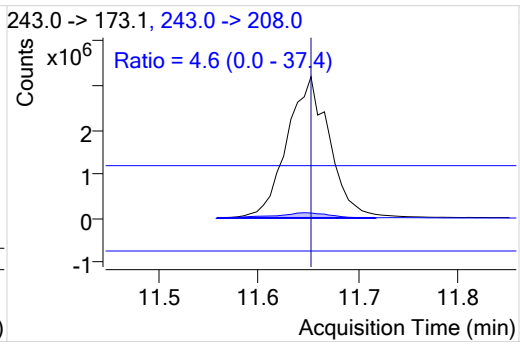


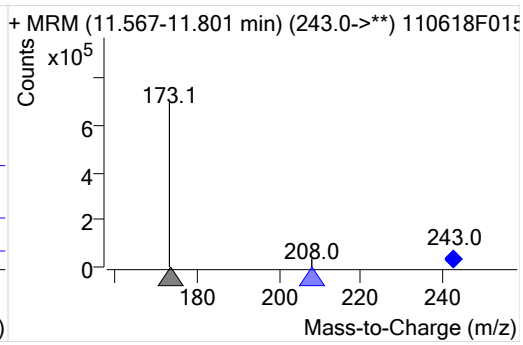




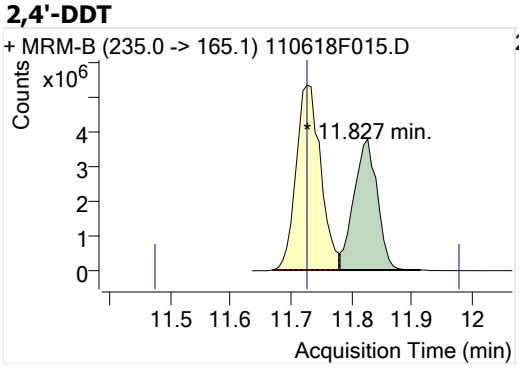
4,4'-DDD d4

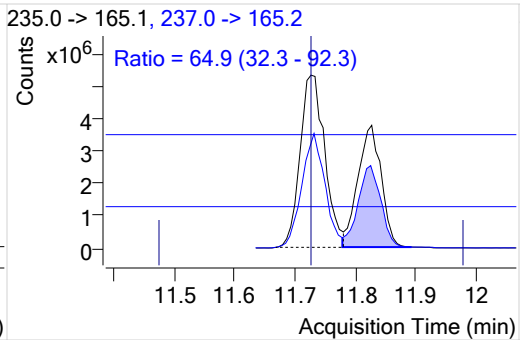


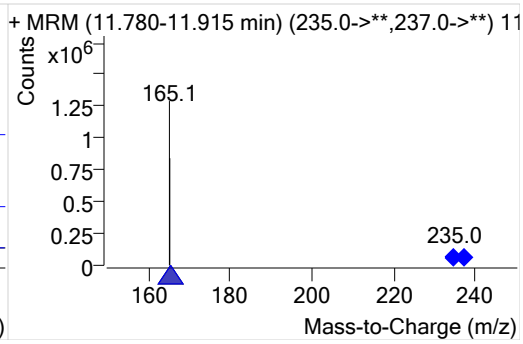




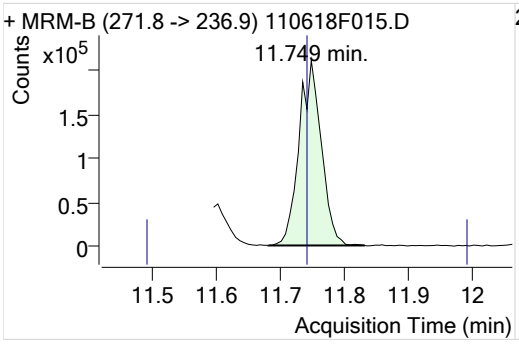
2,4'-DDT

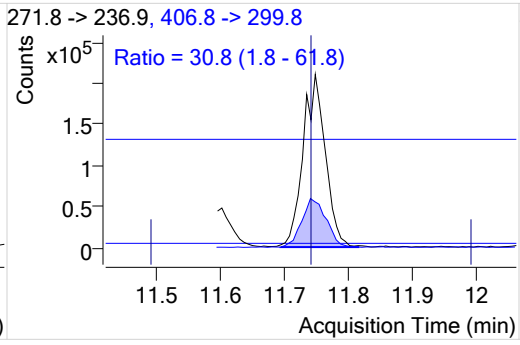


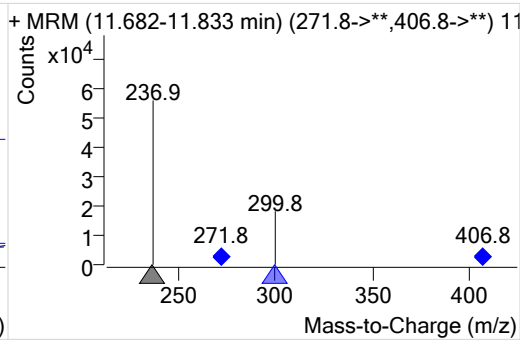




cis-Nonachlor

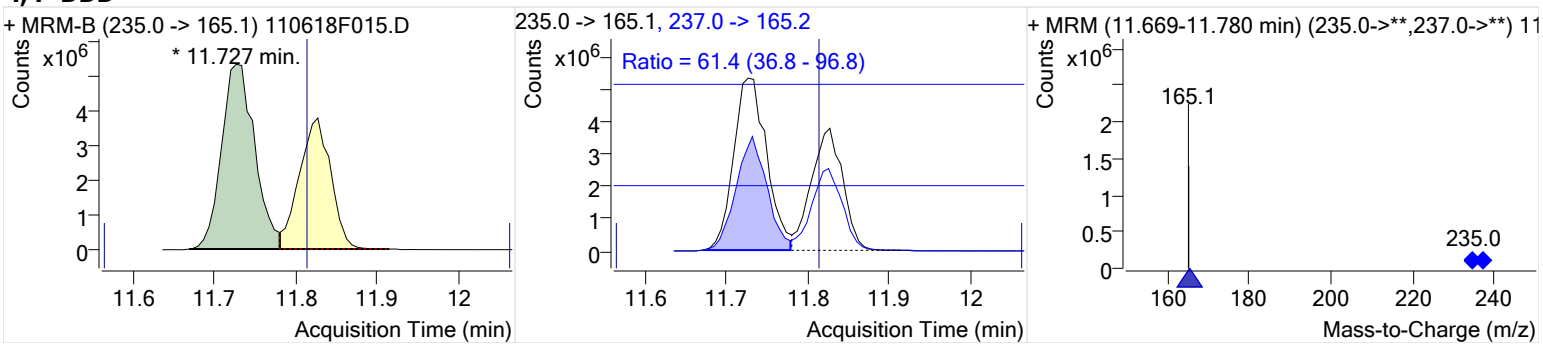




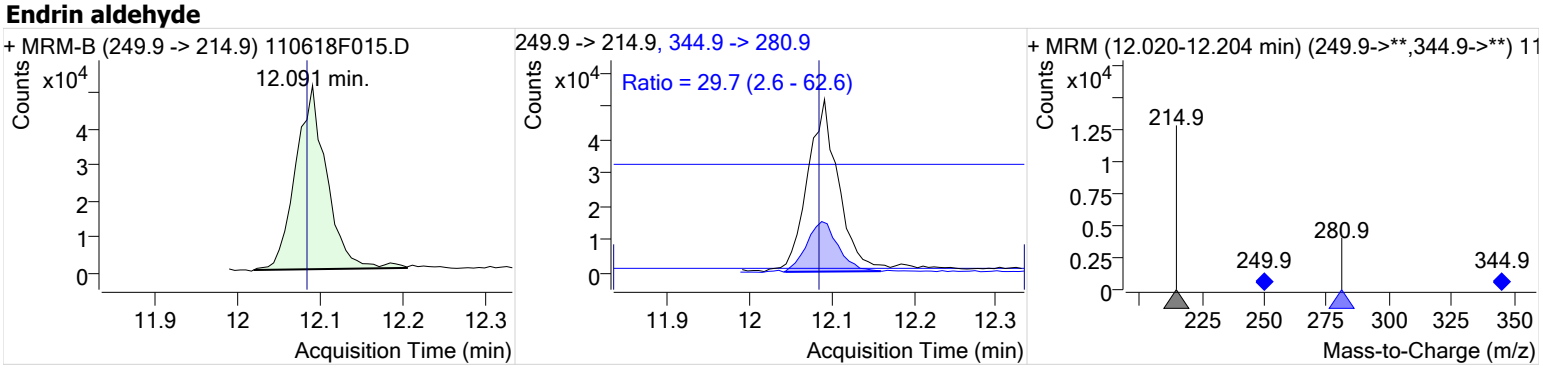


Quantitative Analysis Sample Report

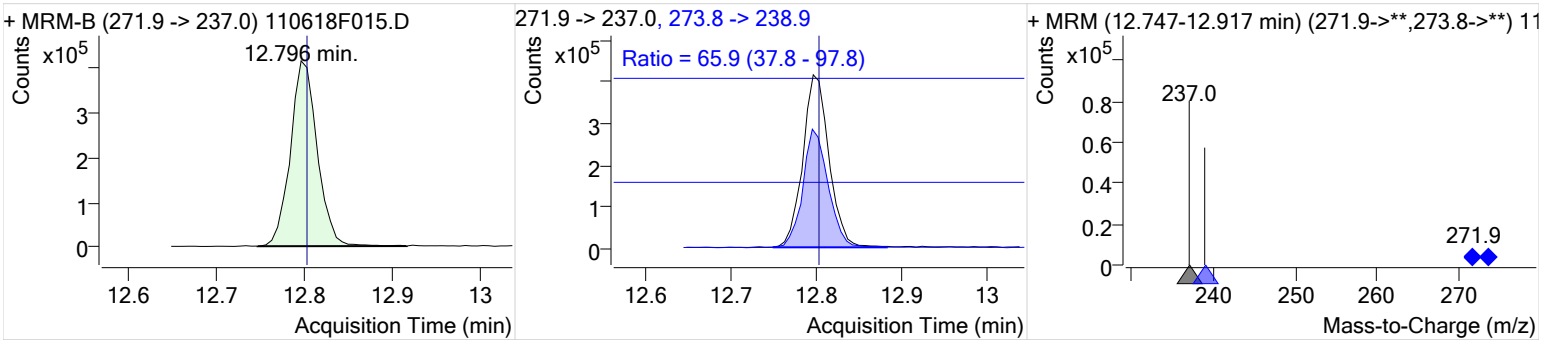
4,4'-DDD



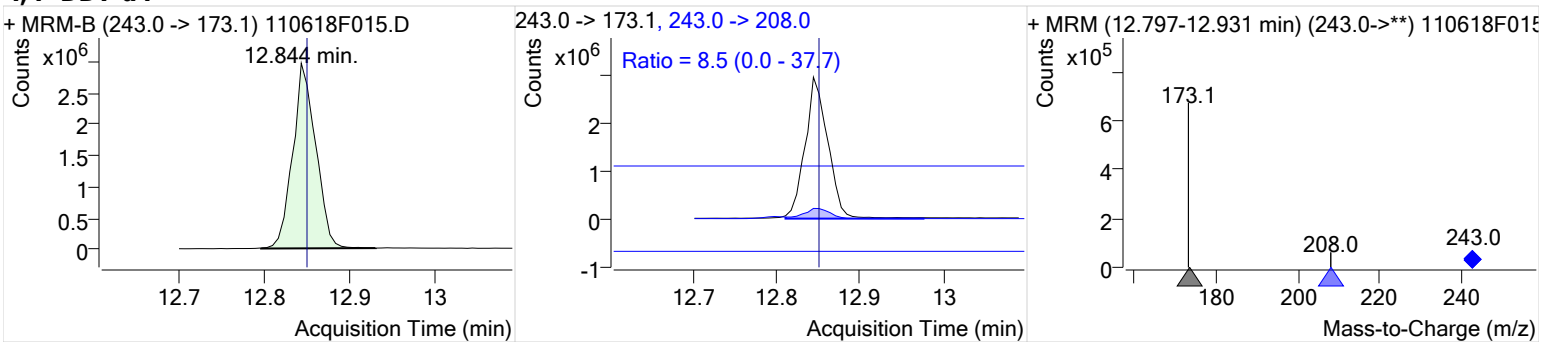
Endrin aldehyde



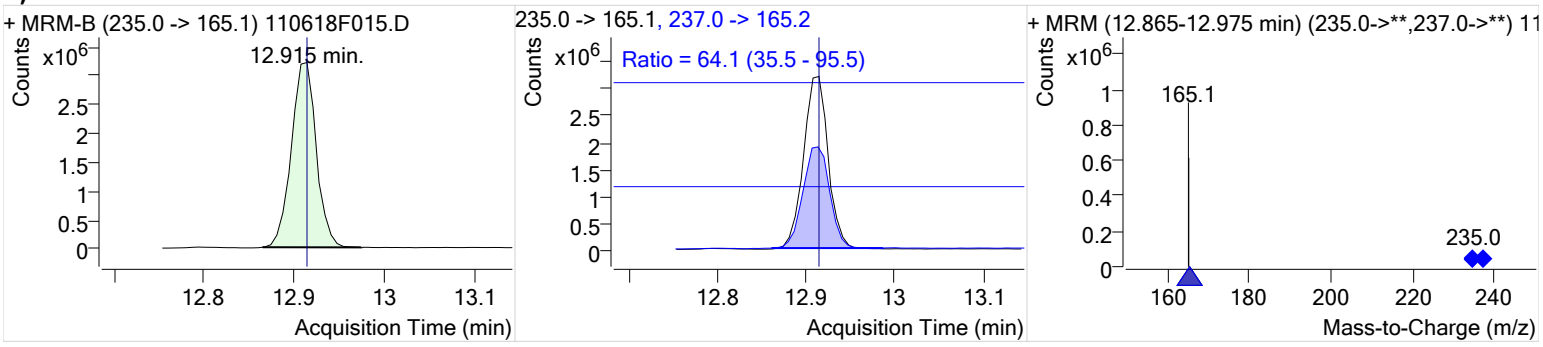
Endosulfan sulfate



4,4'-DDT-d4

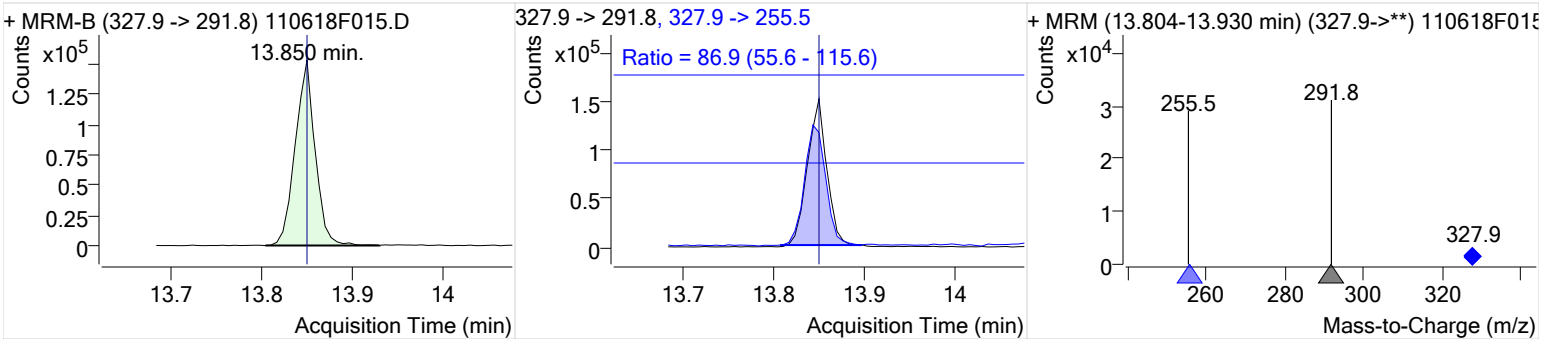


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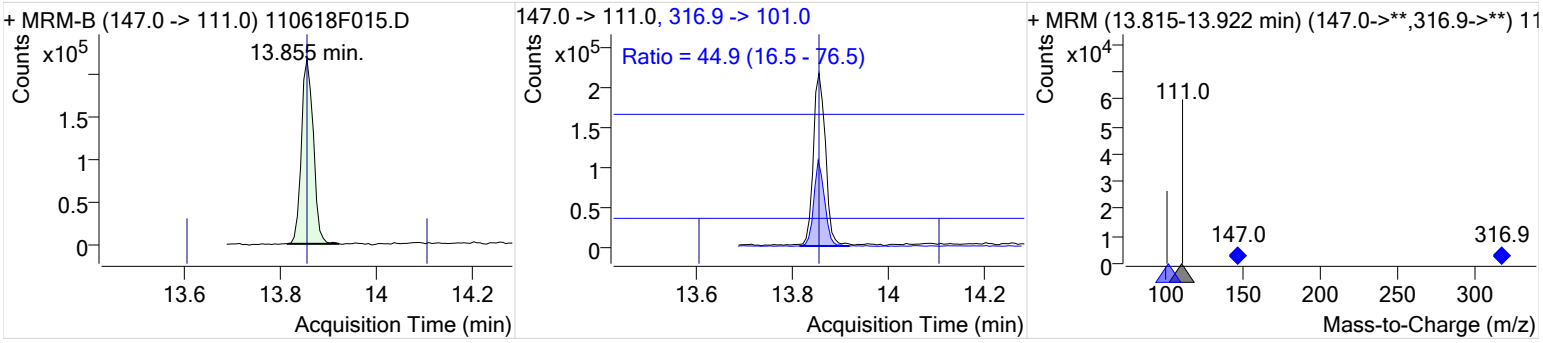


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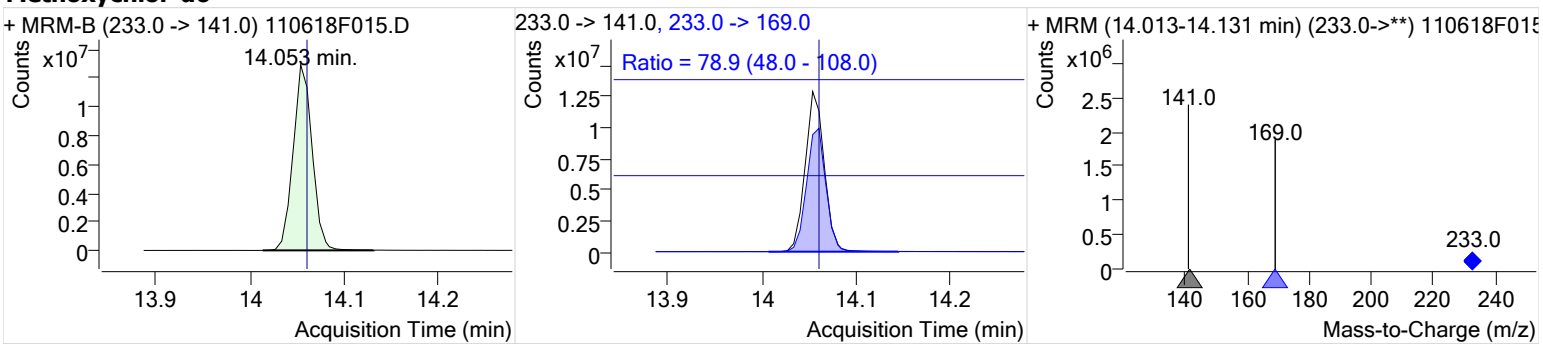
Endrin ketone-13C12



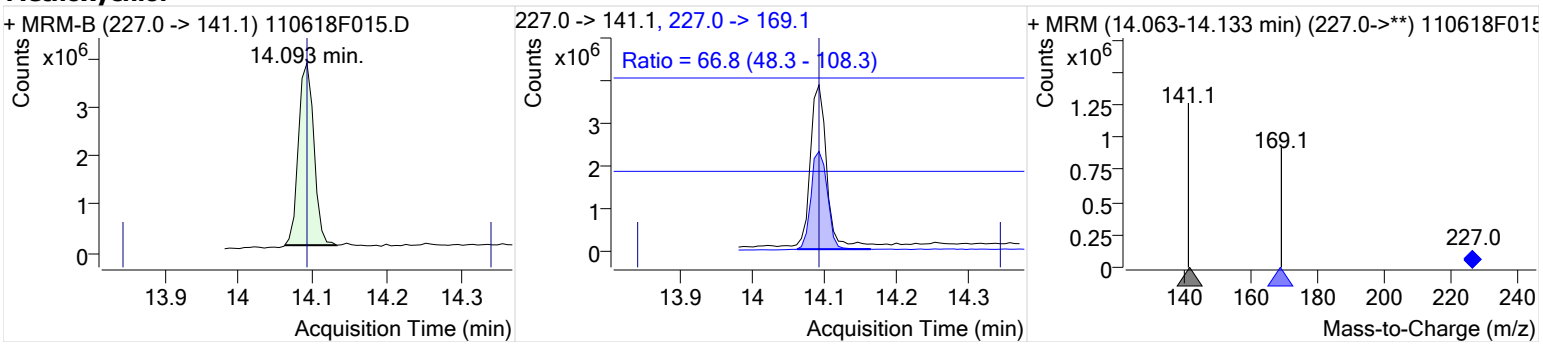
Endrin ketone



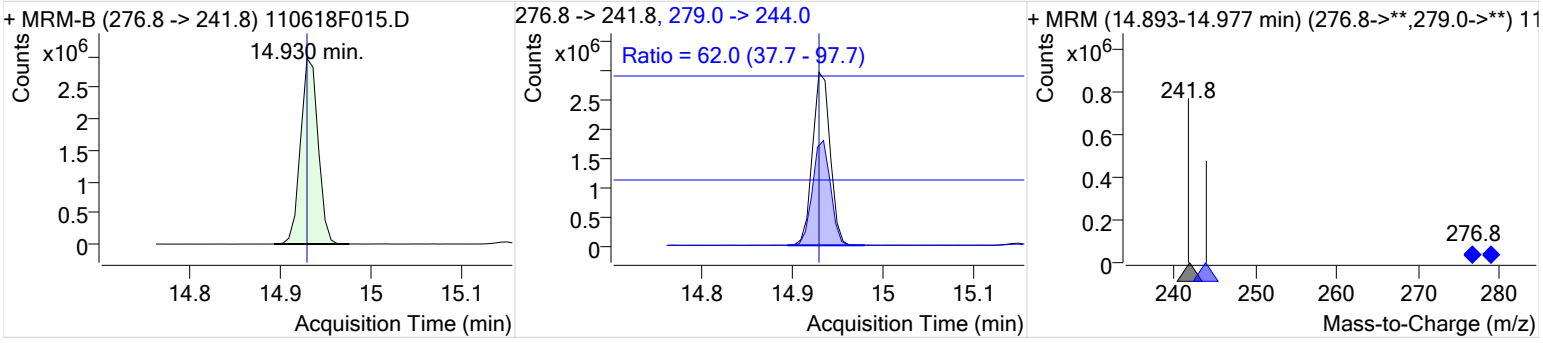
Methoxychlor-d6



Methoxychlor

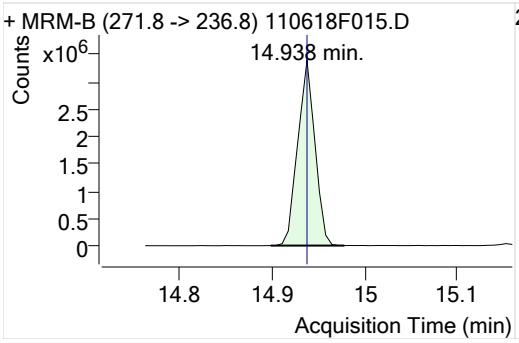


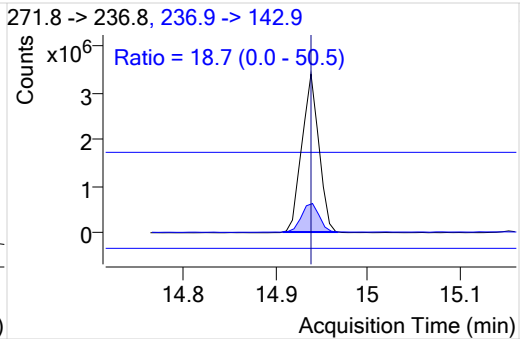
Mirex-13C10

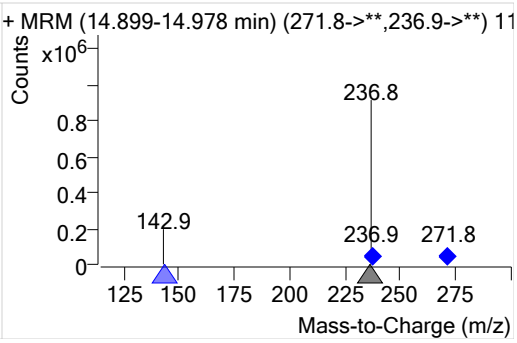


Quantitative Analysis Sample Report

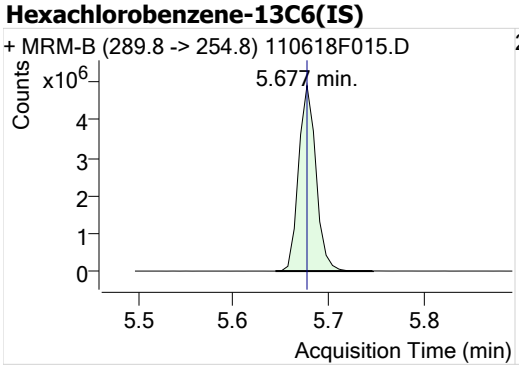
Mirex

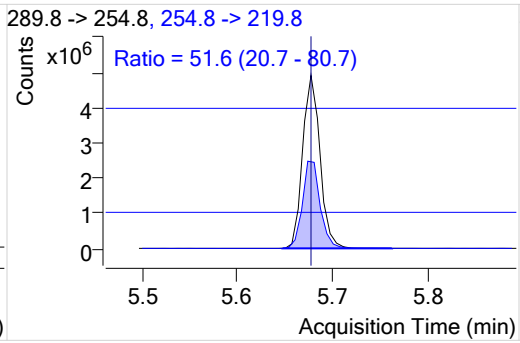


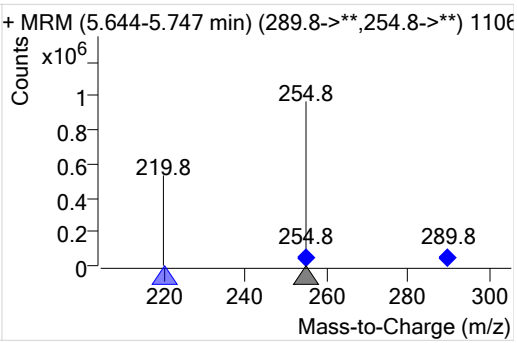




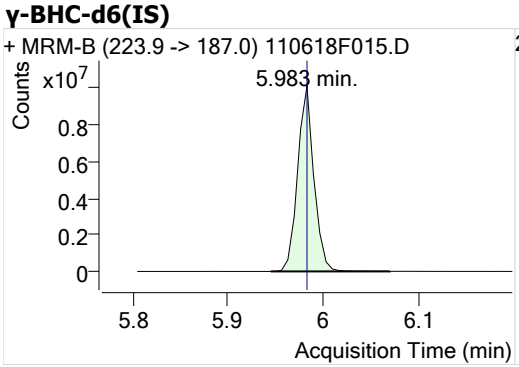
Hexachlorobenzene-13C6(IS)

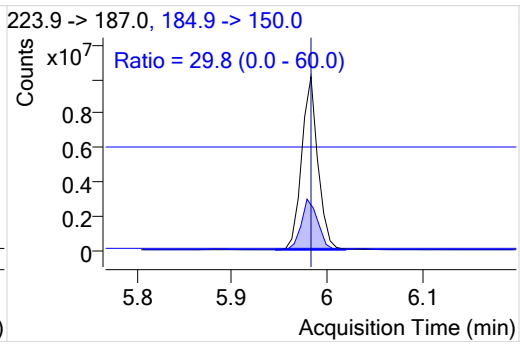


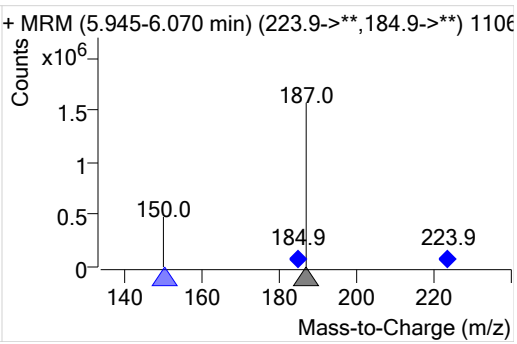




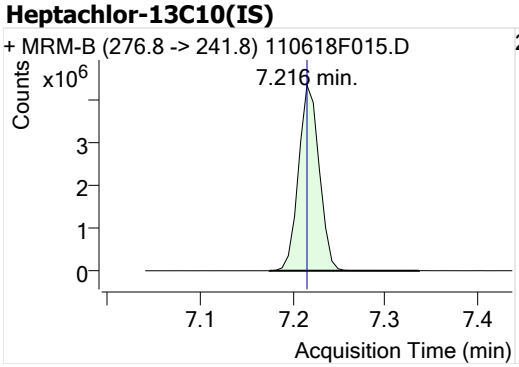
γ-BHC-d6(IS)

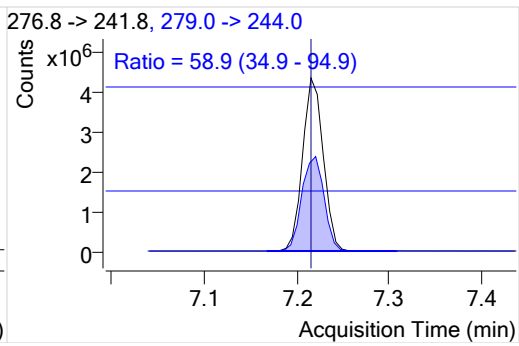


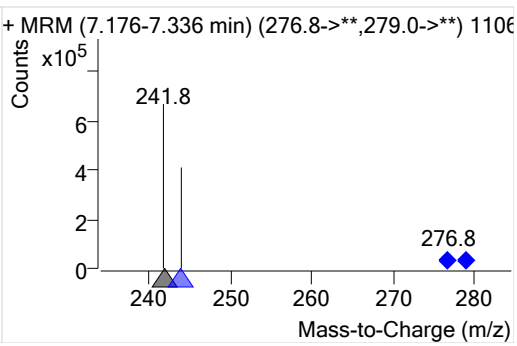




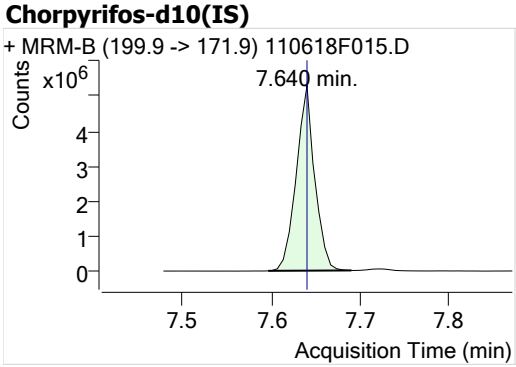
Heptachlor-13C10(IS)

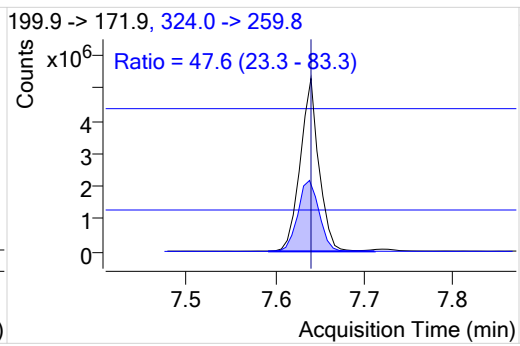


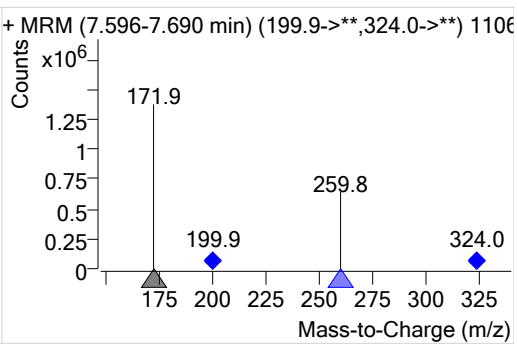




Chorpyrifos-d10(IS)

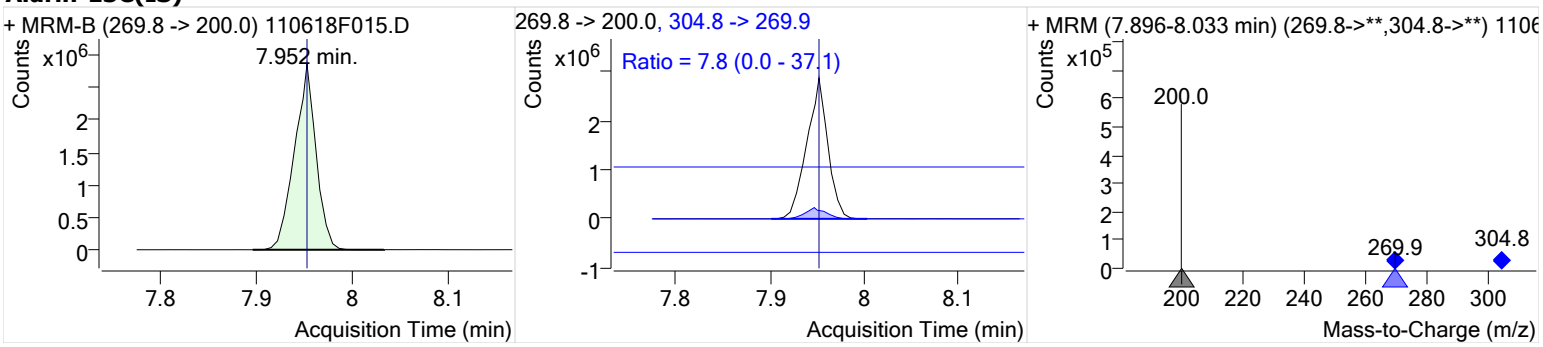




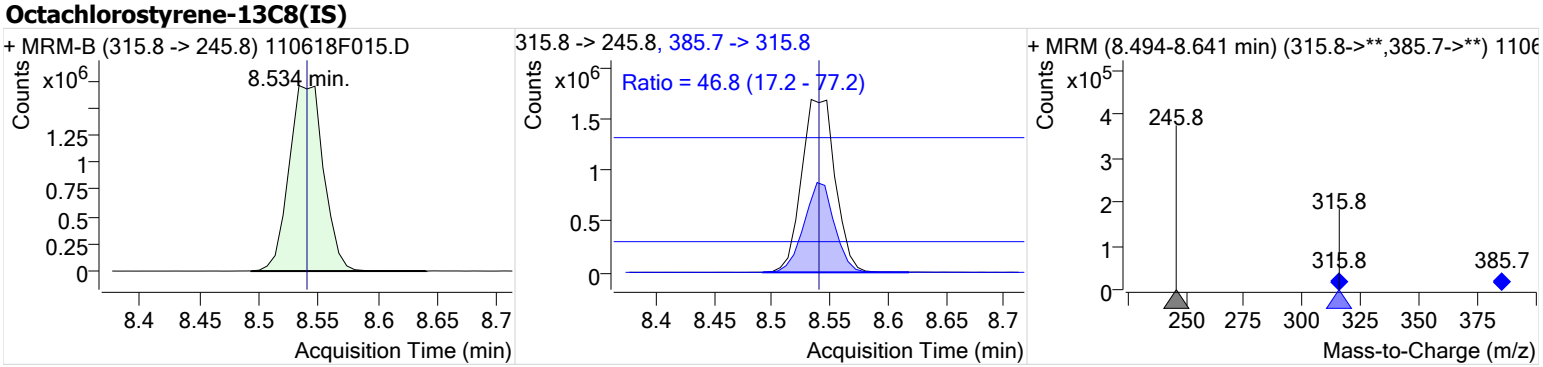


Quantitative Analysis Sample Report

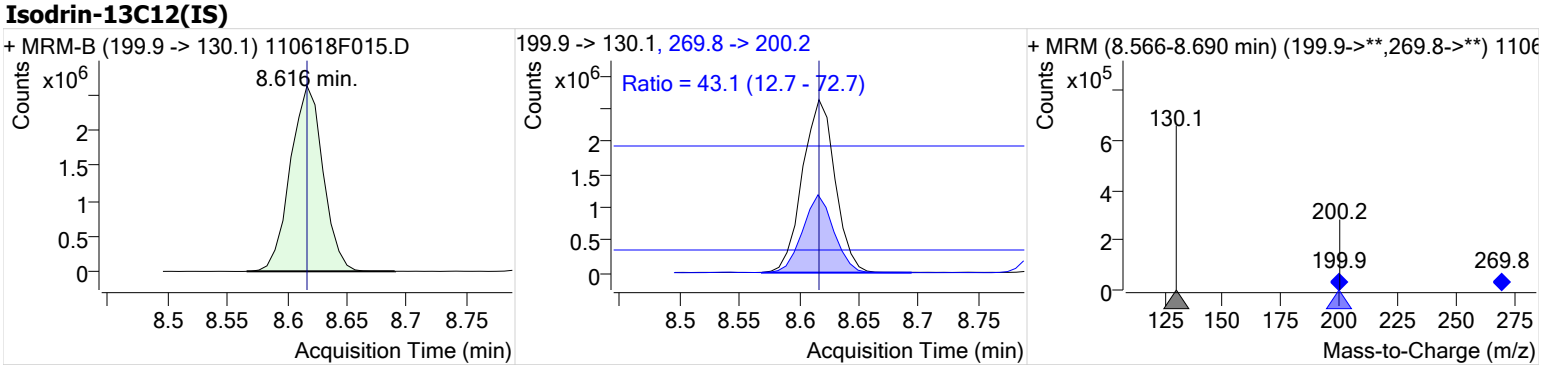
Aldrin-13C(IS)



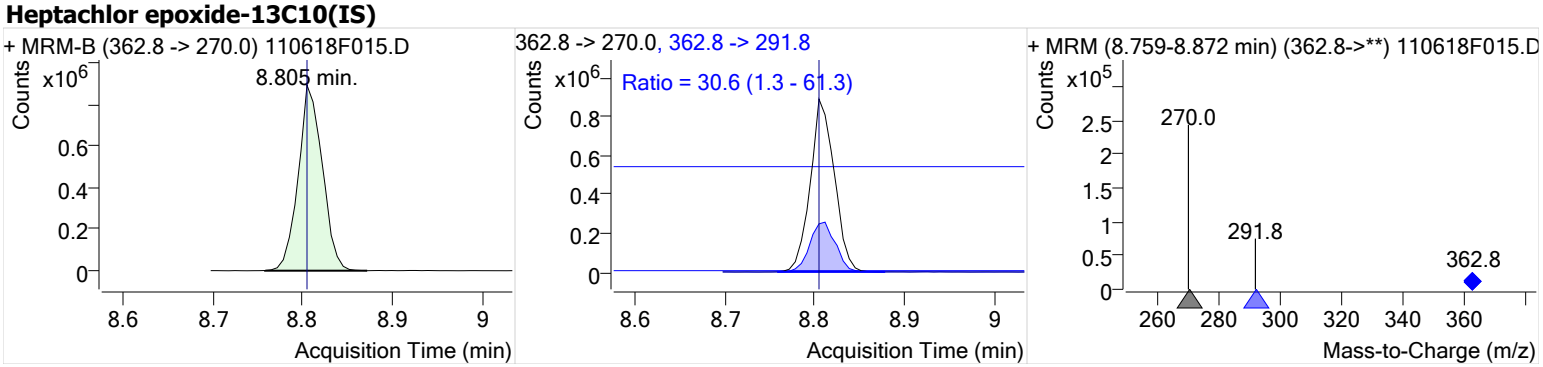
Octachlorostyrene-13C8(IS)



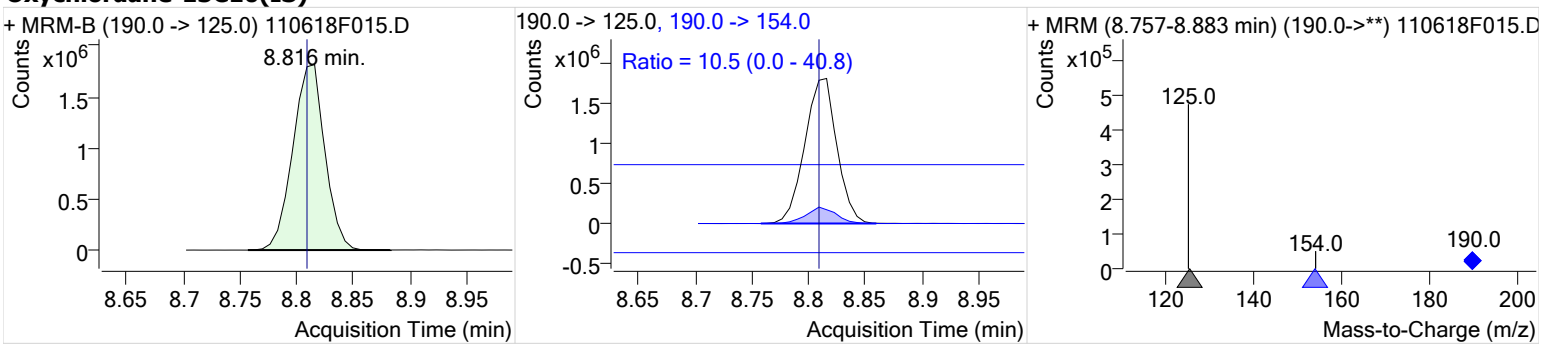
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

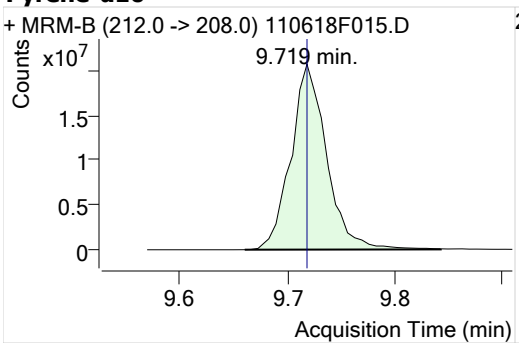


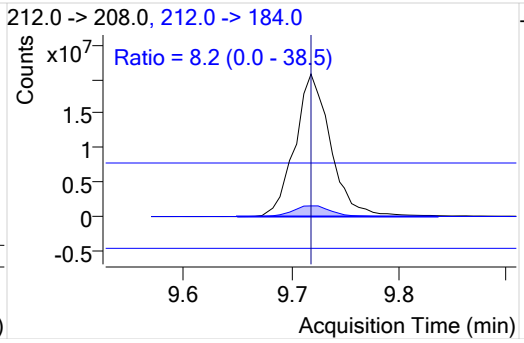
Oxychlordane-13C10(IS)

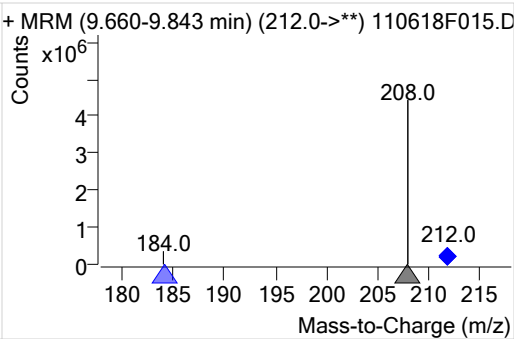


Quantitative Analysis Sample Report

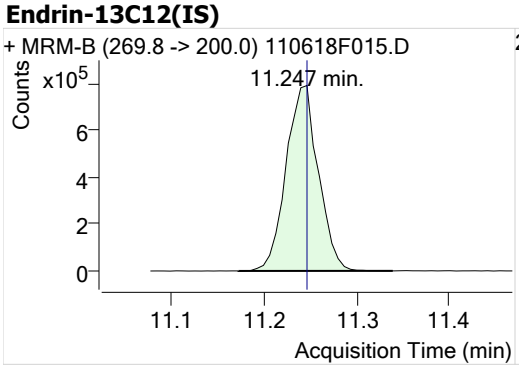
Pyrene-d10

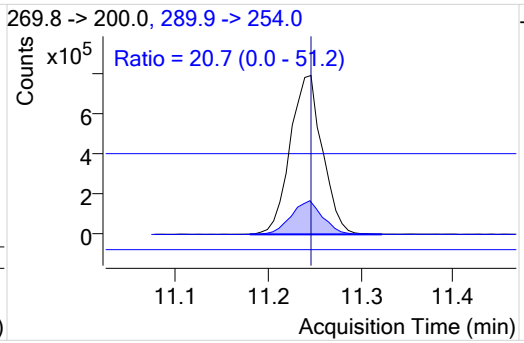


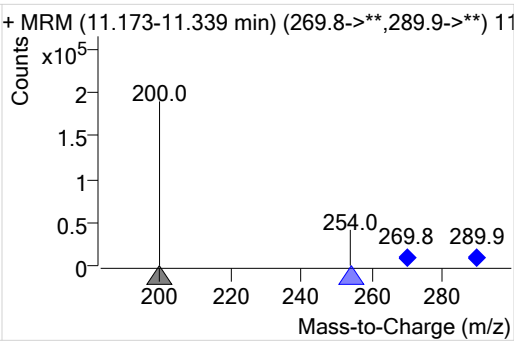




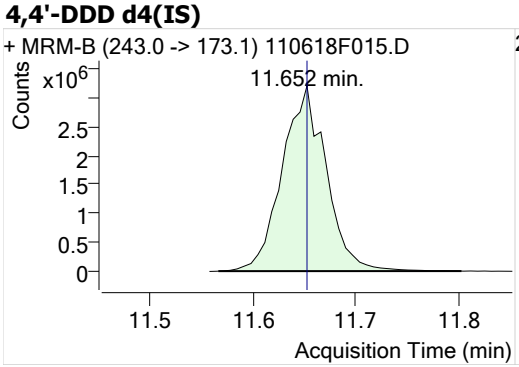
Endrin-13C12(IS)

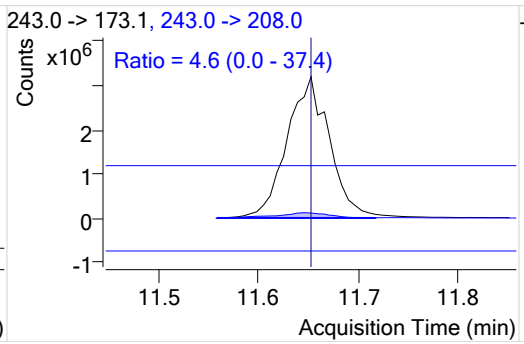


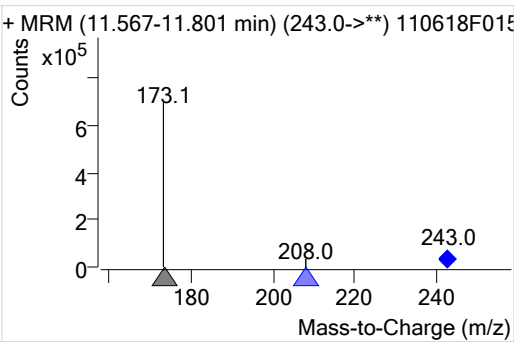




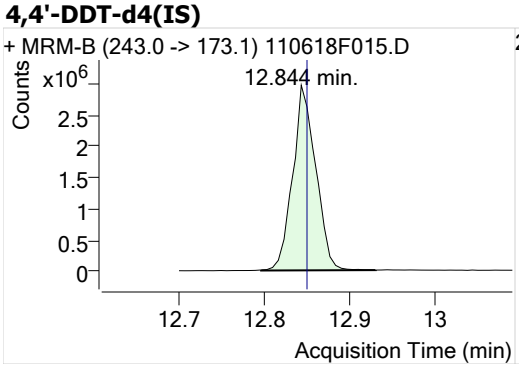
4,4'-DDD d4(IS)

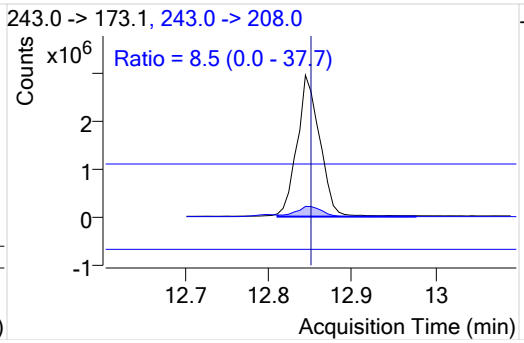


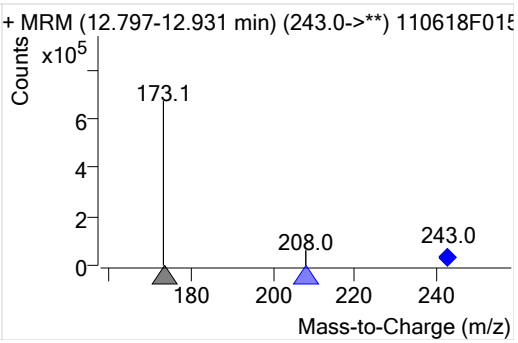




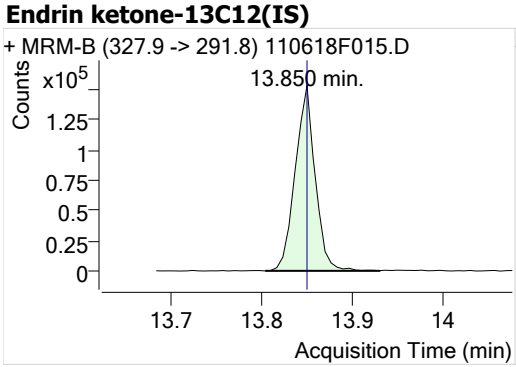
4,4'-DDT-d4(IS)

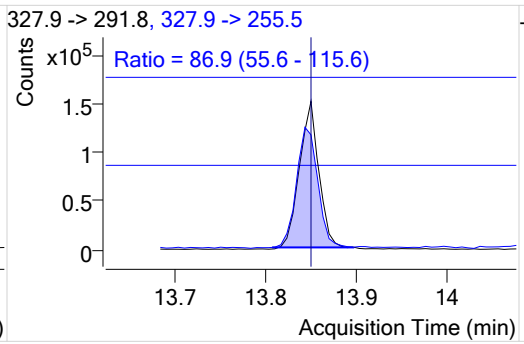


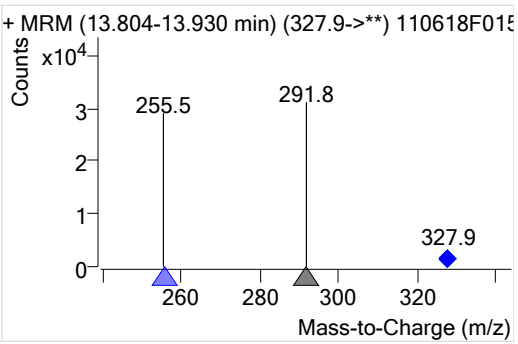




Endrin ketone-13C12(IS)

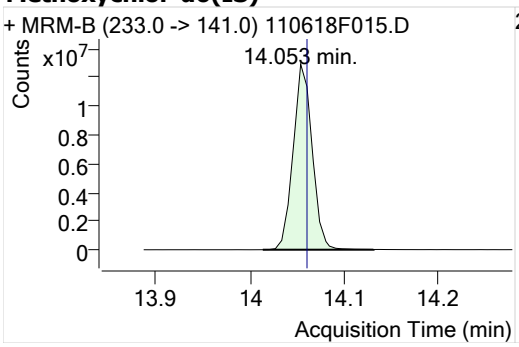


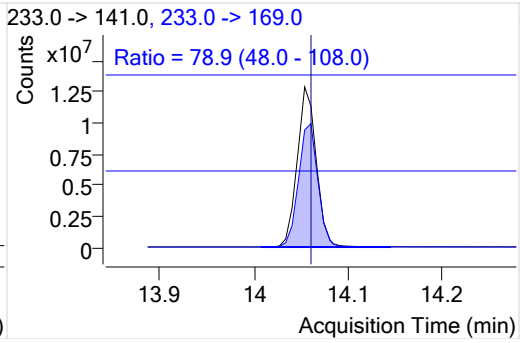


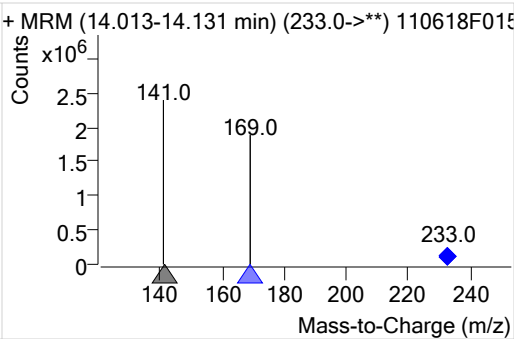


Quantitative Analysis Sample Report

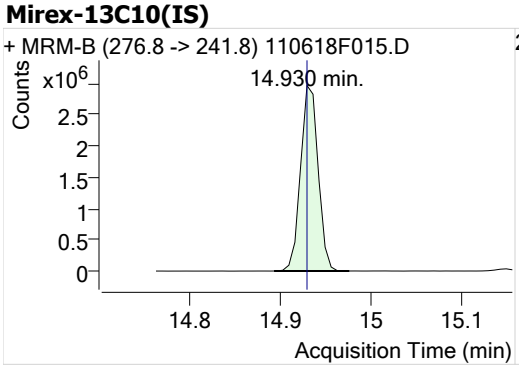
Methoxychlor-d6(IS)

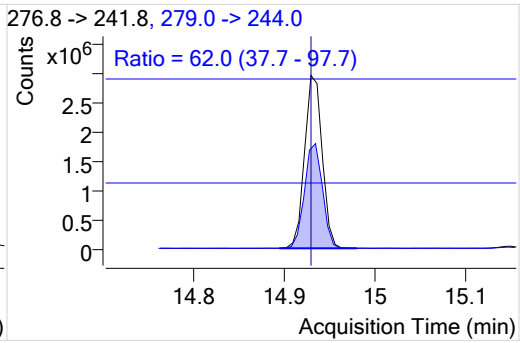


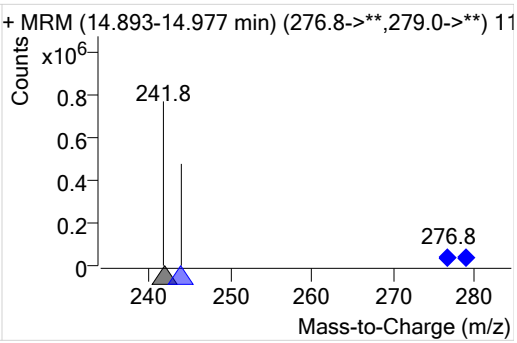




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F016.D	**Vial**	7
Acq. Date-Time	11/6/2018 6:33:35 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 10ng/mL SVM59-48E	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	5572482	20.000 ng/ml	0.001
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	11793212	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.219	276.8 -> 241.8	5496402	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	5055595	20.000 ng/ml	0.000
Aldrin-13C(IS)	7.948	269.8 -> 200.0	3910536	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	3066357	20.000 ng/ml	0.001
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4618427	20.000 ng/ml	0.001
Heptachlor epoxide-13C10(IS)	8.812	362.8 -> 270.0	1345763	20.000 ng/ml	0.007
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	3028113	20.000 ng/ml	0.000
Pyrene-d10	9.719	212.0 -> 208.0	35319510	100.000 ng/ml	0.000
Endrin-13C12(IS)	11.240	269.8 -> 200.0	1358943	20.000 ng/ml	0.007
4,4'-DDD d4(IS)	11.652	243.0 -> 173.1	6709243	5.000 ng/ml	0.003
4,4'-DDT-d4(IS)	12.851	243.0 -> 173.1	4093541	5.000 ng/ml	0.000
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	177604	20.000 ng/ml	0.000
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	12272390	20.000 ng/ml	0.007
Mirex-13C10(IS)	14.930	276.8 -> 241.8	3416763	5.000 ng/ml	0.003

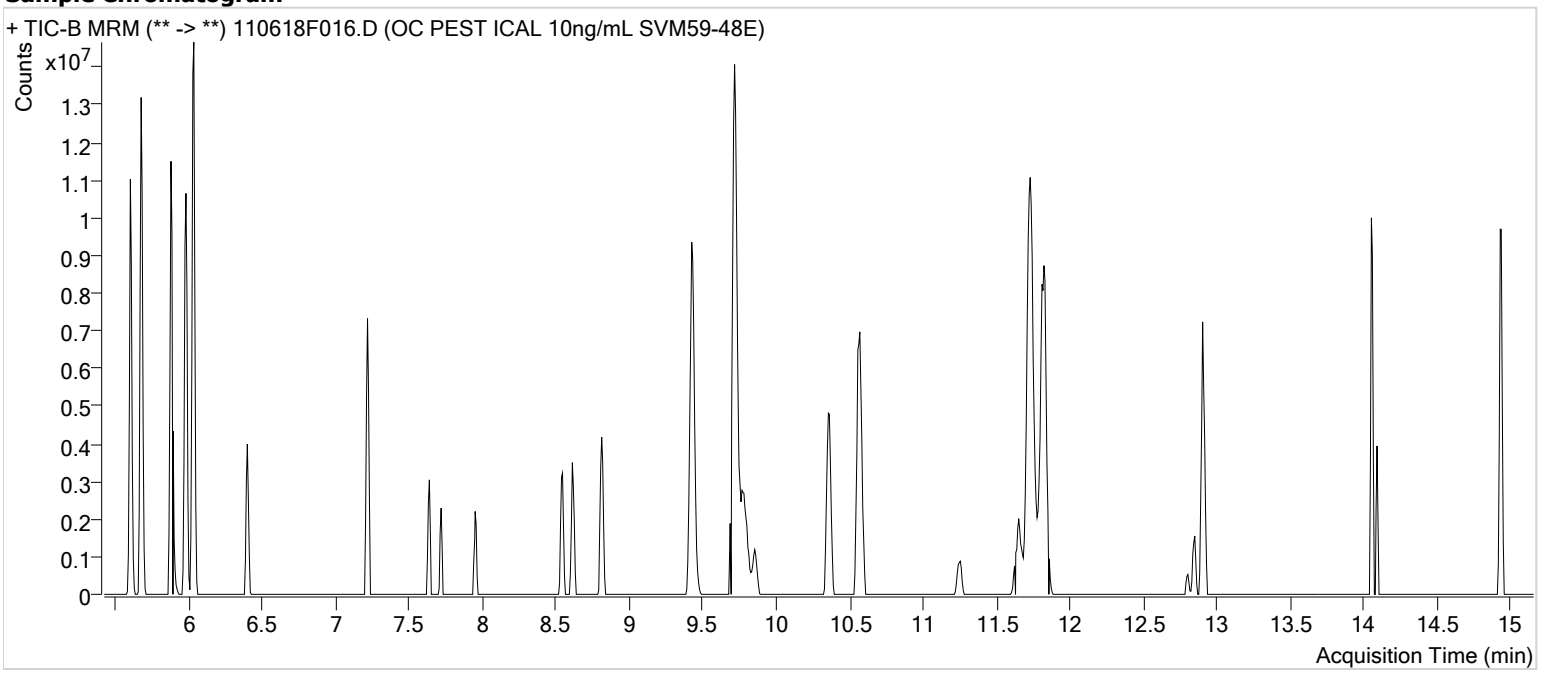
System Monitoring Compounds	RT	Transition	Response	Conc. Units
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	5572482	20.690 ng/ml
		Spiked Amount =	20.0	Recovery = *103.5 %*
γ-BHC-d6	5.983	223.9 -> 187.0	11793212	22.824 ng/ml
		Spiked Amount =	20.0	Recovery = *114.1 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	5496402	21.128 ng/ml
		Spiked Amount =	20.0	Recovery = *105.6 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	5055595	18.954 ng/ml
		Spiked Amount =	20.0	Recovery = *94.8 %*
Aldrin-13C	7.952	269.8 -> 200.0	3910536	21.183 ng/ml
		Spiked Amount =	20.0	Recovery = *105.9 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3066357	22.642 ng/ml
		Spiked Amount =	20.0	Recovery = *113.2 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4618427	22.630 ng/ml
		Spiked Amount =	20.0	Recovery = *113.2 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1345763	20.035 ng/ml
		Spiked Amount =	20.0	Recovery = *100.2 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3028113	21.339 ng/ml
		Spiked Amount =	20.0	Recovery = *106.7 %*
Endrin-13C12	11.247	269.8 -> 200.0	1358943	19.495 ng/ml
		Spiked Amount =	20.0	Recovery = *97.5 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	6709243	4.662 ng/ml
		Spiked Amount =	5.0	Recovery = *93.2 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	4093541	4.986 ng/ml
		Spiked Amount =	5.0	Recovery = *99.7 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	177604	20.273 ng/ml
		Spiked Amount =	20.0	Recovery = *101.4 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	12272390	19.617 ng/ml
		Spiked Amount =	20.0	Recovery = *98.1 %*
Mirex-13C10	14.930	276.8 -> 241.8	3416763	5.316 ng/ml
		Spiked Amount =	5.0	Recovery = *106.3 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc. Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	8019446	9.682 ng/ml	99
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	5164212	10.679 ng/ml	98
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	10068367	9.215 ng/ml	96
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.040	181.1 -> 145.1	12138559	9.246 ng/ml	95
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	4212912	8.568 ng/ml	96
Heptachlor	Heptachlor-13C10(IS)	7.229	271.7 -> 236.9	3033766	9.884 ng/ml	86
Chorpyrifos	Chorpyrifos-d10(IS)	7.724	196.9 -> 169.0	3507108	10.168 ng/ml	91
Aldrin	Aldrin-13C(IS)	7.962	254.9 -> 220.0	1566668	9.854 ng/ml	91
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	3586247	9.185 ng/ml	93
Isodrin	Isodrin-13C12(IS)	8.630	193.0 -> 123.0	2339760	9.933 ng/ml	97
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	755305	10.316 ng/ml	97
Oxychlordane	Oxychlordane-13C10(IS)	8.817	114.9 -> 51.1	4087829	9.712 ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	1362705	9.789 ng/ml	95
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	11807465	10.850 ng/ml	97
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	3381973	10.005 ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	756738	10.601 ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	2357003	10.241 ng/ml	97
4,4' -DDE	4,4'-DDD d4(IS)	10.358	246.0 -> 176.2	9217001	9.412 ng/ml	97
2,4'-DDD	4,4'-DDD d4(IS)	10.574	235.0 -> 165.1	12880121	9.101 ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	872599	9.101 ng/ml	97
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	211847	10.301 ng/ml	94
Endrin	Endrin-13C12(IS)	11.261	262.8 -> 193.0	925684	10.437 ng/ml	92
2,4'-DDT	4,4'-DDT-d4(IS)	11.814	235.0 -> 165.1	16449092 ***m***	9.873 ng/ml	100
cis-Nonachlor	Oxychlordane-13C10(IS)	11.749	271.8 -> 236.9	820543	9.255 ng/ml	97
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	20237548 ***m***	9.504 ng/ml	96
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	177709	9.158 ng/ml	98
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	1313711	9.662 ng/ml	100
4,4'-DDT	4,4'-DDT-d4(IS)	12.908	235.0 -> 165.1	8762181	9.698 ng/ml	97
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	540159	9.264 ng/ml	98
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	7349084	10.328 ng/ml	92
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	7145718	9.438 ng/ml	97

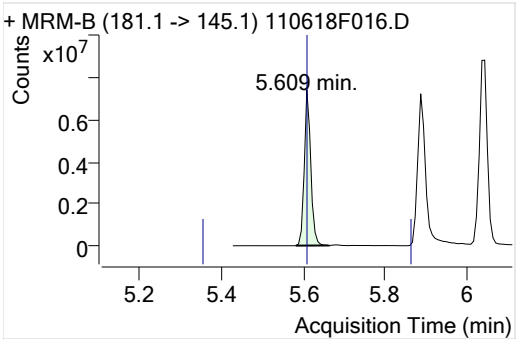
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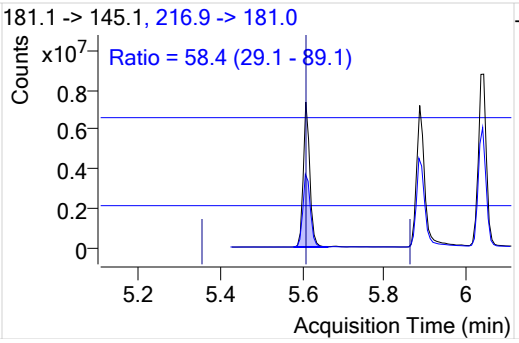
Sample Chromatogram

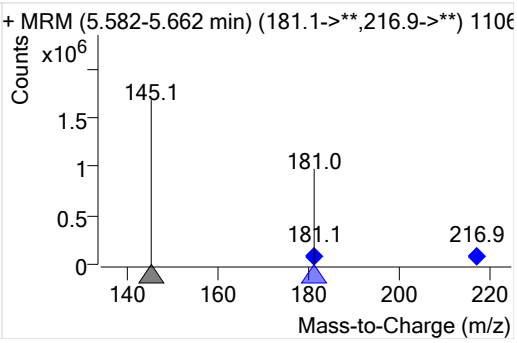


Quantitative Analysis Sample Report

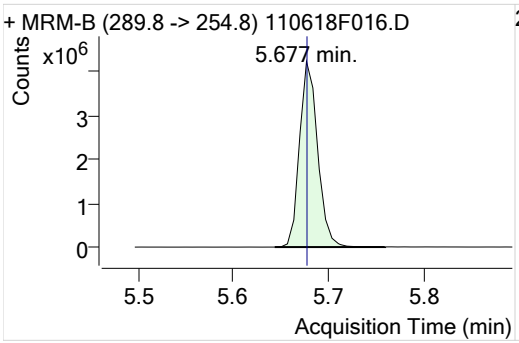
α-BHC

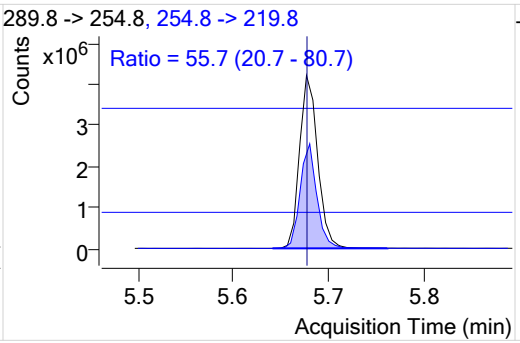


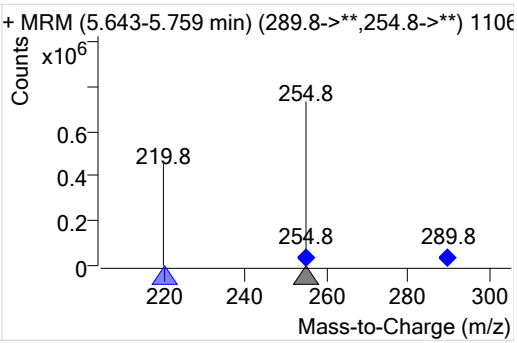




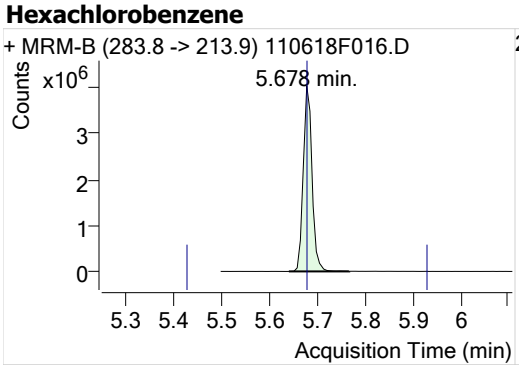
Hexachlorobenzene-13C6

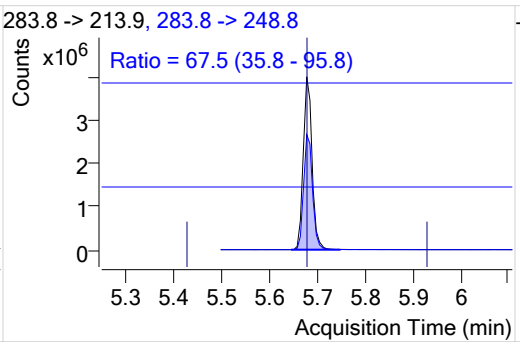


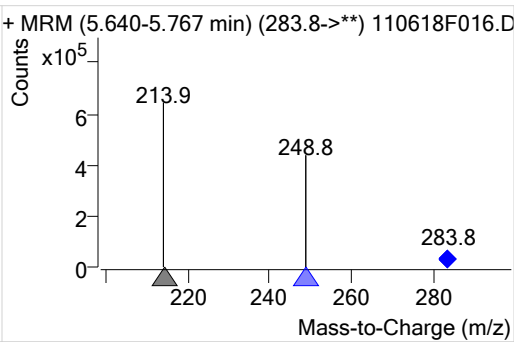




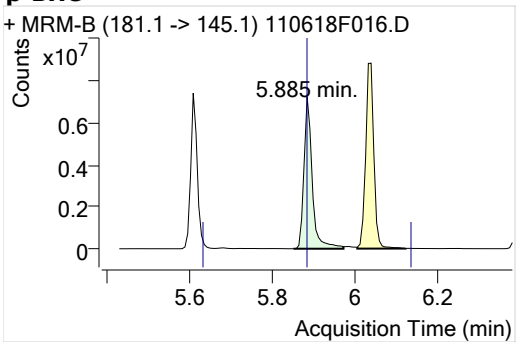
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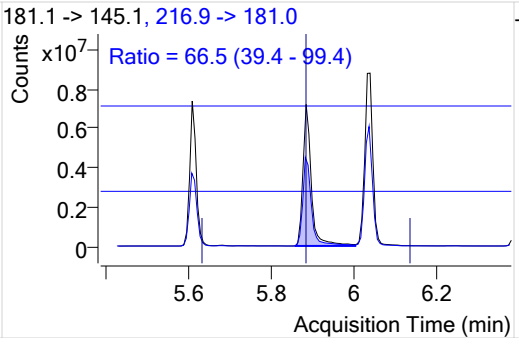


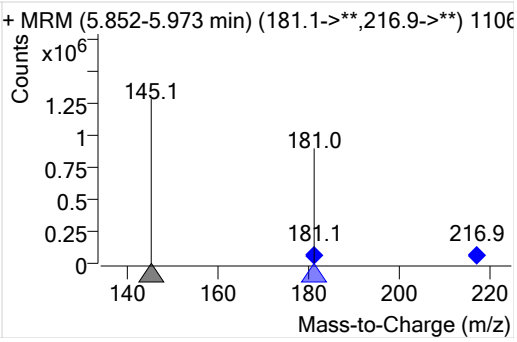




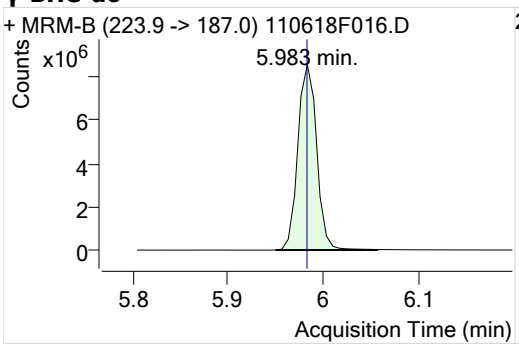
β-BHC

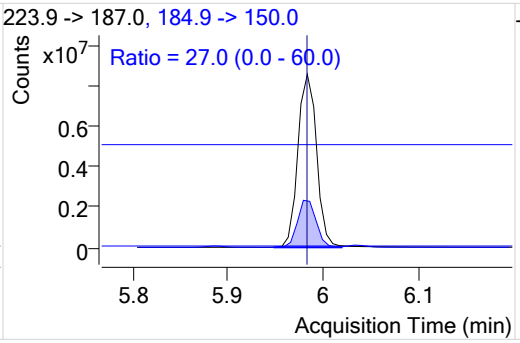


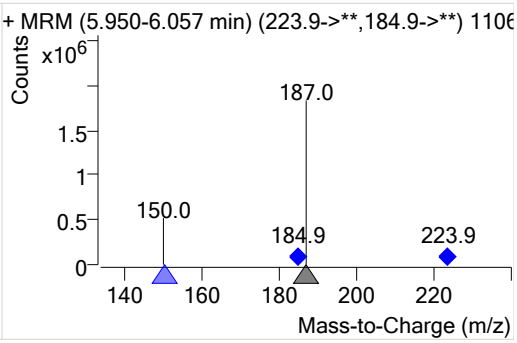




γ-BHC-d6

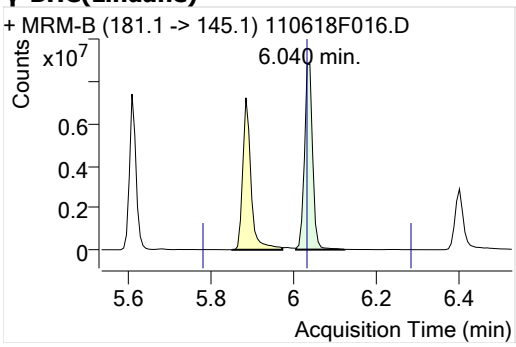


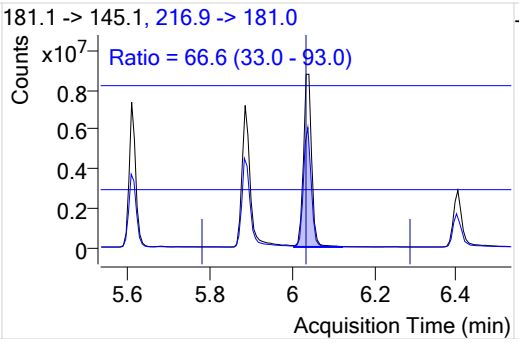


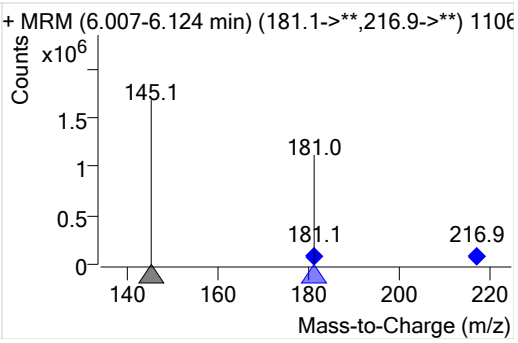


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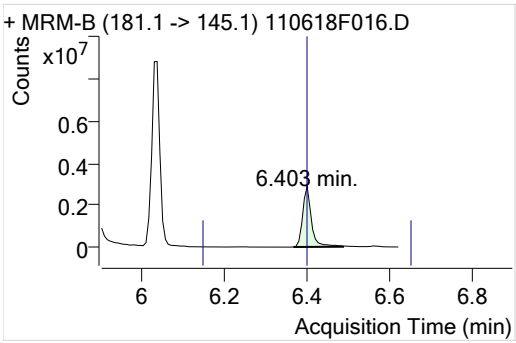
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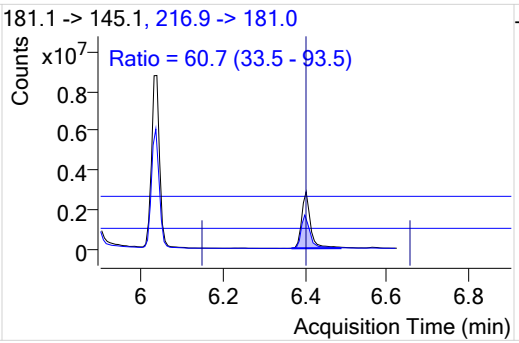


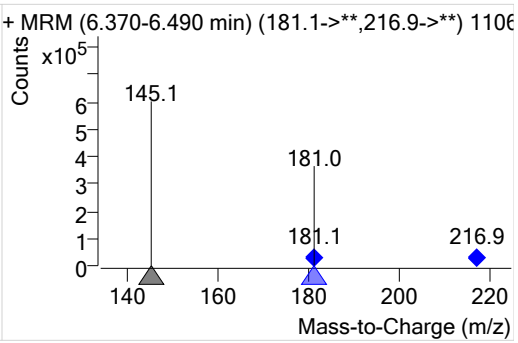




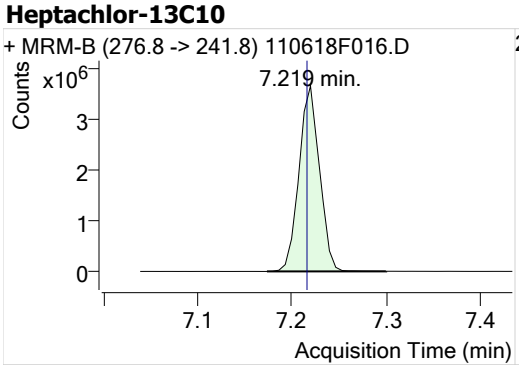
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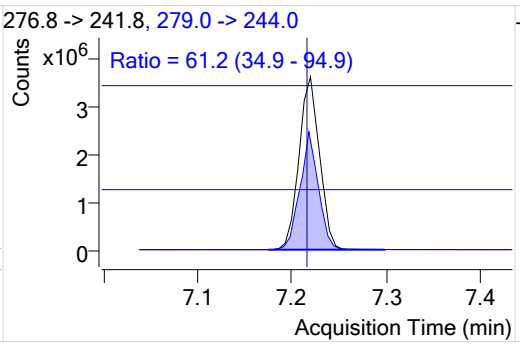


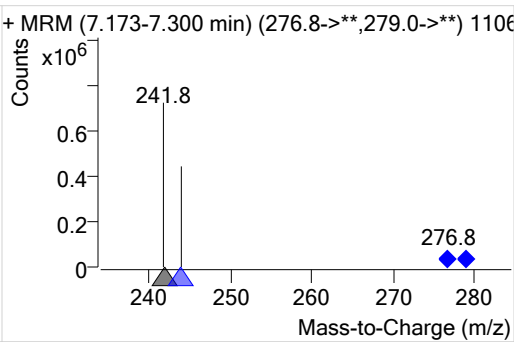




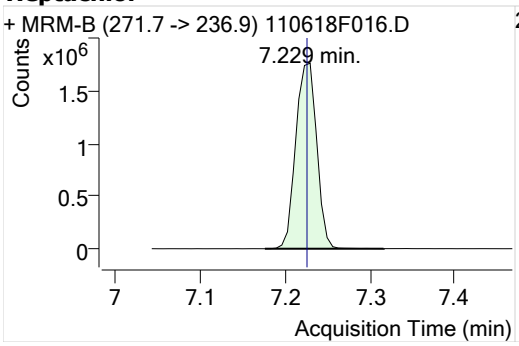
Heptachlor-13C10

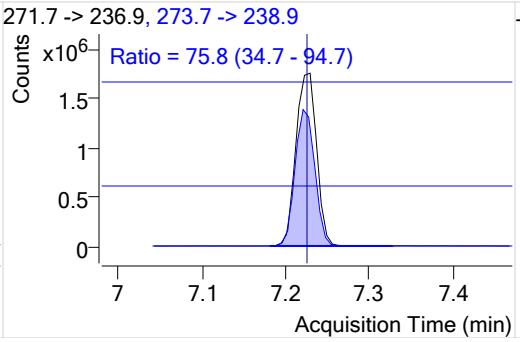


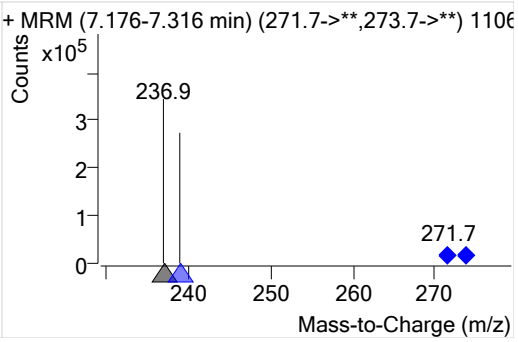




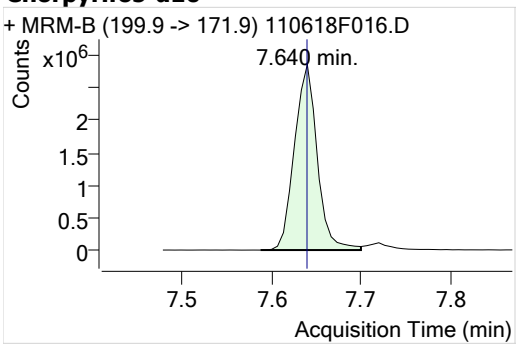
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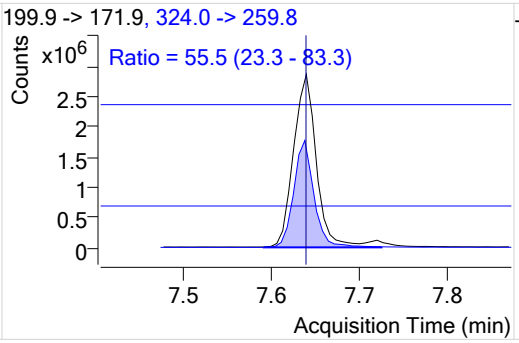


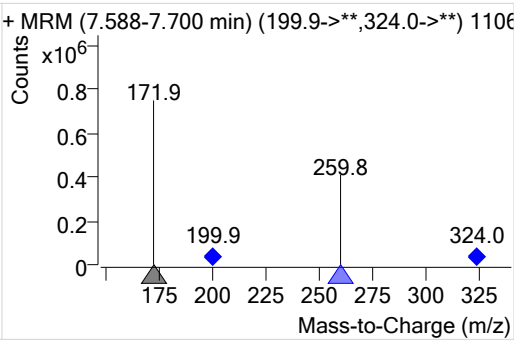




Chorpyrifos-d10

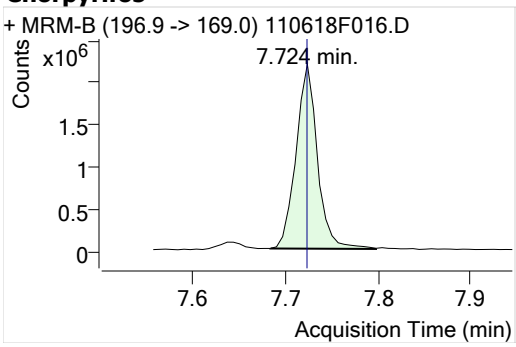


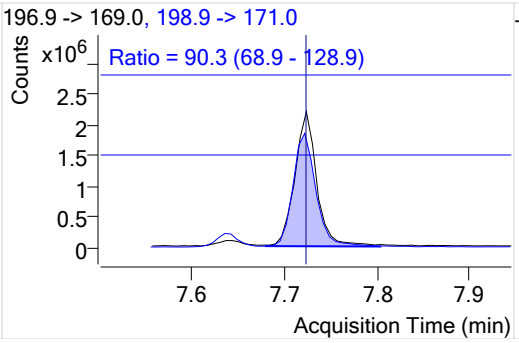


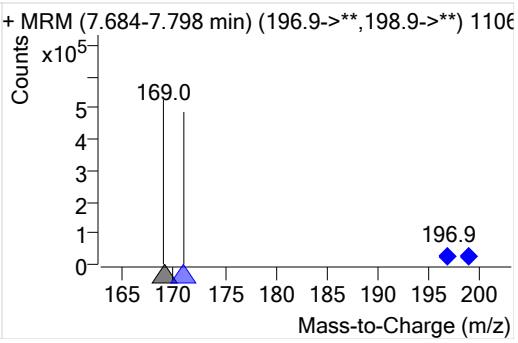


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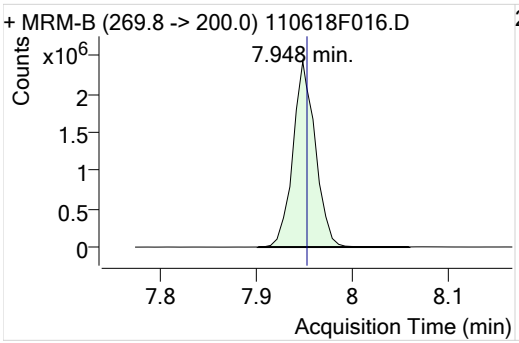
Chorpyrifos

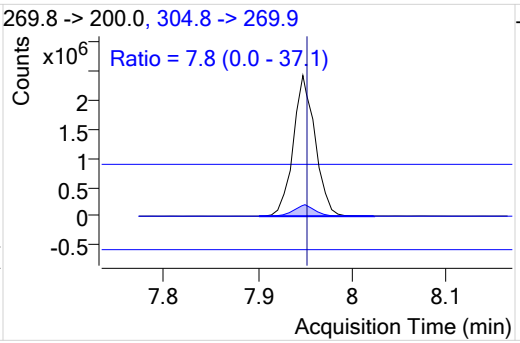


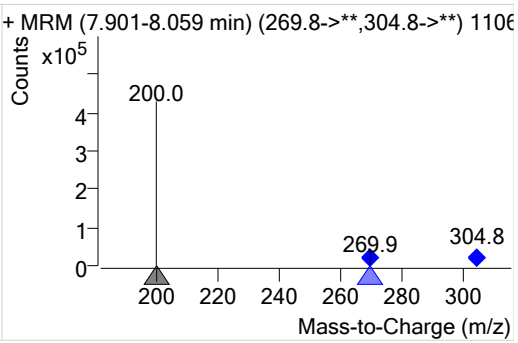




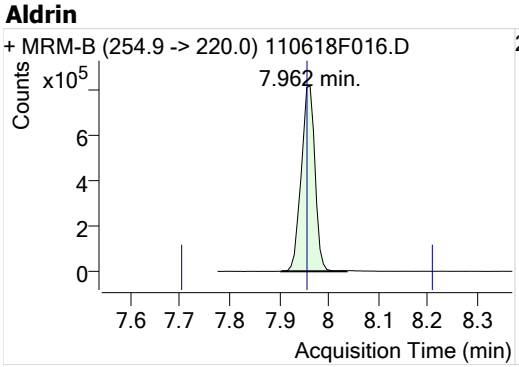
Aldrin-13C

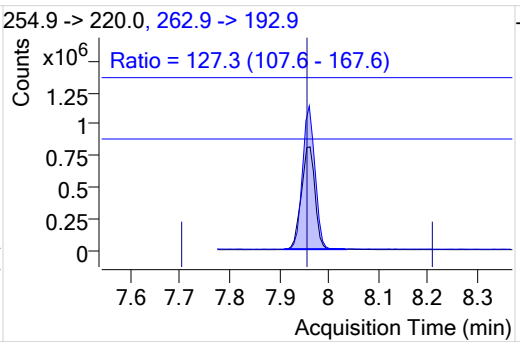


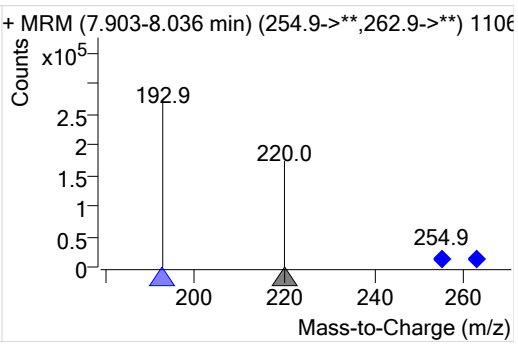




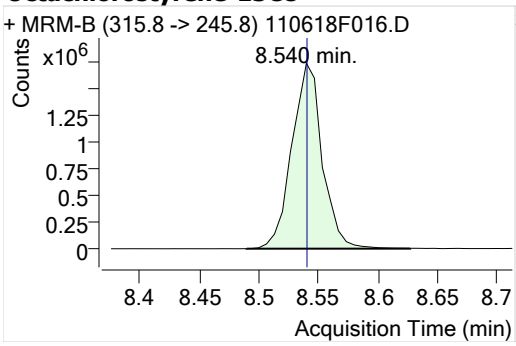
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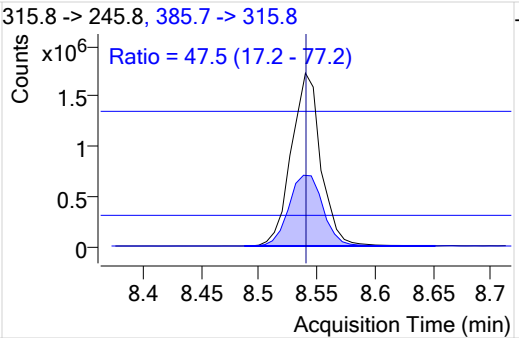


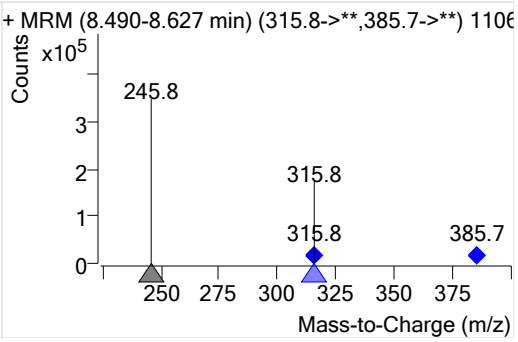




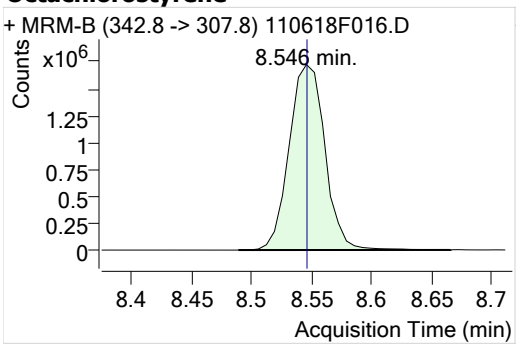
Octachlorostyrene-13C8

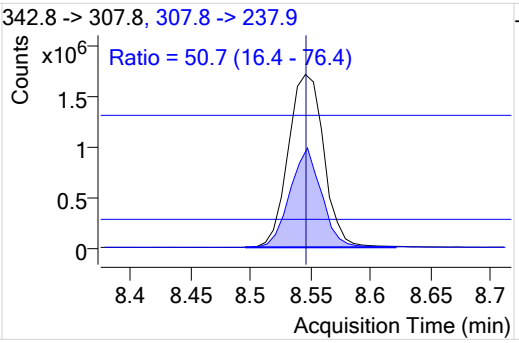


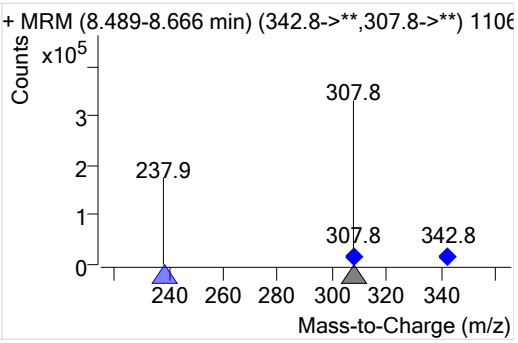




Octachlorostyrene

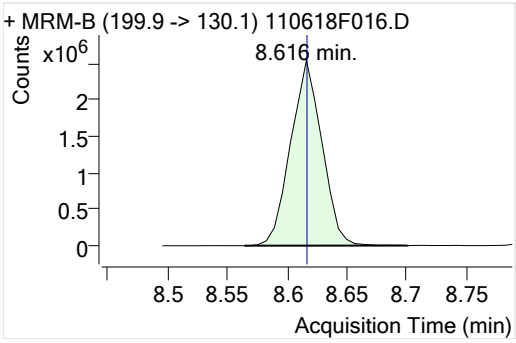


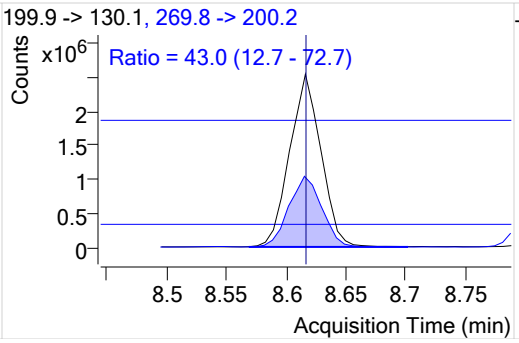


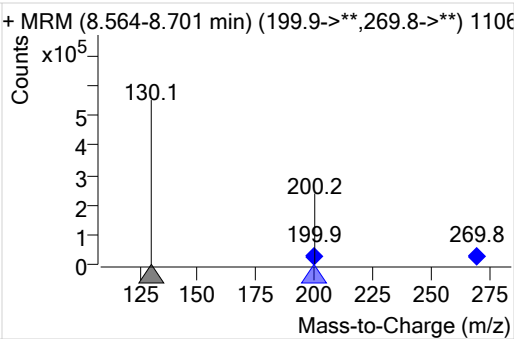


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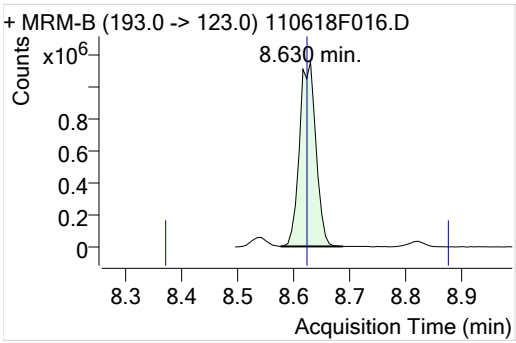
Isodrin-13C12

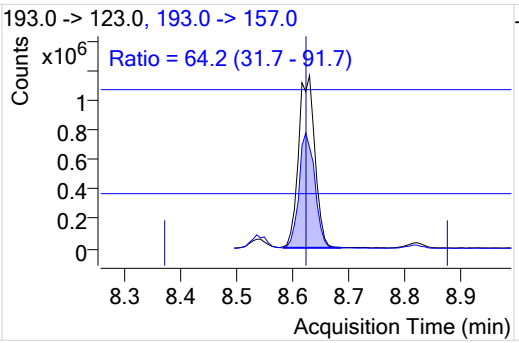


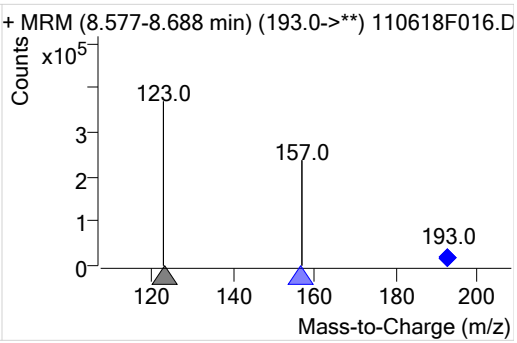




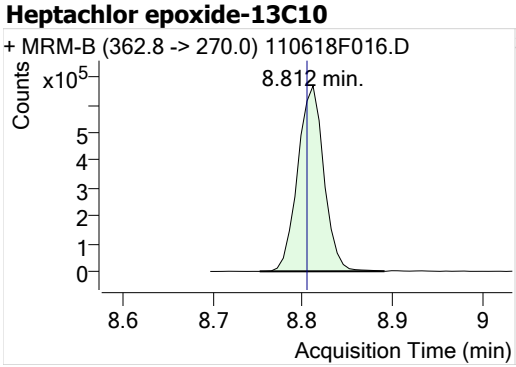
Isodrin

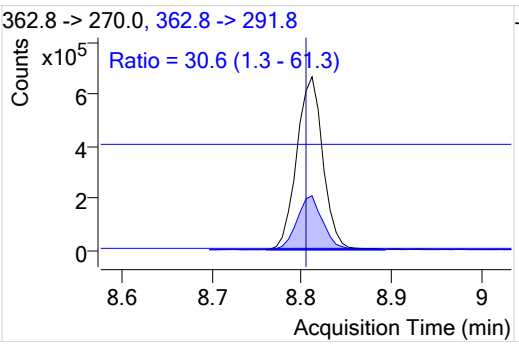


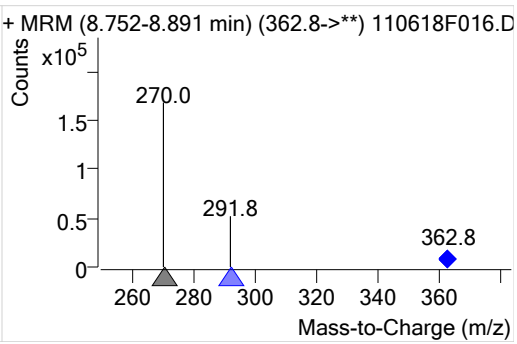




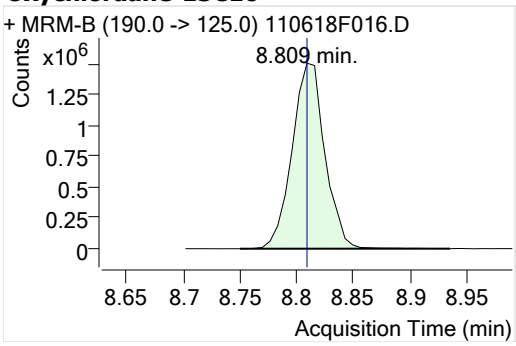
Heptachlor epoxide-13C10

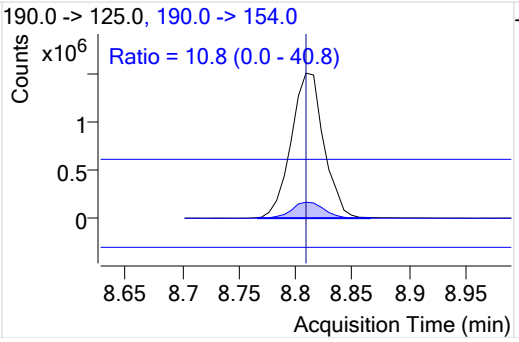


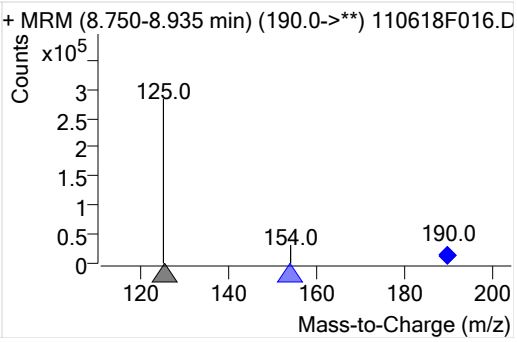




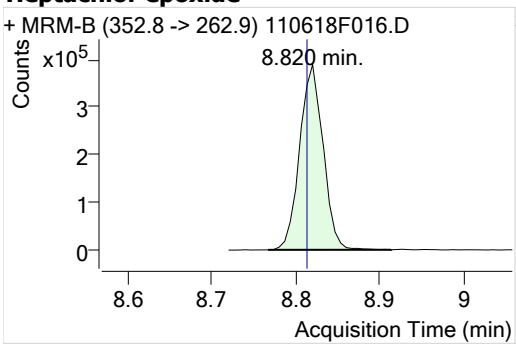
Oxychlordane-13C10

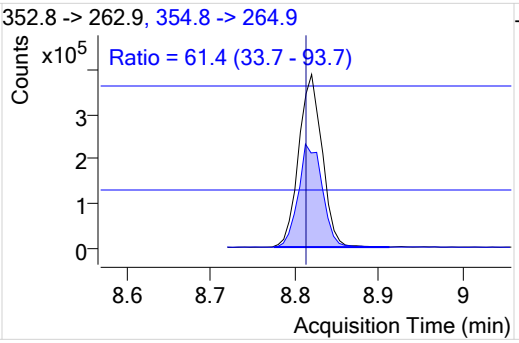


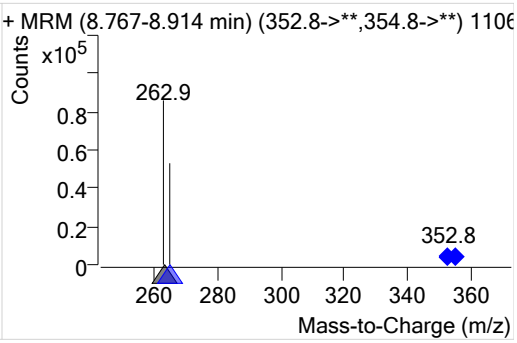




Heptachlor epoxide

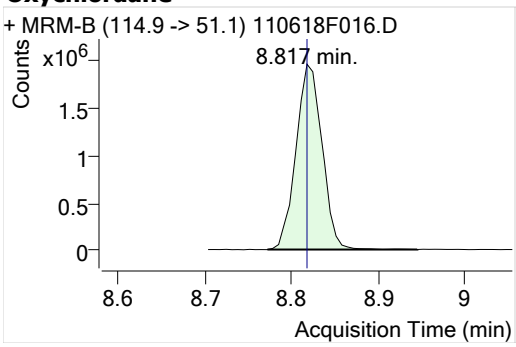


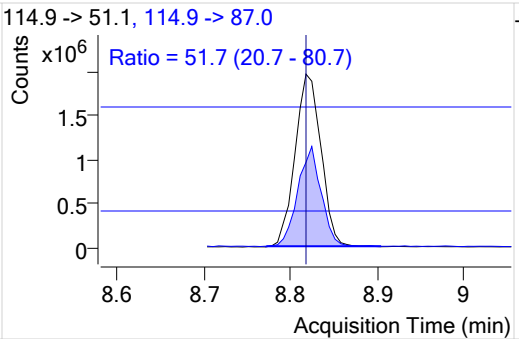


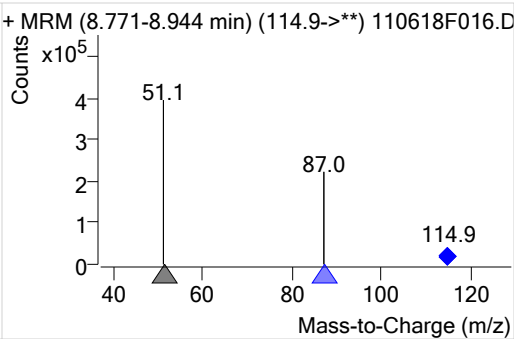


Quantitative Analysis Sample Report

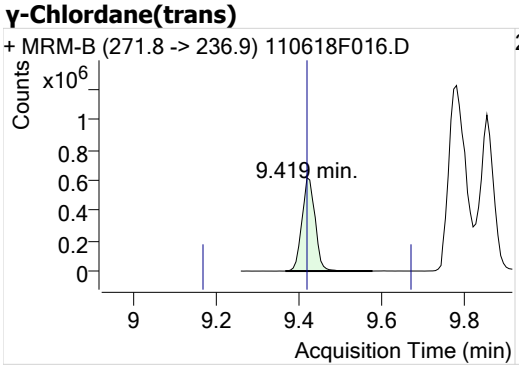
Oxychlordane

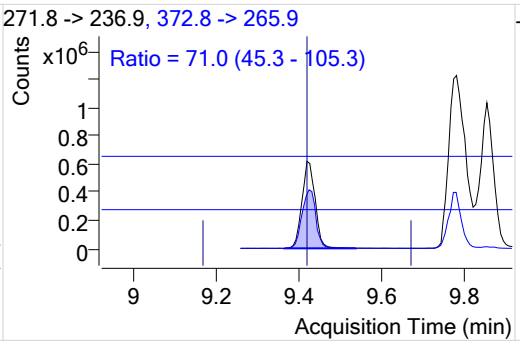


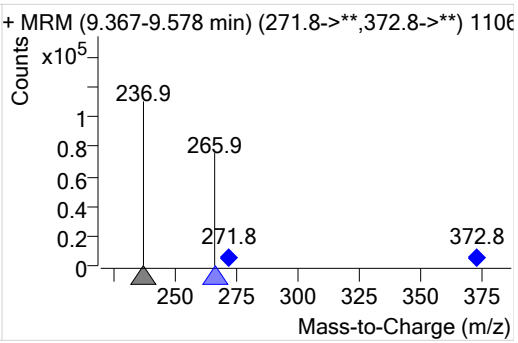




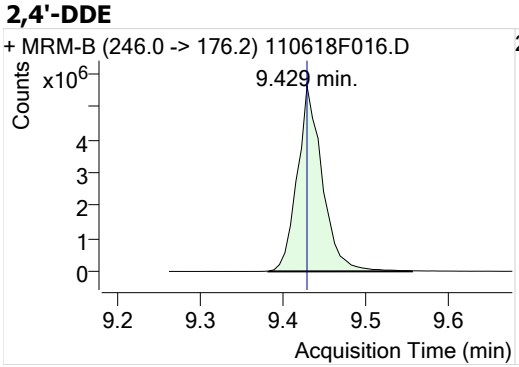
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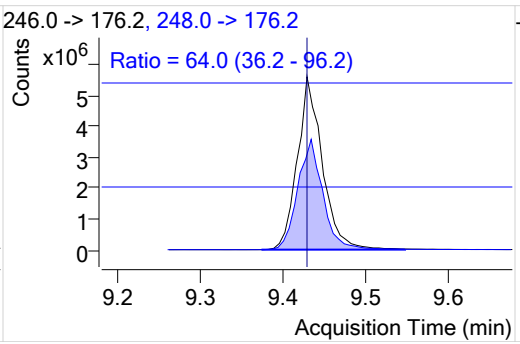


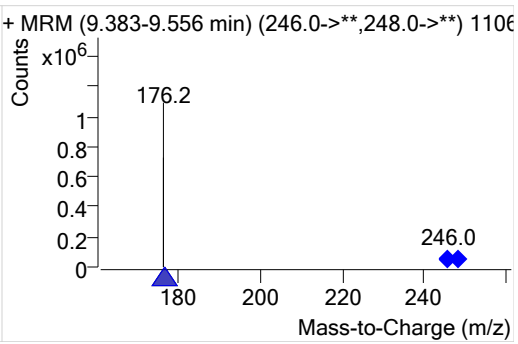




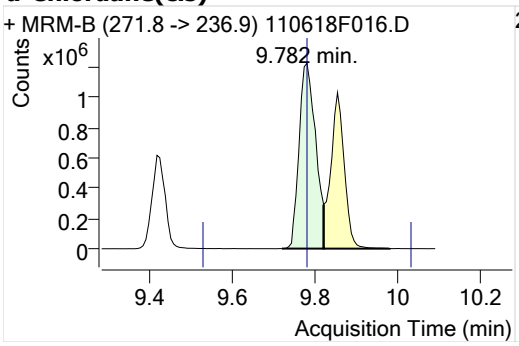
2,4'-DDE

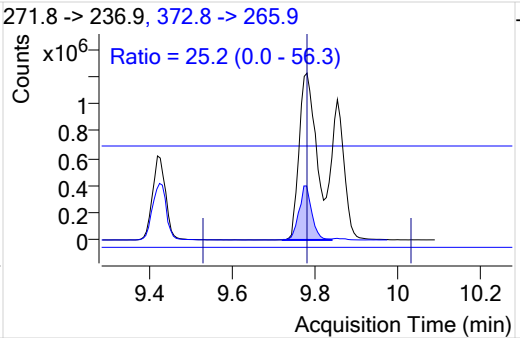


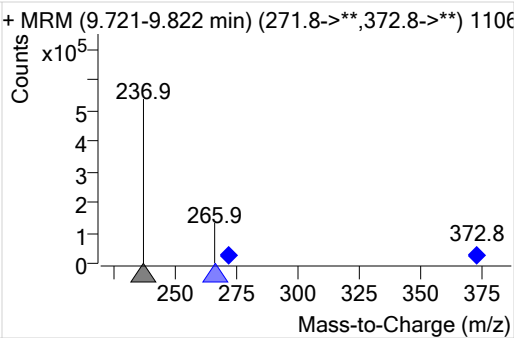




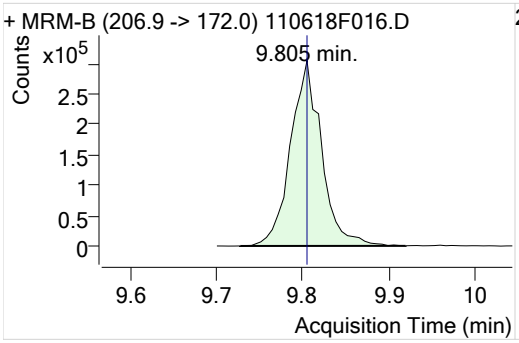
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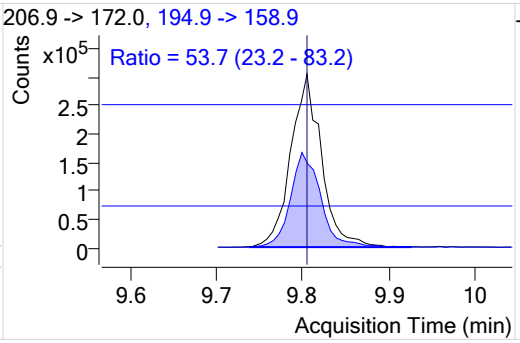


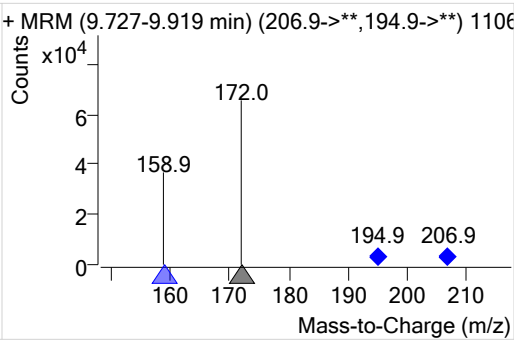




Endosulfan I

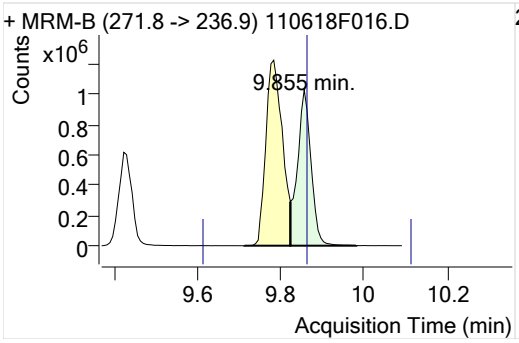


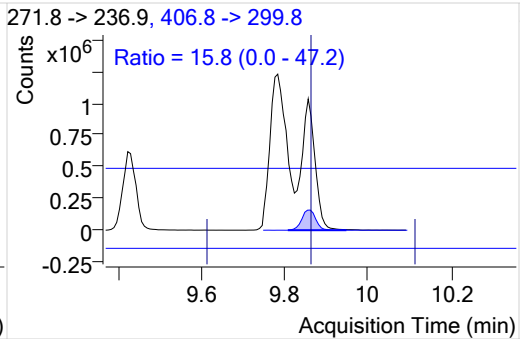


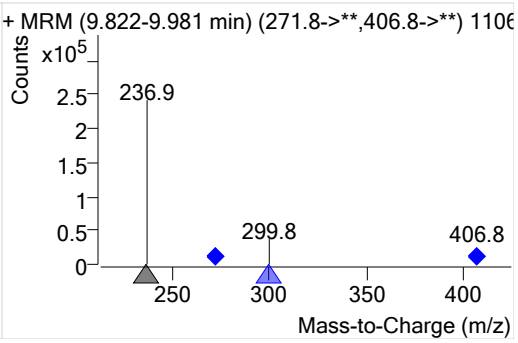


Quantitative Analysis Sample Report

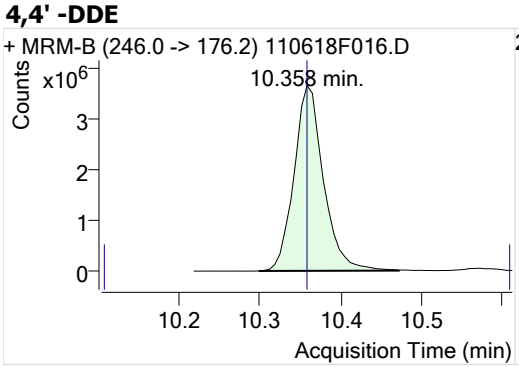
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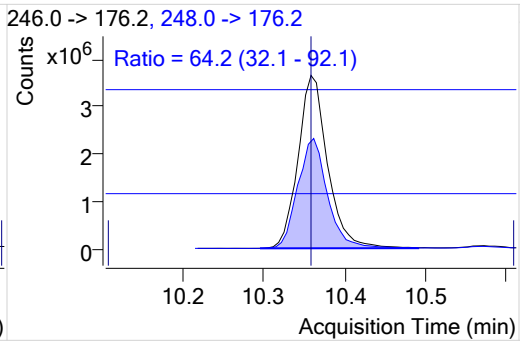


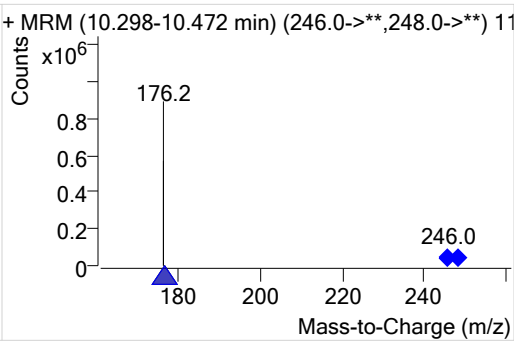




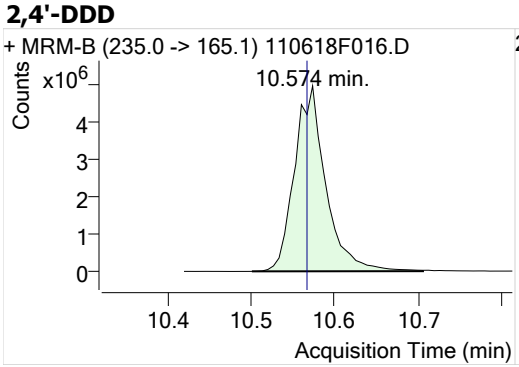
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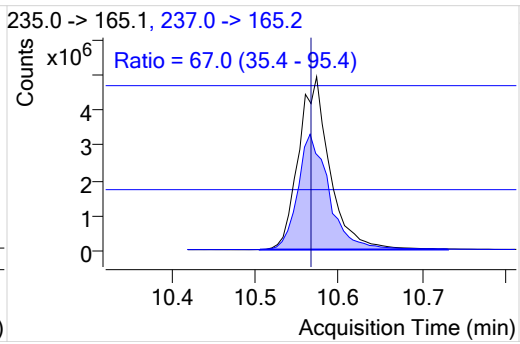


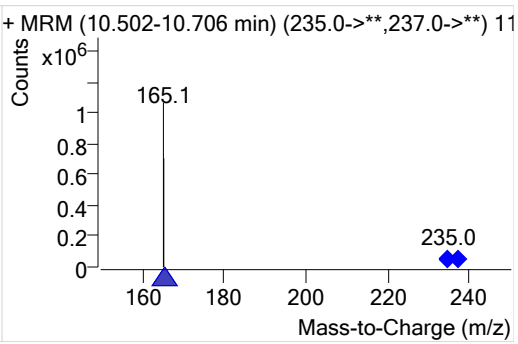




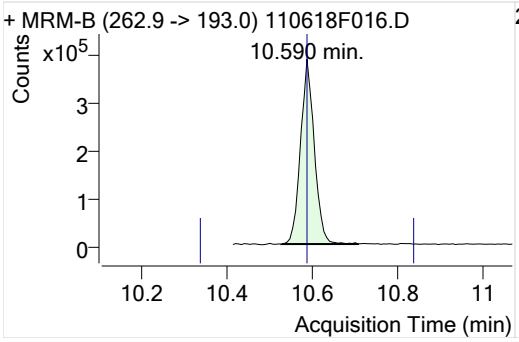
2,4'-DDD

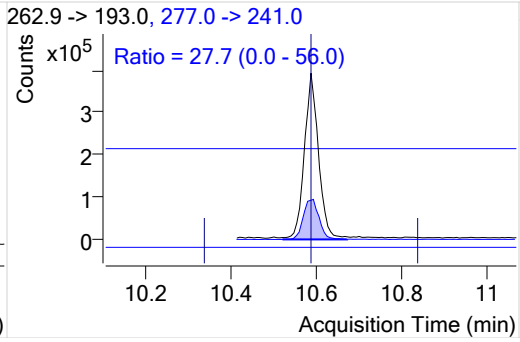


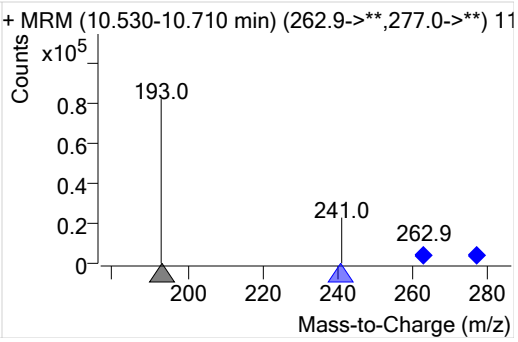




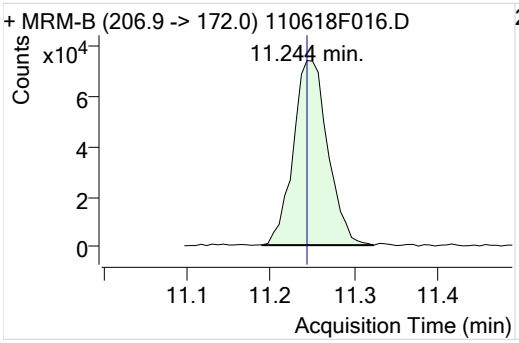
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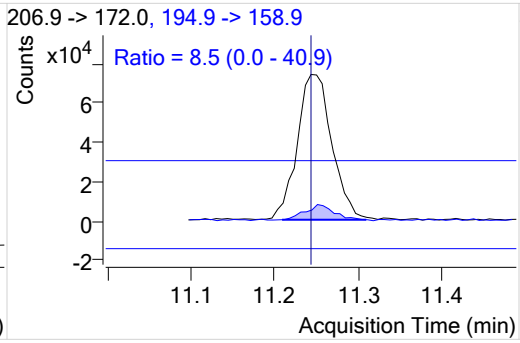


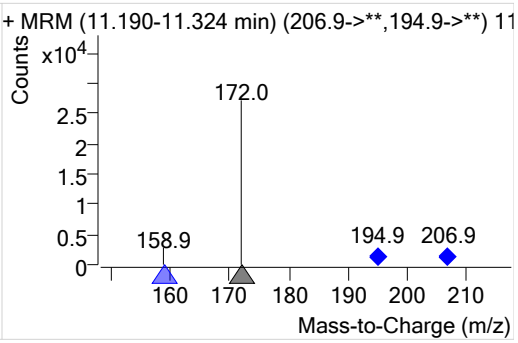




Endosulfan II

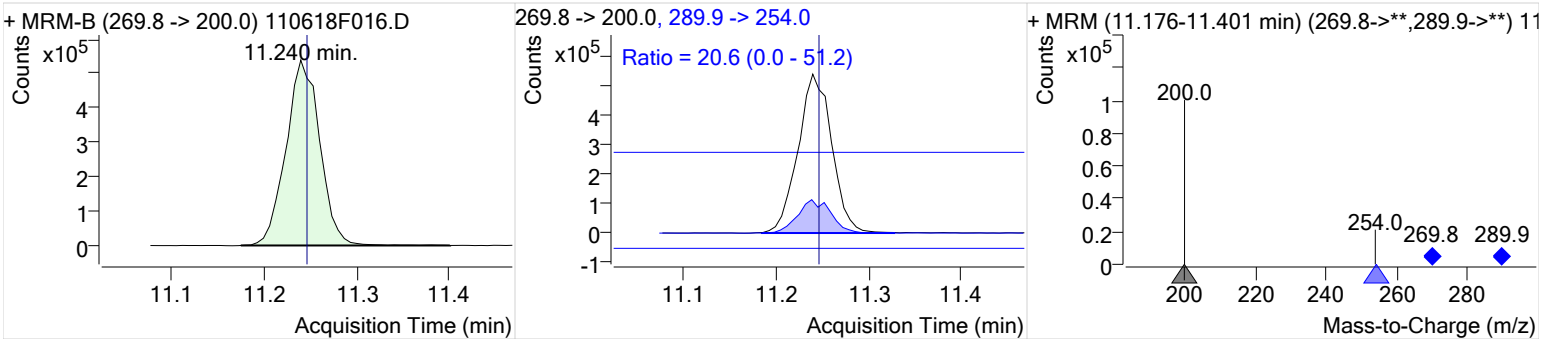




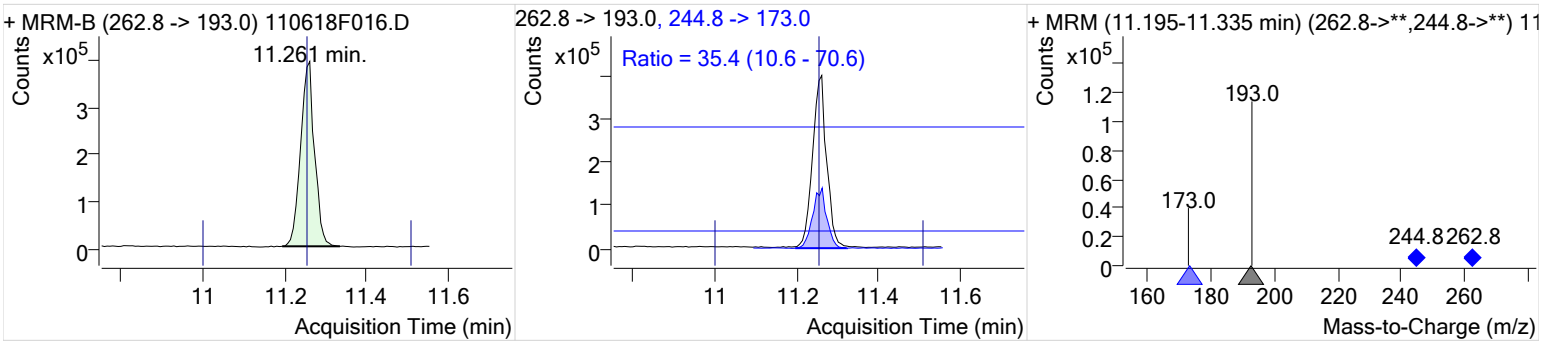


Quantitative Analysis Sample Report

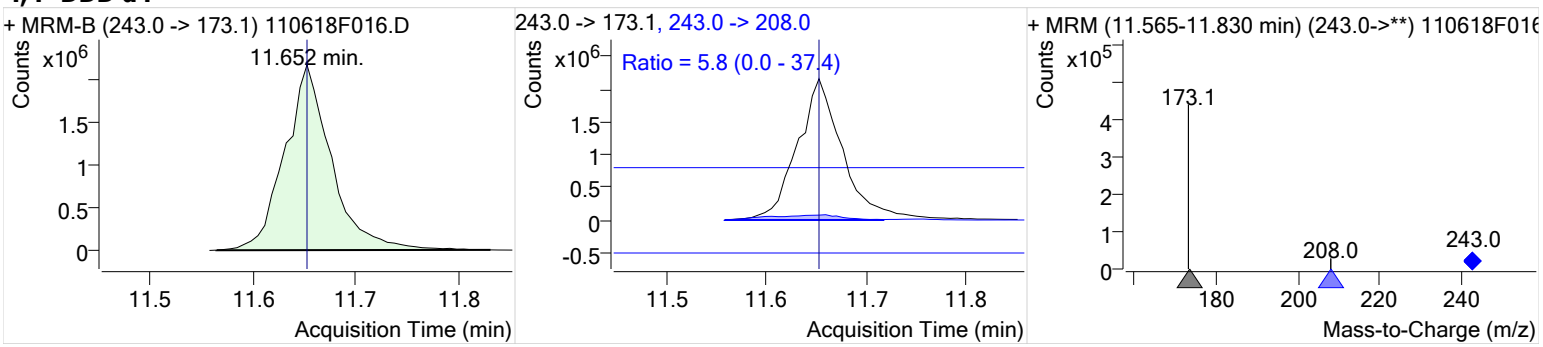
Endrin-13C12



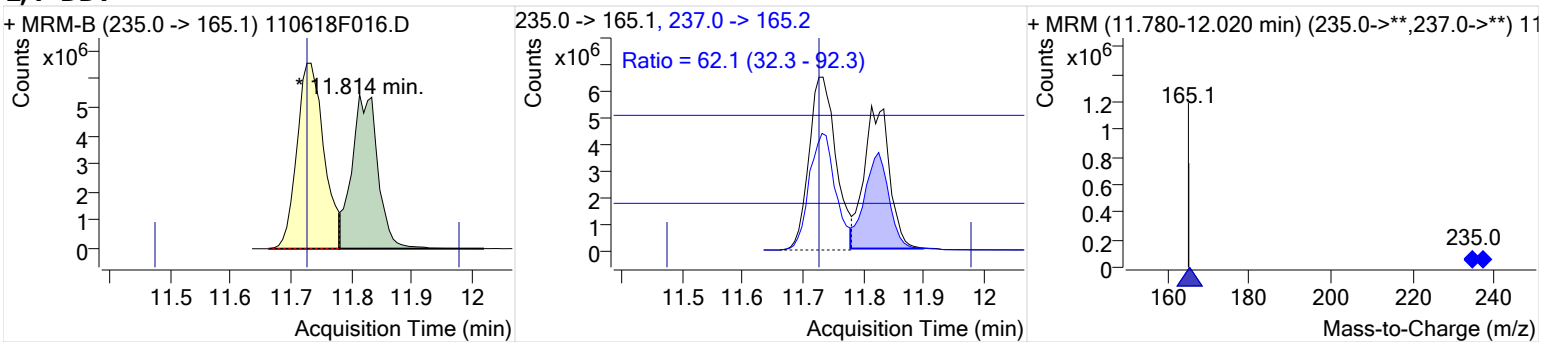
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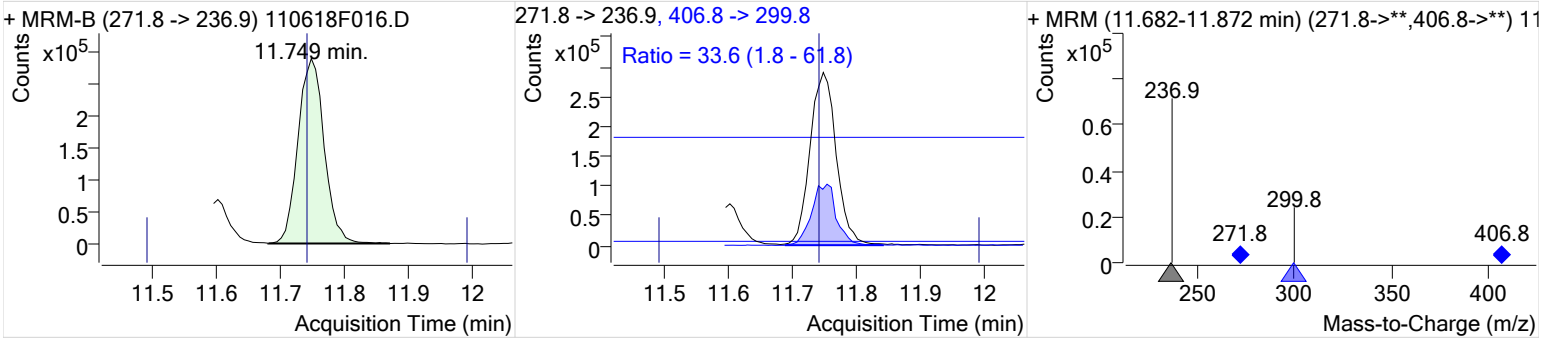
4,4'-DDD d4



2,4'-DDT

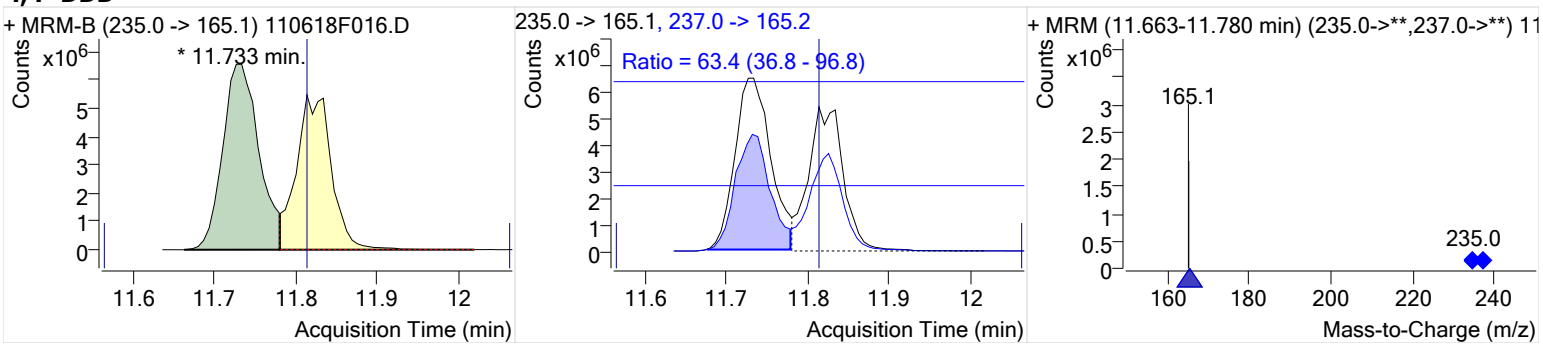


cis-Nonachlor

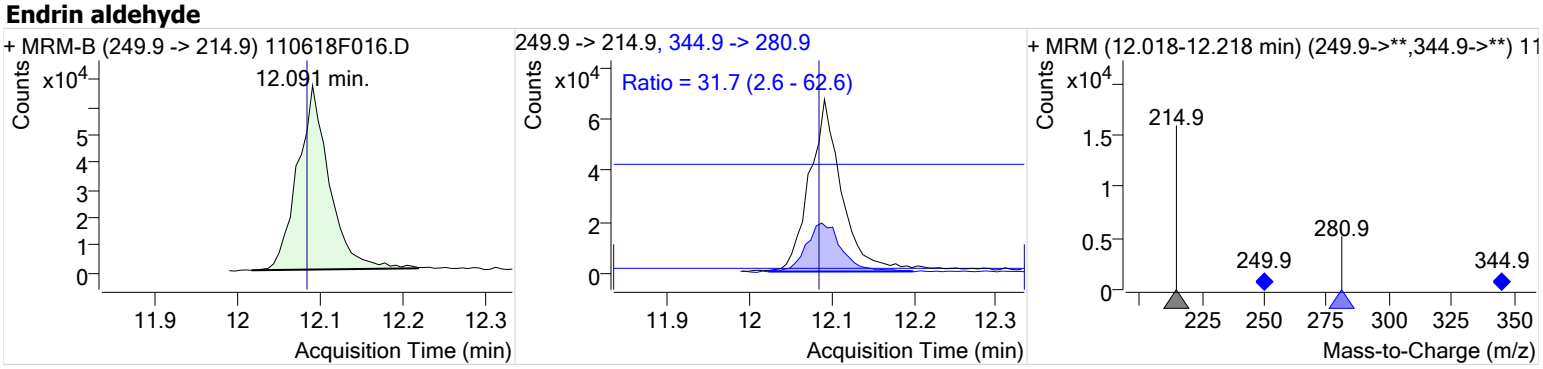


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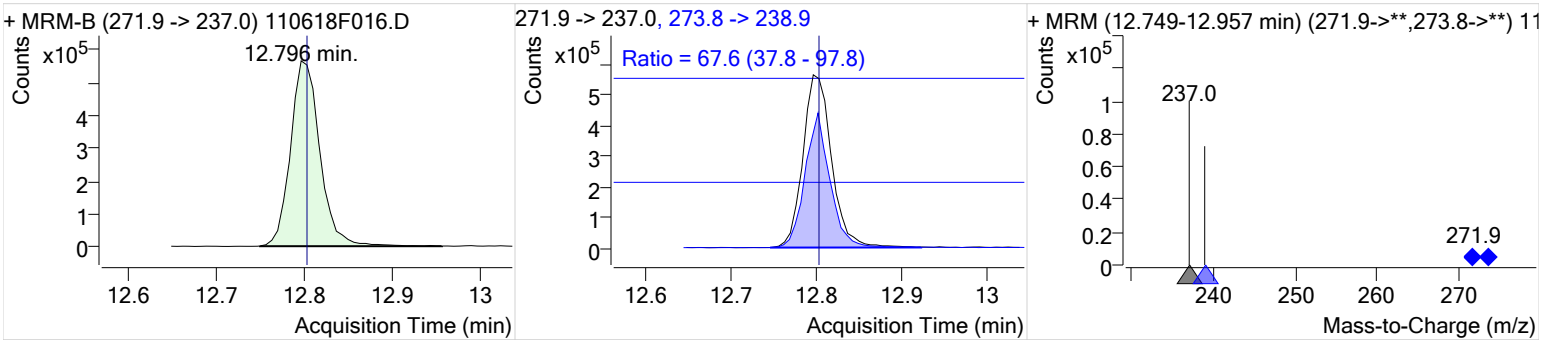
4,4'-DDD



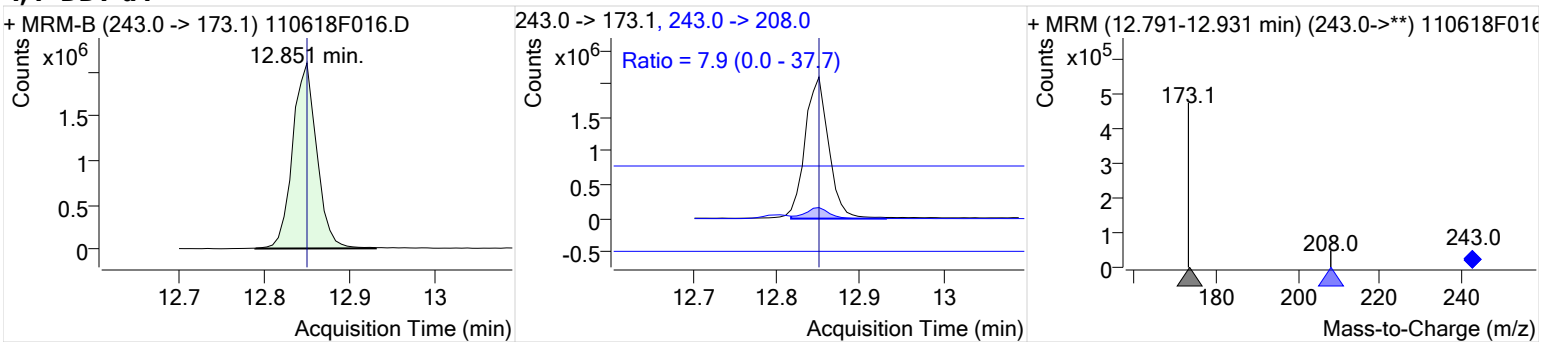
Endrin aldehyde



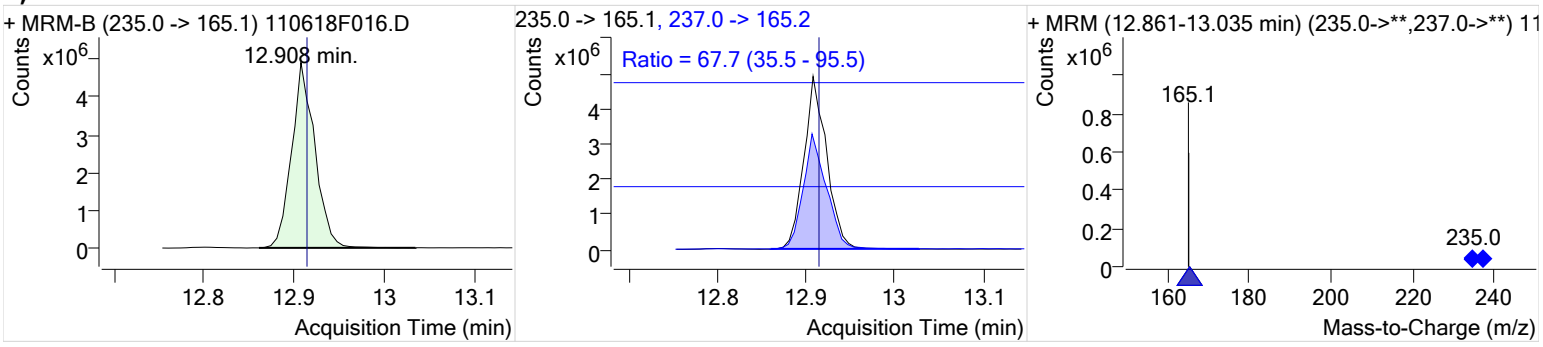
Endosulfan sulfate



4,4'-DDT-d4

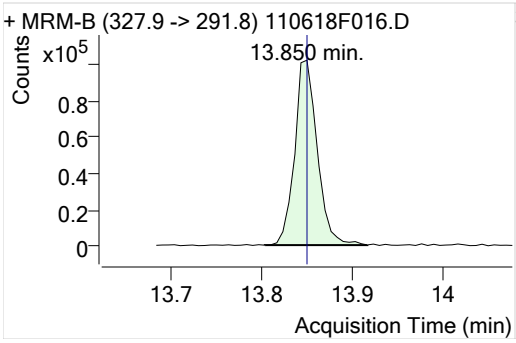


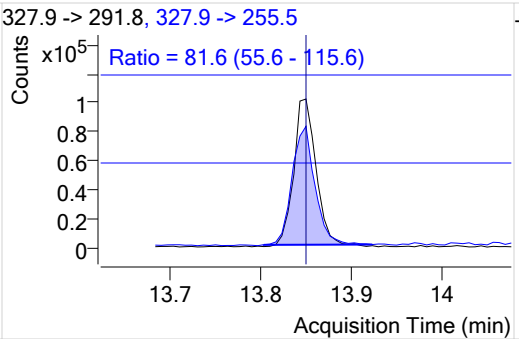
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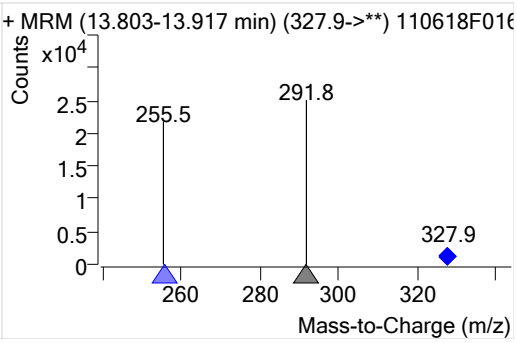


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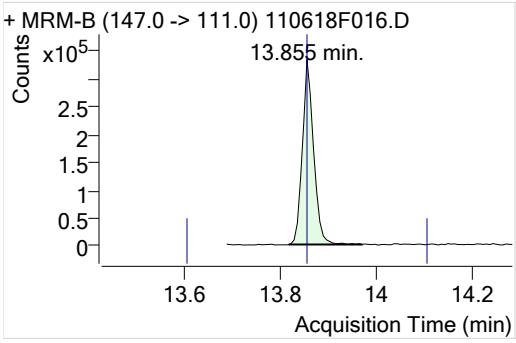
Endrin ketone-13C12

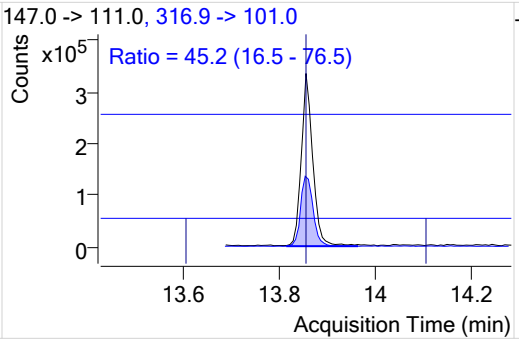


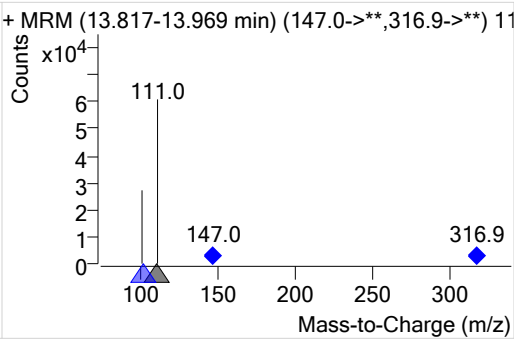




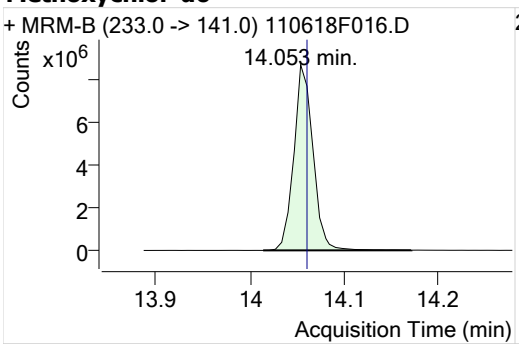
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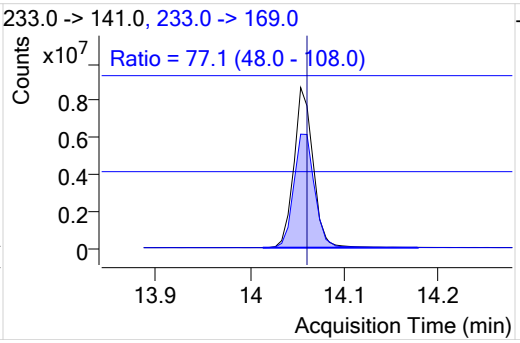


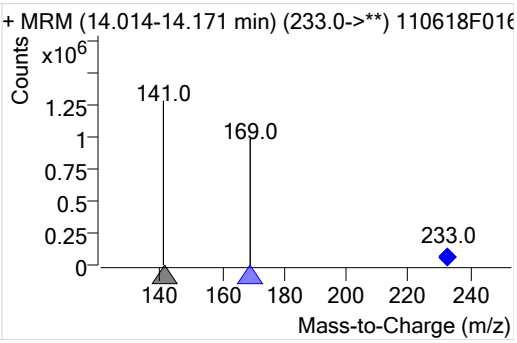




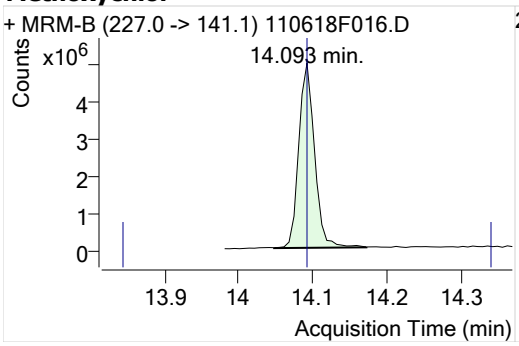
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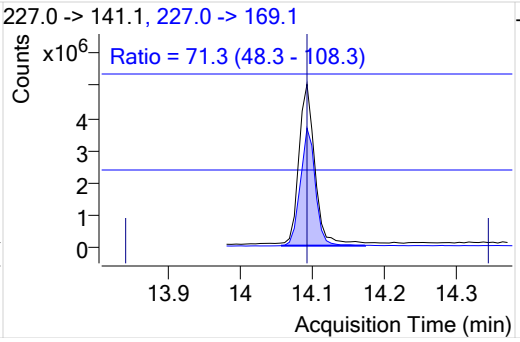


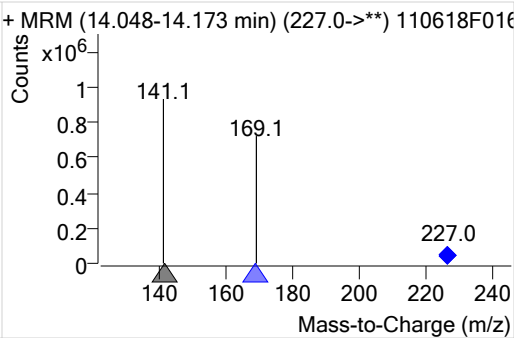




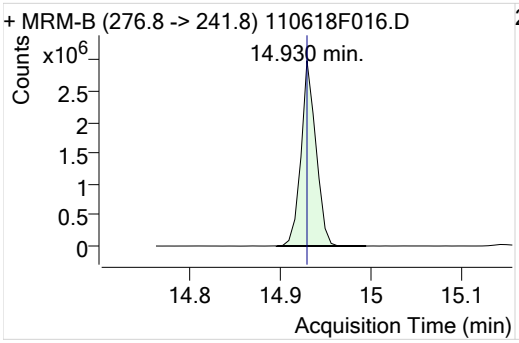
Methoxychlor

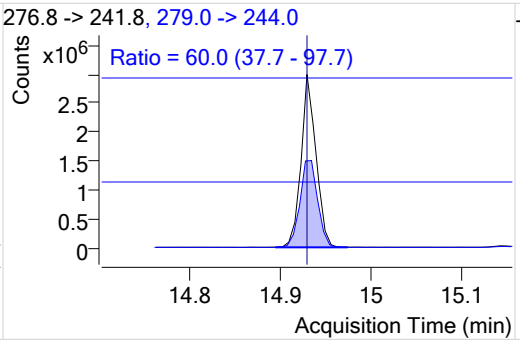


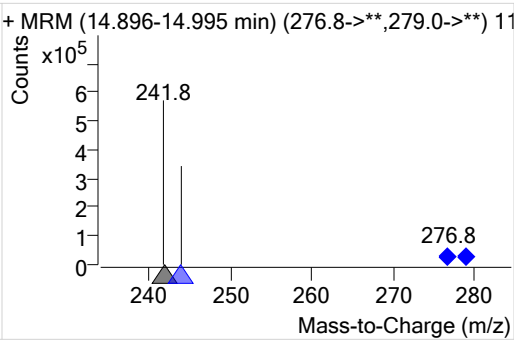




Mirex-13C10

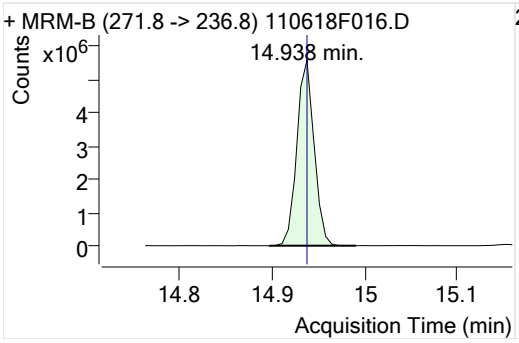


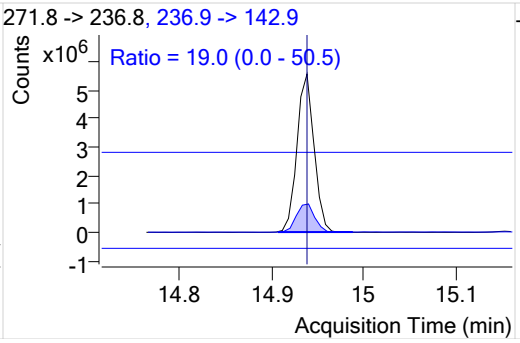


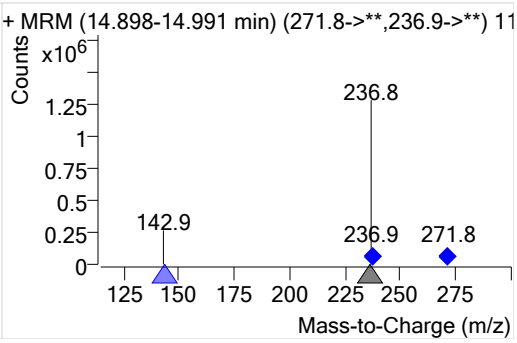


Quantitative Analysis Sample Report

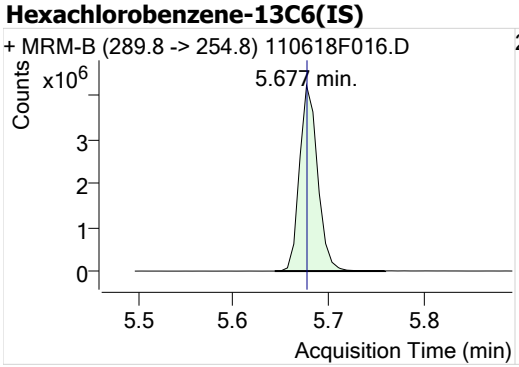
Mirex

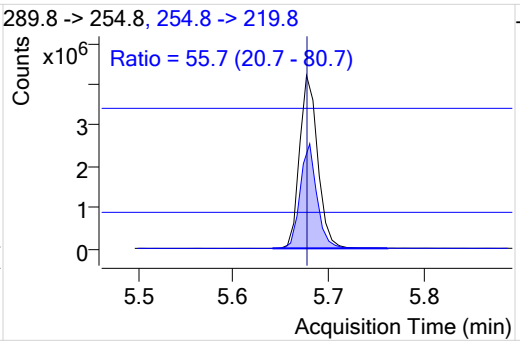


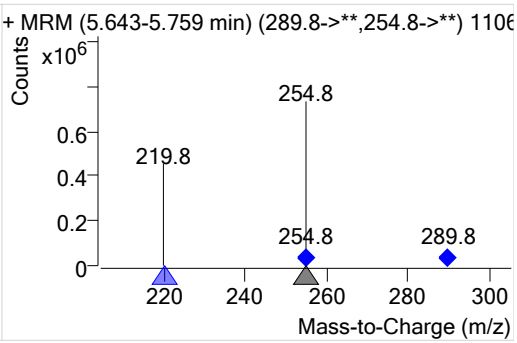




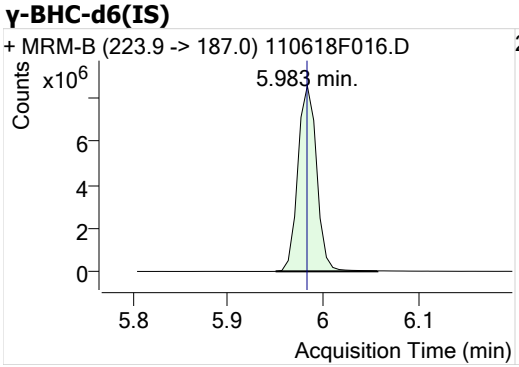
Hexachlorobenzene-13C6(IS)

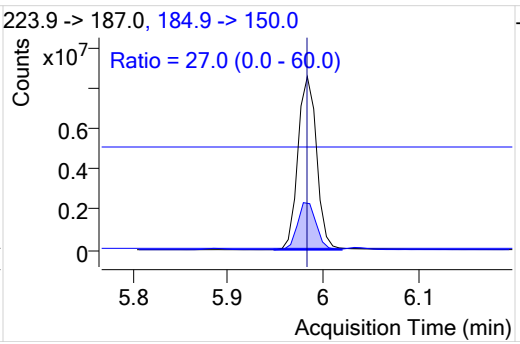


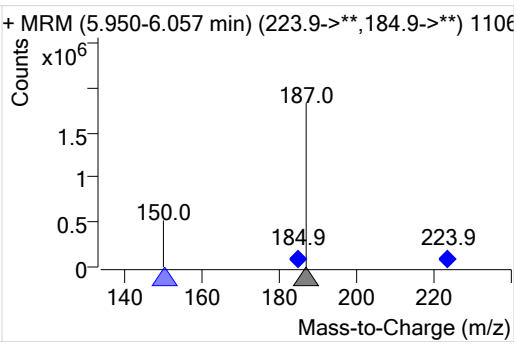




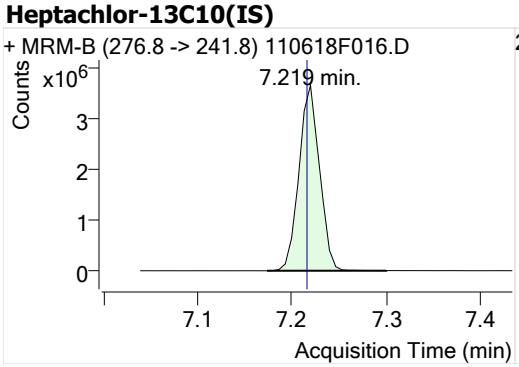
γ-BHC-d6(IS)

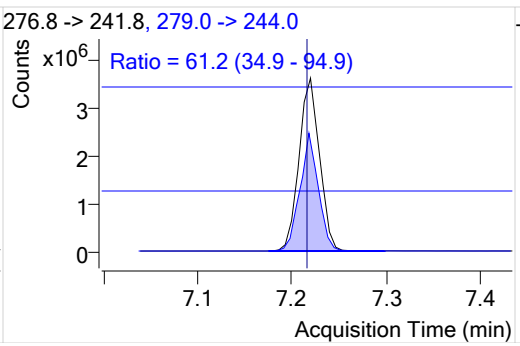


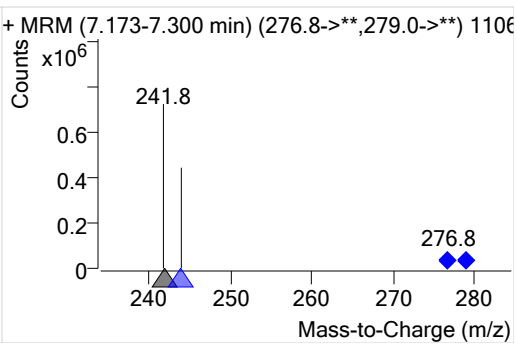




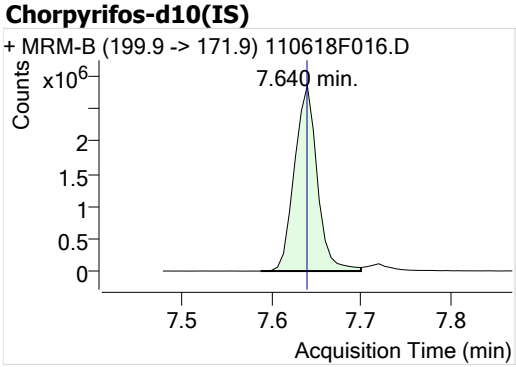
Heptachlor-13C10(IS)

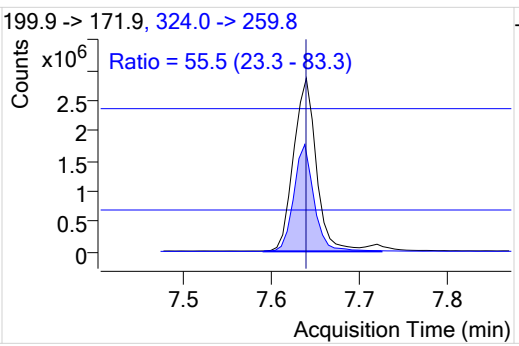


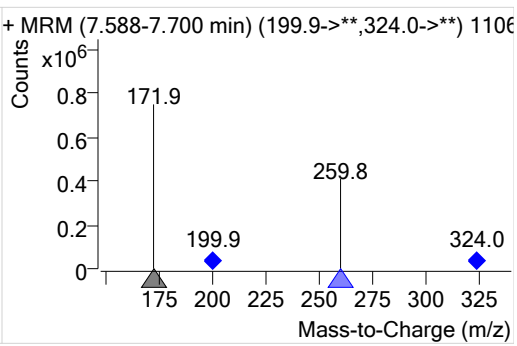




Chorpyrifos-d10(IS)

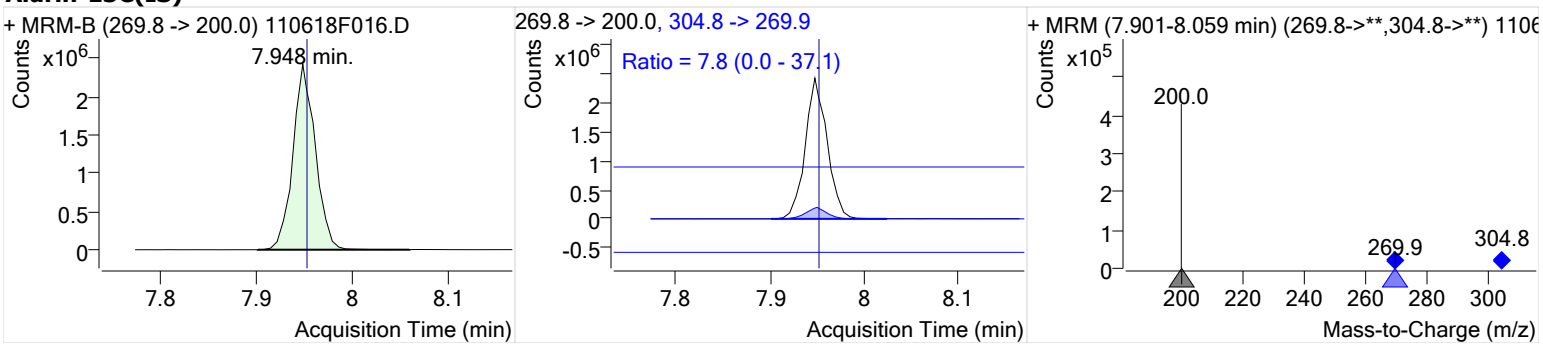




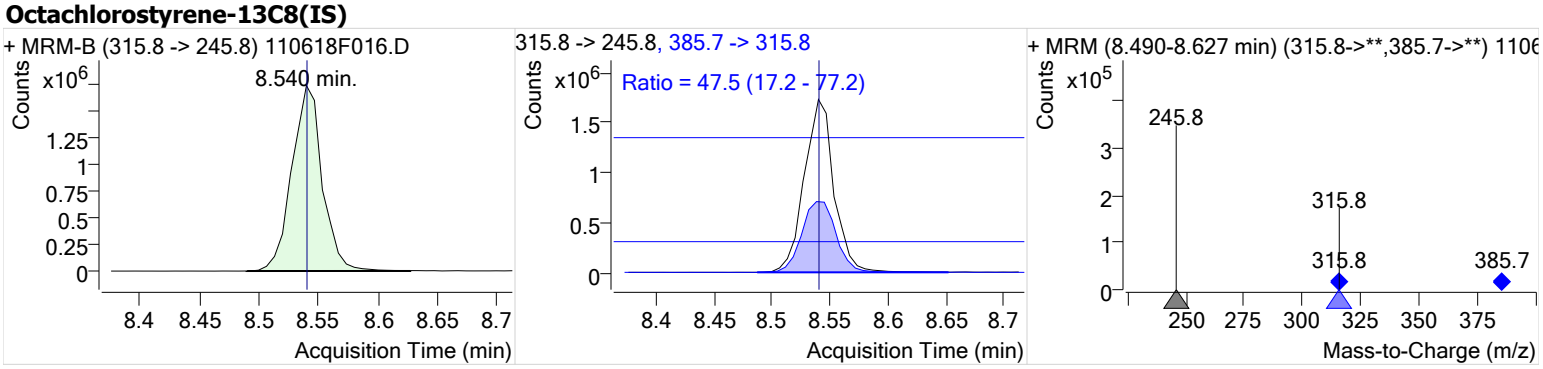


Quantitative Analysis Sample Report

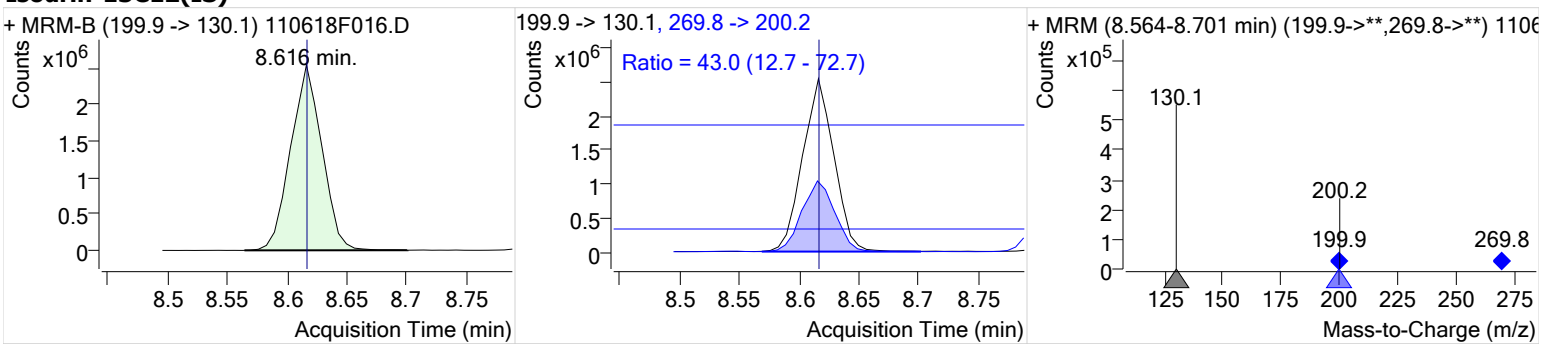
Aldrin-13C(IS)



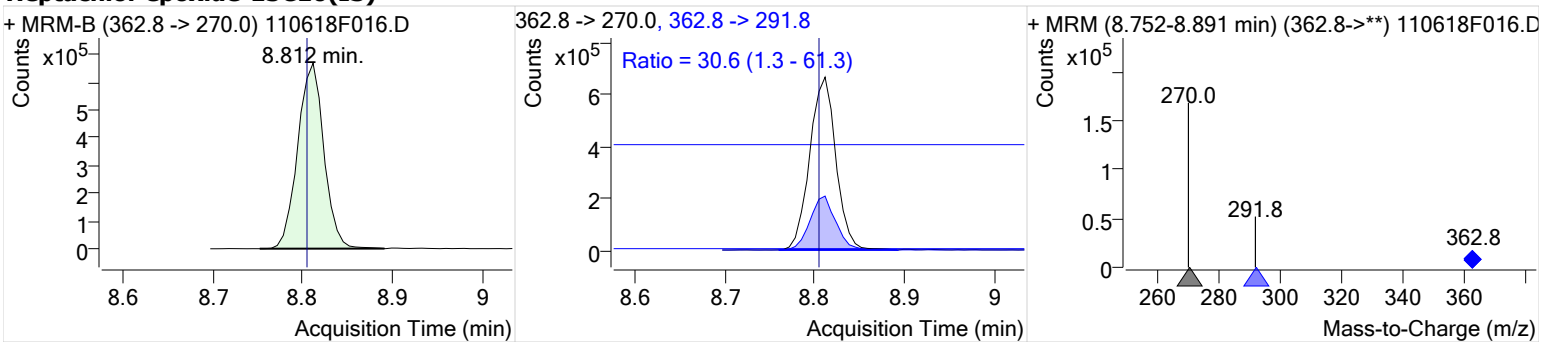
Octachlorostyrene-13C8(IS)



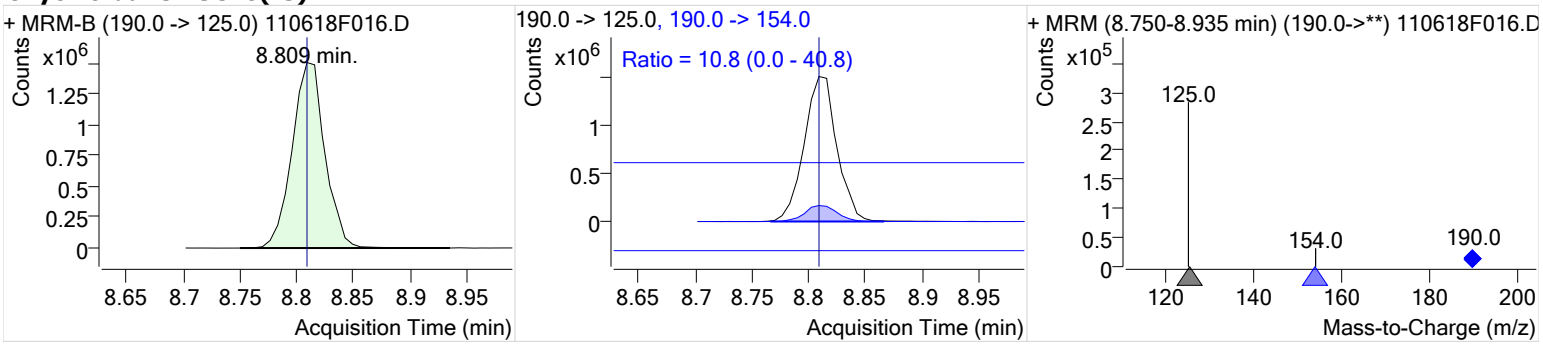
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

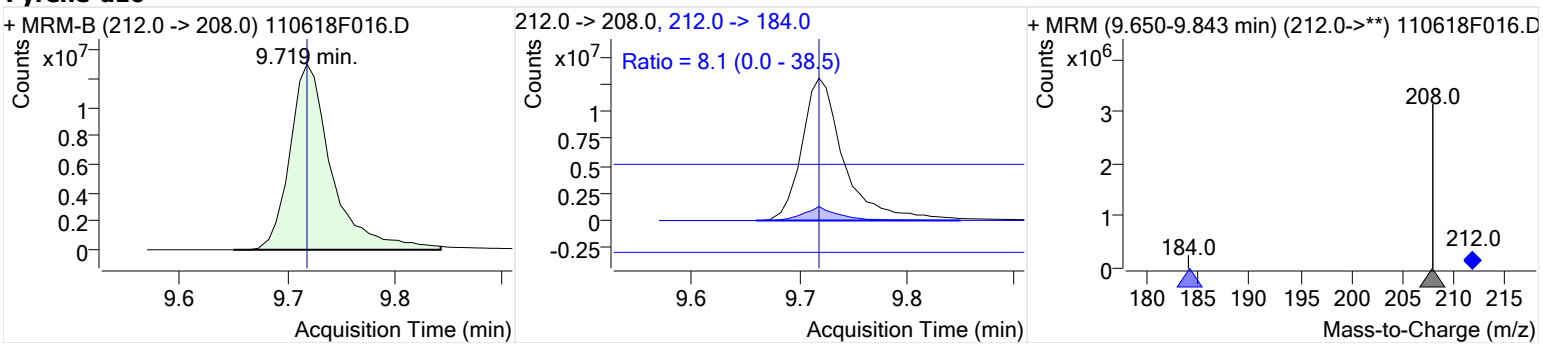


Oxychlordane-13C10(IS)

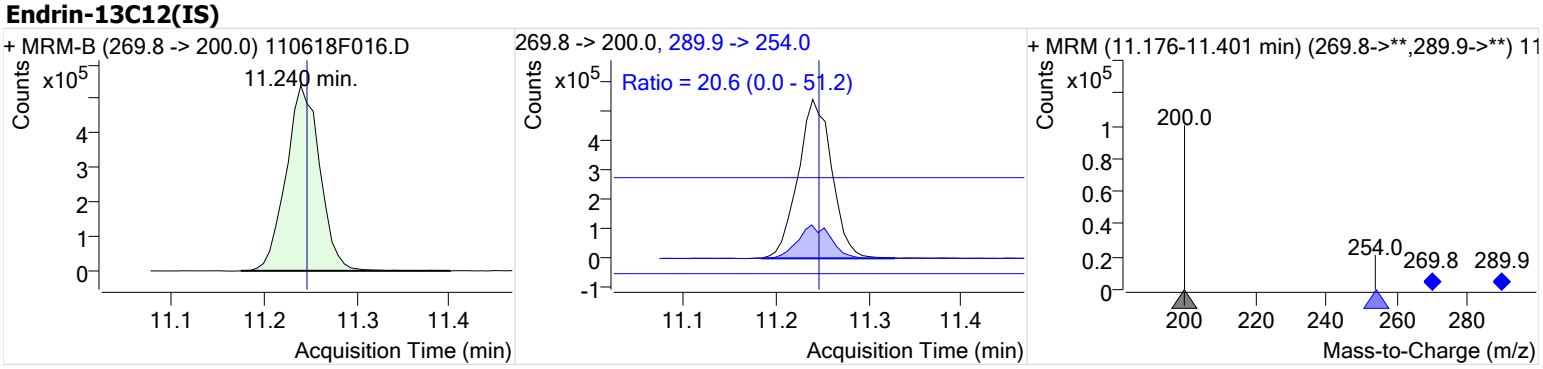


Quantitative Analysis Sample Report

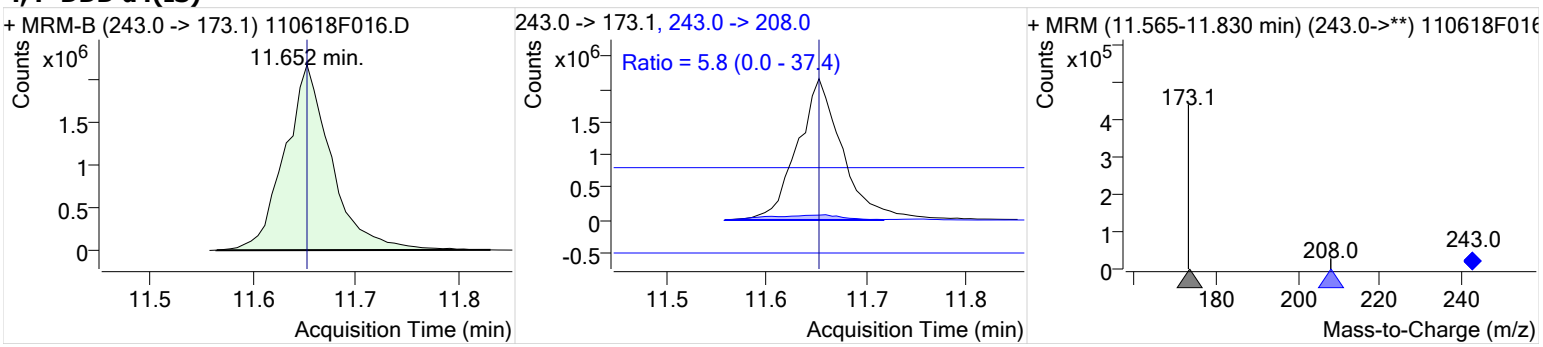
Pyrene-d10



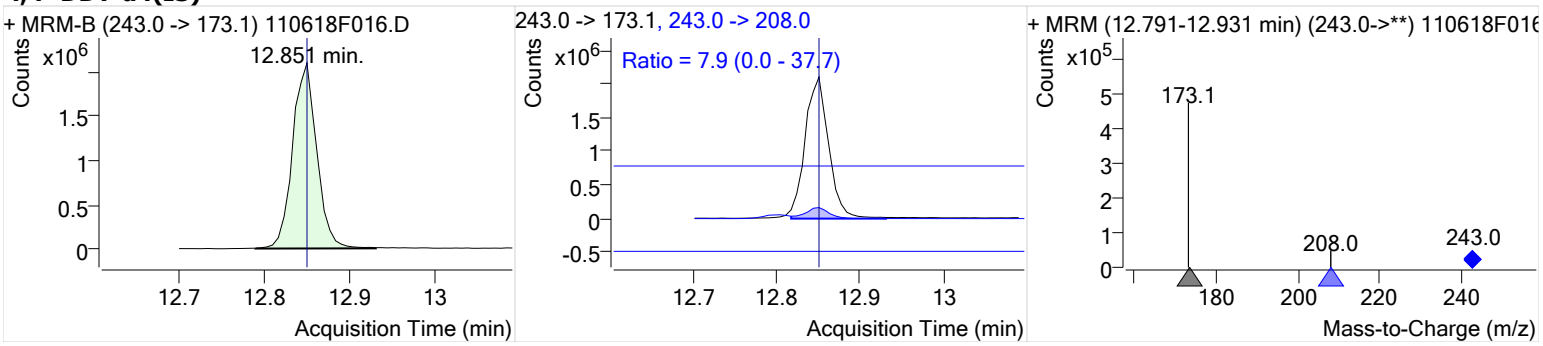
Endrin-13C12(IS)



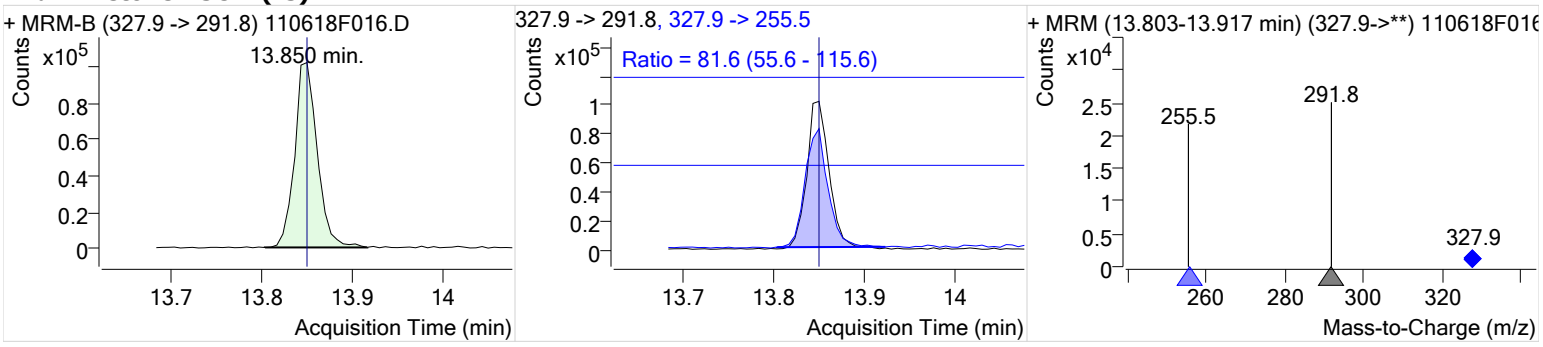
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

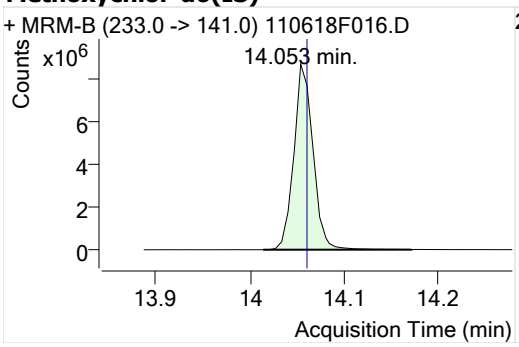


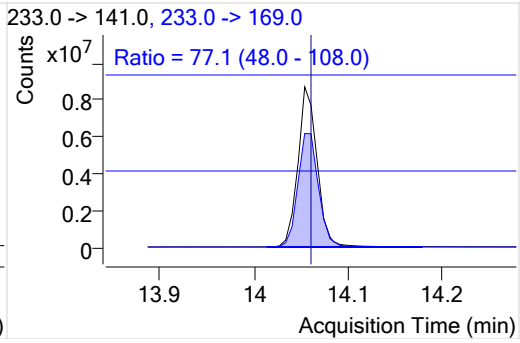
Endrin ketone-13C12(IS)

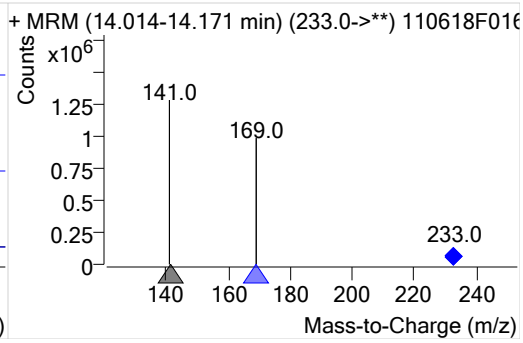


Quantitative Analysis Sample Report

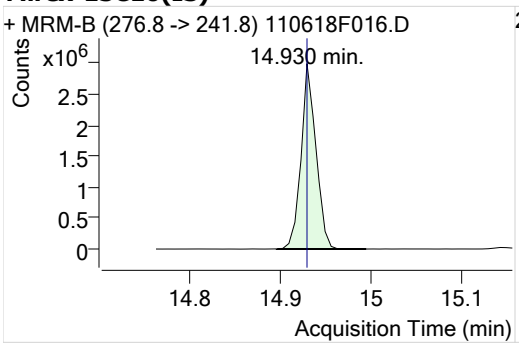
Methoxychlor-d6(IS)

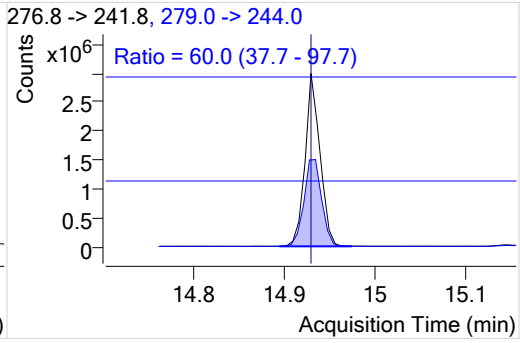


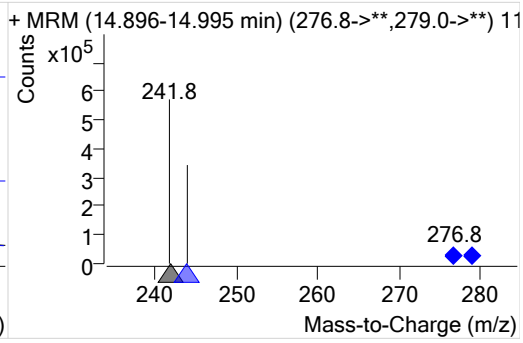




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F017.D	**Vial**	8
Acq. Date-Time	11/6/2018 6:51:13 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 20ng/mL SVM59-48F	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	6547795	20.000 ng/ml	0.002
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	11762160	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.216	276.8 -> 241.8	6405681	20.000 ng/ml	0.001
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	6100421	20.000 ng/ml	0.001
Aldrin-13C(IS)	7.952	269.8 -> 200.0	4188282	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	3254137	20.000 ng/ml	0.001
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4767940	20.000 ng/ml	0.000
Heptachlor epoxide-13C10(IS)	8.805	362.8 -> 270.0	1553107	20.000 ng/ml	0.003
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	3239959	20.000 ng/ml	0.000
Pyrene-d10	9.719	212.0 -> 208.0	41272026	100.000 ng/ml	0.000
Endrin-13C12(IS)	11.247	269.8 -> 200.0	1571000	20.000 ng/ml	0.004
4,4'-DDD d4(IS)	11.652	243.0 -> 173.1	8067628	5.000 ng/ml	0.024
4,4'-DDT-d4(IS)	12.851	243.0 -> 173.1	4771034	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	200414	20.000 ng/ml	0.000
Methoxychlor-d6(IS)	14.060	233.0 -> 141.0	14760327	20.000 ng/ml	0.003
Mirex-13C10(IS)	14.930	276.8 -> 241.8	3465254	5.000 ng/ml	0.003

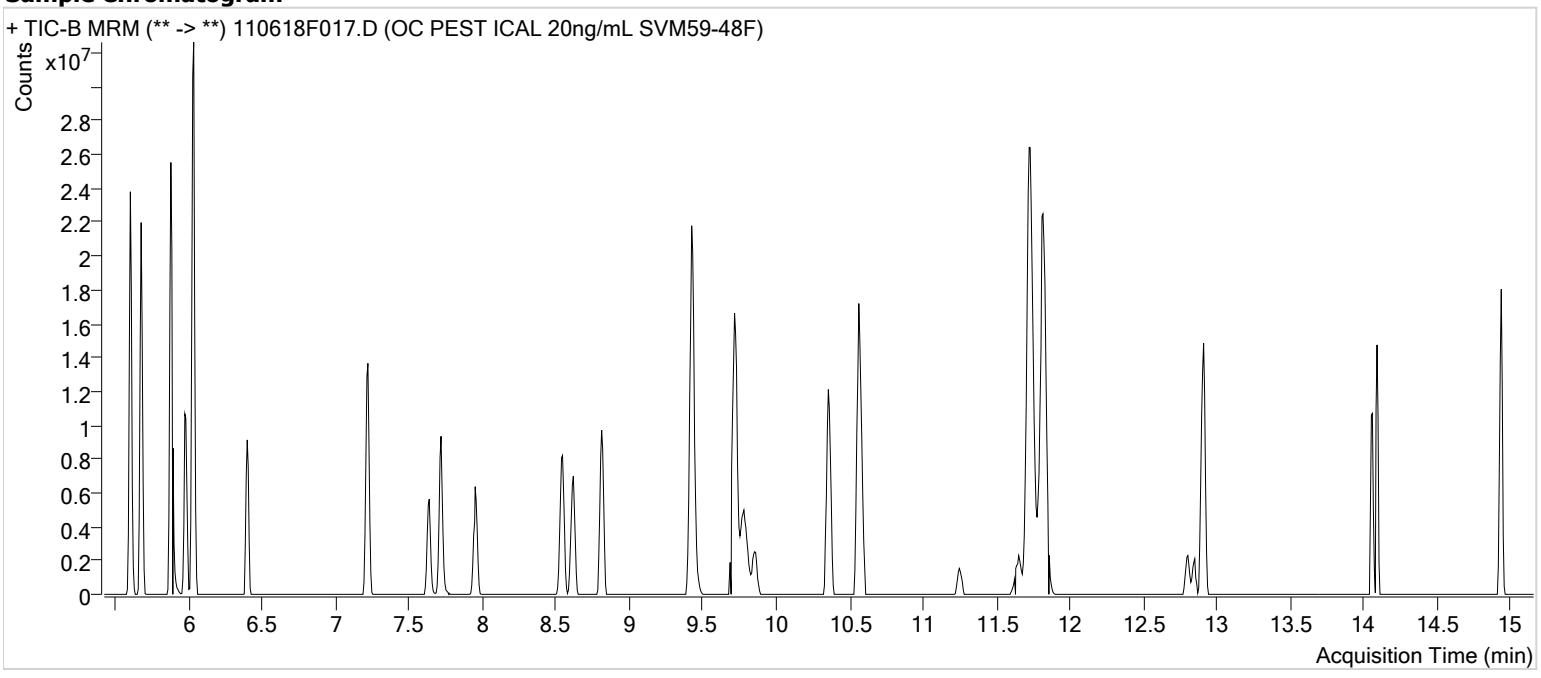
System Monitoring Compounds	RT	Transition	Response	Conc. Units
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	6547795	20.805 ng/ml
		Spiked Amount =	20.0	Recovery = *104.0 %*
γ-BHC-d6	5.983	223.9 -> 187.0	11762160	19.481 ng/ml
		Spiked Amount =	20.0	Recovery = *97.4 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	6405681	21.072 ng/ml
		Spiked Amount =	20.0	Recovery = *105.4 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	6100421	19.572 ng/ml
		Spiked Amount =	20.0	Recovery = *97.9 %*
Aldrin-13C	7.952	269.8 -> 200.0	4188282	19.415 ng/ml
		Spiked Amount =	20.0	Recovery = *97.1 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3254137	20.563 ng/ml
		Spiked Amount =	20.0	Recovery = *102.8 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4767940	19.993 ng/ml
		Spiked Amount =	20.0	Recovery = *100.0 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1553107	19.787 ng/ml
		Spiked Amount =	20.0	Recovery = *98.9 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3239959	19.539 ng/ml
		Spiked Amount =	20.0	Recovery = *97.7 %*
Endrin-13C12	11.247	269.8 -> 200.0	1571000	19.286 ng/ml
		Spiked Amount =	20.0	Recovery = *96.4 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	8067628	4.798 ng/ml
		Spiked Amount =	5.0	Recovery = *96.0 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	4771034	4.973 ng/ml
		Spiked Amount =	5.0	Recovery = *99.5 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	200414	19.577 ng/ml
		Spiked Amount =	20.0	Recovery = *97.9 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	14760327	20.191 ng/ml
		Spiked Amount =	20.0	Recovery = *101.0 %*
Mirex-13C10	14.930	276.8 -> 241.8	3465254	4.614 ng/ml
		Spiked Amount =	5.0	Recovery = *92.3 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	17837716	21.593	ng/ml	100
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	10974852	19.315	ng/ml	100
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	21667270	19.883	ng/ml	100
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.033	181.1 -> 145.1	27756573	21.197	ng/ml	100
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	9774537	19.932	ng/ml	100
Heptachlor	Heptachlor-13C10(IS)	7.226	271.7 -> 236.9	7197287	20.120	ng/ml	100
Chorpyrifos	Chorpyrifos-d10(IS)	7.723	196.9 -> 169.0	7733287	18.581	ng/ml	100
Aldrin	Aldrin-13C(IS)	7.956	254.9 -> 220.0	3104373	20.695	ng/ml	100
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	8178235	19.737	ng/ml	100
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	4933859	20.290	ng/ml	100
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.814	352.8 -> 262.9	1677335	19.851	ng/ml	100
Oxychlordane	Oxychlordane-13C10(IS)	8.817	114.9 -> 51.1	8865316	19.686	ng/ml	100
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	2873927	19.296	ng/ml	100
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	25961846	19.839	ng/ml	100
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	7301938 ***m***	20.189	ng/ml	100
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	1766744	21.410	ng/ml	100
trans-Nanochlor	Oxychlordane-13C10(IS)	9.862	271.8 -> 236.9	5208359	21.151	ng/ml	100
4,4' -DDE	4,4'-DDD d4(IS)	10.358	246.0 -> 176.2	21418233	18.188	ng/ml	100
2,4'-DDD	4,4'-DDD d4(IS)	10.567	235.0 -> 165.1	28872105	16.966	ng/ml	100
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	2117172	19.101	ng/ml	100
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	372871	21.218	ng/ml	100
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	1955866	19.076	ng/ml	100
2,4'-DDT	4,4'-DDT-d4(IS)	11.814	235.0 -> 165.1	39587678 ***m***	20.388	ng/ml	94
cis-Nonachlor	Oxychlordane-13C10(IS)	11.743	271.8 -> 236.9	1946520	20.518	ng/ml	100
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	47892771 ***m***	18.705	ng/ml	94
Endrin aldehyde	Endrin-13C12(IS)	12.084	249.9 -> 214.9	439887	19.609	ng/ml	100
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	3266472	20.781	ng/ml	100
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	19477767	18.497	ng/ml	100
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	1301669	19.784	ng/ml	100
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	16667158	19.475	ng/ml	100
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	15213469	20.748	ng/ml	100

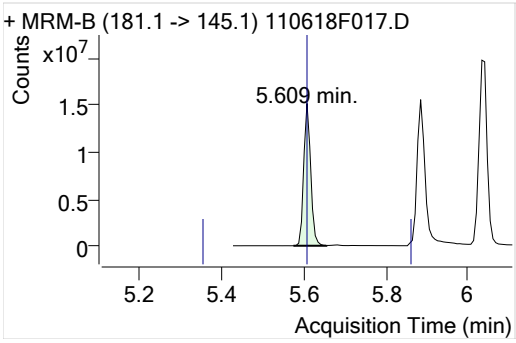
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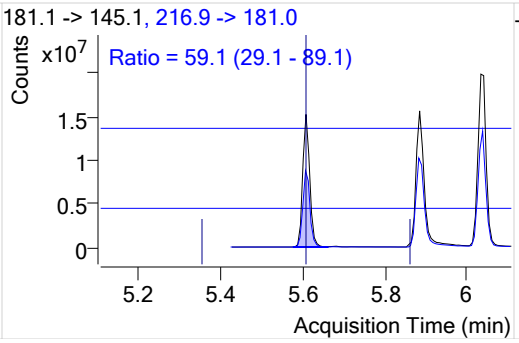
Sample Chromatogram

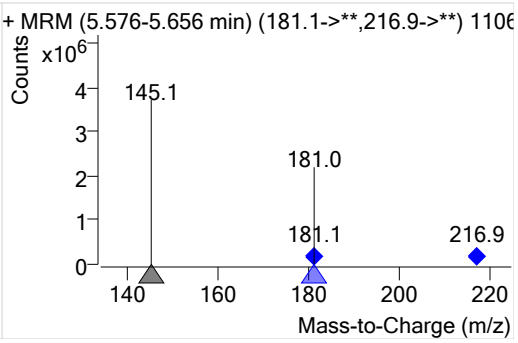


Quantitative Analysis Sample Report

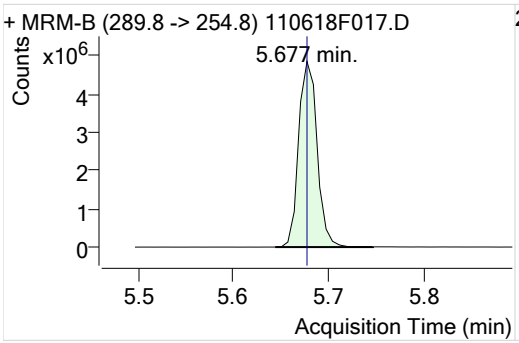
α-BHC

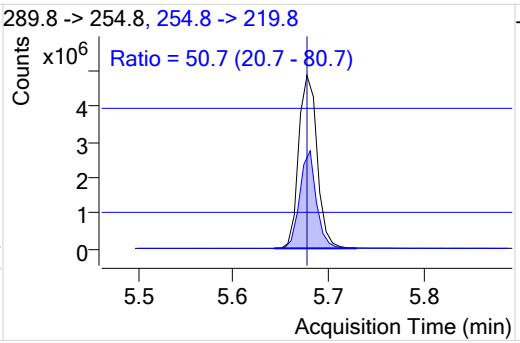


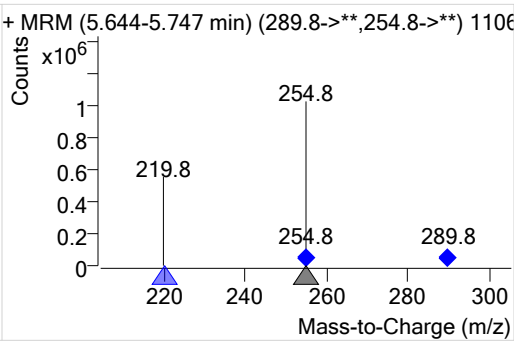




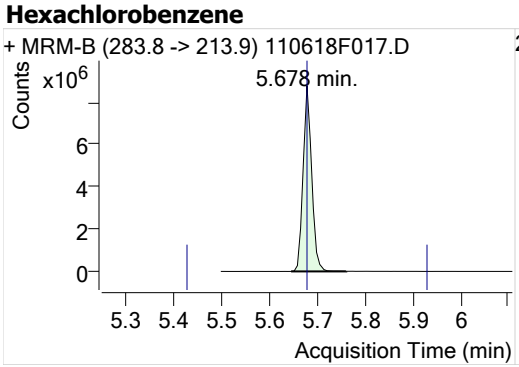
Hexachlorobenzene-13C6

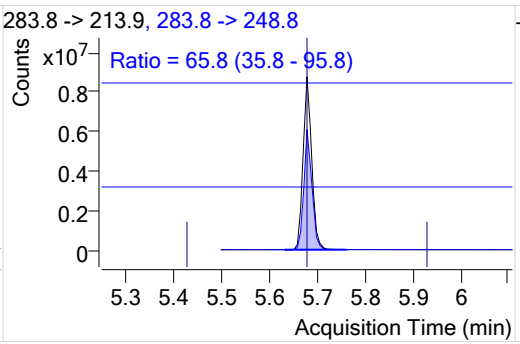


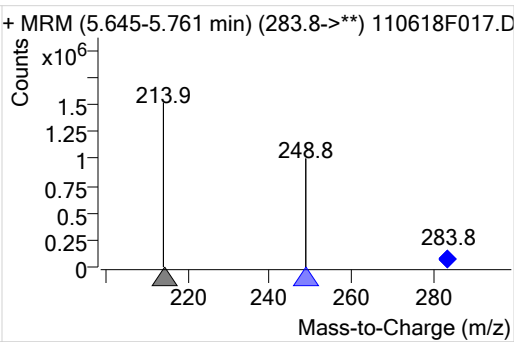




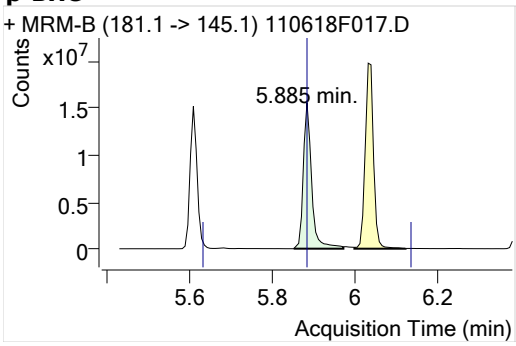
Hexachlorobenzene

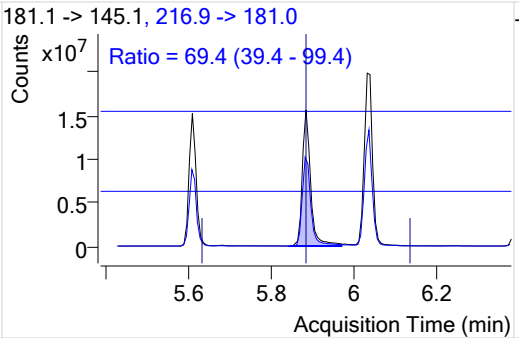


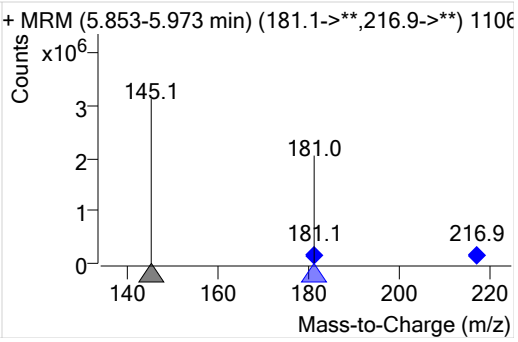




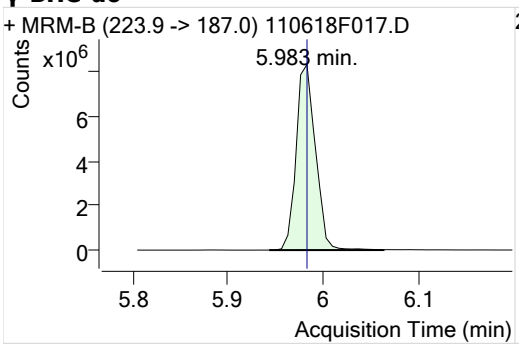
β-BHC

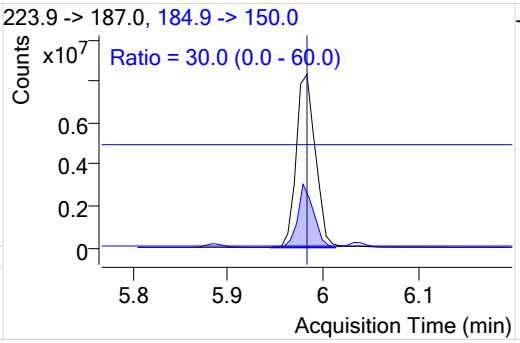


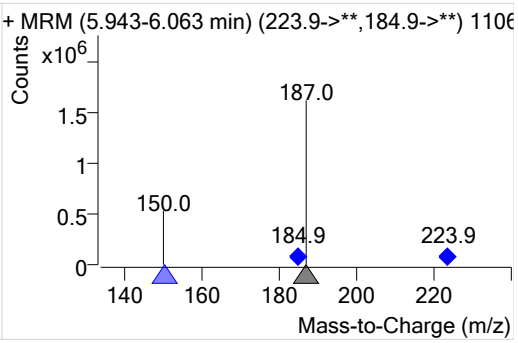




γ-BHC-d6

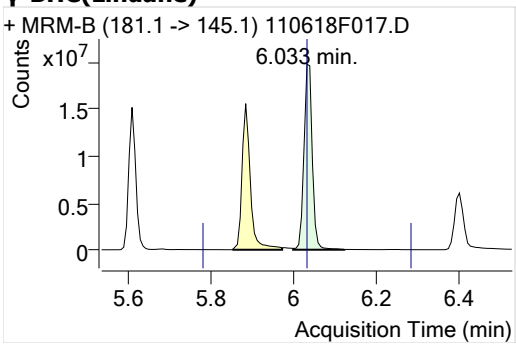


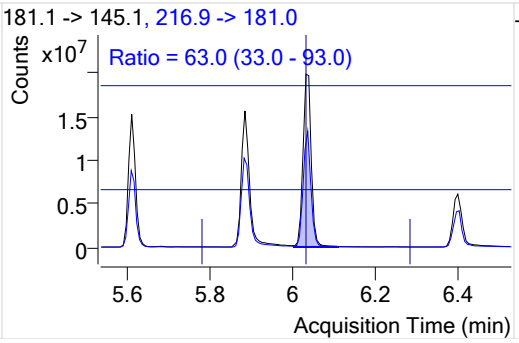


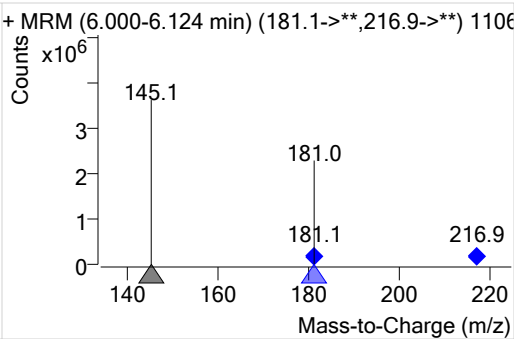


Quantitative Analysis Sample Report

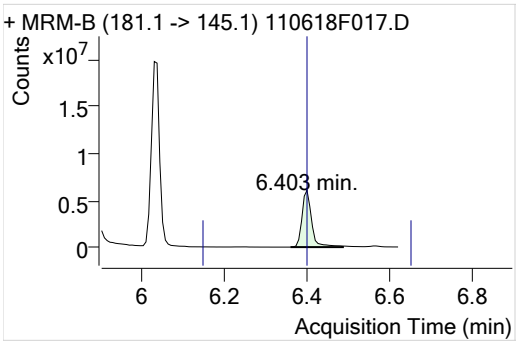
γ-BHC(Lindane)

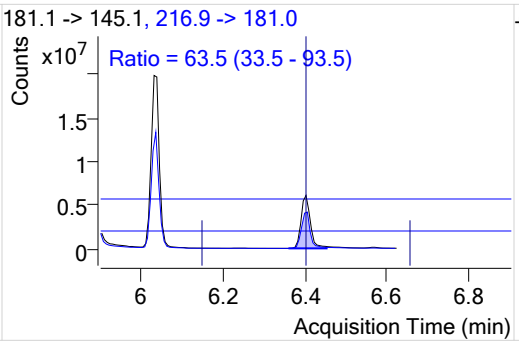


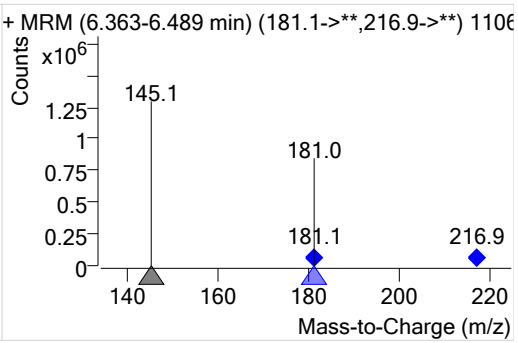




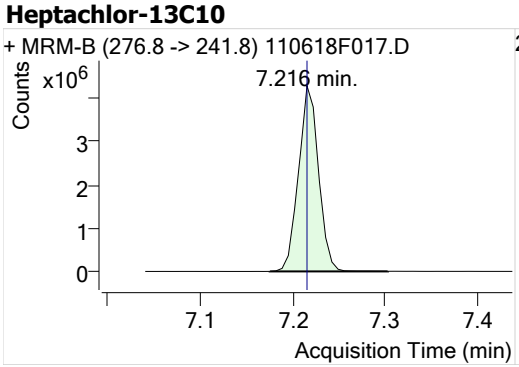
δ-BHC

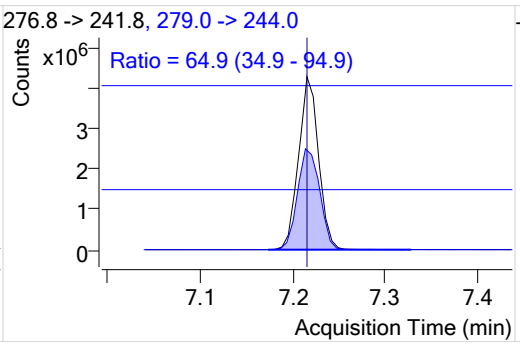


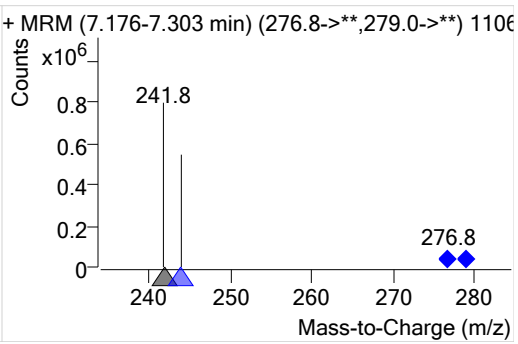




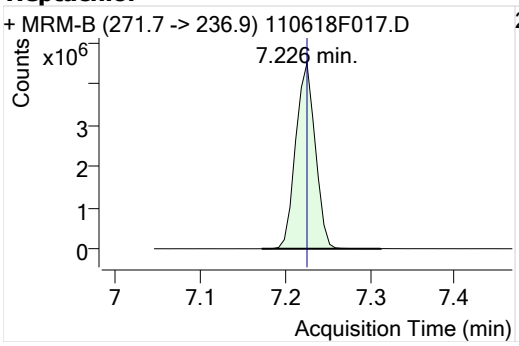
Heptachlor-13C10

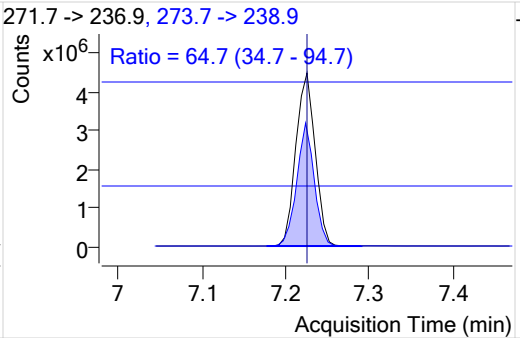


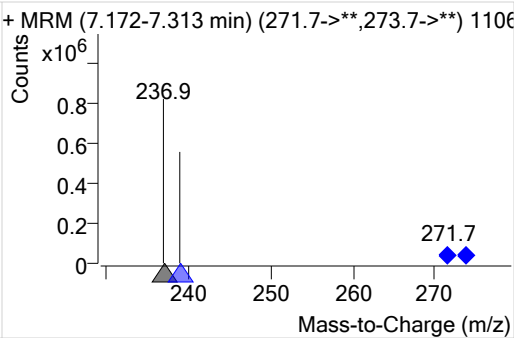




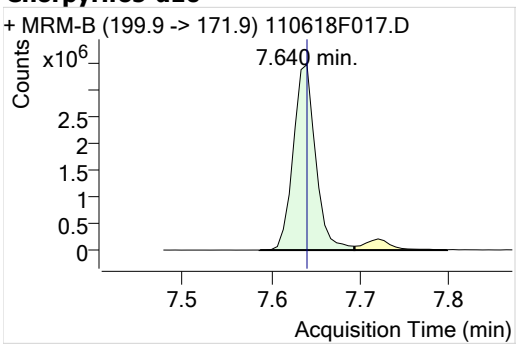
Heptachlor

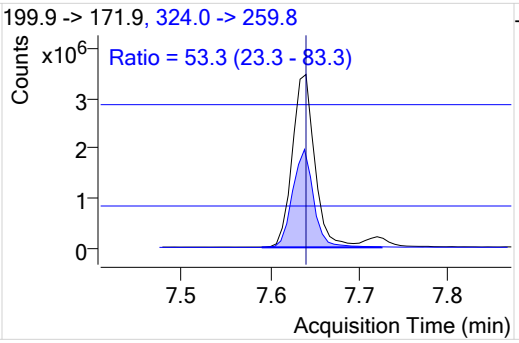


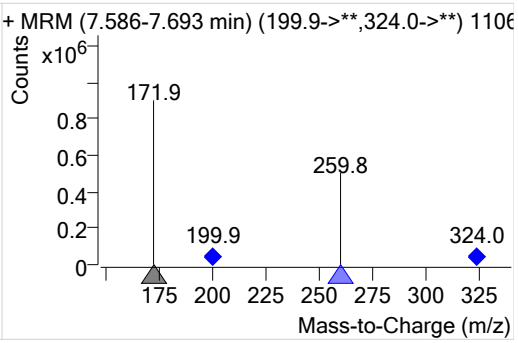




Chorpyrifos-d10

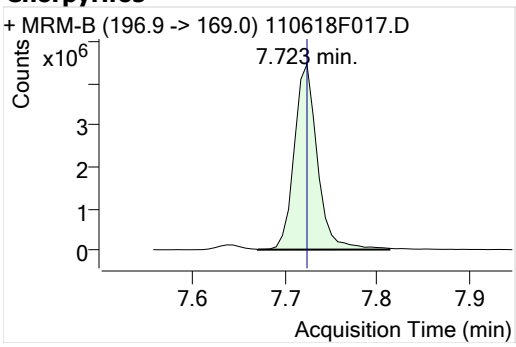


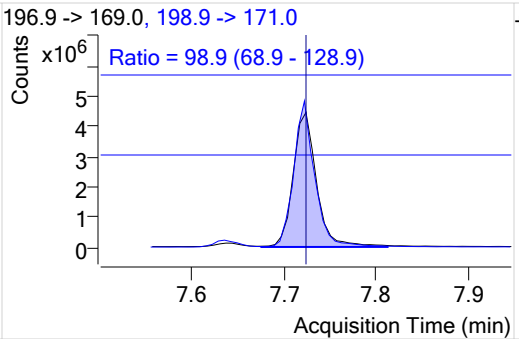


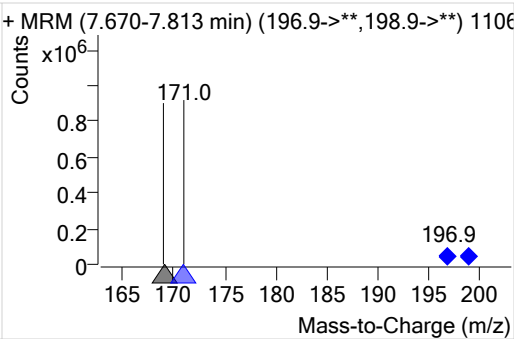


Quantitative Analysis Sample Report

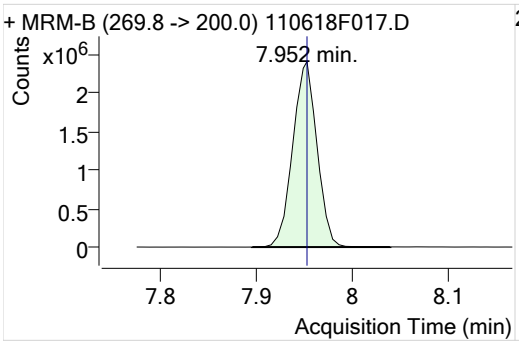
Chorpyrifos

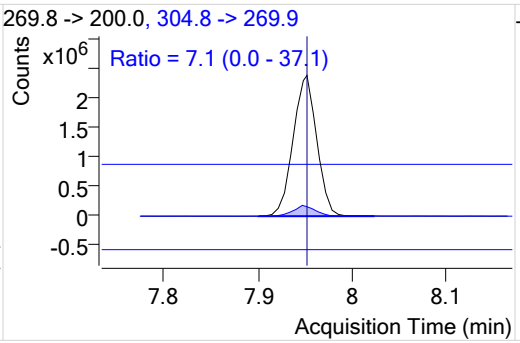


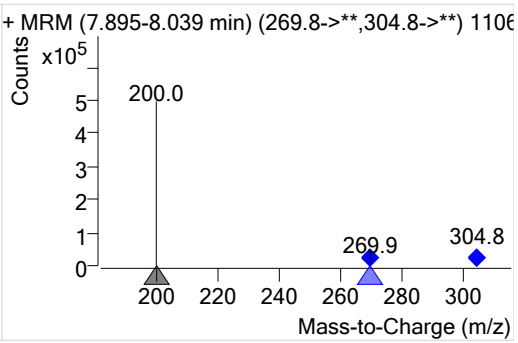




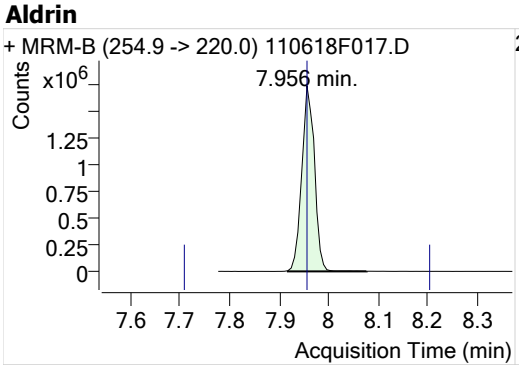
Aldrin-13C

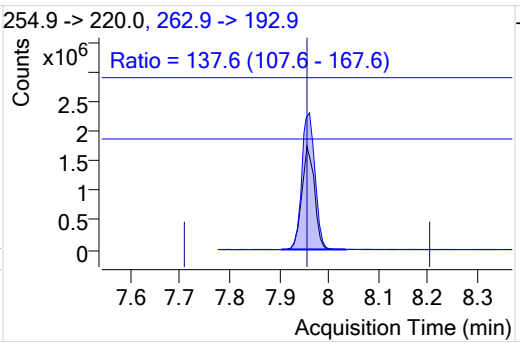


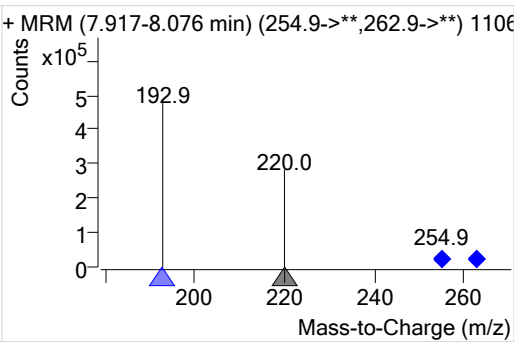




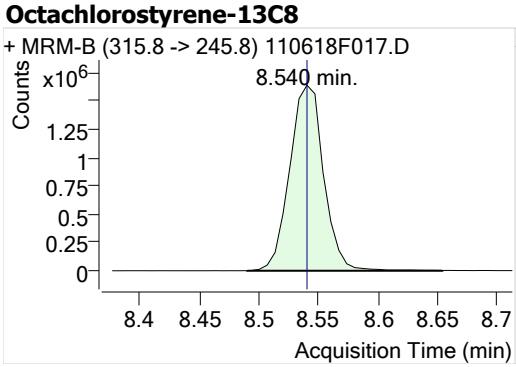
Aldrin

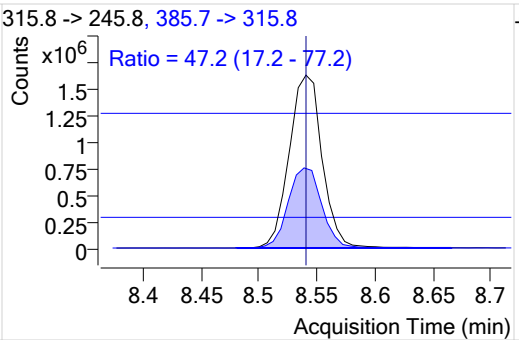


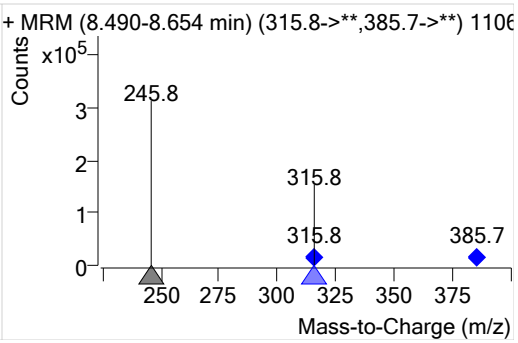




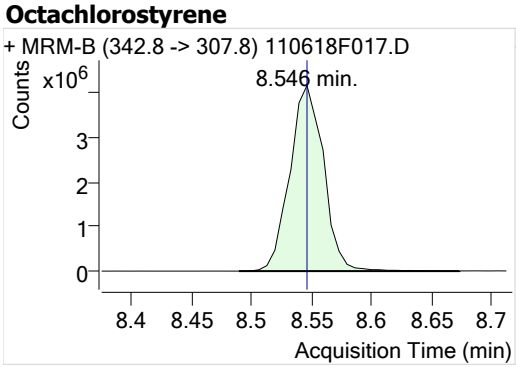
Octachlorostyrene-13C8

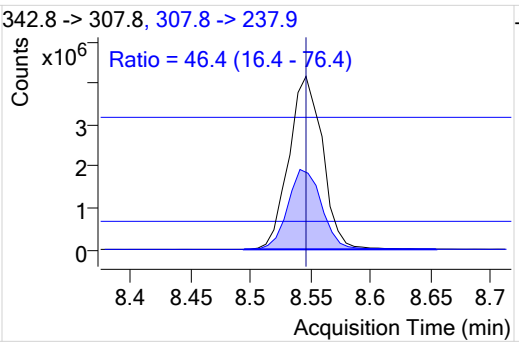


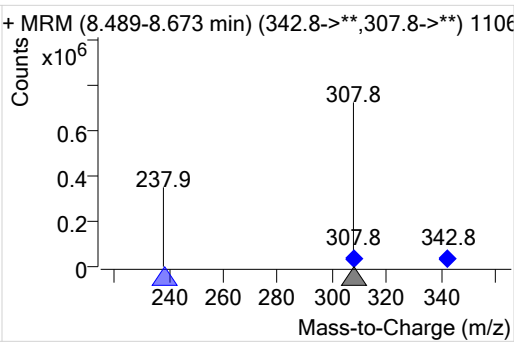




Octachlorostyrene

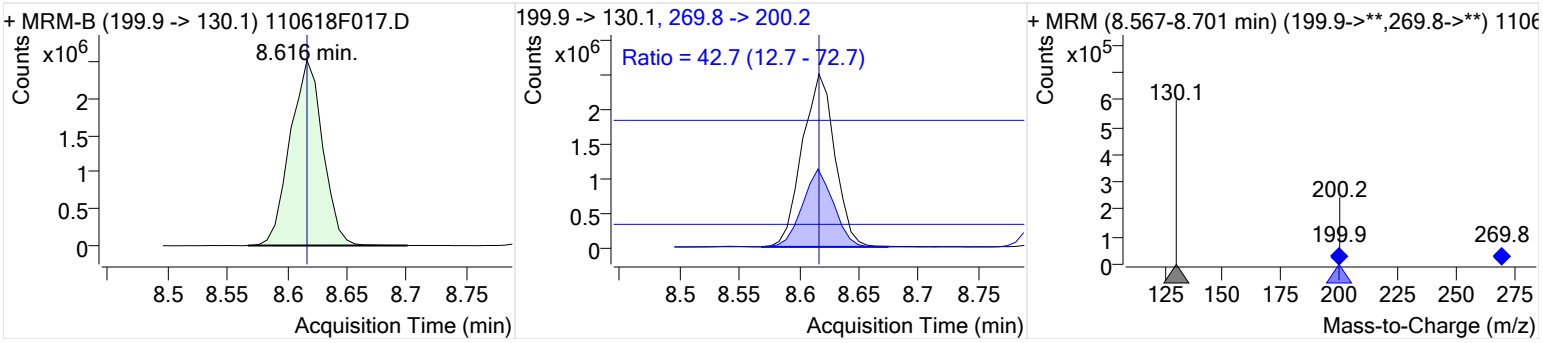




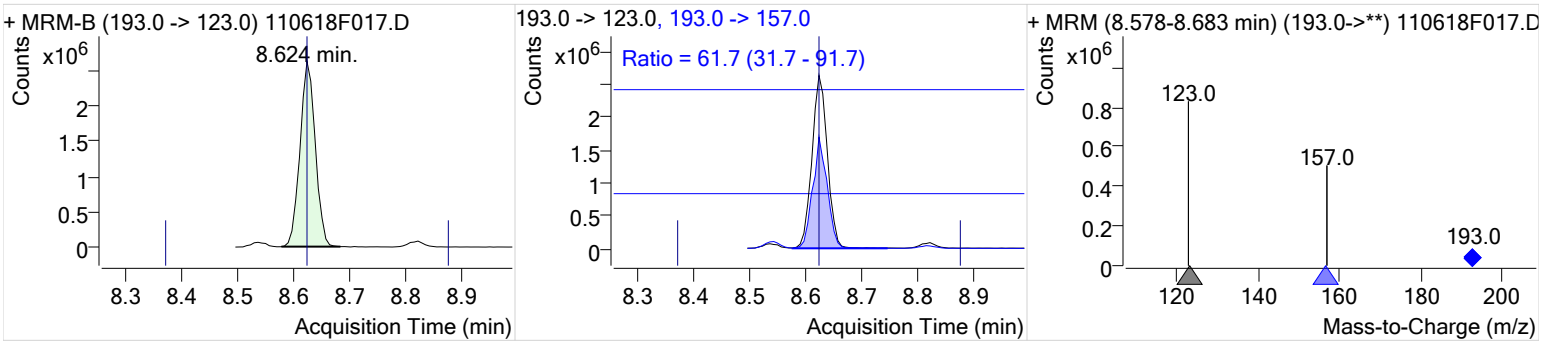


Quantitative Analysis Sample Report

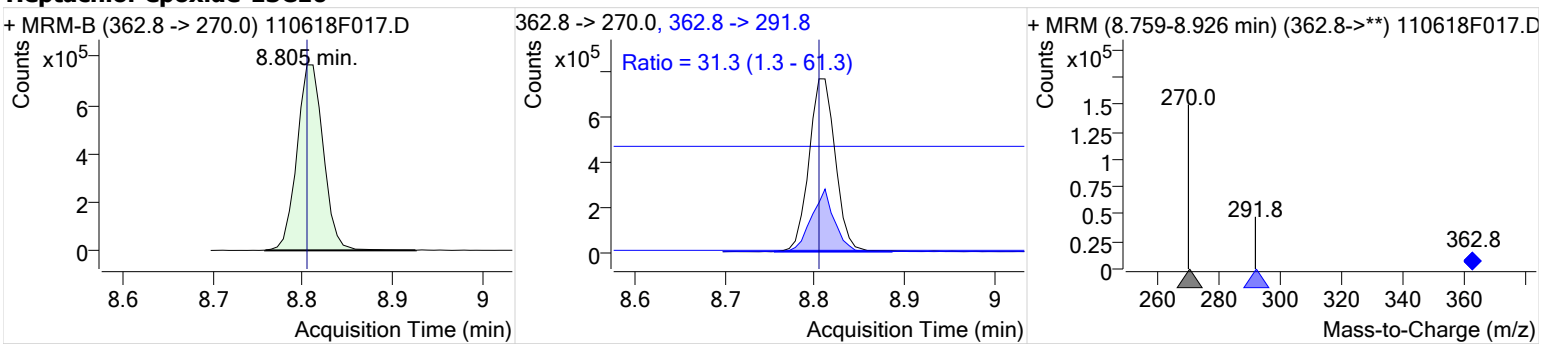
Isodrin-13C12



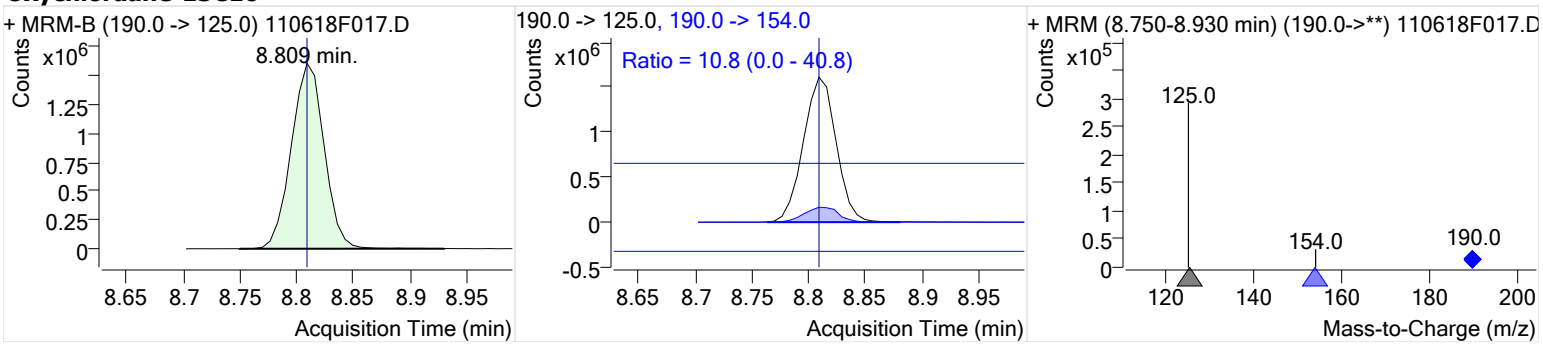
Isodrin



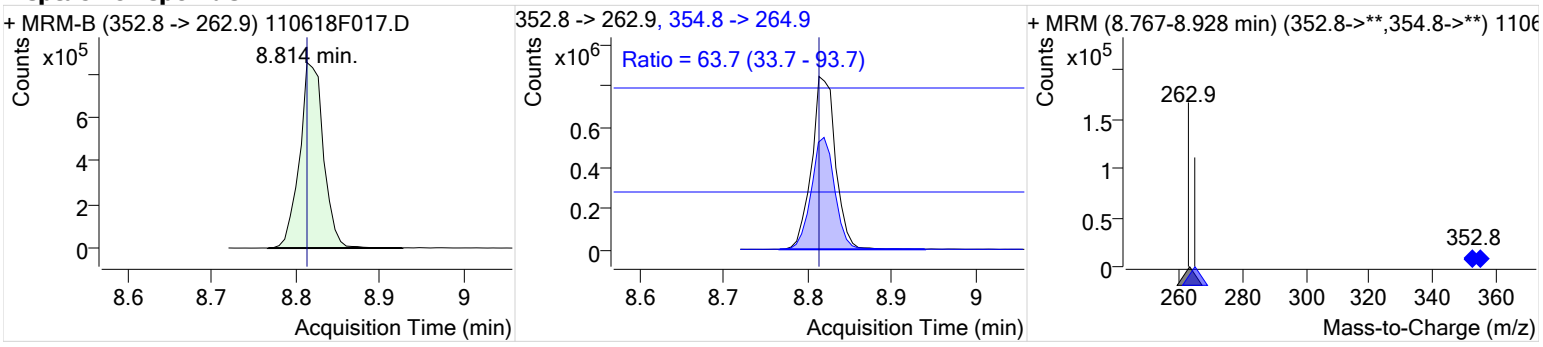
Heptachlor epoxide-13C10



Oxychlordane-13C10

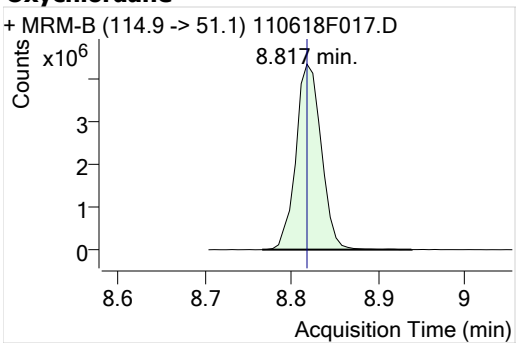


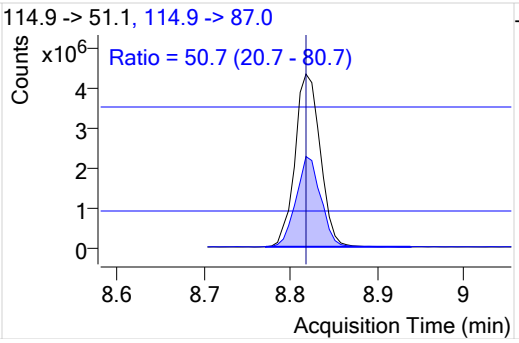
Heptachlor epoxide

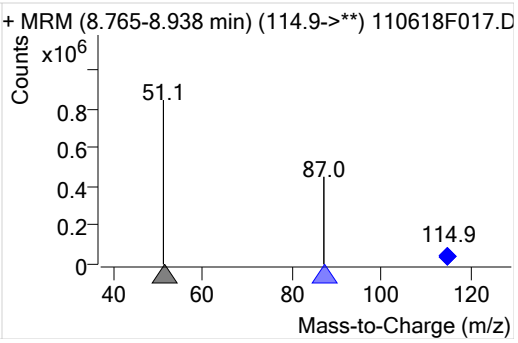


Quantitative Analysis Sample Report

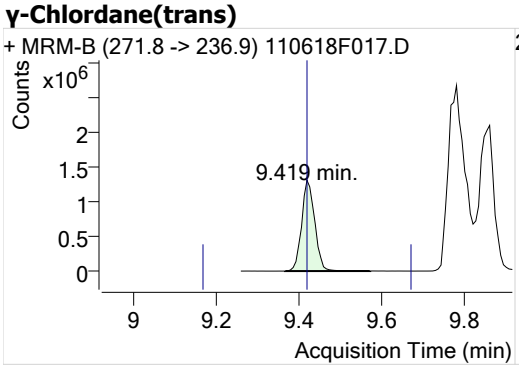
Oxychlordane

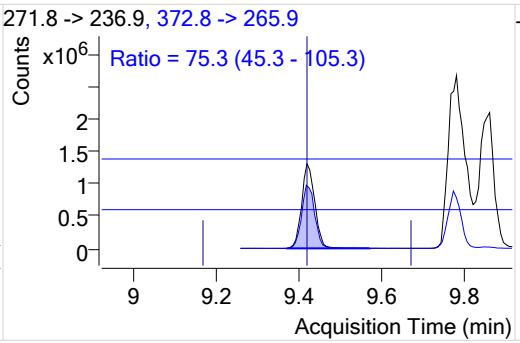


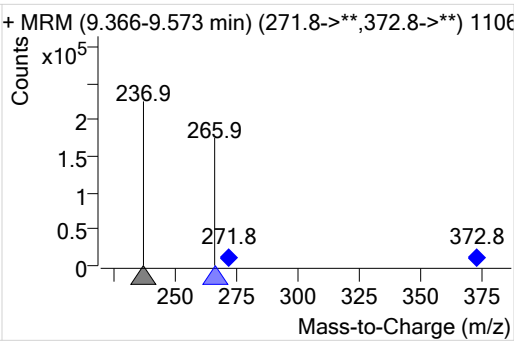




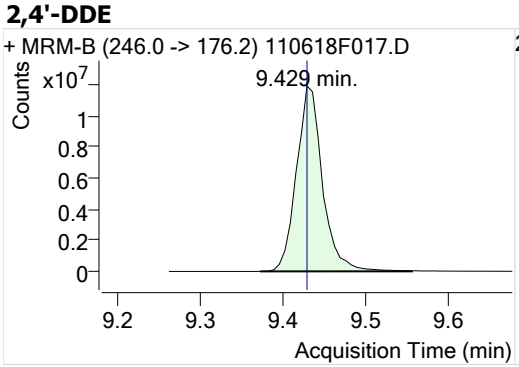
γ-Chlordane(trans)

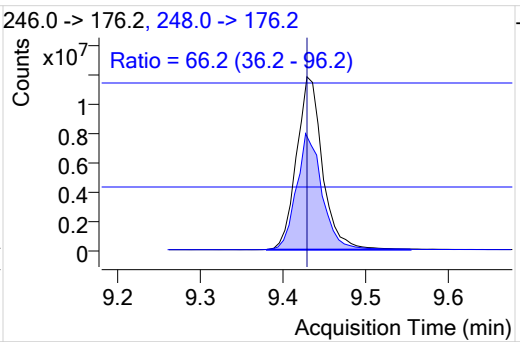


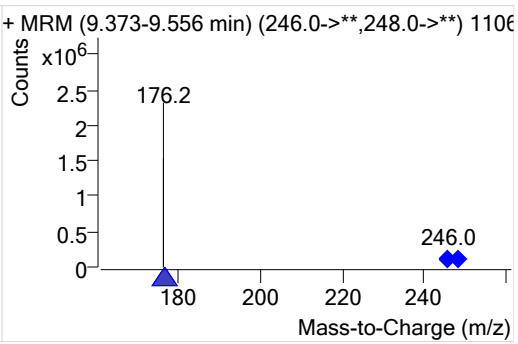




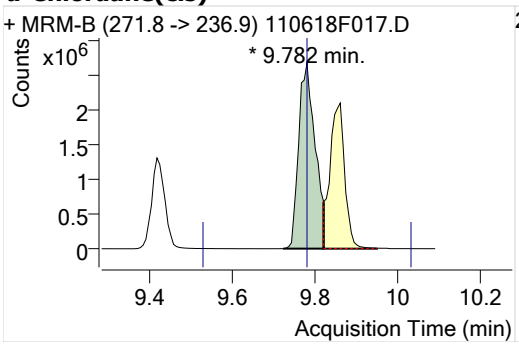
2,4'-DDE

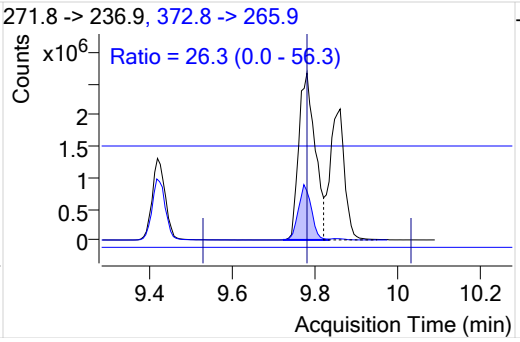


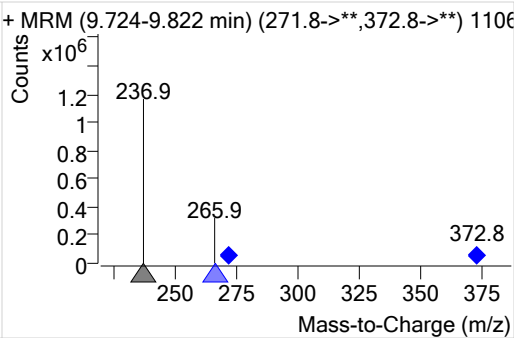




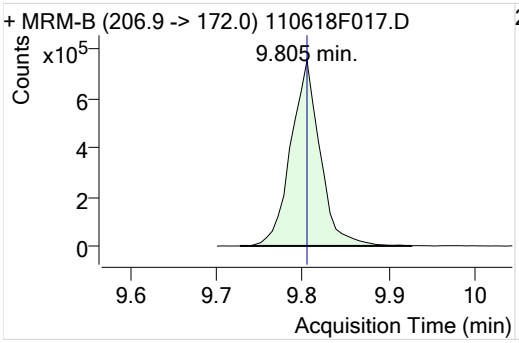
α-Chlordane(cis)

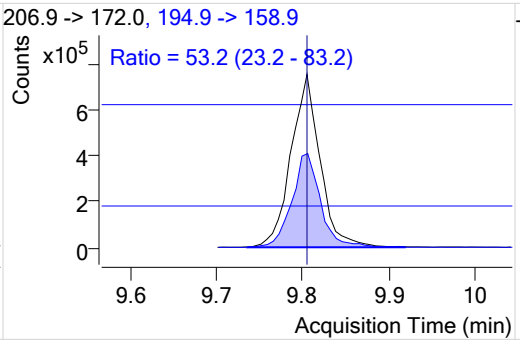


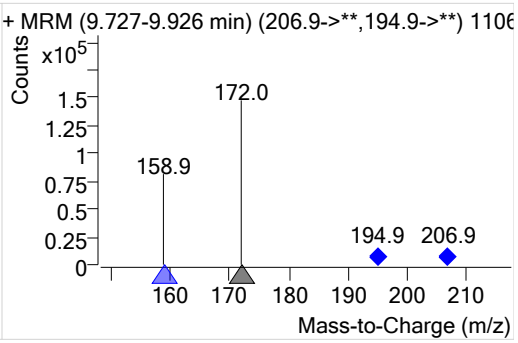




Endosulfan I

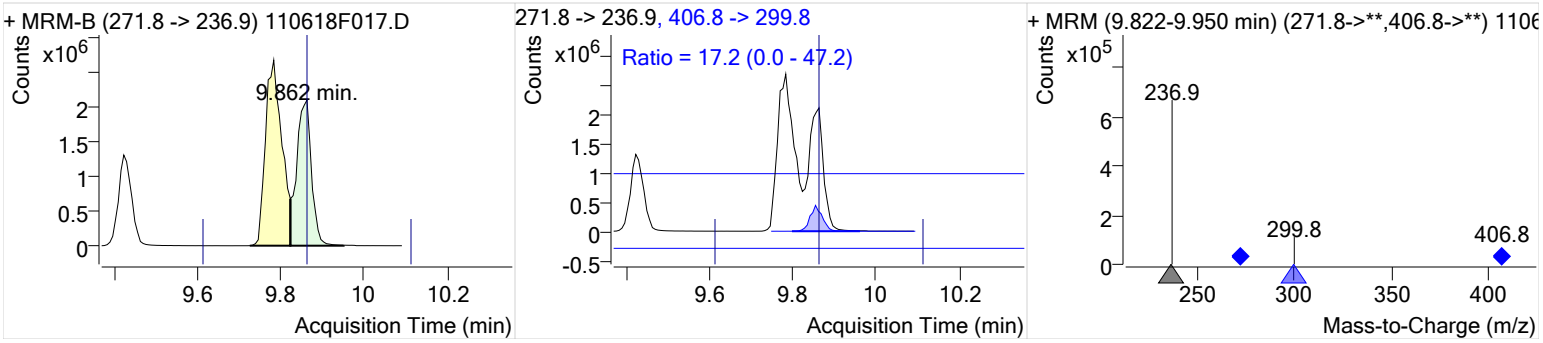




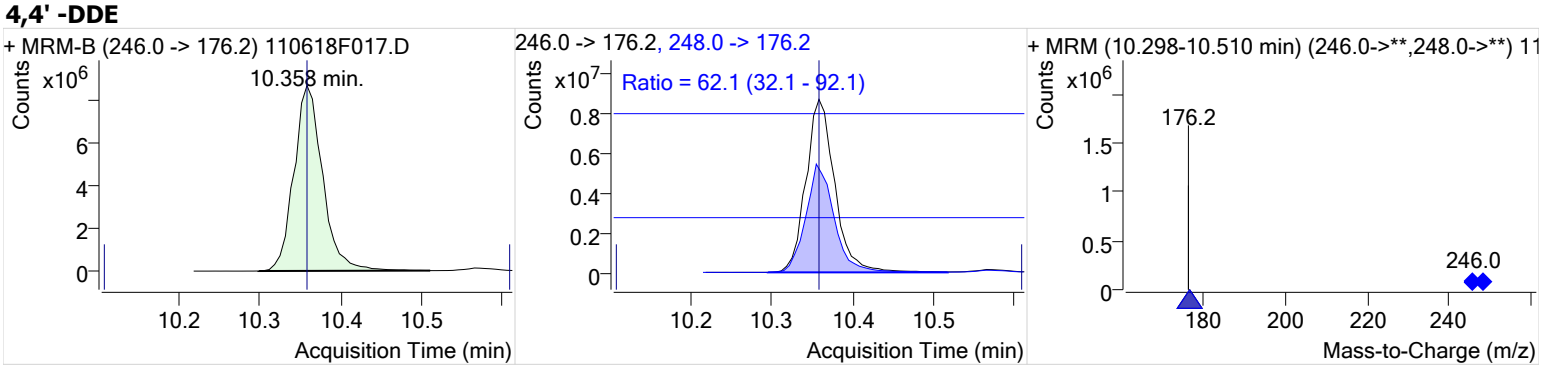


Quantitative Analysis Sample Report

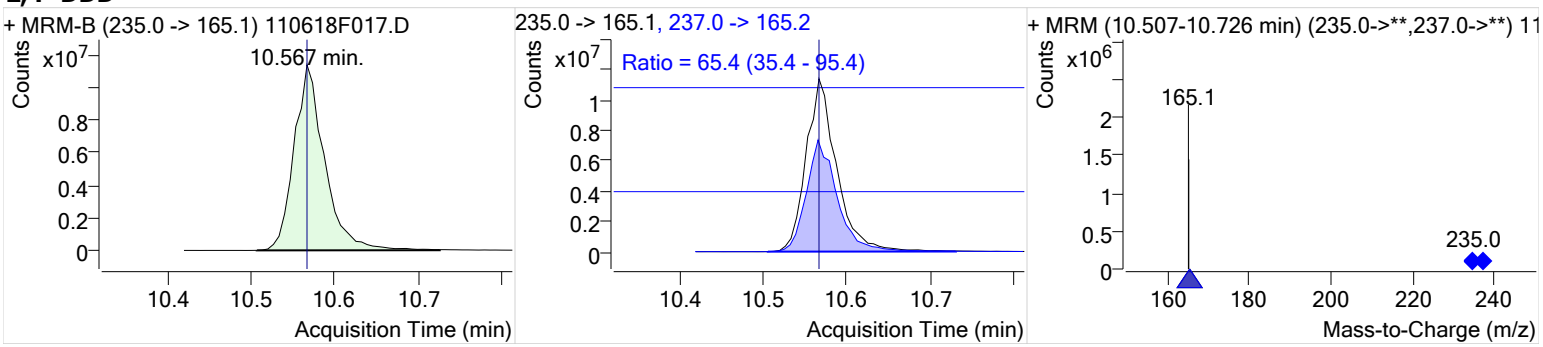
trans-Nanochlor



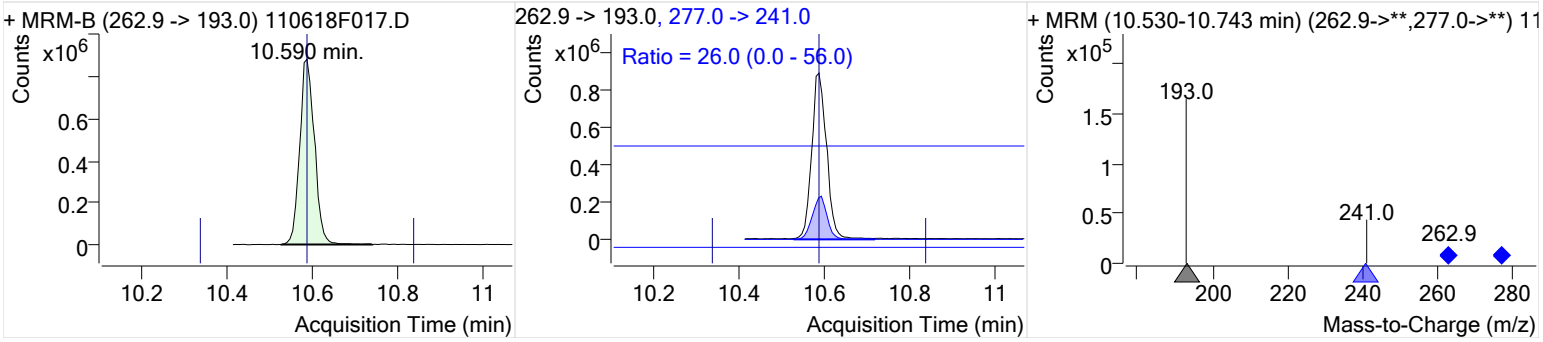
4,4' -DDE



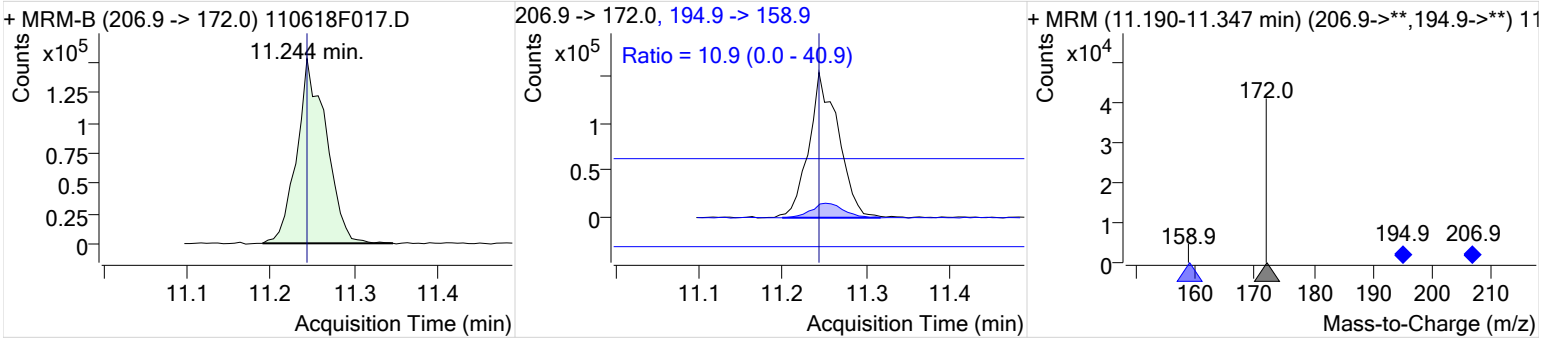
2,4'-DDD



Dieldrin

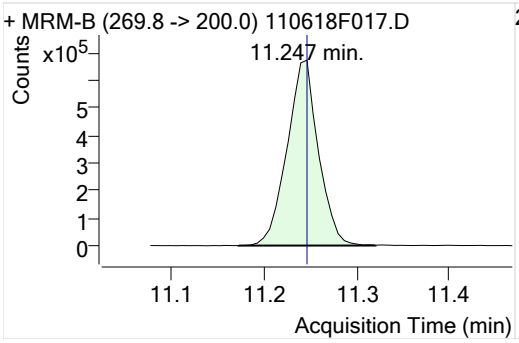


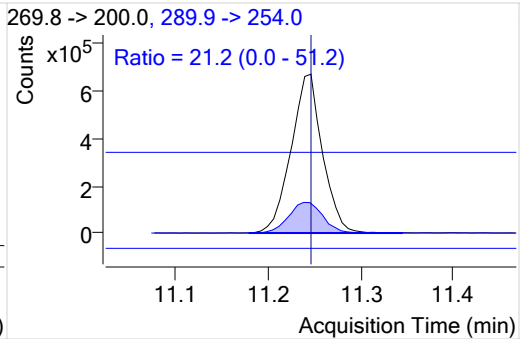
Endosulfan II

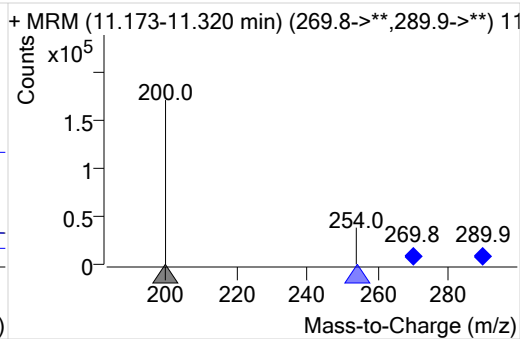


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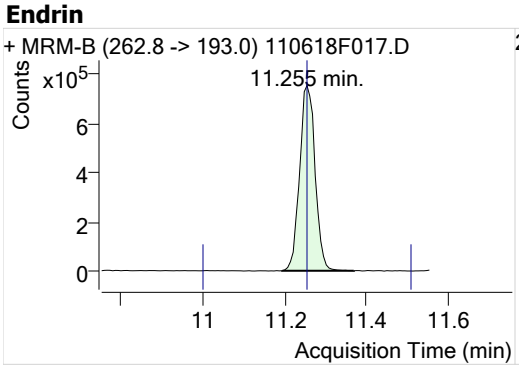
Endrin-13C12

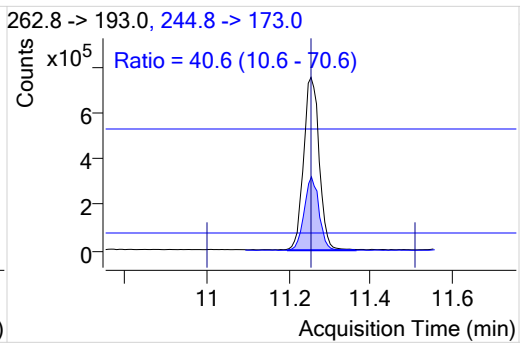


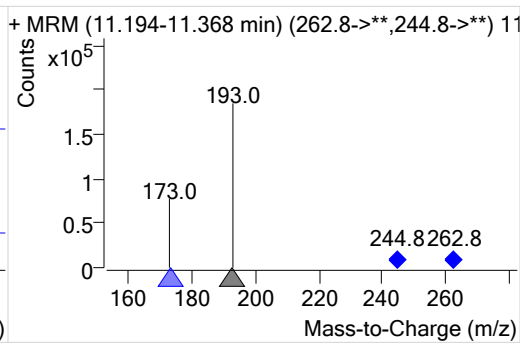




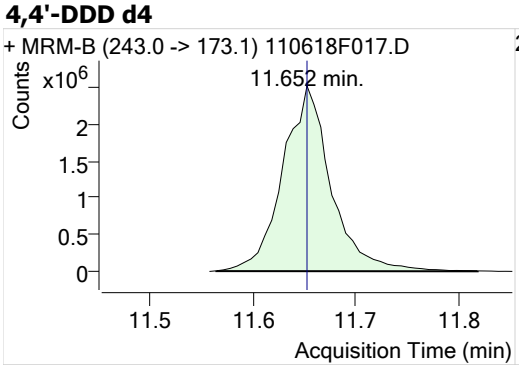
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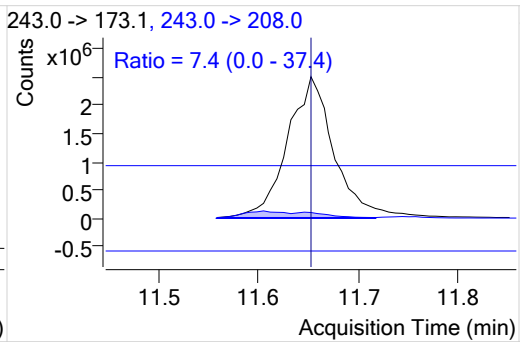


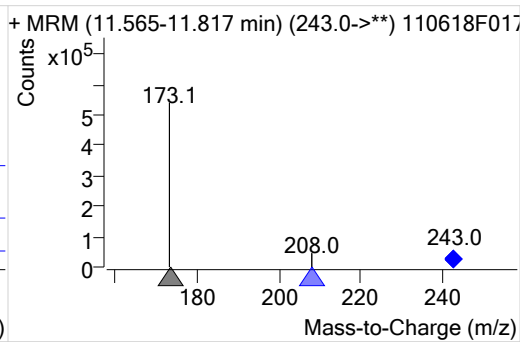




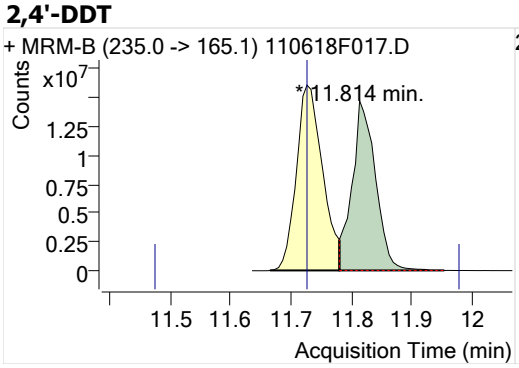
4,4'-DDD d4

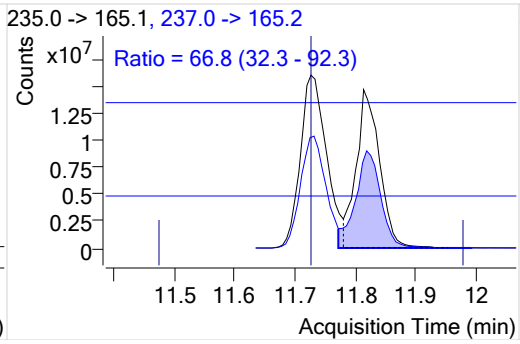


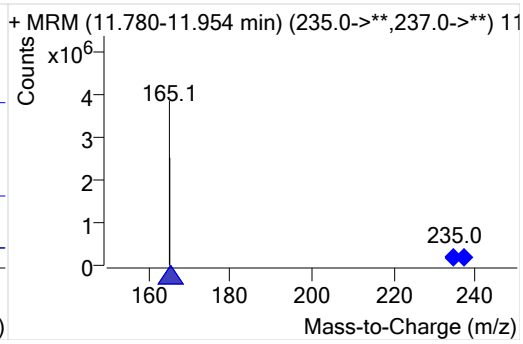




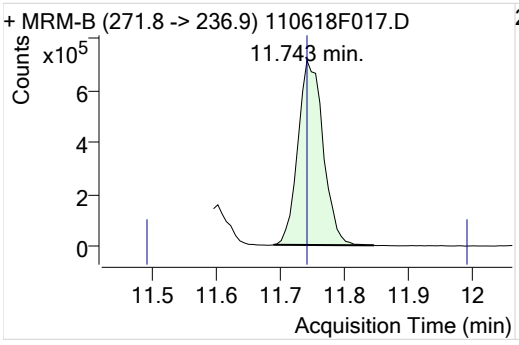
2,4'-DDT

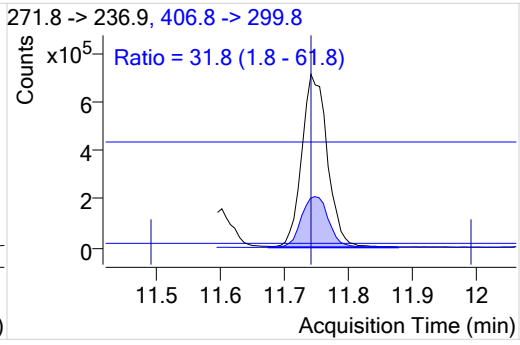


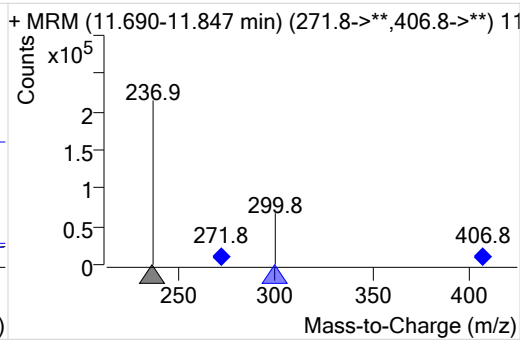




cis-Nonachlor

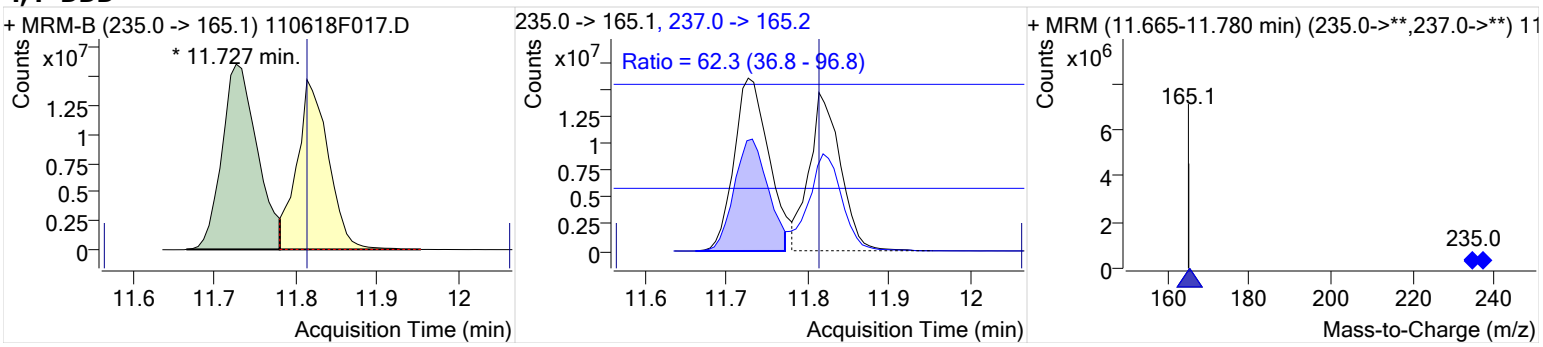




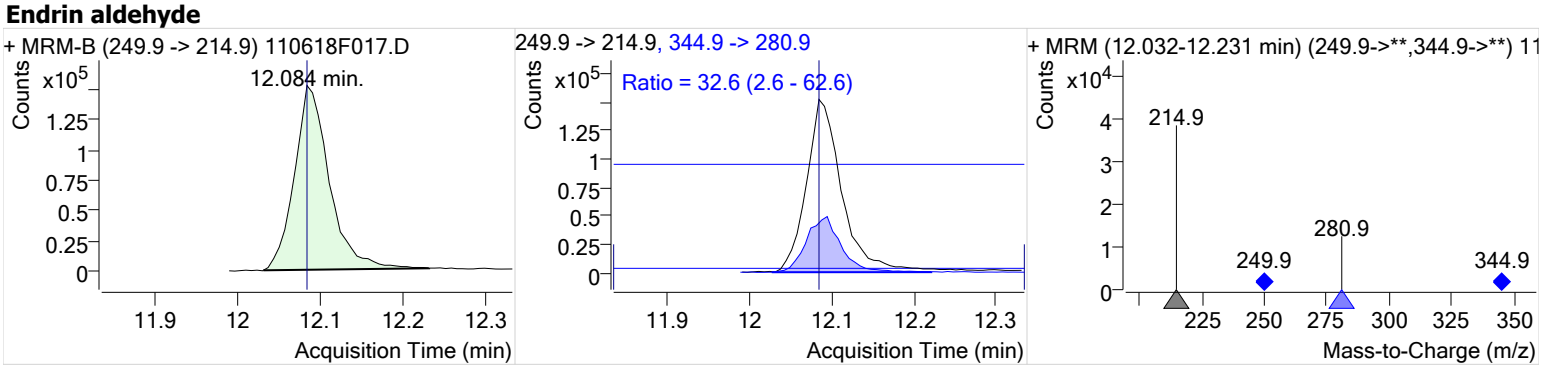


Quantitative Analysis Sample Report

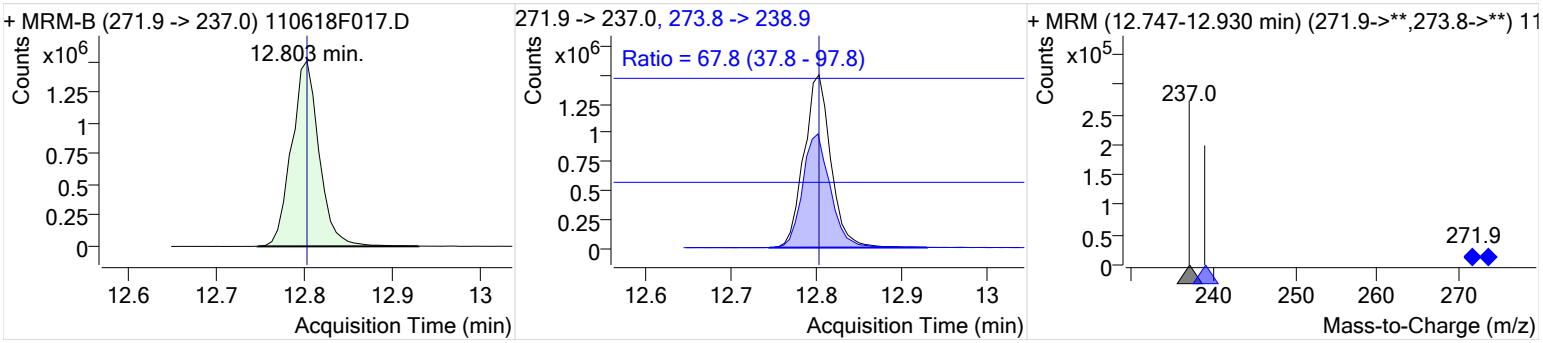
4,4'-DDD



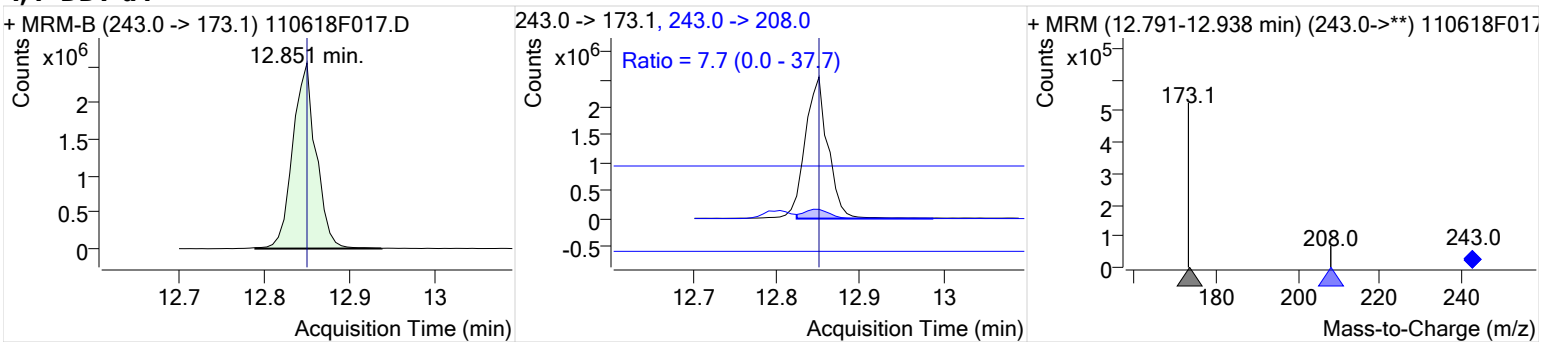
Endrin aldehyde



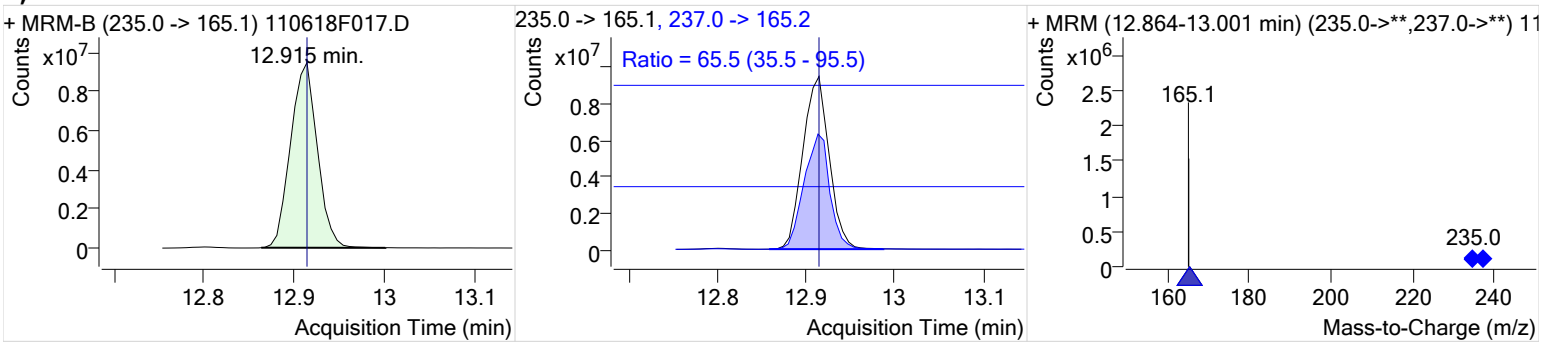
Endosulfan sulfate



4,4'-DDT-d4

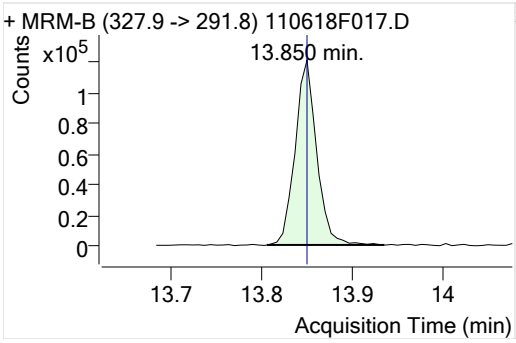


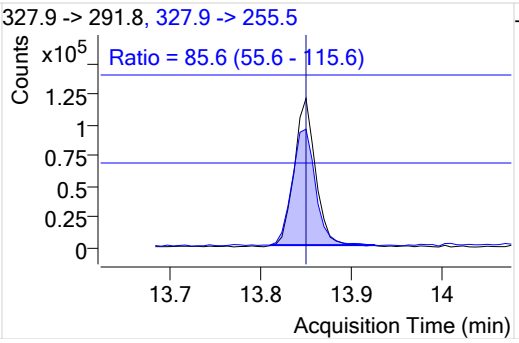
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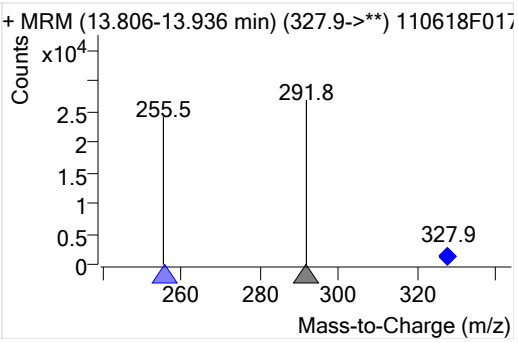


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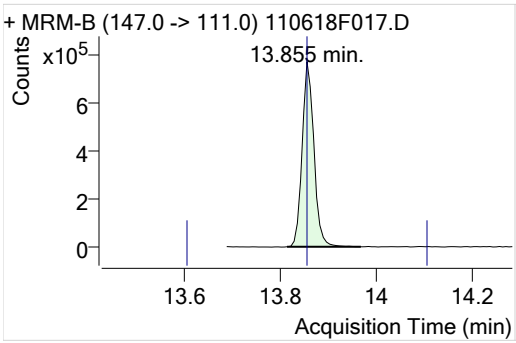
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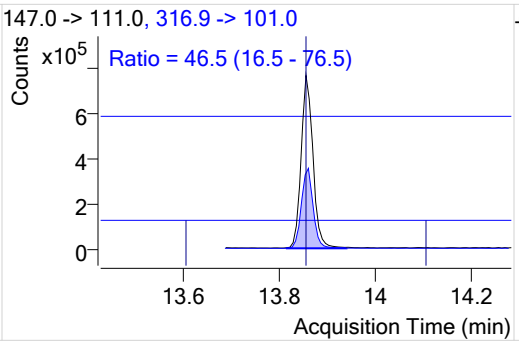


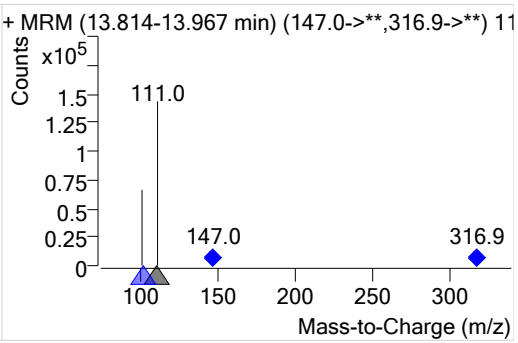




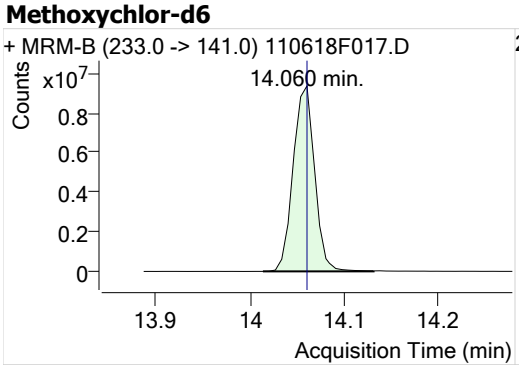
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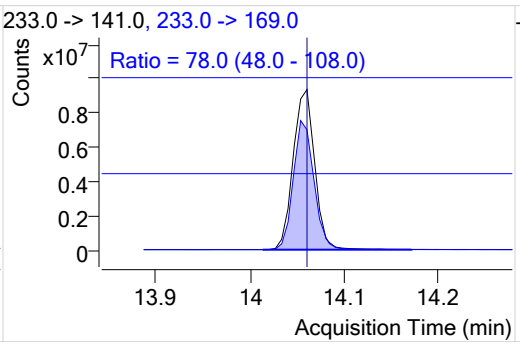


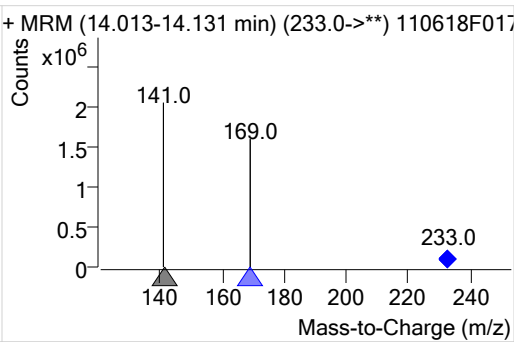




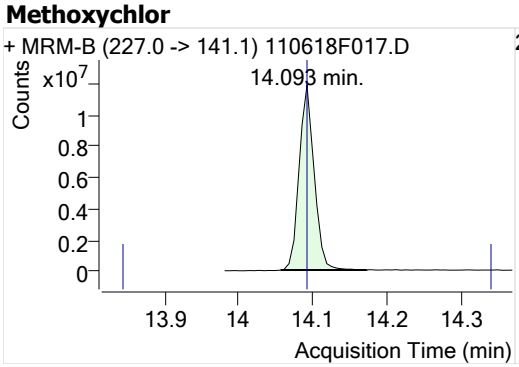
Methoxychlor-d6

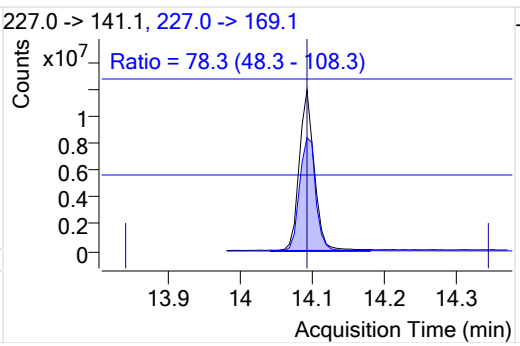


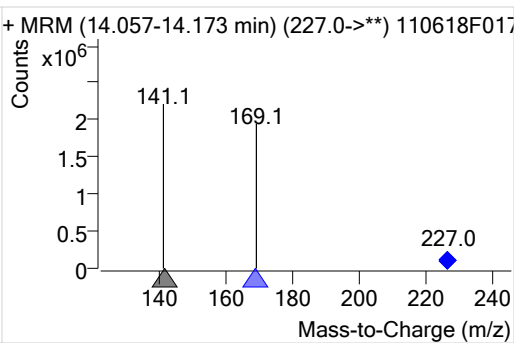




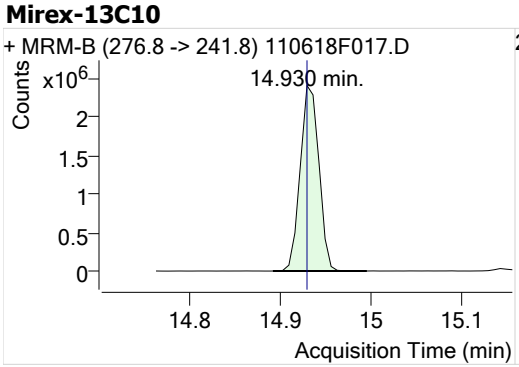
Methoxychlor

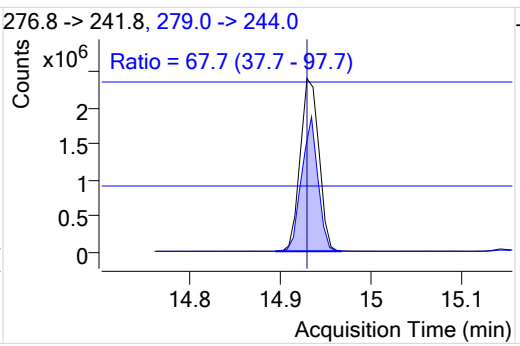


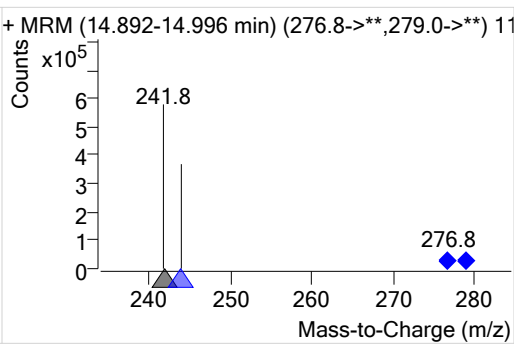




Mirex-13C10

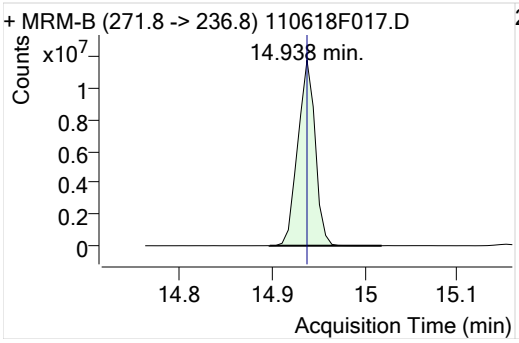


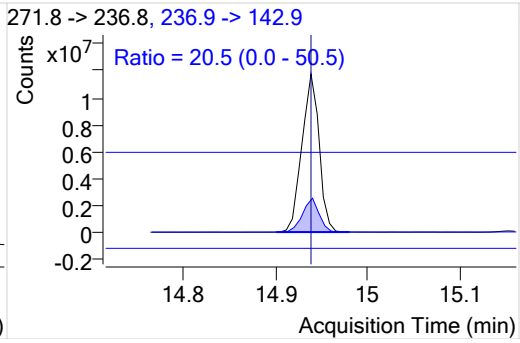


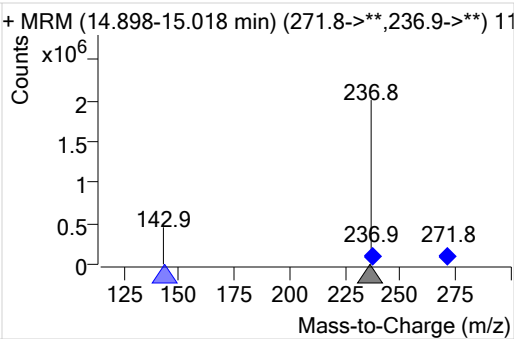


Quantitative Analysis Sample Report

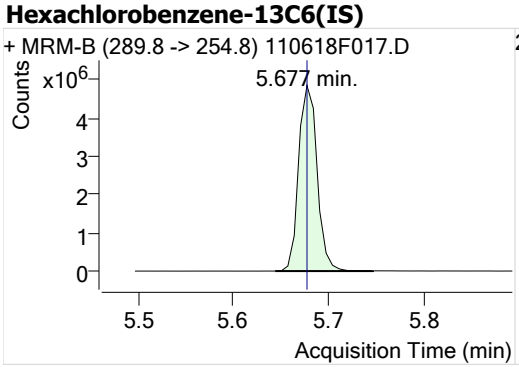
Mirex

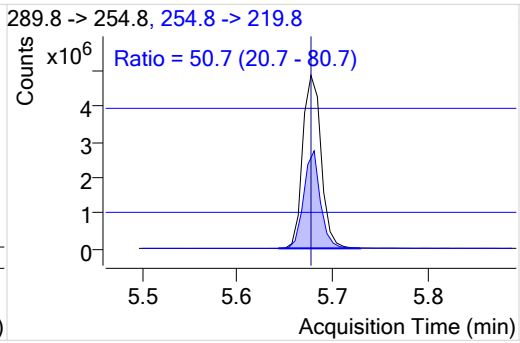


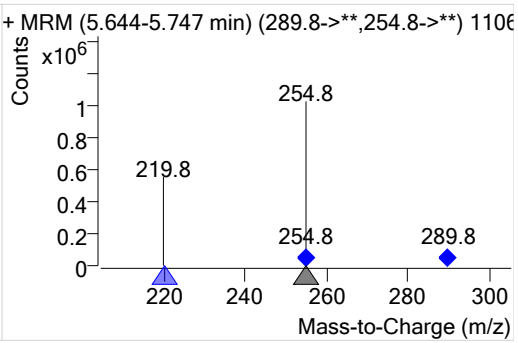




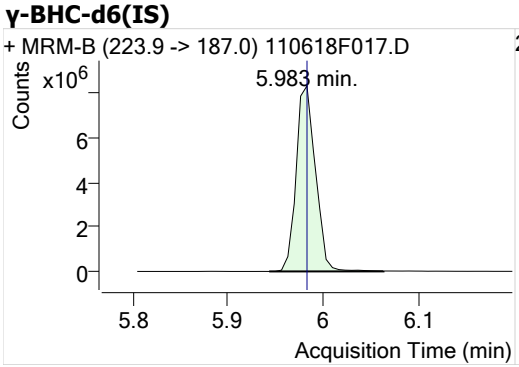
Hexachlorobenzene-13C6(IS)

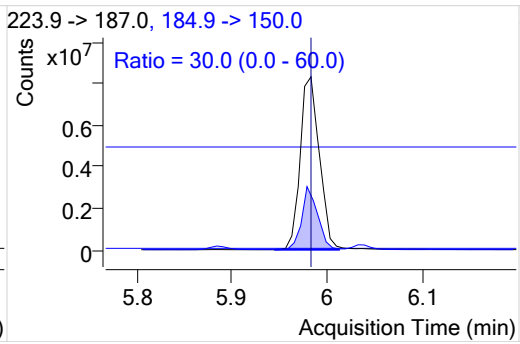


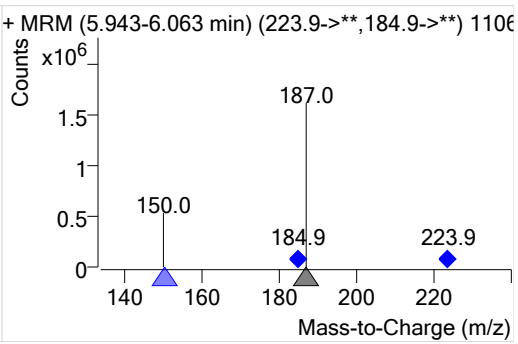




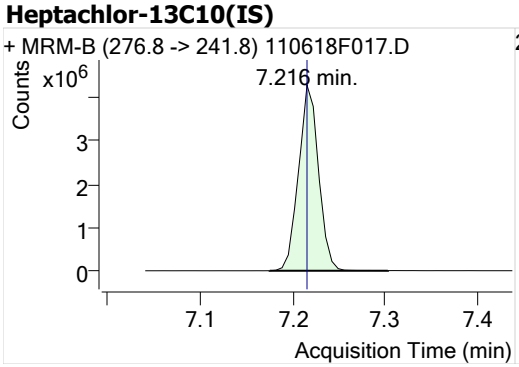
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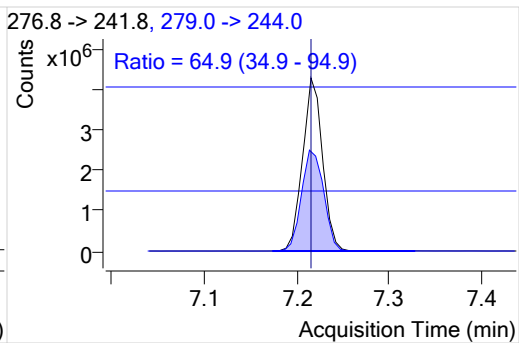


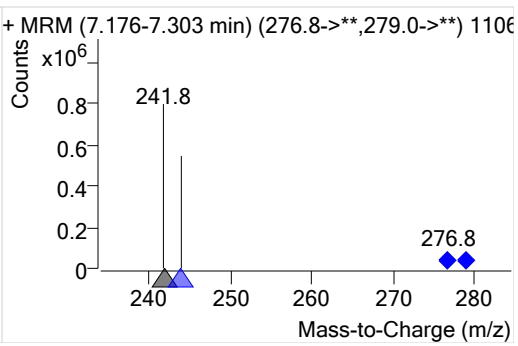




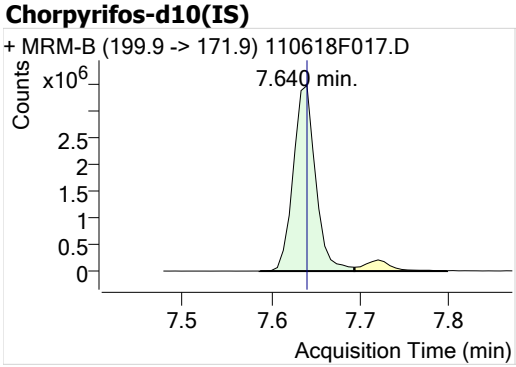
Heptachlor-13C10(IS)

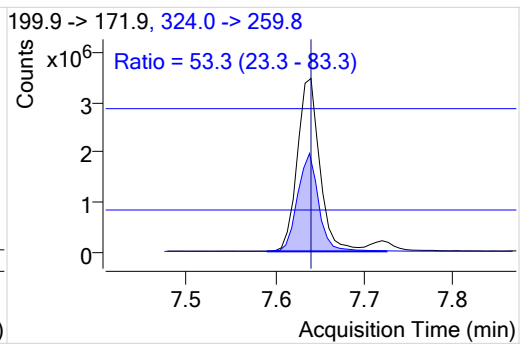


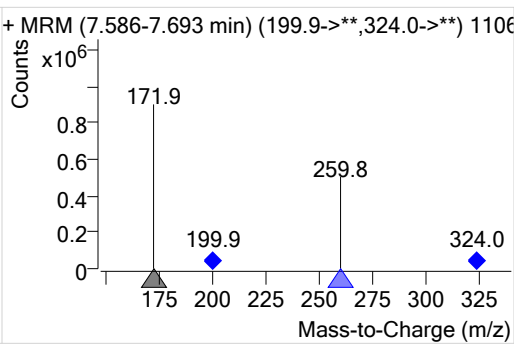




Chorpyrifos-d10(IS)

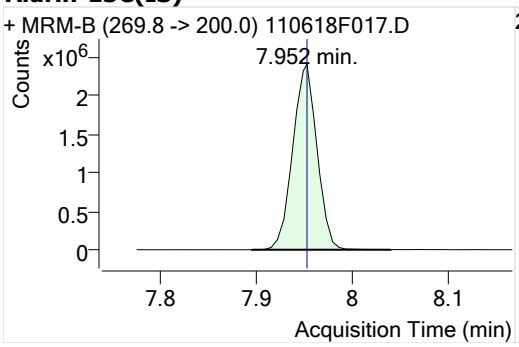


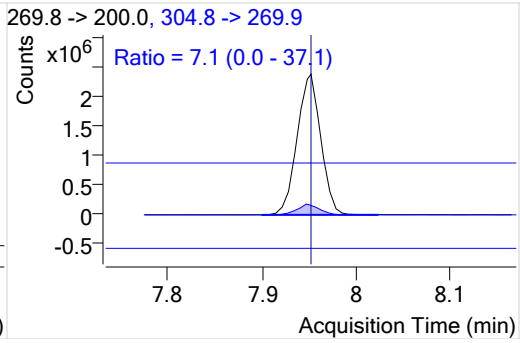


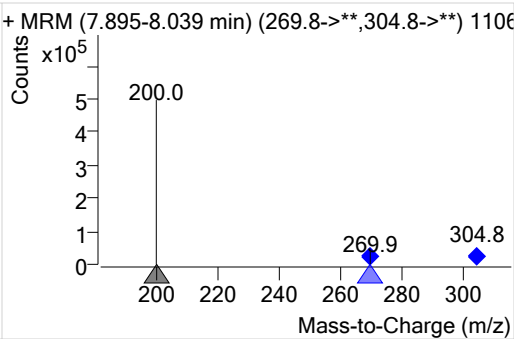


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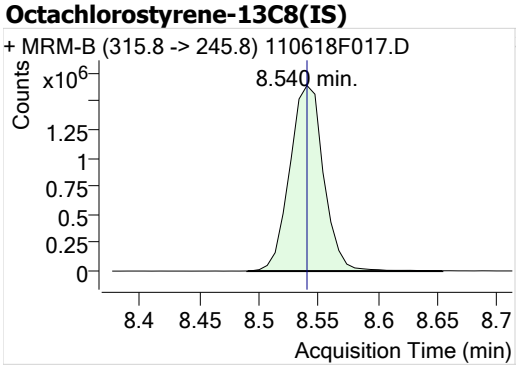
Aldrin-13C(IS)

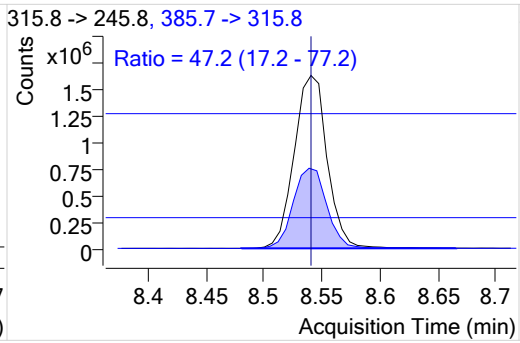


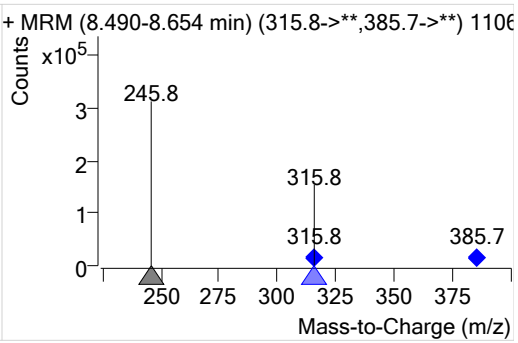




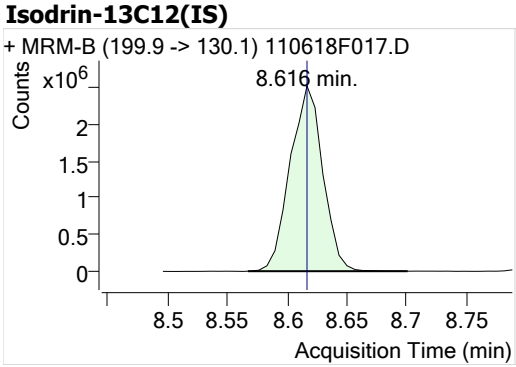
Octachlorostyrene-13C8(IS)

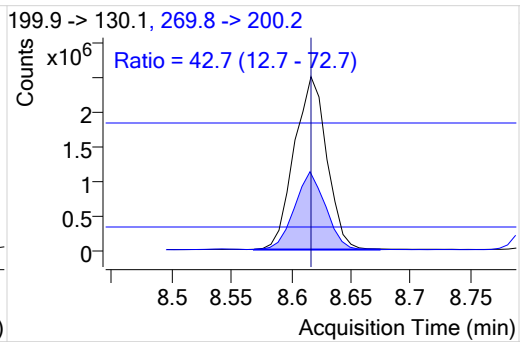


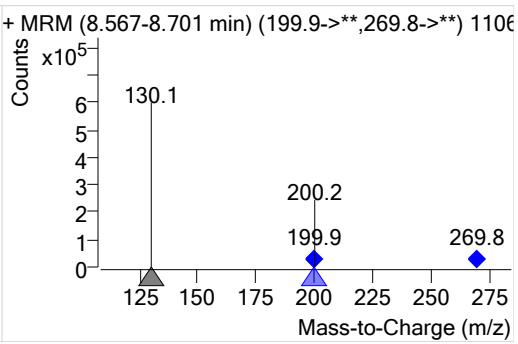




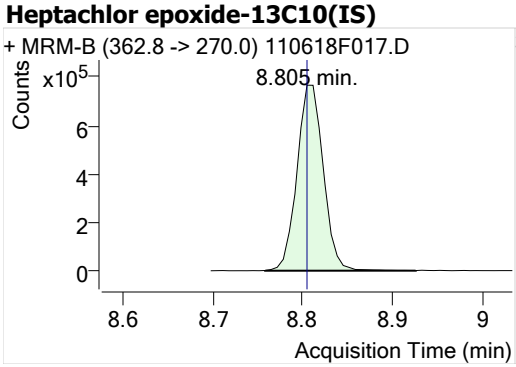
Isodrin-13C12(IS)

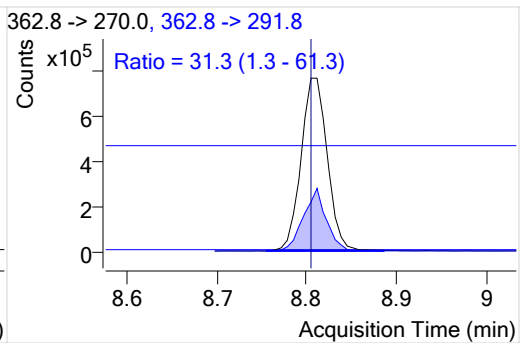


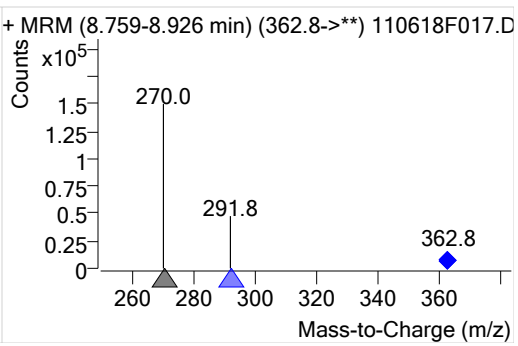




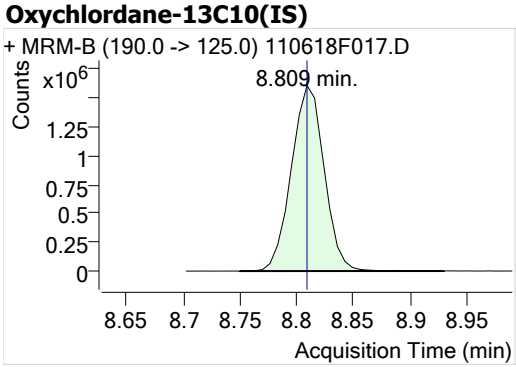
Heptachlor epoxide-13C10(IS)

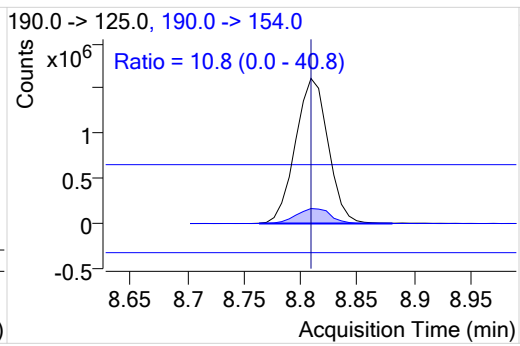


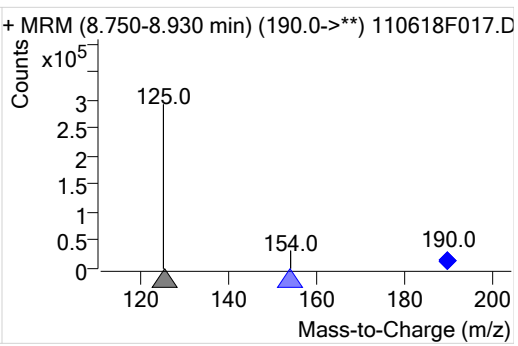




Oxychlordane-13C10(IS)

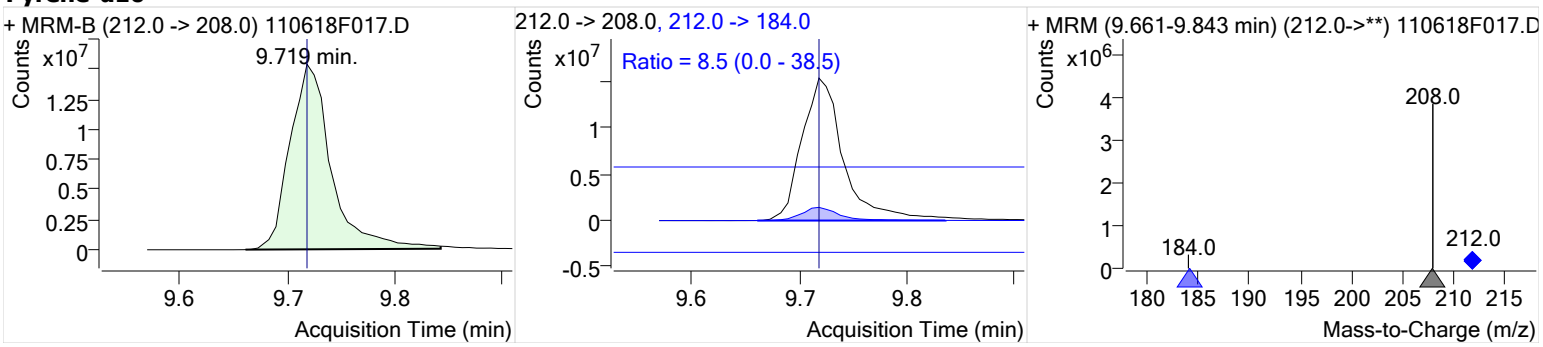




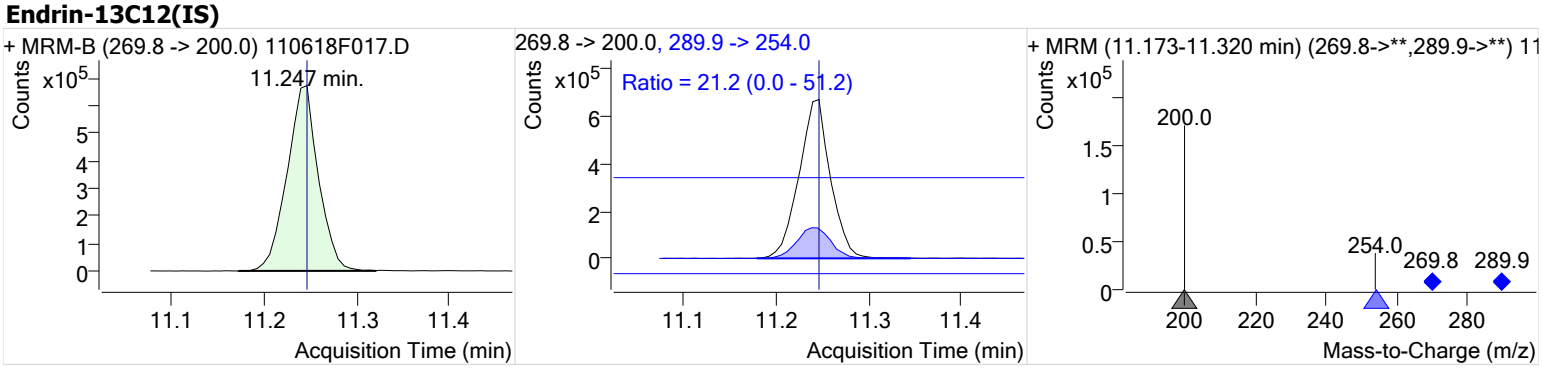


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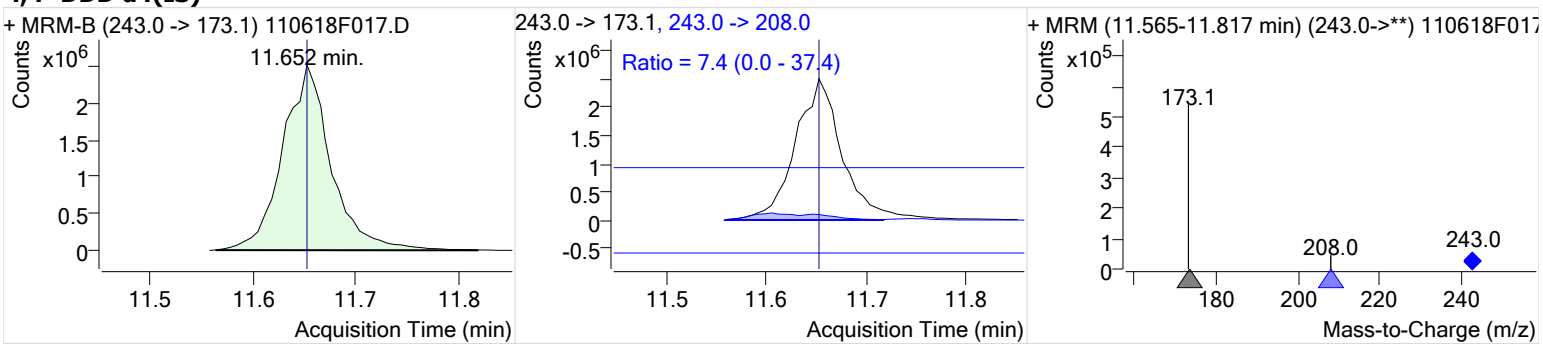
Pyrene-d10



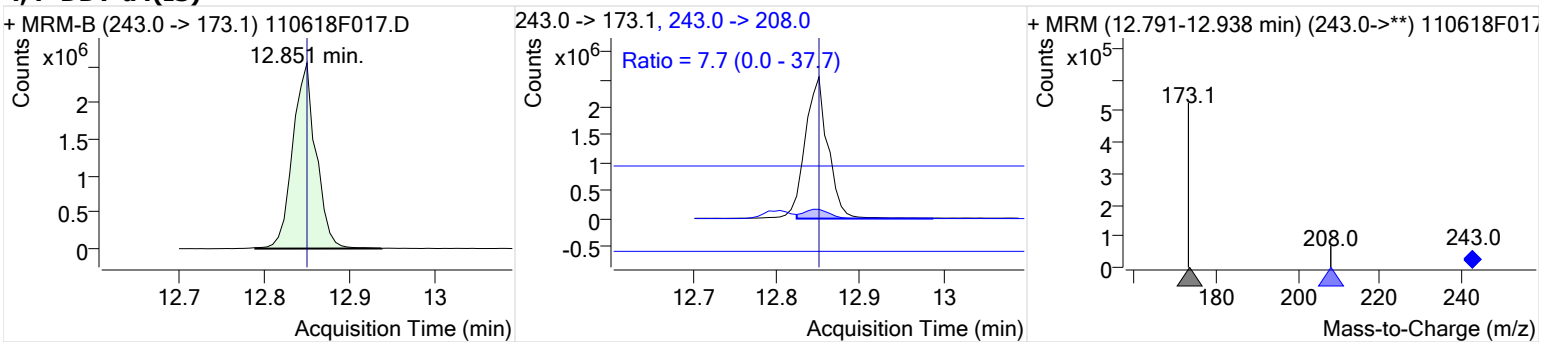
Endrin-13C12(IS)



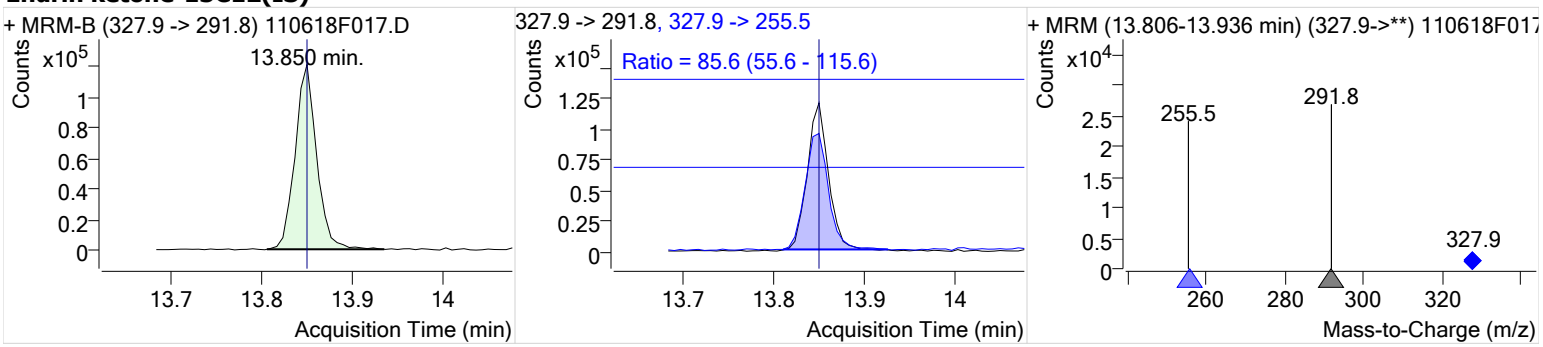
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

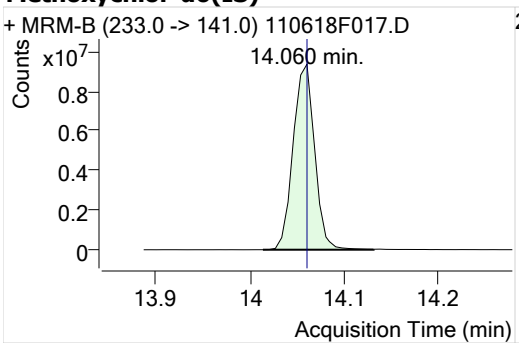


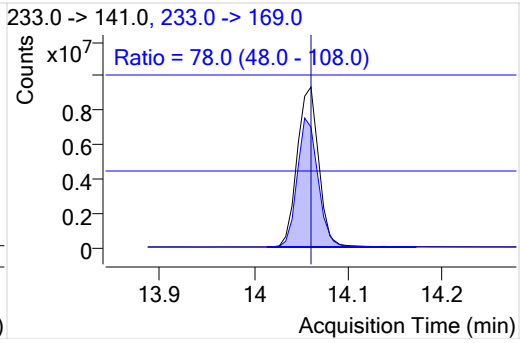
Endrin ketone-13C12(IS)

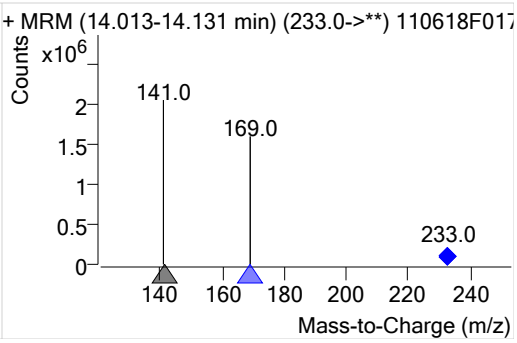


Quantitative Analysis Sample Report

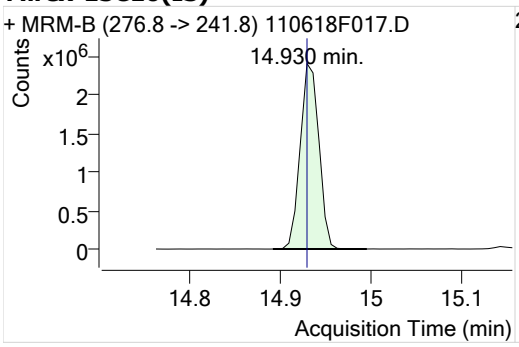
Methoxychlor-d6(IS)

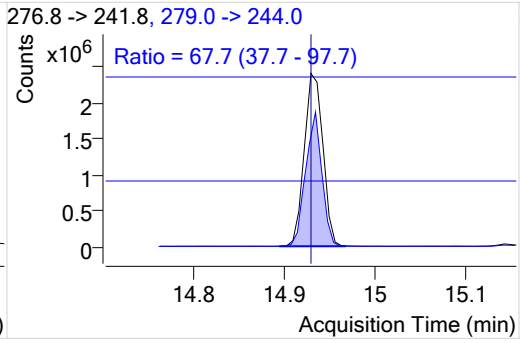


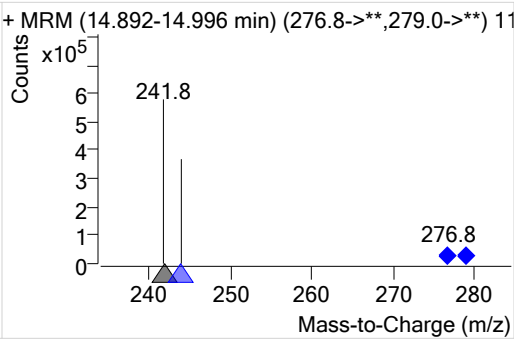




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F018.D	**Vial**	9
Acq. Date-Time	11/6/2018 7:08:48 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 40ng/mL SVM59-48G	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	5784023	20.000 ng/ml	0.001
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	11329868	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.219	276.8 -> 241.8	5111835	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.634	199.9 -> 171.9	4834796	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.948	269.8 -> 200.0	3625085	20.000 ng/ml	0.000
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	2637179	20.000 ng/ml	0.001
Isodrin-13C12(IS)	8.623	199.9 -> 130.1	4296284	20.000 ng/ml	0.006
Heptachlor epoxide-13C10(IS)	8.812	362.8 -> 270.0	1390977	20.000 ng/ml	0.007
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	2964225	20.000 ng/ml	0.000
Pyrene-d10	9.719	212.0 -> 208.0	32769234	100.000 ng/ml	0.001
Endrin-13C12(IS)	11.247	269.8 -> 200.0	1350873	20.000 ng/ml	0.004
4,4'-DDD d4(IS)	11.652	243.0 -> 173.1	6573924	5.000 ng/ml	0.027
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	3626909	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	165651	20.000 ng/ml	0.000
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	11776832	20.000 ng/ml	0.007
Mirex-13C10(IS)	14.930	276.8 -> 241.8	3212184	5.000 ng/ml	0.001

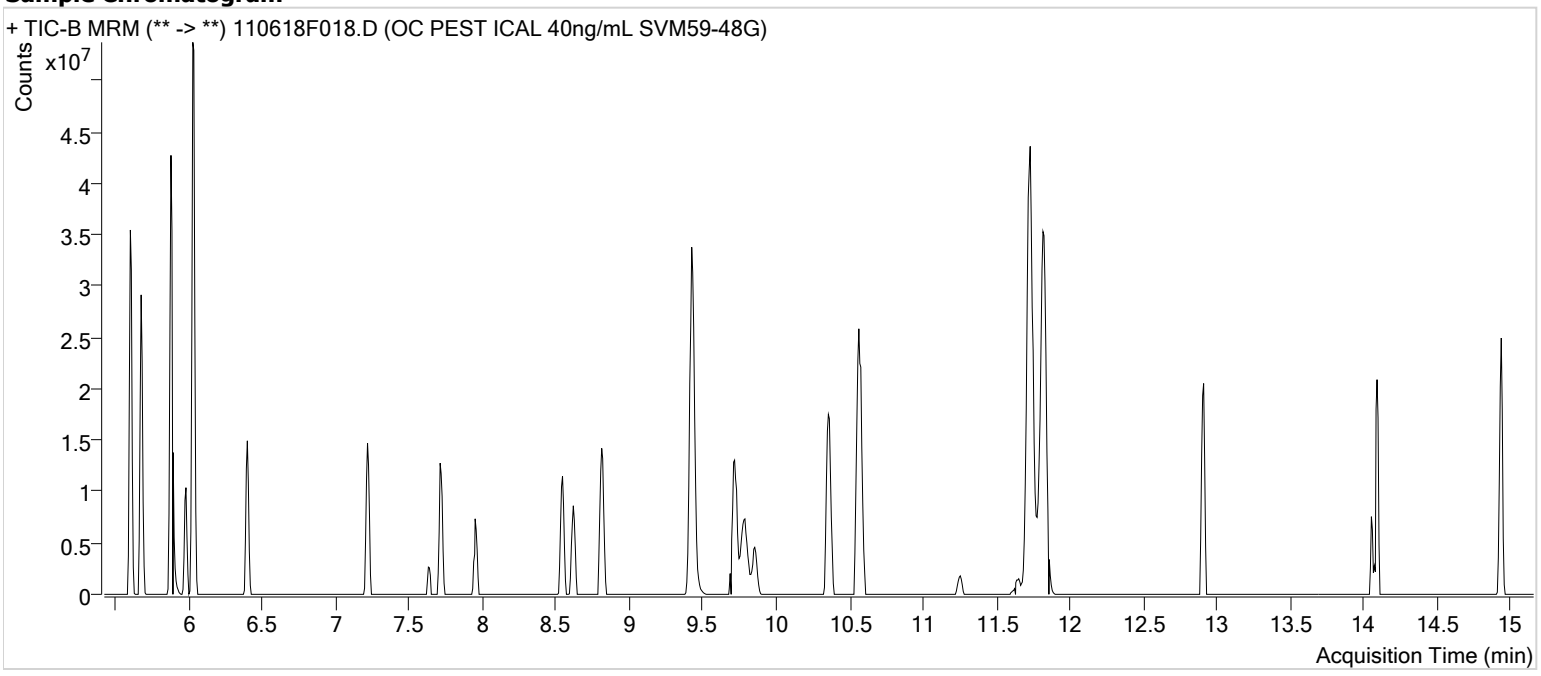
System Monitoring Compounds	RT	Transition	Response	Conc. Units
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	5784023	23.147 ng/ml
		Spiked Amount = 20.0		Recovery = *115.7 %*
γ-BHC-d6	5.983	223.9 -> 187.0	11329868	23.634 ng/ml
		Spiked Amount = 20.0		Recovery = *118.2 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	5111835	21.179 ng/ml
		Spiked Amount = 20.0		Recovery = *105.9 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	4834796	19.537 ng/ml
		Spiked Amount = 20.0		Recovery = *97.7 %*
Aldrin-13C	7.952	269.8 -> 200.0	3625085	21.165 ng/ml
		Spiked Amount = 20.0		Recovery = *105.8 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	2637179	20.988 ng/ml
		Spiked Amount = 20.0		Recovery = *104.9 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4296284	22.690 ng/ml
		Spiked Amount = 20.0		Recovery = *113.4 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1390977	22.320 ng/ml
		Spiked Amount = 20.0		Recovery = *111.6 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	2964225	22.514 ng/ml
		Spiked Amount = 20.0		Recovery = *112.6 %*
Endrin-13C12	11.247	269.8 -> 200.0	1350873	20.887 ng/ml
		Spiked Amount = 20.0		Recovery = *104.4 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	6573924	4.924 ng/ml
		Spiked Amount = 5.0		Recovery = *98.5 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	3626909	4.762 ng/ml
		Spiked Amount = 5.0		Recovery = *95.2 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	165651	20.380 ng/ml
		Spiked Amount = 20.0		Recovery = *101.9 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	11776832	20.290 ng/ml
		Spiked Amount = 20.0		Recovery = *101.4 %*
Mirex-13C10	14.930	276.8 -> 241.8	3212184	5.387 ng/ml
		Spiked Amount = 5.0		Recovery = *107.7 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	28490425	35.805	ng/ml	95
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	18187883	36.237	ng/ml	98
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	37032750	35.280	ng/ml	96
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.034	181.1 -> 145.1	45911174	36.399	ng/ml	100
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	17541128	37.135	ng/ml	85
Heptachlor	Heptachlor-13C10(IS)	7.223	271.7 -> 236.9	11206297	39.255	ng/ml	99
Chorpyrifos	Chorpyrifos-d10(IS)	7.717	196.9 -> 169.0	12489270	37.864	ng/ml	99
Aldrin	Aldrin-13C(IS)	7.955	254.9 -> 220.0	4929269	41.069	ng/ml	89
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	13733562	40.899	ng/ml	95
Isodrin	Isodrin-13C12(IS)	8.630	193.0 -> 123.0	8691401	39.666	ng/ml	100
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.814	352.8 -> 262.9	2937278	38.815	ng/ml	98
Oxychlordane	Oxychlordane-13C10(IS)	8.817	114.9 -> 51.1	15107846	36.669	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	5138147	37.707	ng/ml	96
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	42438950	39.799	ng/ml	100
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	12030980	36.358	ng/ml	99
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	2974683	41.921	ng/ml	100
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	8973157	39.829	ng/ml	99
4,4' -DDE	4,4'-DDD d4(IS)	10.358	246.0 -> 176.2	33366595	34.773	ng/ml	99
2,4'-DDD	4,4'-DDD d4(IS)	10.569	235.0 -> 165.1	47343059	34.141	ng/ml	100
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	3359952	35.254	ng/ml	95
Endosulfan II	Endrin-13C12(IS)	11.257	206.9 -> 172.0	482790	36.083	ng/ml	92
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	3159382	35.836	ng/ml	98
2,4'-DDT	4,4'-DDT-d4(IS)	11.820	235.0 -> 165.1	63849592 ***m***	43.256	ng/ml	97
cis-Nonachlor	Oxychlordane-13C10(IS)	11.743	271.8 -> 236.9	3154594	36.346	ng/ml	99
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	74593166 ***m***	35.752	ng/ml	97
Endrin aldehyde	Endrin-13C12(IS)	12.091	249.9 -> 214.9	725511	37.612	ng/ml	92
Endosulfan sulfate	Endrin-13C12(IS)	12.803	271.9 -> 237.0	4936929	36.527	ng/ml	97
4,4'-DDT	4,4'-DDT-d4(IS)	12.915	235.0 -> 165.1	32294458	40.343	ng/ml	100
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	2183669	40.154	ng/ml	99
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	25202540	36.908	ng/ml	98
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	24917843	39.002	ng/ml	99

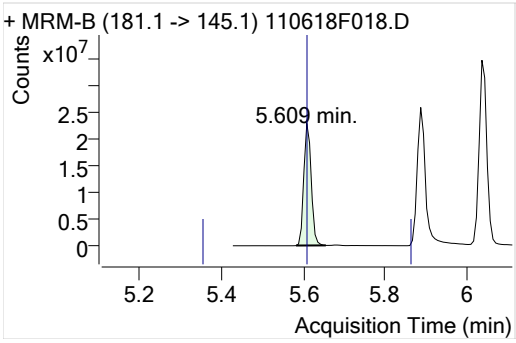
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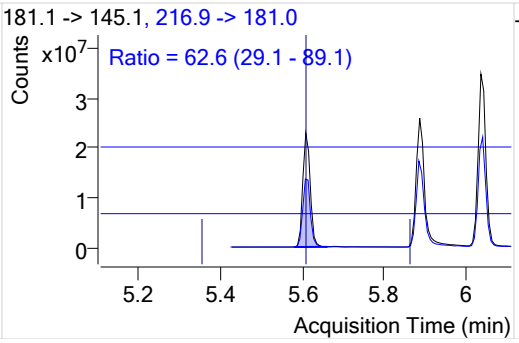
Sample Chromatogram

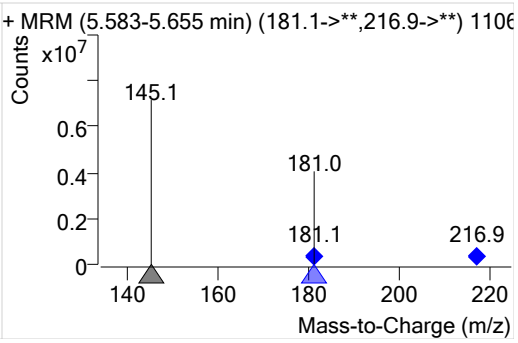


Quantitative Analysis Sample Report

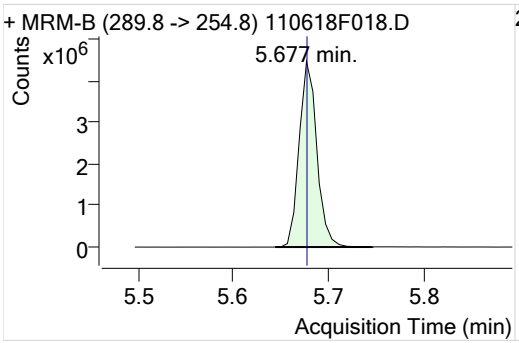
α-BHC

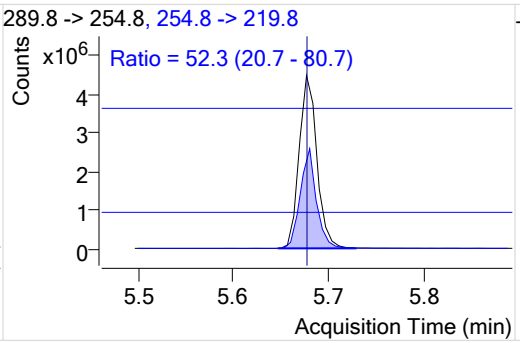


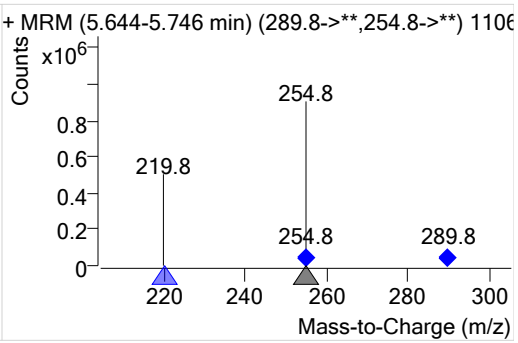




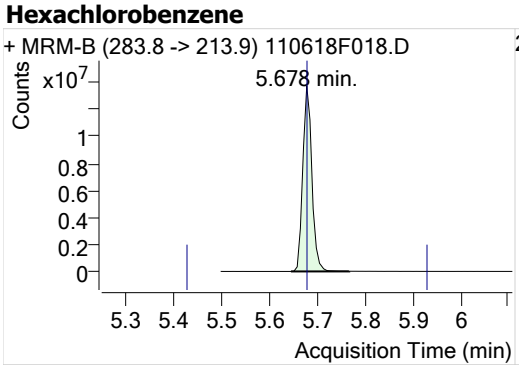
Hexachlorobenzene-13C6

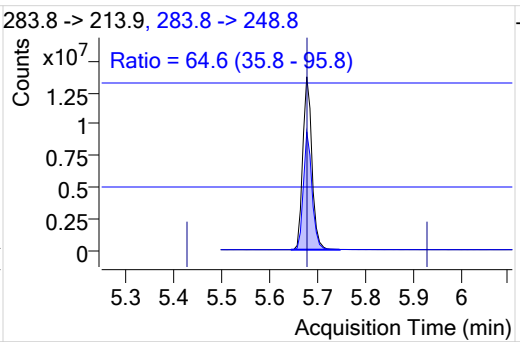


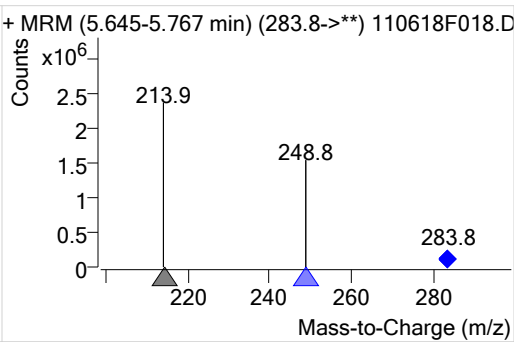




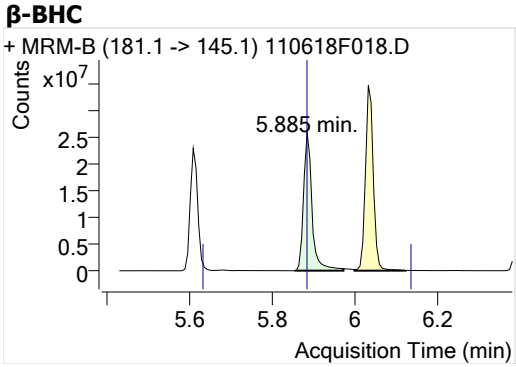
Hexachlorobenzene

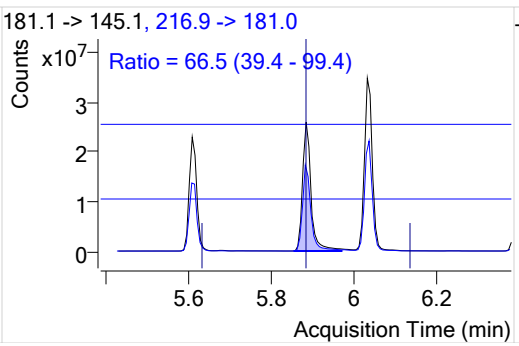


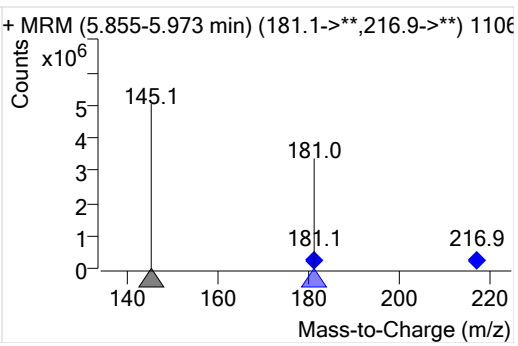




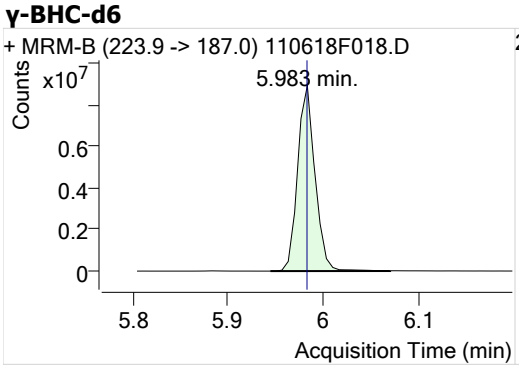
β-BHC

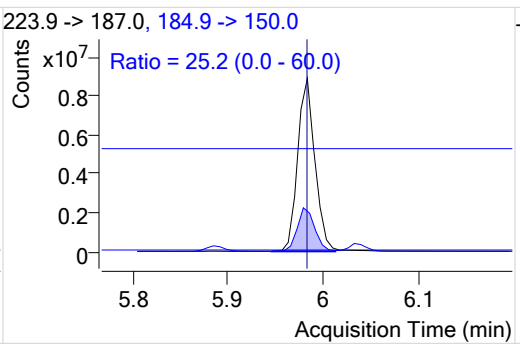


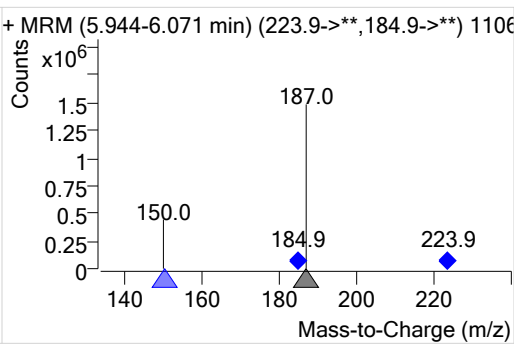




γ-BHC-d6

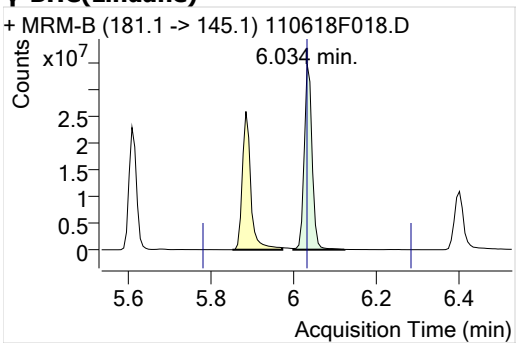


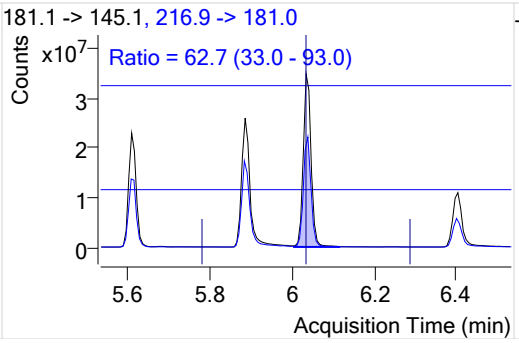


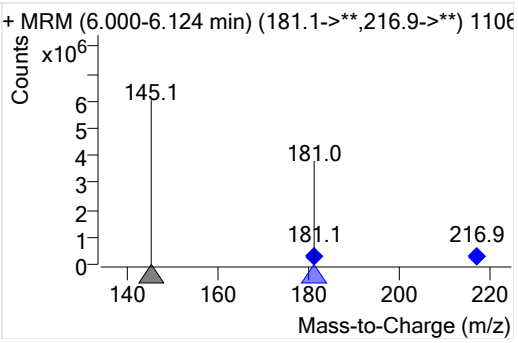


Quantitative Analysis Sample Report

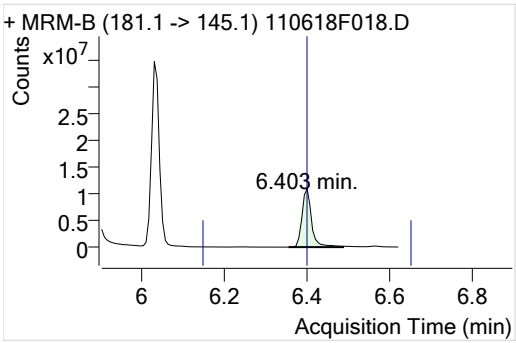
γ-BHC(Lindane)

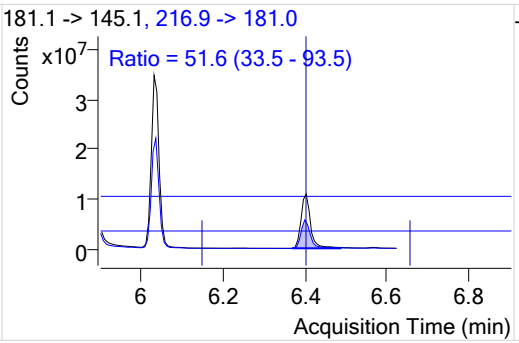


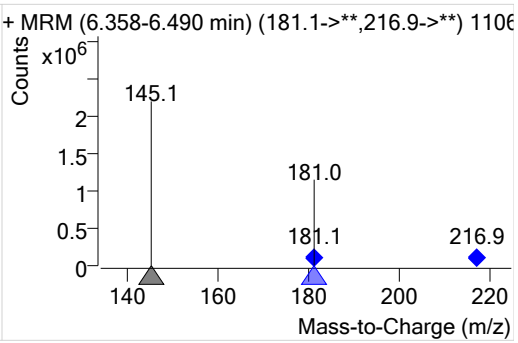




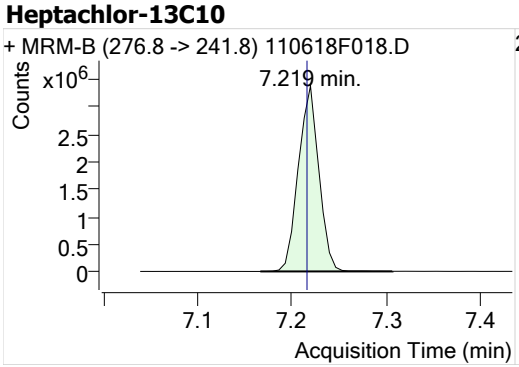
δ-BHC

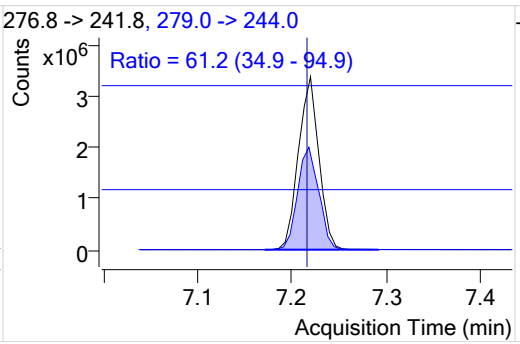


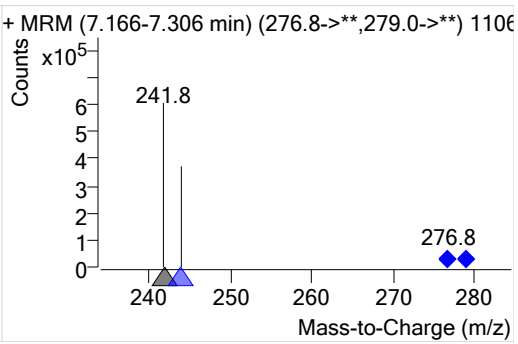




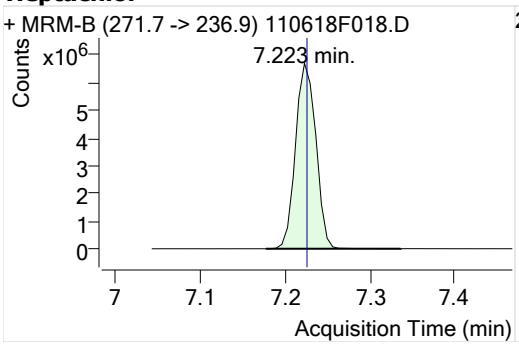
Heptachlor-13C10

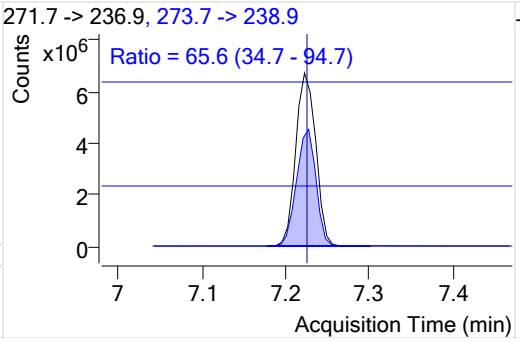


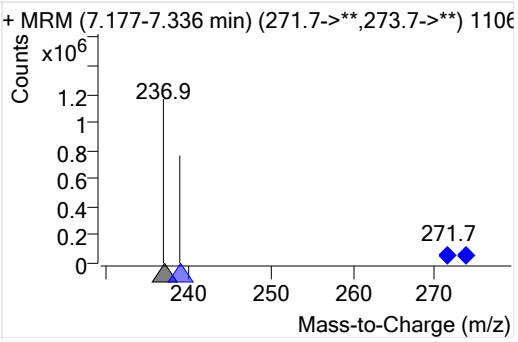




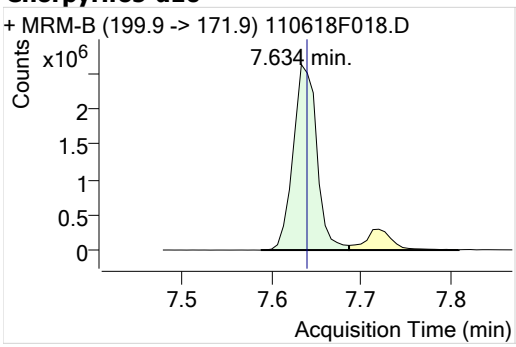
Heptachlor

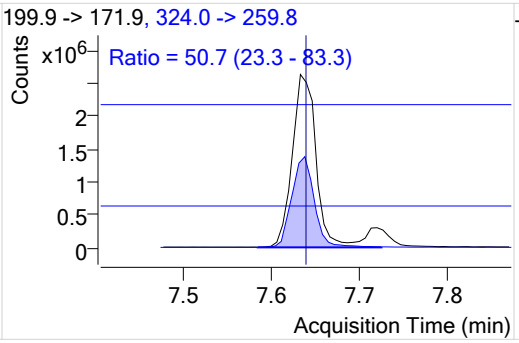


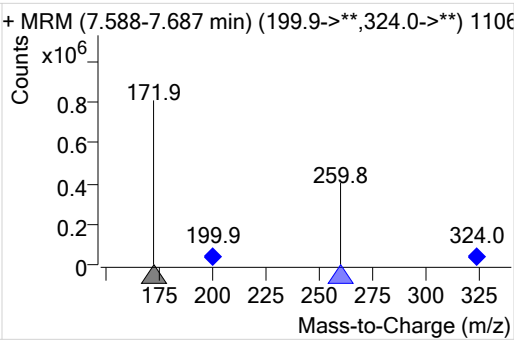




Chorpyrifos-d10

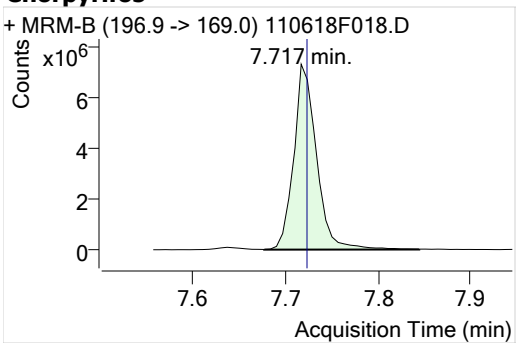


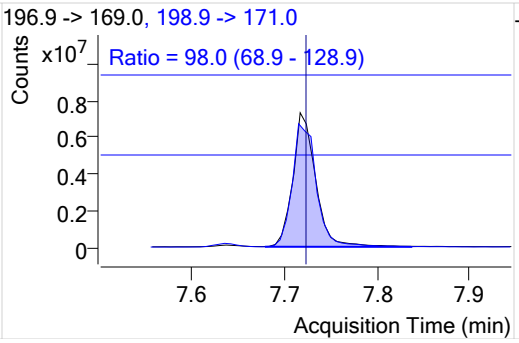


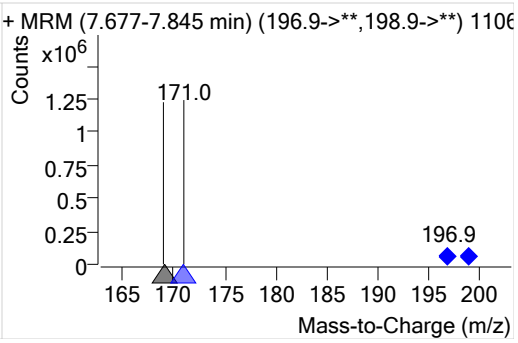


Quantitative Analysis Sample Report

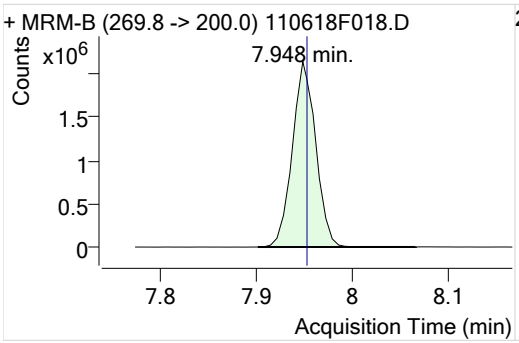
Chorpyrifos

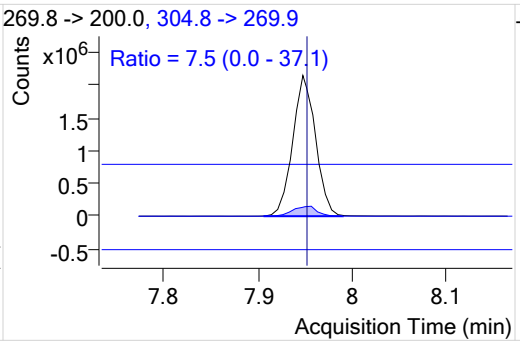


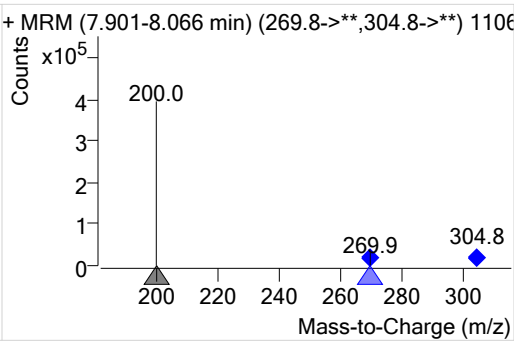




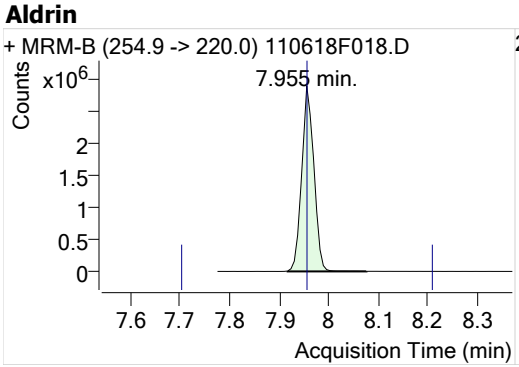
Aldrin-13C

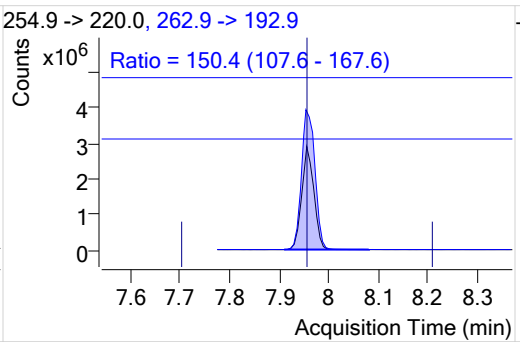


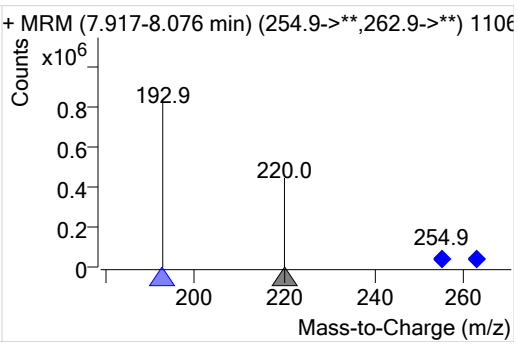




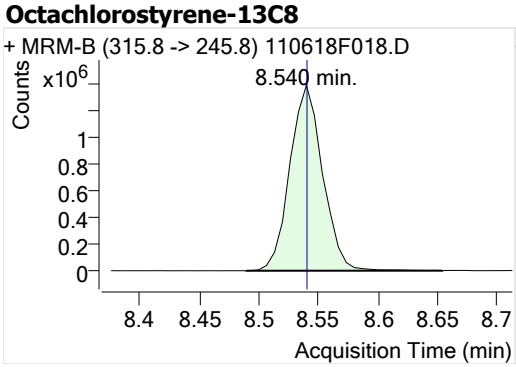
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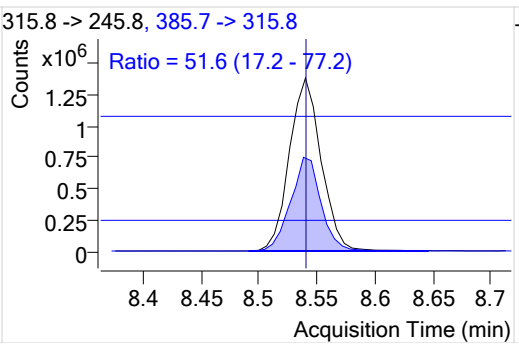


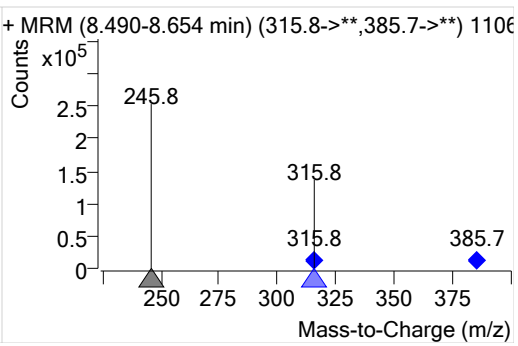




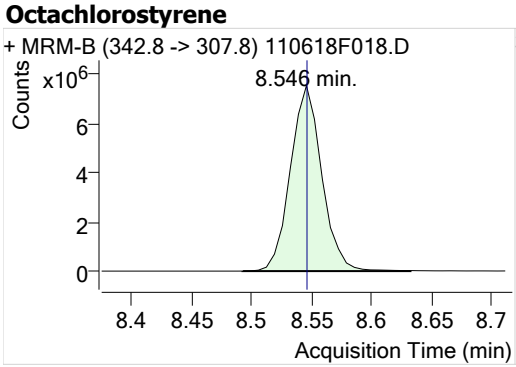
Octachlorostyrene-13C8

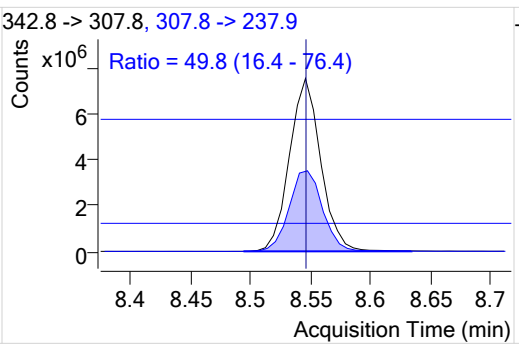


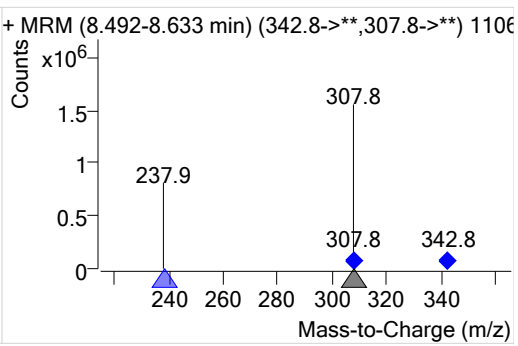




Octachlorostyrene

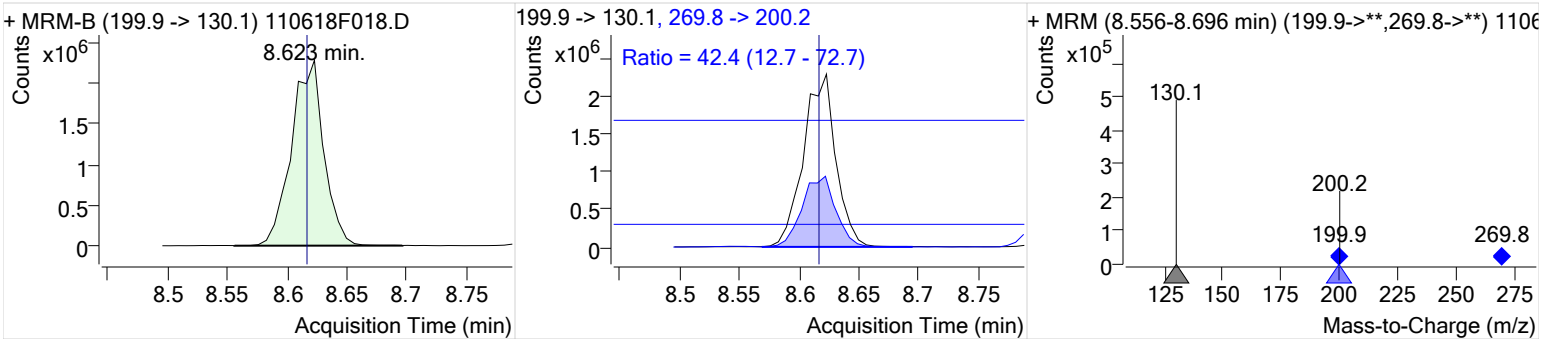




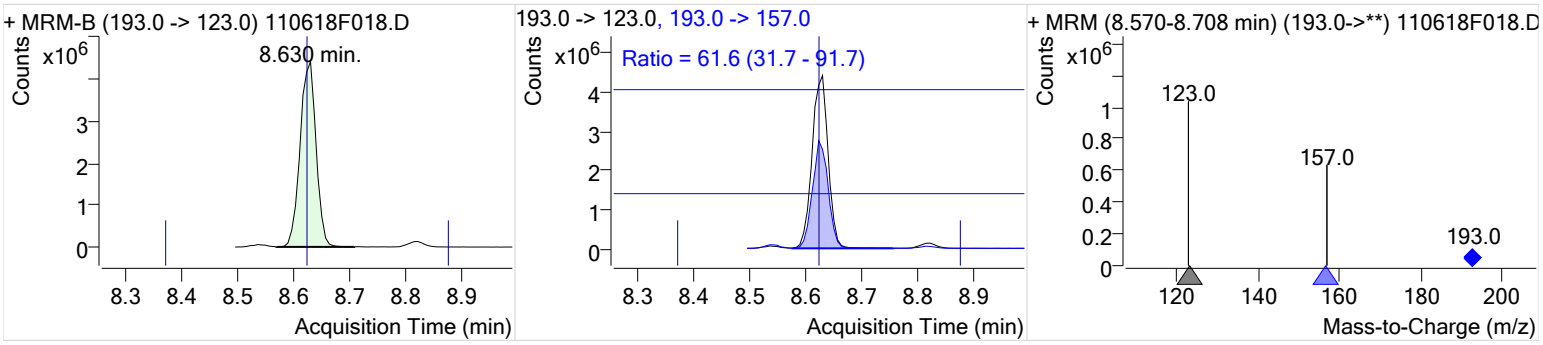


Quantitative Analysis Sample Report

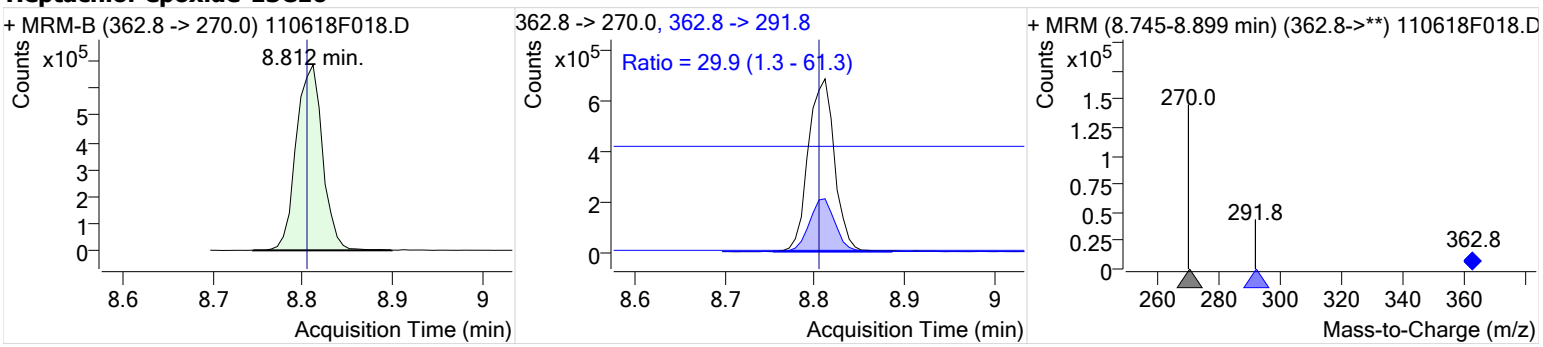
Isodrin-13C12



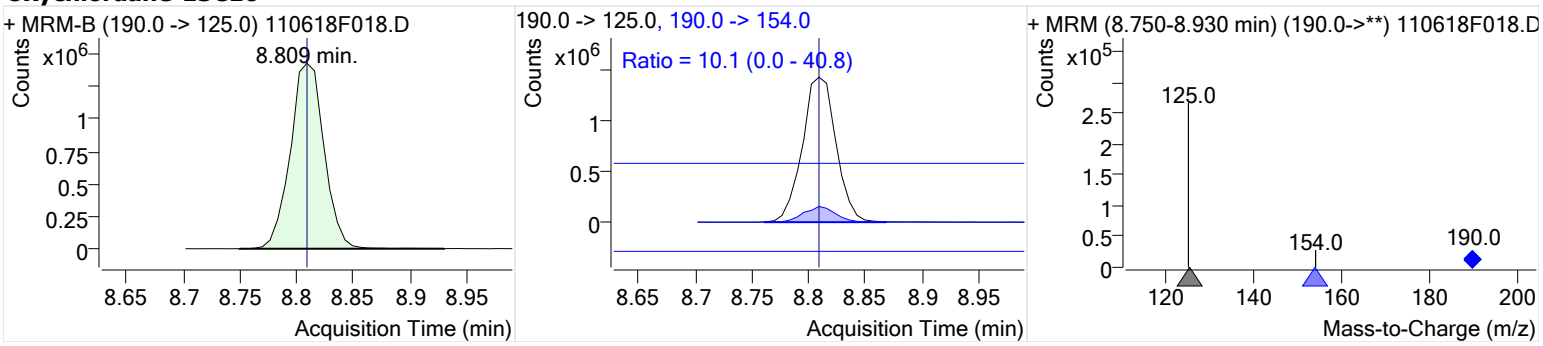
Isodrin



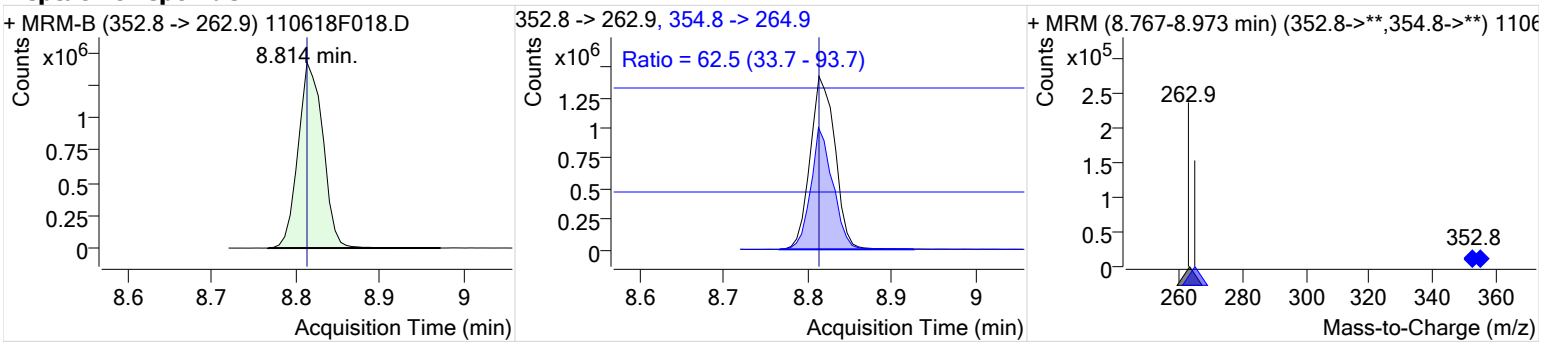
Heptachlor epoxide-13C10



Oxychlordane-13C10

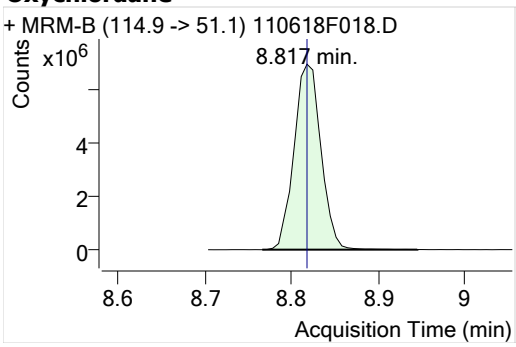


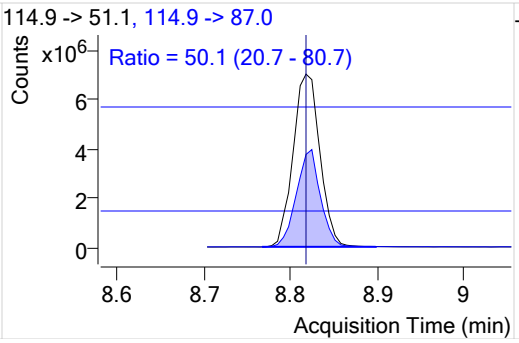
Heptachlor epoxide

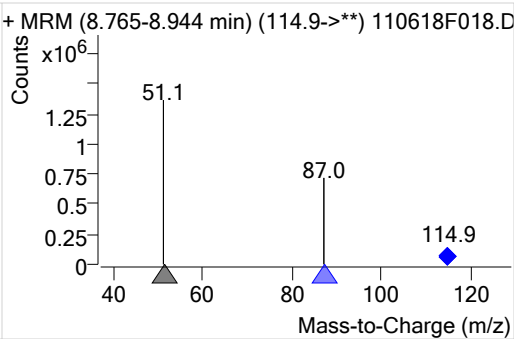


Quantitative Analysis Sample Report

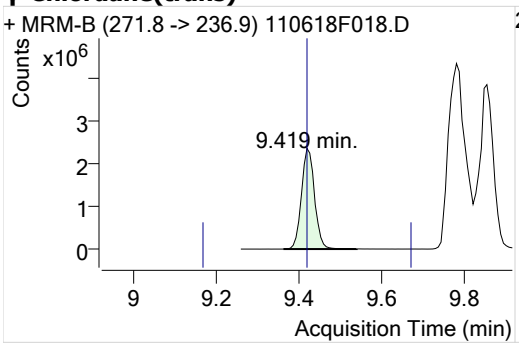
Oxychlordane

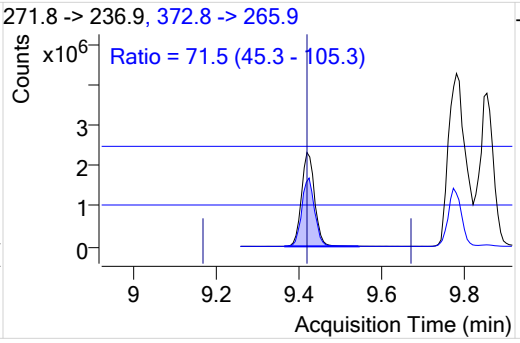


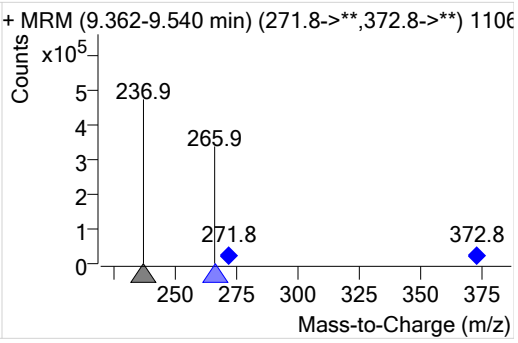




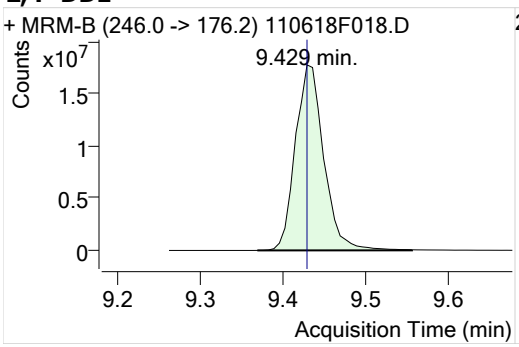
γ-Chlordane(trans)

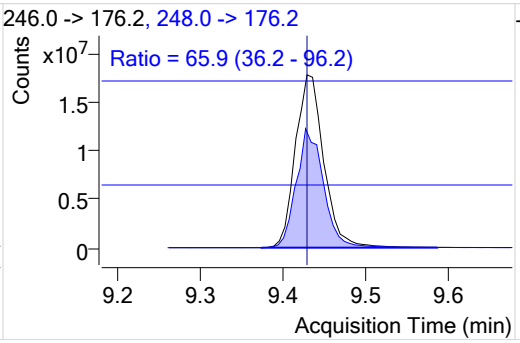


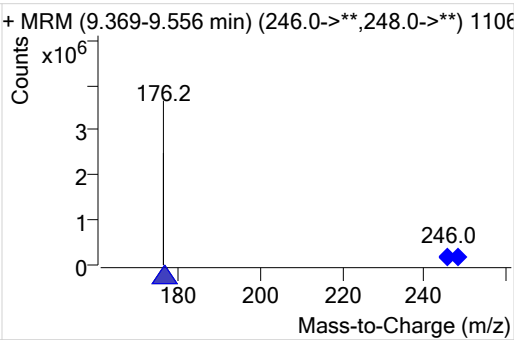




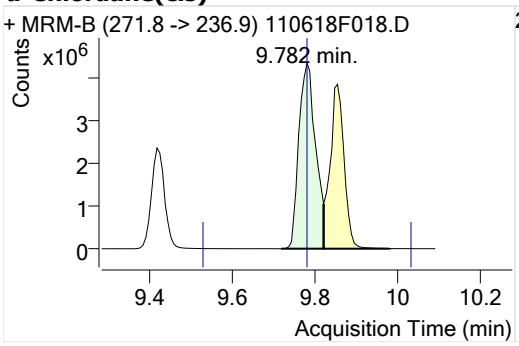
2,4'-DDE

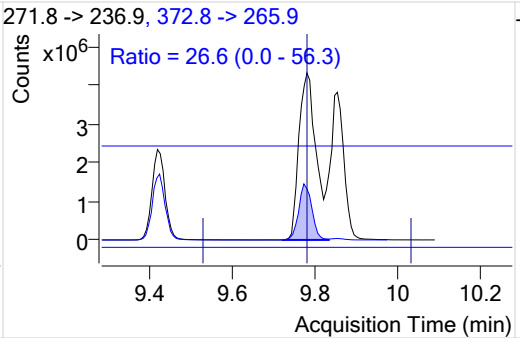


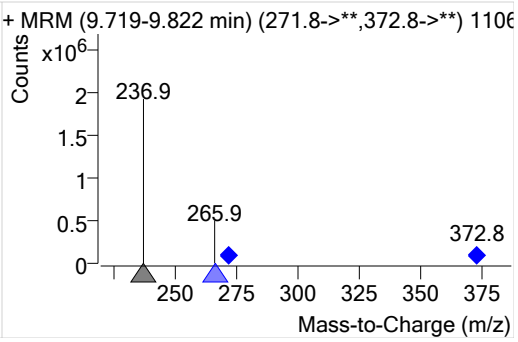




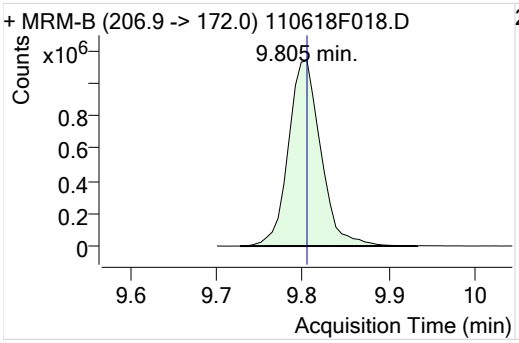
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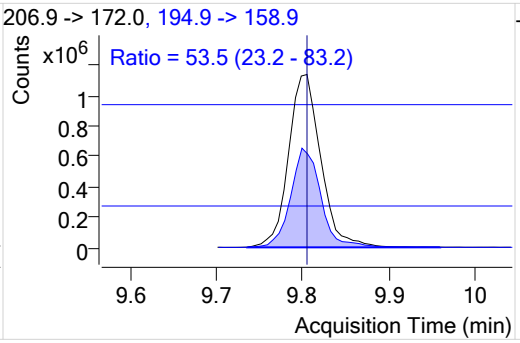


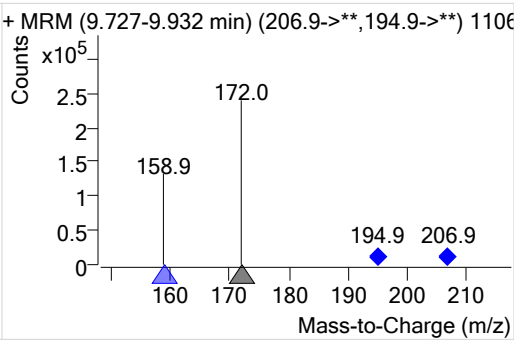




Endosulfan I

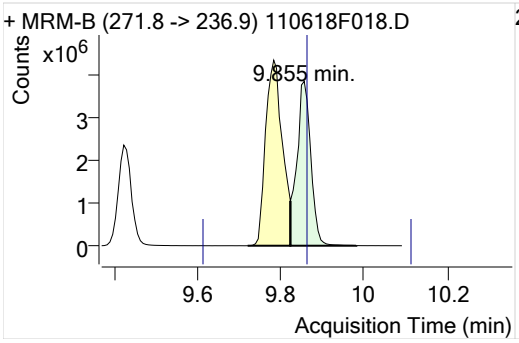


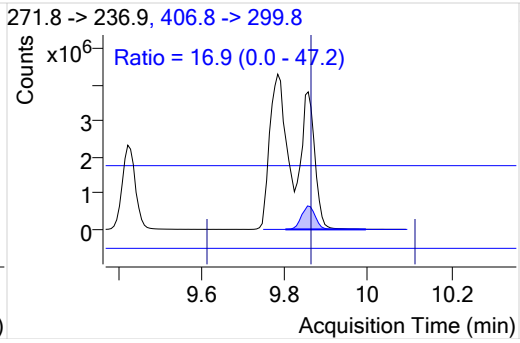


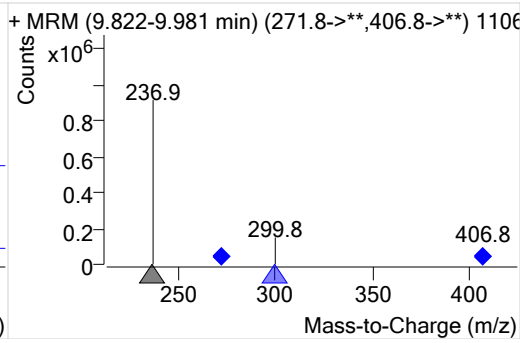


Quantitative Analysis Sample Report

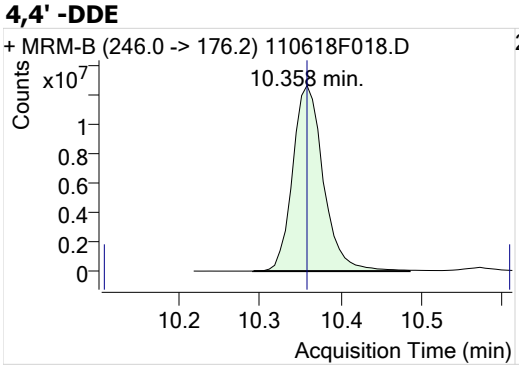
trans-Nanochlor

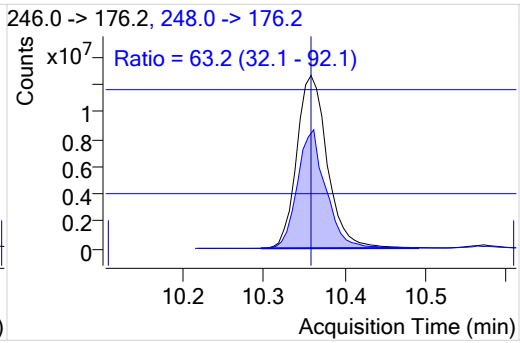


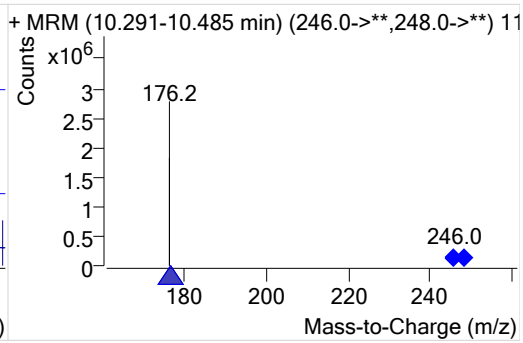




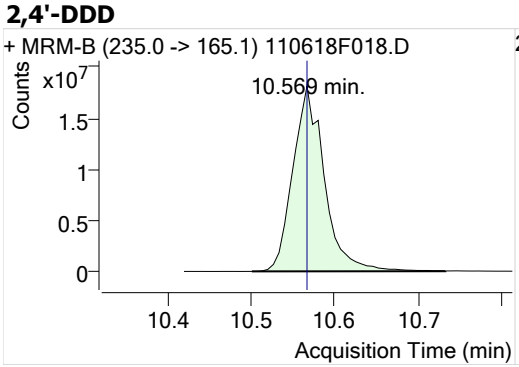
4,4' -DDE

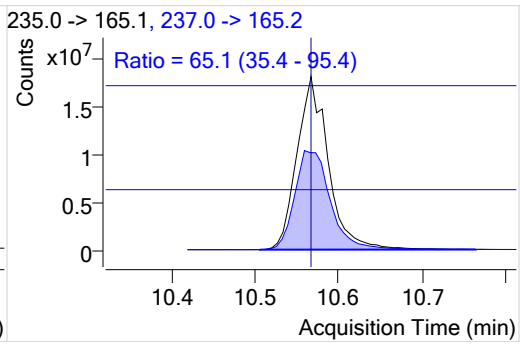


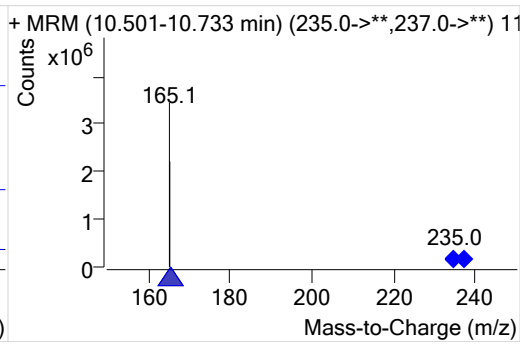




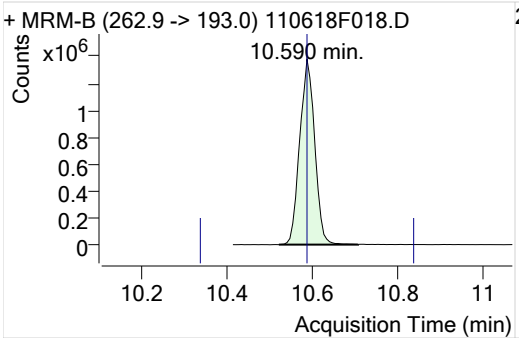
2,4'-DDD

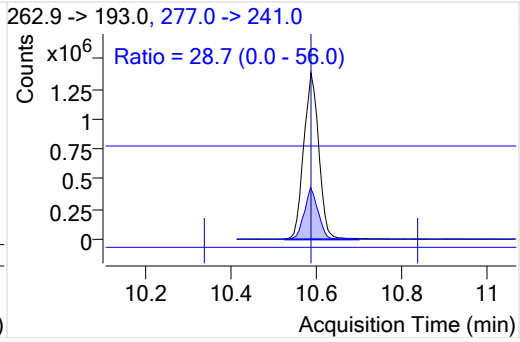


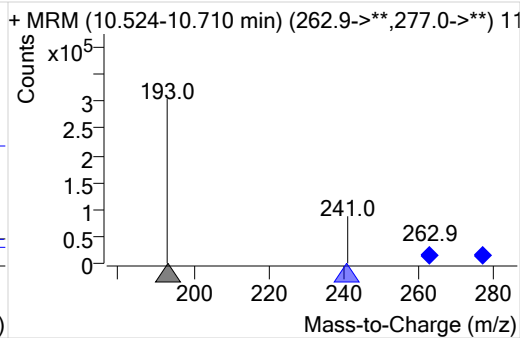




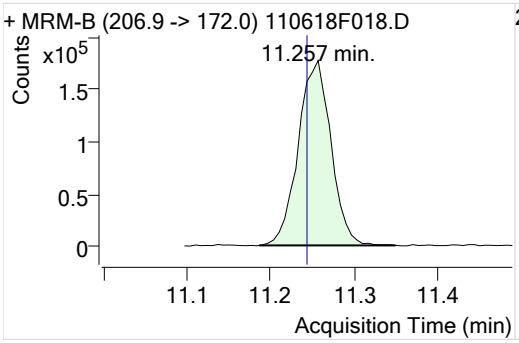
Dieldrin

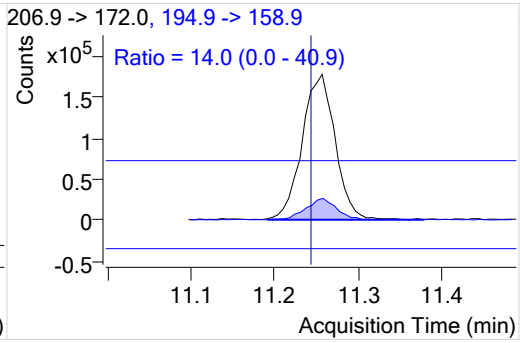


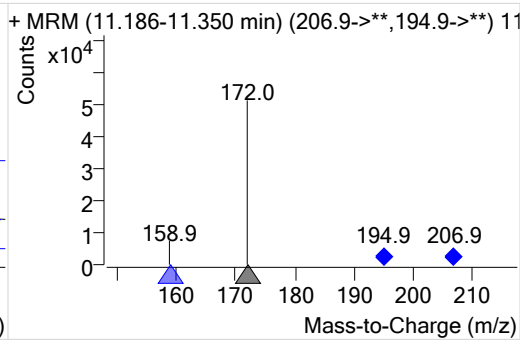




Endosulfan II

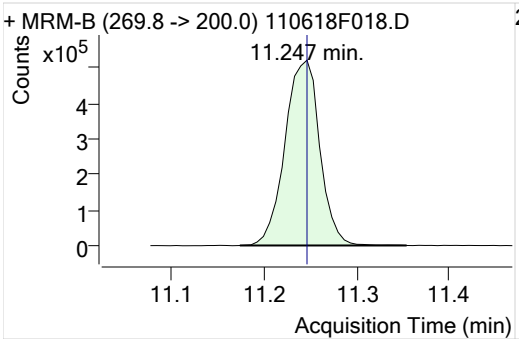


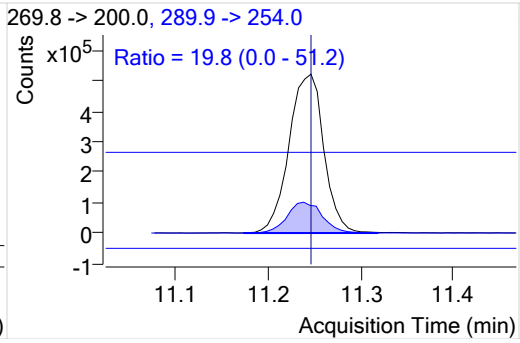


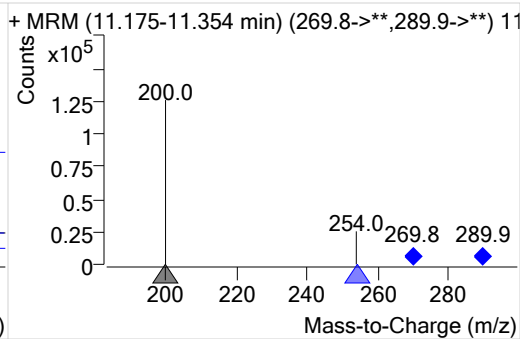


Quantitative Analysis Sample Report

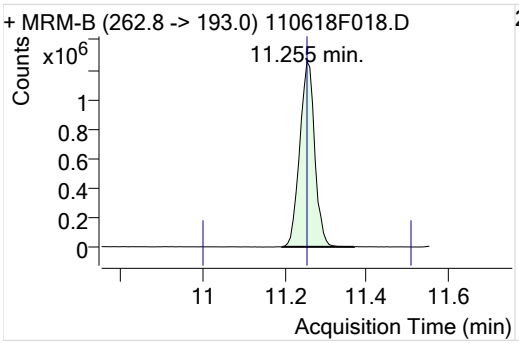
Endrin-13C12

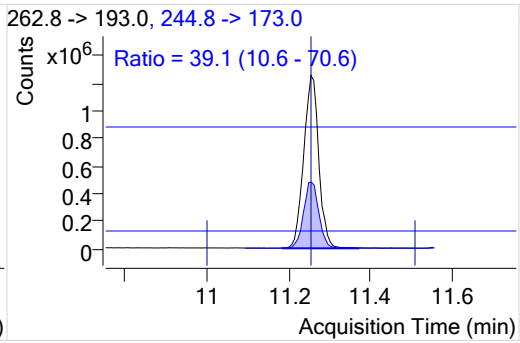


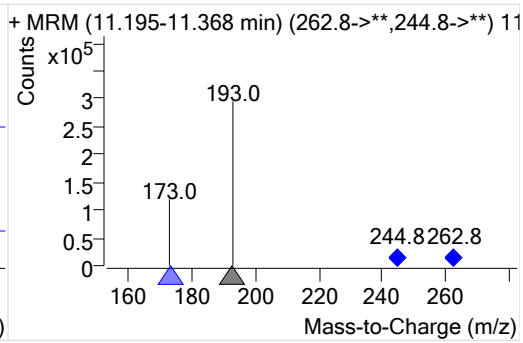




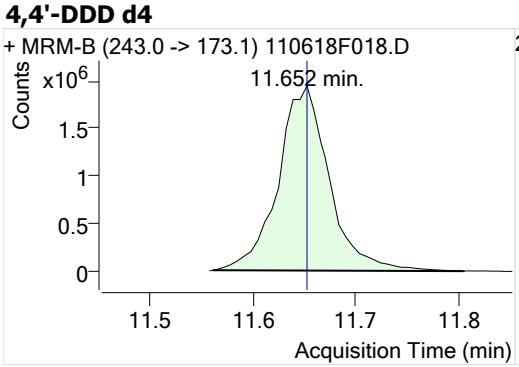
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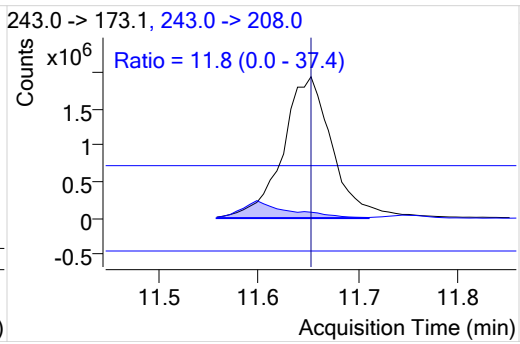


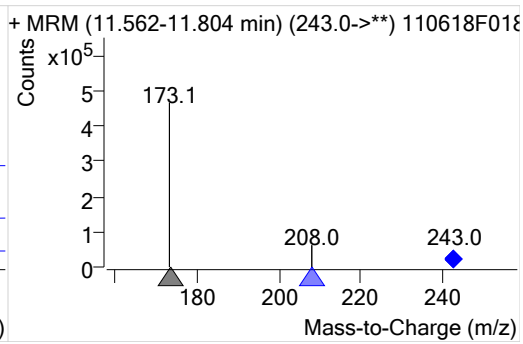




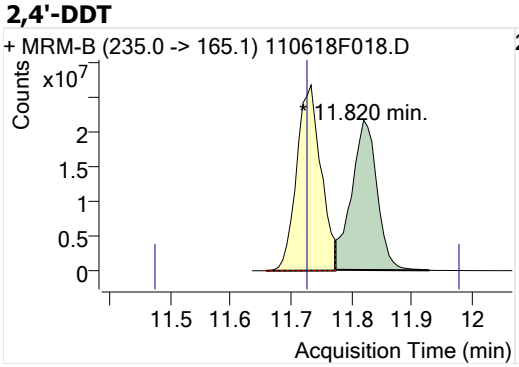
4,4'-DDD d4

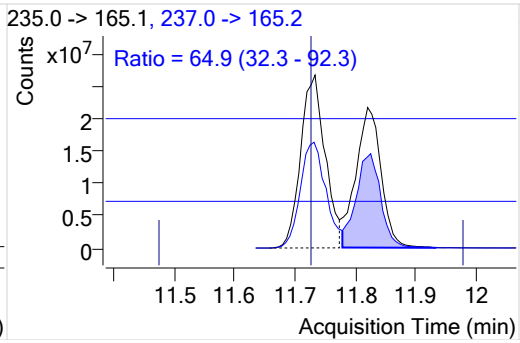


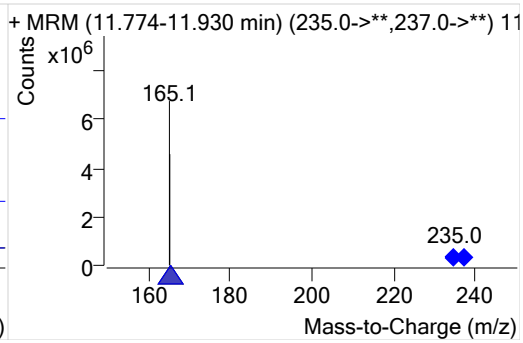




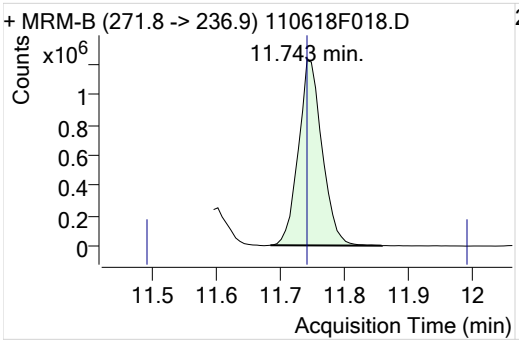
2,4'-DDT

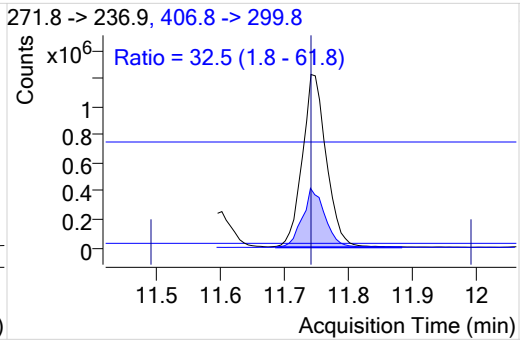


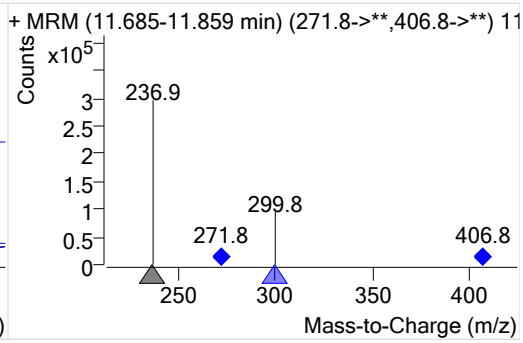




cis-Nonachlor

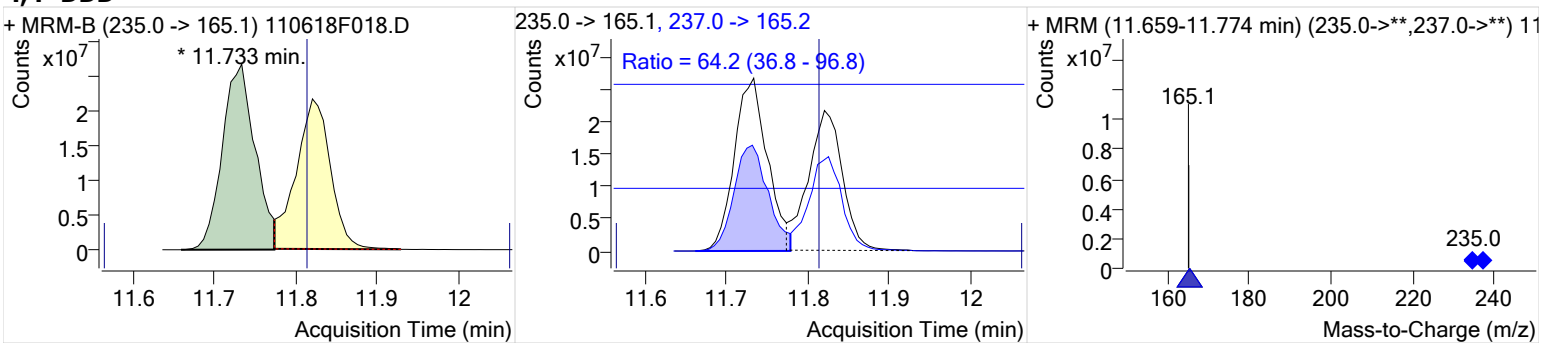




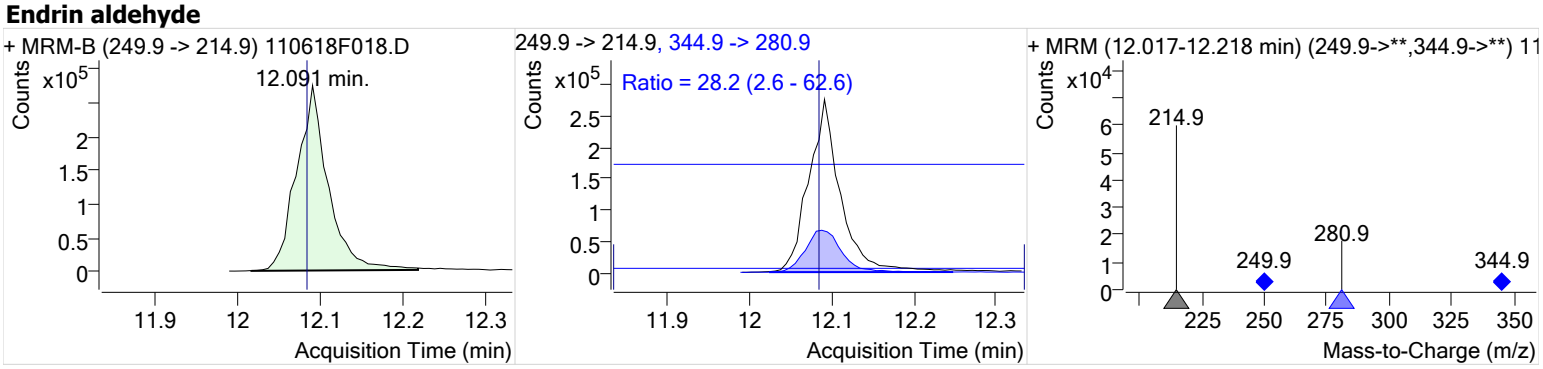


Quantitative Analysis Sample Report

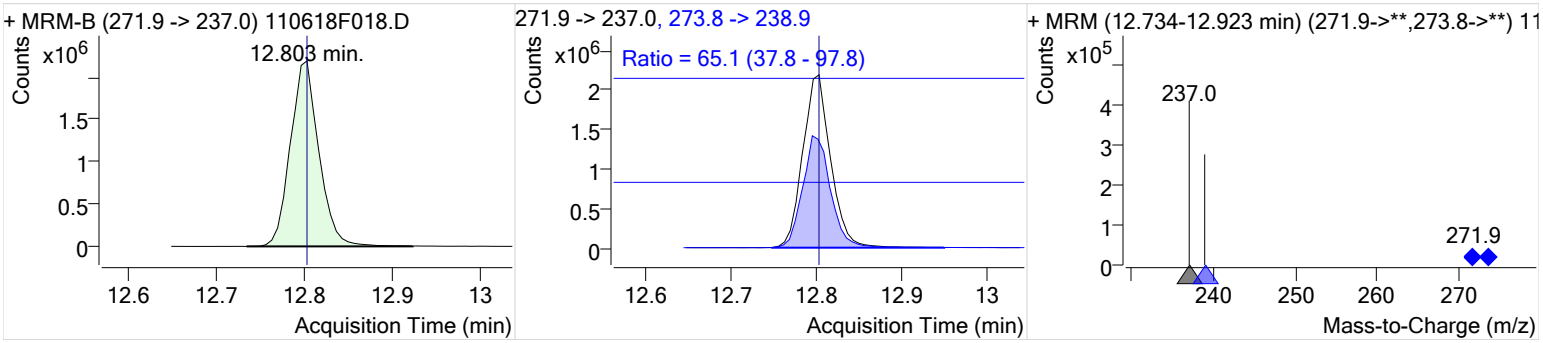
4,4'-DDD



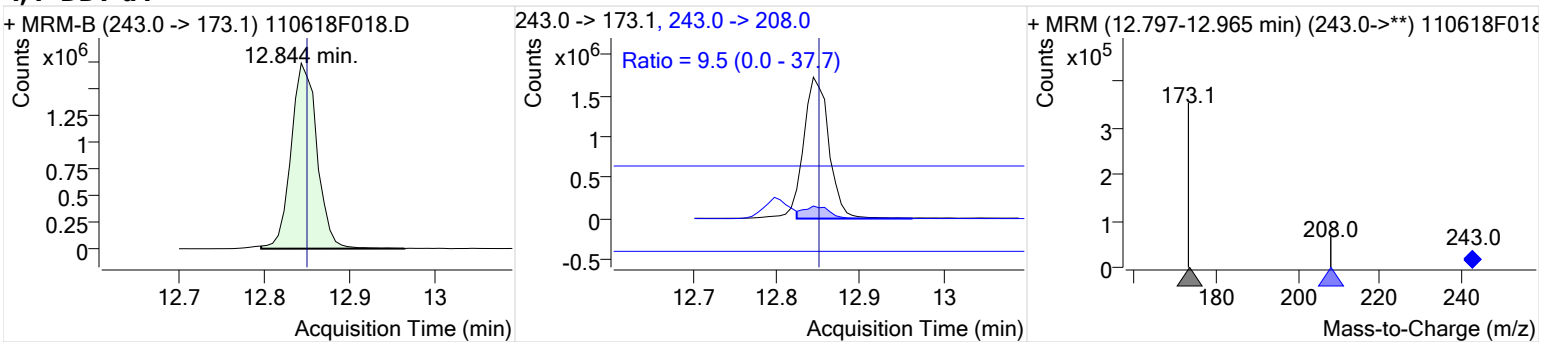
Endrin aldehyde



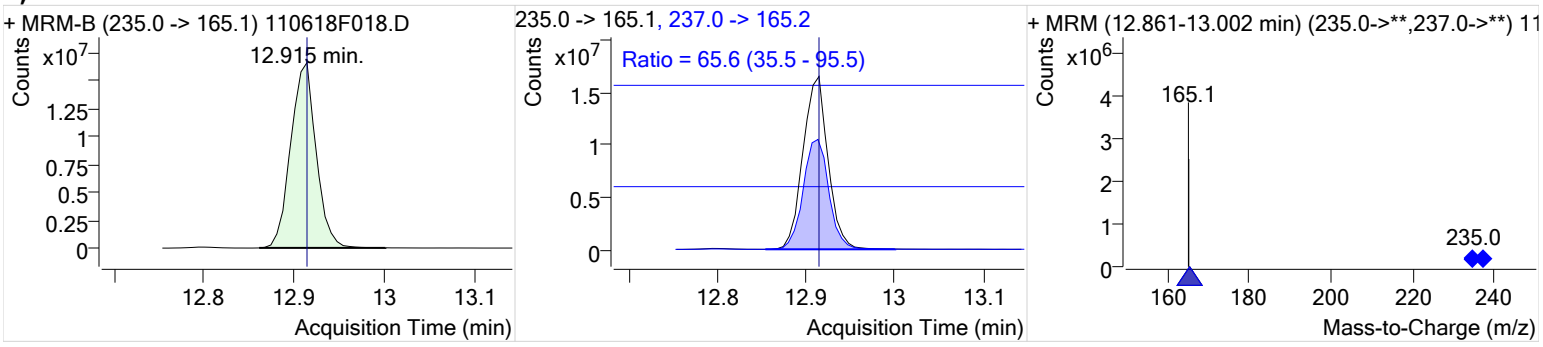
Endosulfan sulfate



4,4'-DDT-d4

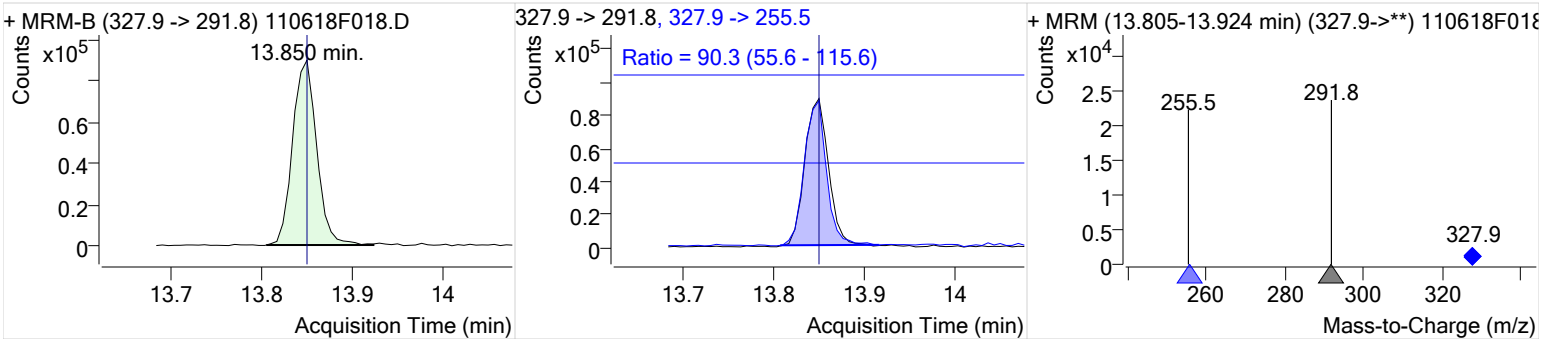


4,4'-DDT

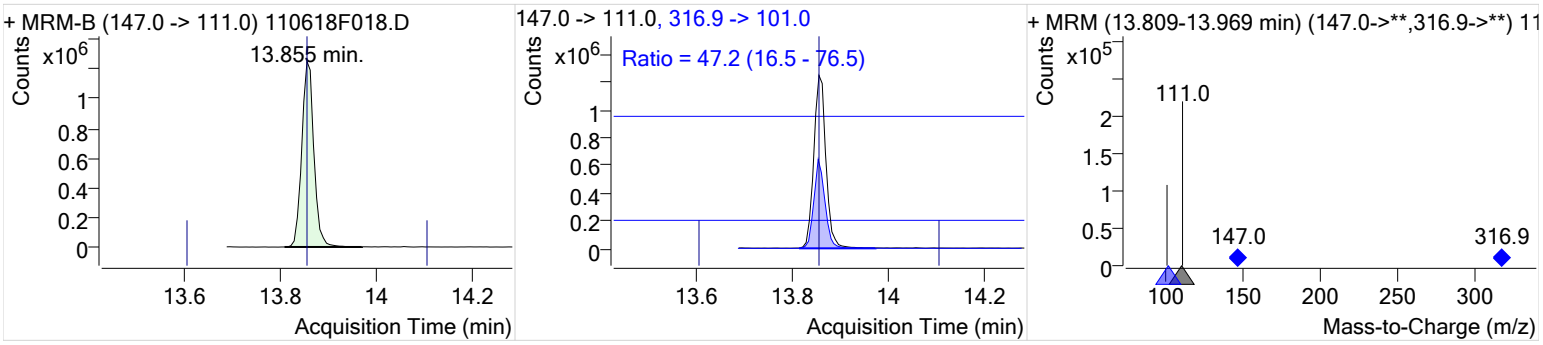


Quantitative Analysis Sample Report

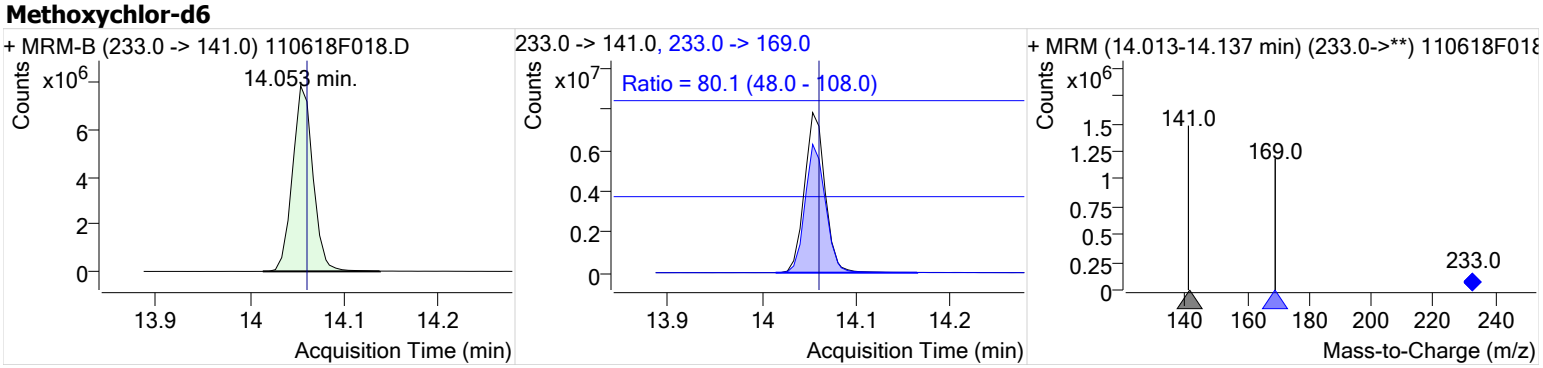
Endrin ketone-13C12



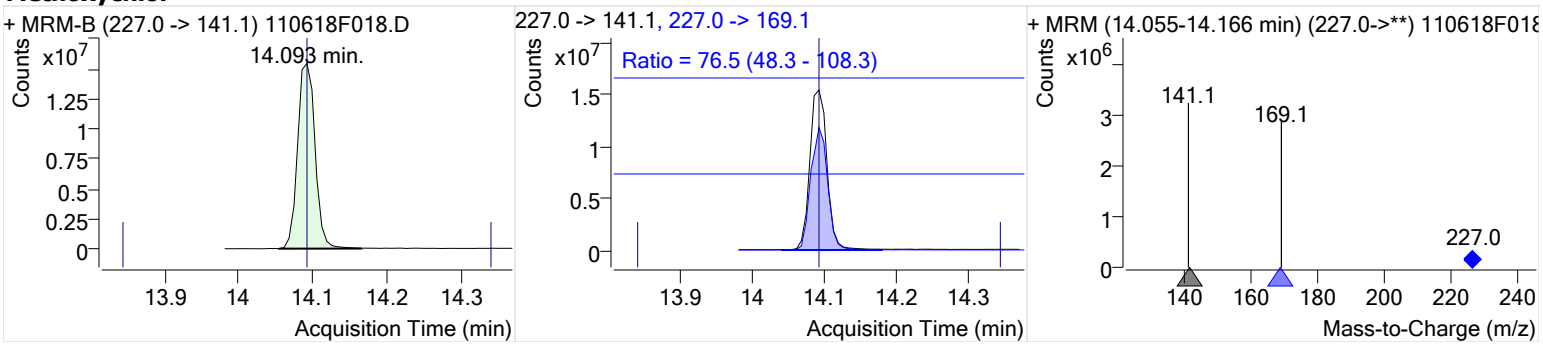
Endrin ketone



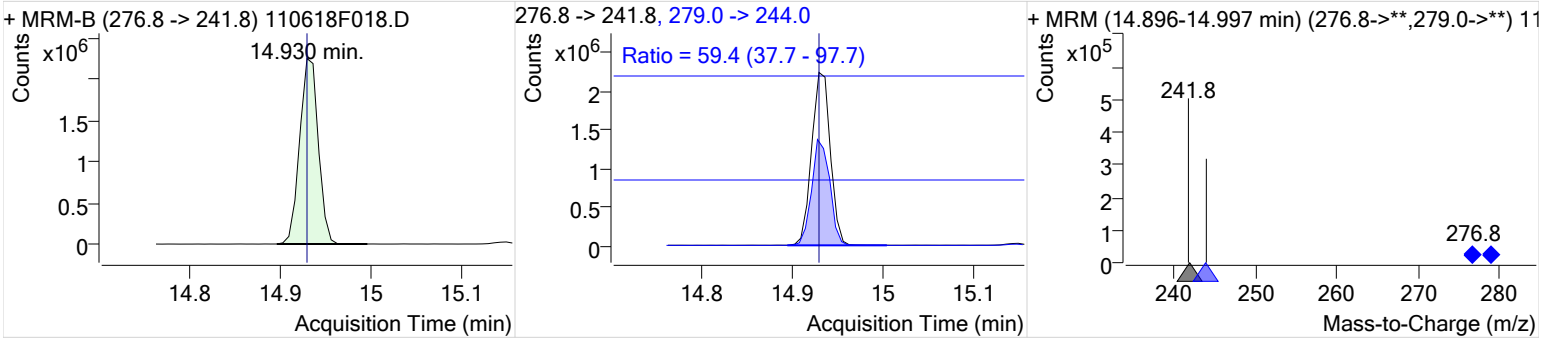
Methoxychlor-d6



Methoxychlor

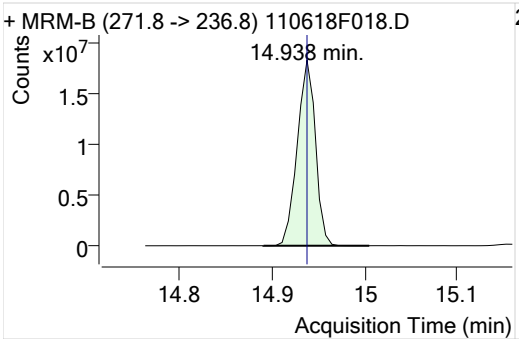


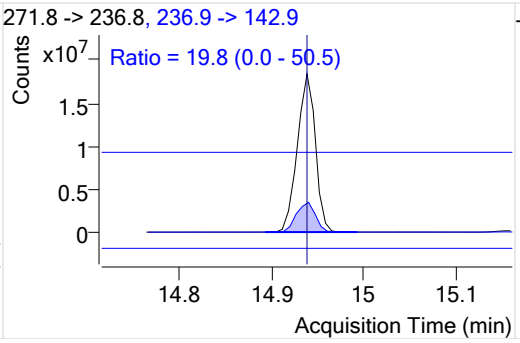
Mirex-13C10

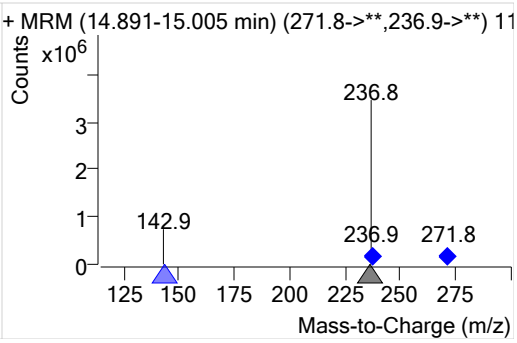


Quantitative Analysis Sample Report

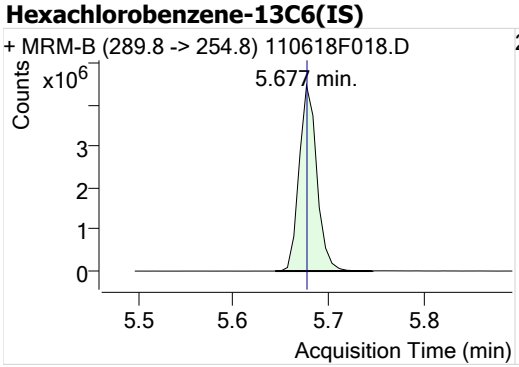
Mirex

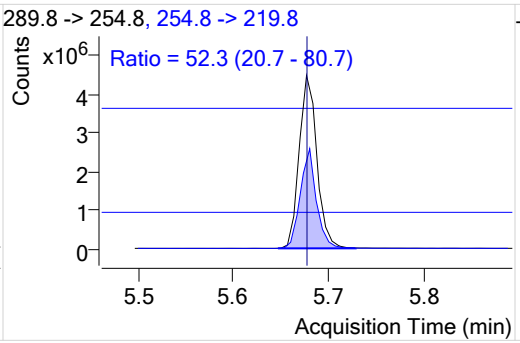


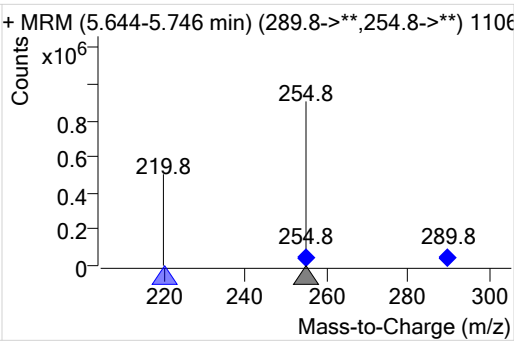




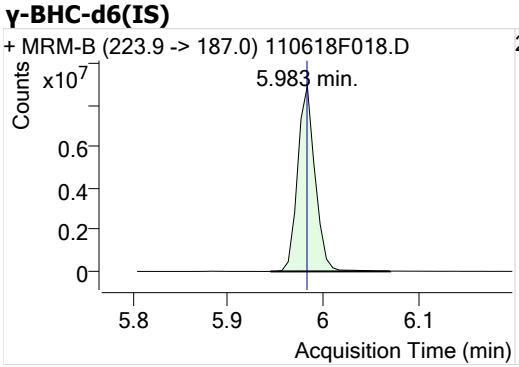
Hexachlorobenzene-13C6(IS)

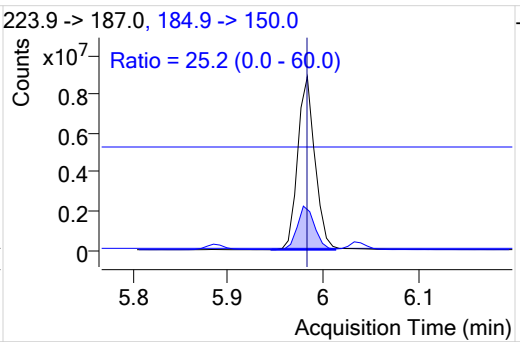


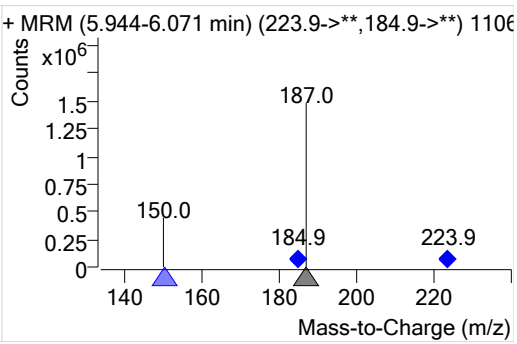




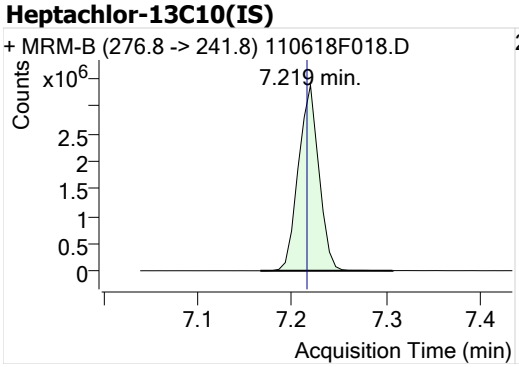
γ-BHC-d6(IS)

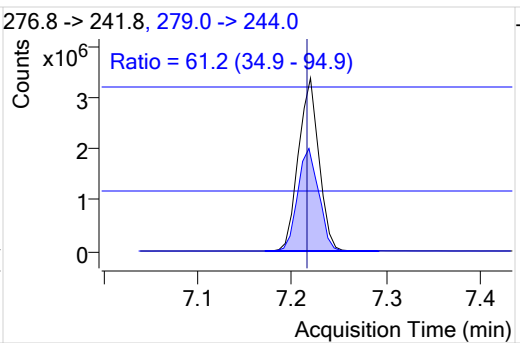


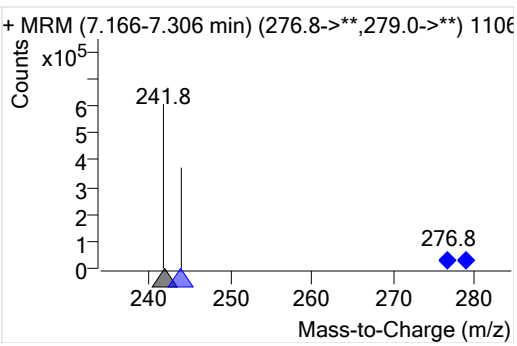




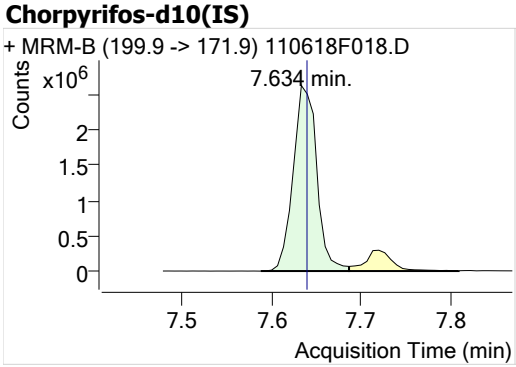
Heptachlor-13C10(IS)

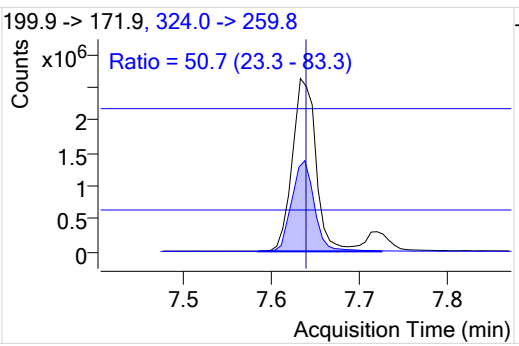


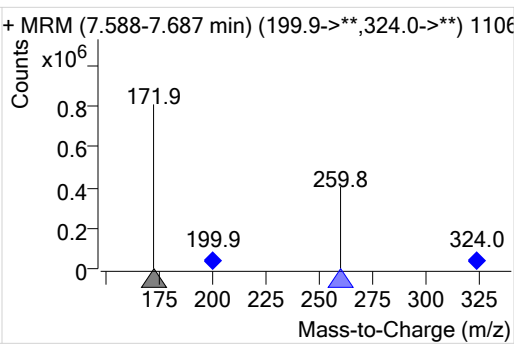




Chorpyrifos-d10(IS)

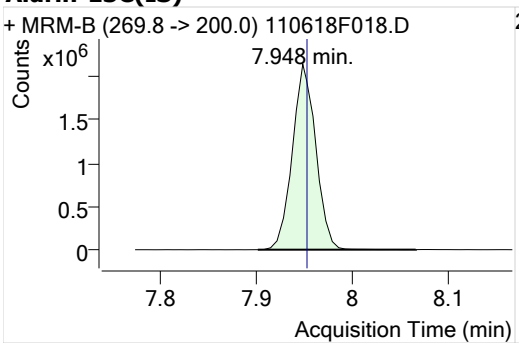


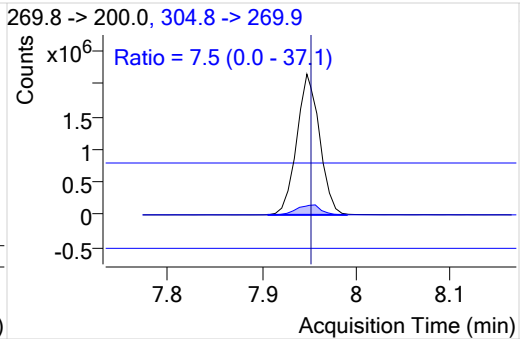


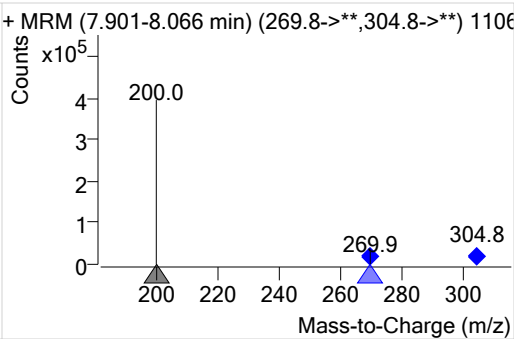


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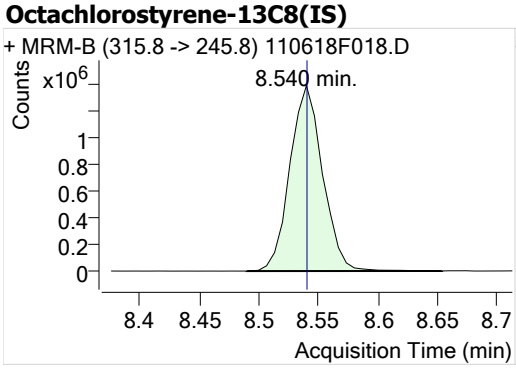
Aldrin-13C(IS)

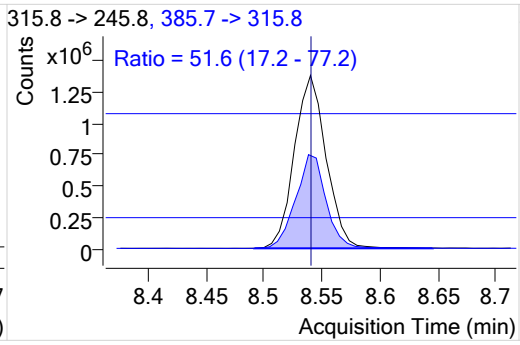


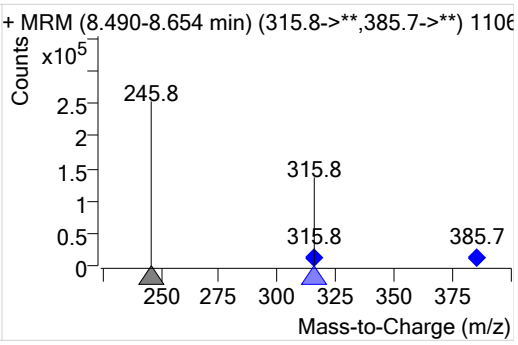




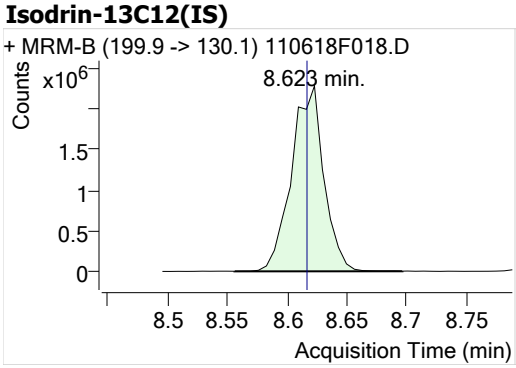
Octachlorostyrene-13C8(IS)

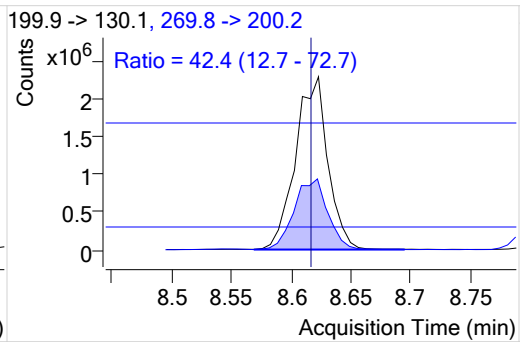


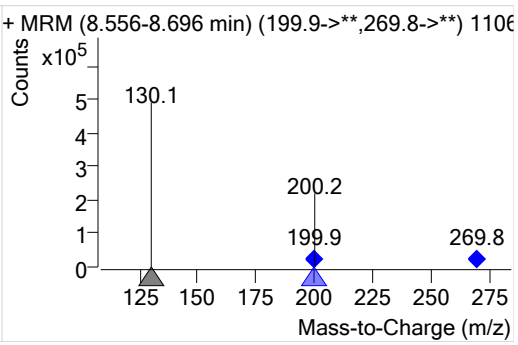




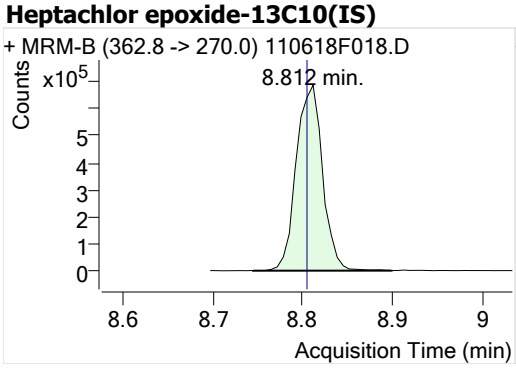
Isodrin-13C12(IS)

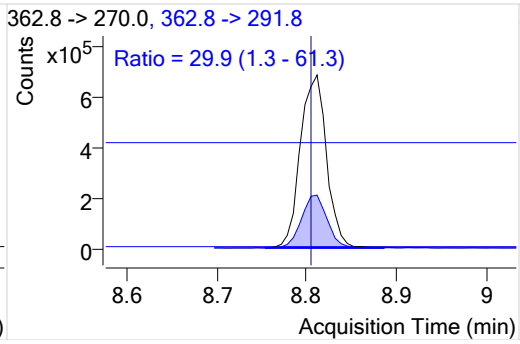


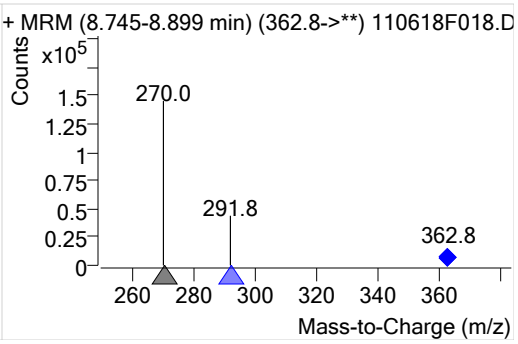




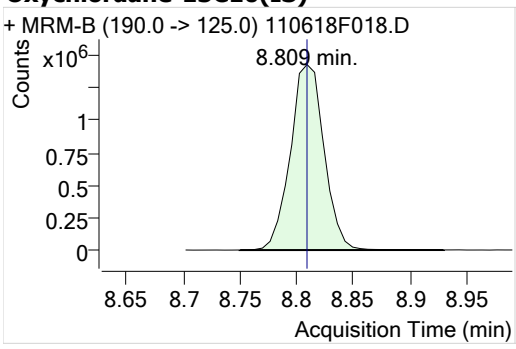
Heptachlor epoxide-13C10(IS)

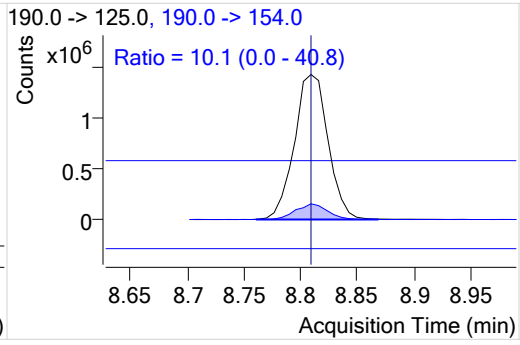


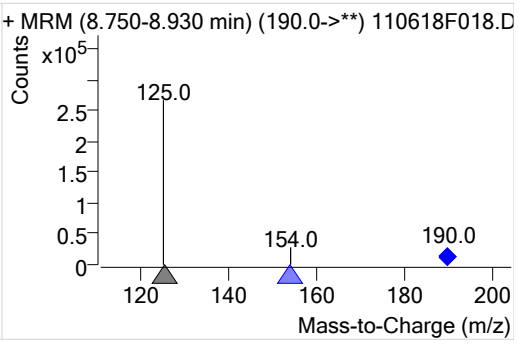




Oxychlordane-13C10(IS)

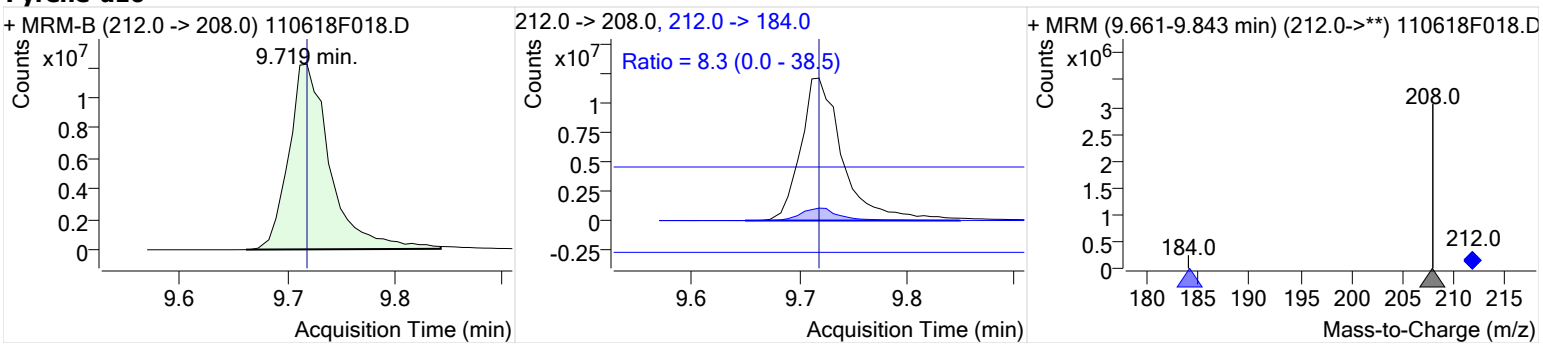




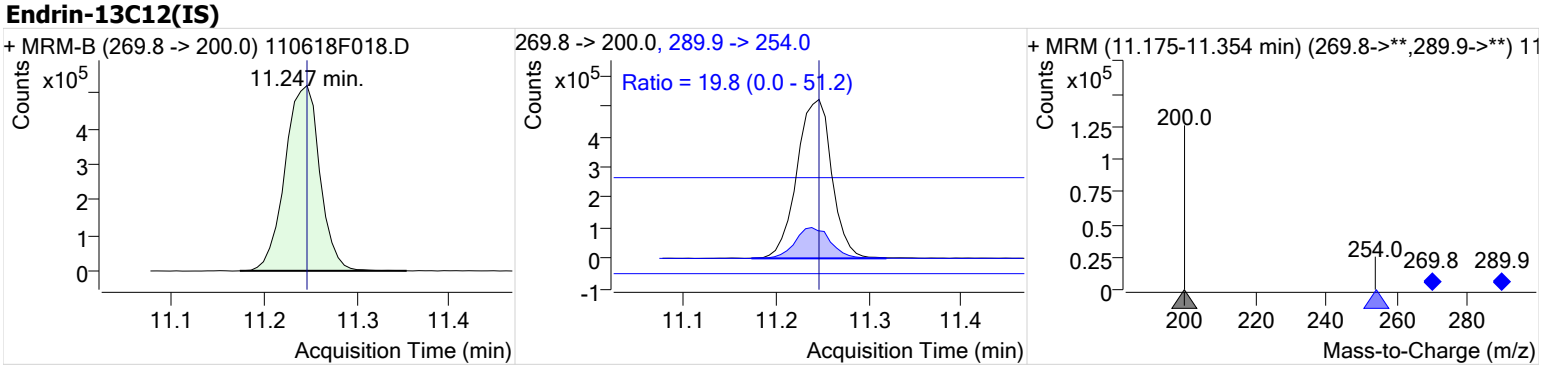


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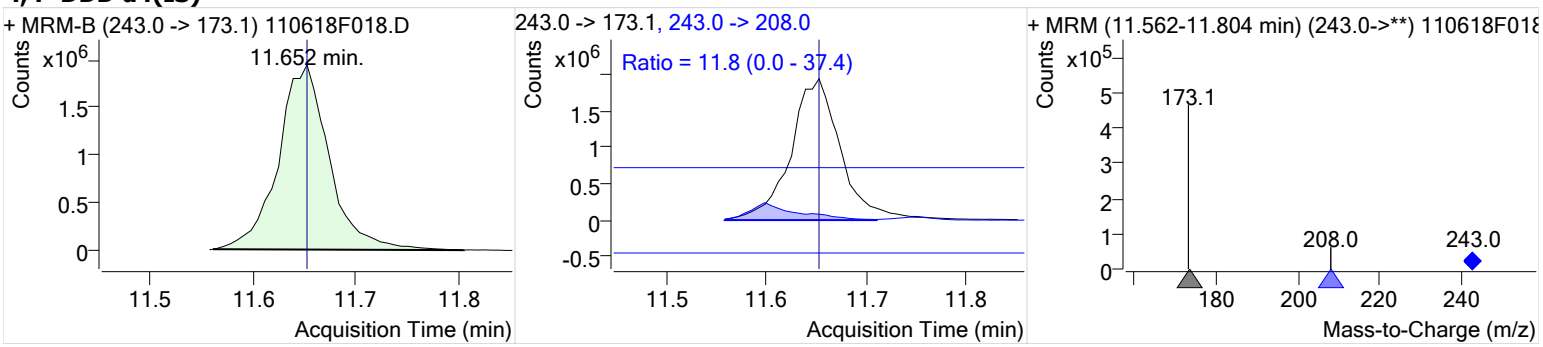
Pyrene-d10



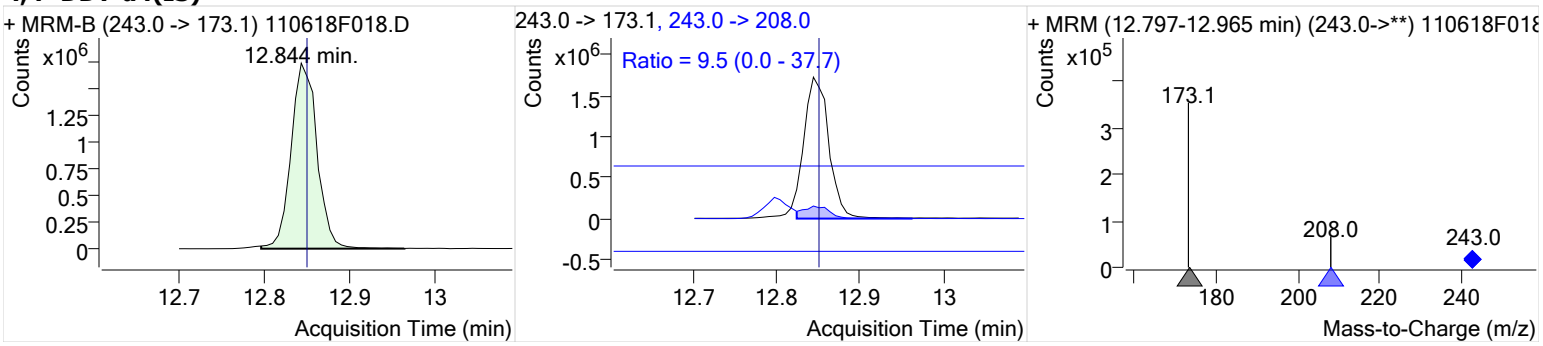
Endrin-13C12(IS)



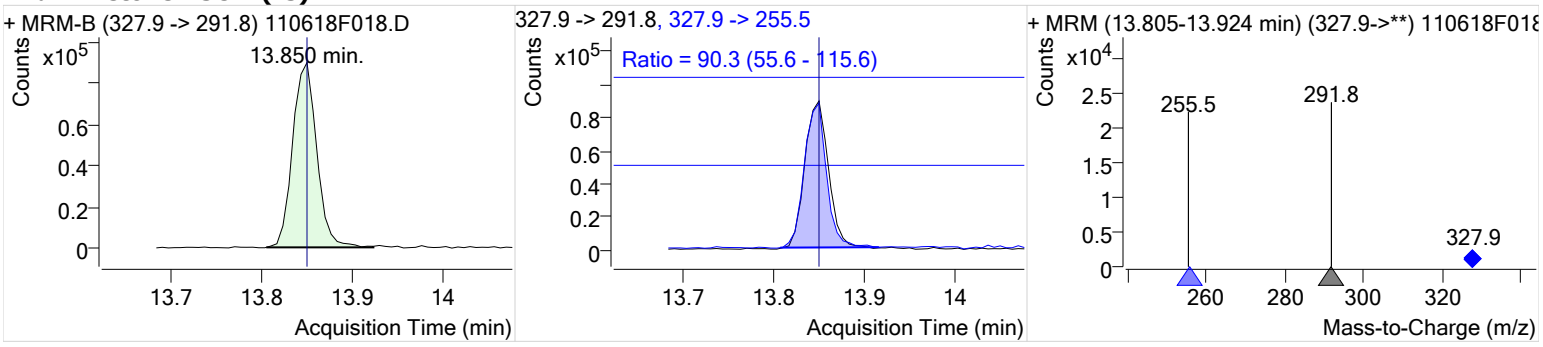
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

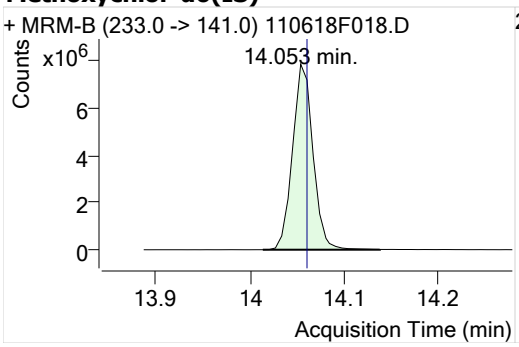


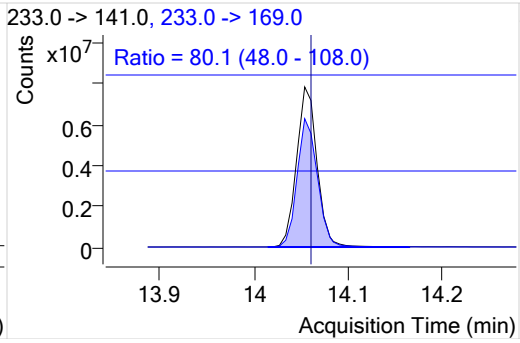
Endrin ketone-13C12(IS)

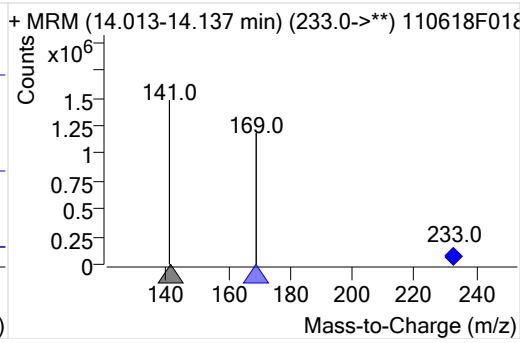


Quantitative Analysis Sample Report

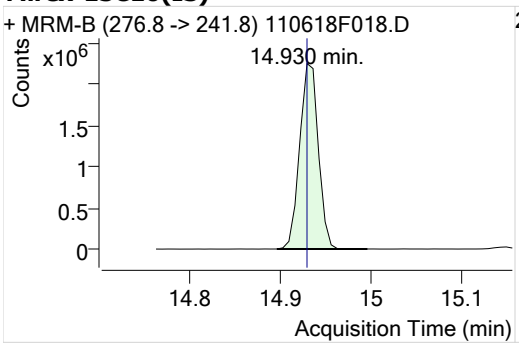
Methoxychlor-d6(IS)

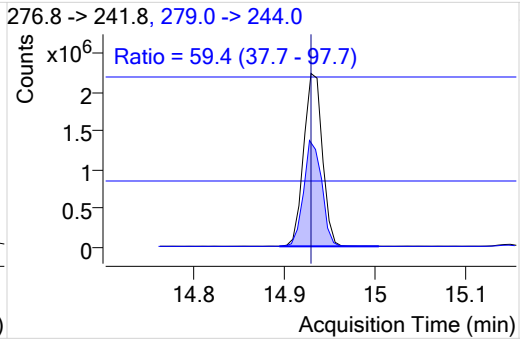


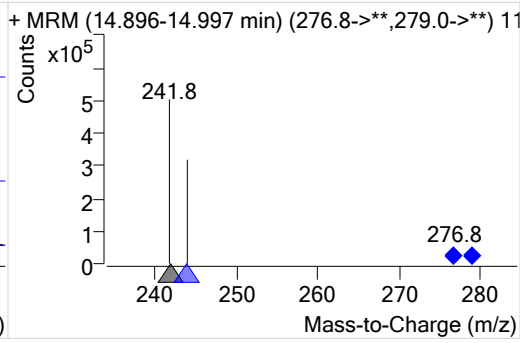




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F019.D	**Vial**	10
Acq. Date-Time	11/6/2018 7:26:24 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 60ng/mL SVM59-48H	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	6823062	20.000 ng/ml	0.002
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	12203305	20.000 ng/ml	0.001
Heptachlor-13C10(IS)	7.216	276.8 -> 241.8	6088749	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	6156374	20.000 ng/ml	0.001
Aldrin-13C(IS)	7.949	269.8 -> 200.0	4583028	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	3150956	20.000 ng/ml	0.003
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4682605	20.000 ng/ml	0.000
Heptachlor epoxide-13C10(IS)	8.812	362.8 -> 270.0	1552444	20.000 ng/ml	0.007
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	3497995	20.000 ng/ml	0.000
Pyrene-d10	9.712	212.0 -> 208.0	40011692	100.000 ng/ml	0.003
Endrin-13C12(IS)	11.247	269.8 -> 200.0	1608376	20.000 ng/ml	0.004
4,4'-DDD d4(IS)	11.646	243.0 -> 173.1	8223845	5.000 ng/ml	0.030
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	4659813	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.844	327.9 -> 291.8	198564	20.000 ng/ml	0.007
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	14402039	20.000 ng/ml	0.007
Mirex-13C10(IS)	14.937	276.8 -> 241.8	4098490	5.000 ng/ml	0.003

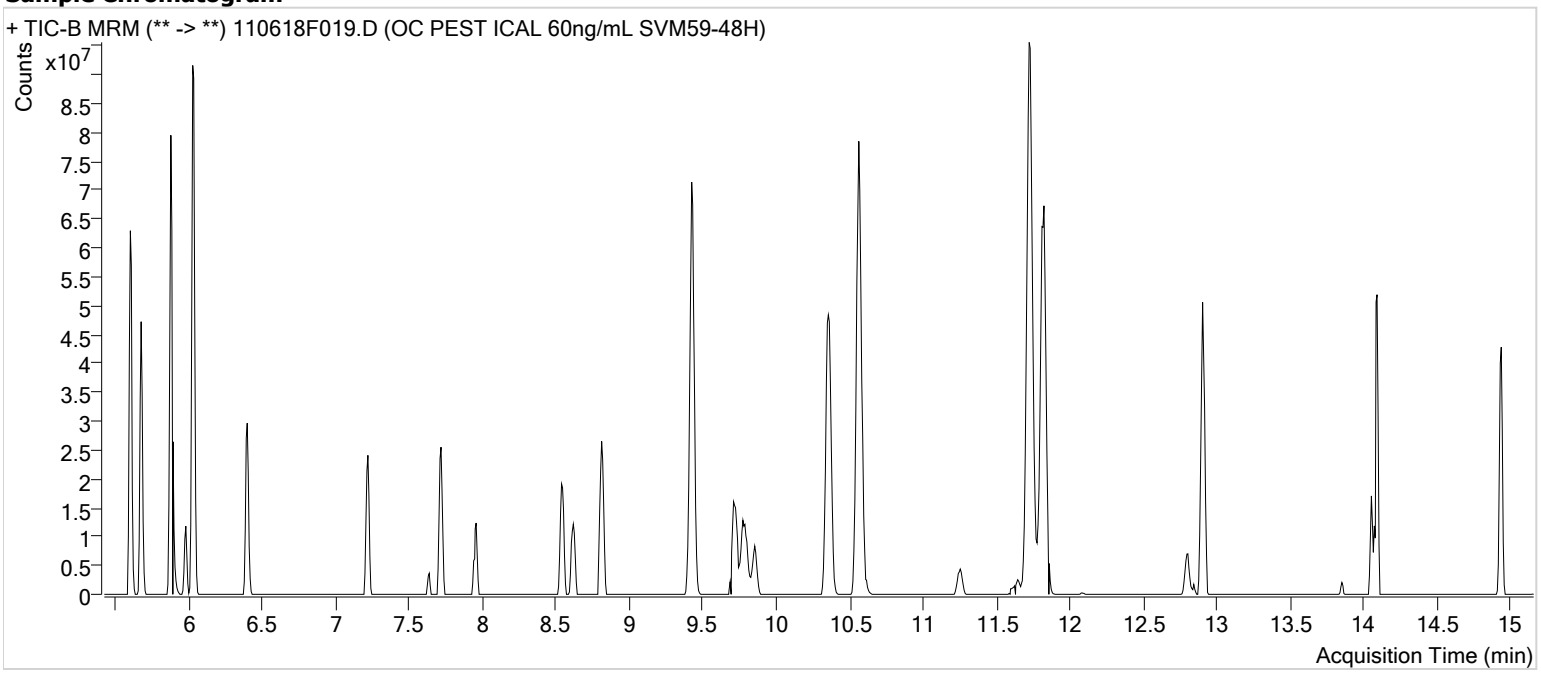
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	6823062	22.363 ng/ml	
		Spiked Amount =	20.0	Recovery =	*111.8 %*
γ-BHC-d6	5.983	223.9 -> 187.0	12203305	20.848 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.2 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	6088749	20.660 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.3 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	6156374	20.374 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.9 %*
Aldrin-13C	7.952	269.8 -> 200.0	4583028	21.914 ng/ml	
		Spiked Amount =	20.0	Recovery =	*109.6 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3150956	20.538 ng/ml	
		Spiked Amount =	20.0	Recovery =	*102.7 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4682605	20.254 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.3 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1552444	20.402 ng/ml	
		Spiked Amount =	20.0	Recovery =	*102.0 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3497995	21.759 ng/ml	
		Spiked Amount =	20.0	Recovery =	*108.8 %*
Endrin-13C12	11.247	269.8 -> 200.0	1608376	20.367 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.8 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	8223845	5.045 ng/ml	
		Spiked Amount =	5.0	Recovery =	*100.9 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	4659813	5.011 ng/ml	
		Spiked Amount =	5.0	Recovery =	*100.2 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	198564	20.007 ng/ml	
		Spiked Amount =	20.0	Recovery =	*100.0 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	14402039	20.321 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.6 %*
Mirex-13C10	14.930	276.8 -> 241.8	4098490	5.629 ng/ml	
		Spiked Amount =	5.0	Recovery =	*112.6 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	51022059	59.532	ng/ml	96
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	31514405	53.226	ng/ml	94
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	63843004	56.468	ng/ml	98
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.033	181.1 -> 145.1	80474318	59.235	ng/ml	97
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	30290609	59.536	ng/ml	90
Heptachlor	Heptachlor-13C10(IS)	7.226	271.7 -> 236.9	19535889	57.454	ng/ml	98
Chorpyrifos	Chorpyrifos-d10(IS)	7.717	196.9 -> 169.0	23747897	56.541	ng/ml	97
Aldrin	Aldrin-13C(IS)	7.962	254.9 -> 220.0	8508630	58.144	ng/ml	85
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.540	342.8 -> 307.8	25325728	63.123	ng/ml	99
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	14473650	60.605	ng/ml	95
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.814	352.8 -> 262.9	5430345	64.296	ng/ml	99
Oxychlordane	Oxychlordane-13C10(IS)	8.817	114.9 -> 51.1	28048497	57.689	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	9490972	59.022	ng/ml	95
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	80222817	60.139	ng/ml	99
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.775	271.8 -> 236.9	22854560	58.529	ng/ml	98
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	5420024	64.154	ng/ml	100
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	15927791	59.911	ng/ml	100
4,4' -DDE	4,4'-DDD d4(IS)	10.365	246.0 -> 176.2	77988777	64.970	ng/ml	99
2,4'-DDD	4,4'-DDD d4(IS)	10.567	235.0 -> 165.1	111215794	64.112	ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.583	262.9 -> 193.0	7104648	62.609	ng/ml	95
Endosulfan II	Endrin-13C12(IS)	11.257	206.9 -> 172.0	947344	61.705	ng/ml	94
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	6621540	63.081	ng/ml	97
2,4'-DDT	4,4'-DDT-d4(IS)	11.820	235.0 -> 165.1	112266542 ***m***	59.197	ng/ml	95
cis-Nonachlor	Oxychlordane-13C10(IS)	11.749	271.8 -> 236.9	6139526	59.943	ng/ml	94
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	155684644 ***m***	59.648	ng/ml	97
Endrin aldehyde	Endrin-13C12(IS)	12.084	249.9 -> 214.9	1454985	63.353	ng/ml	94
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	9399704	58.412	ng/ml	94
4,4'-DDT	4,4'-DDT-d4(IS)	12.908	235.0 -> 165.1	59548947	57.901	ng/ml	99
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	3784574	58.056	ng/ml	98
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	49379643	59.133	ng/ml	94
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	45616051	60.163	ng/ml	100

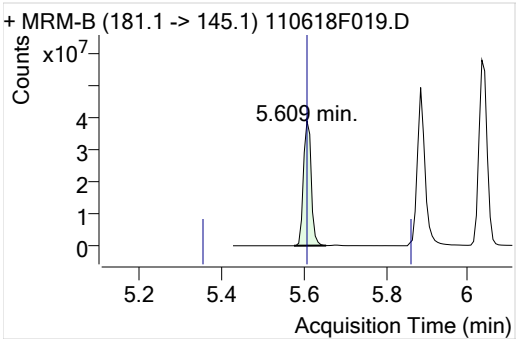
(m) = manual integration ND = Not Detected NC = Not Calculated

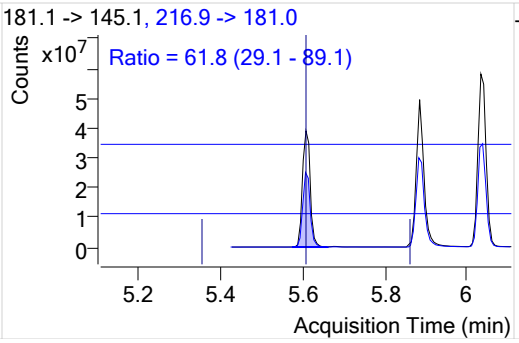
Sample Chromatogram

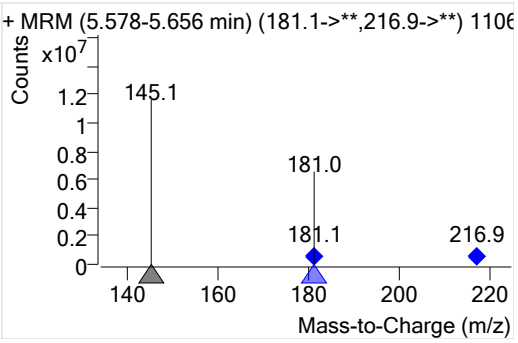


Quantitative Analysis Sample Report

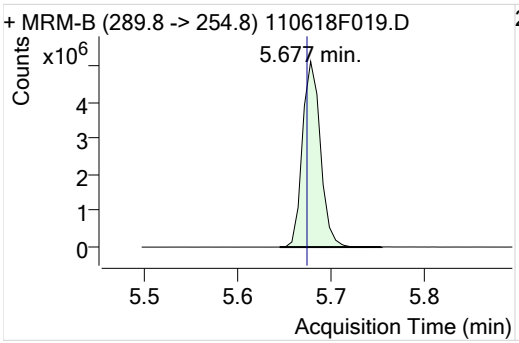
α-BHC

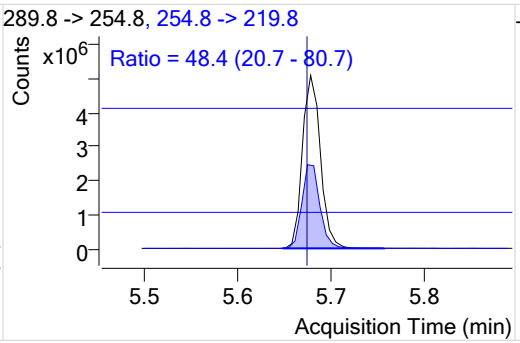


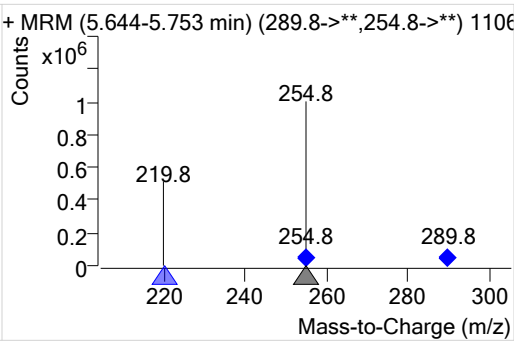




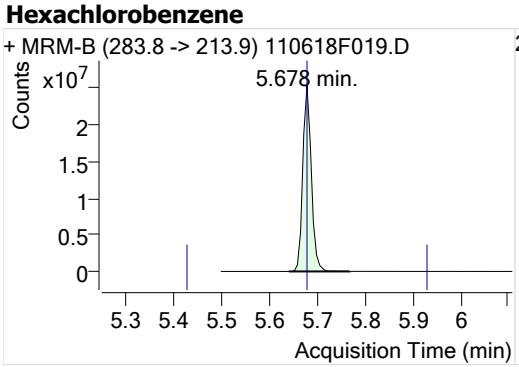
Hexachlorobenzene-13C6

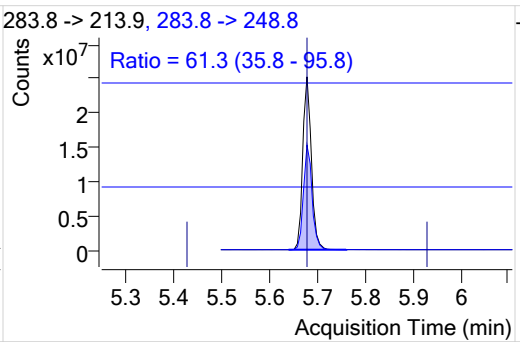


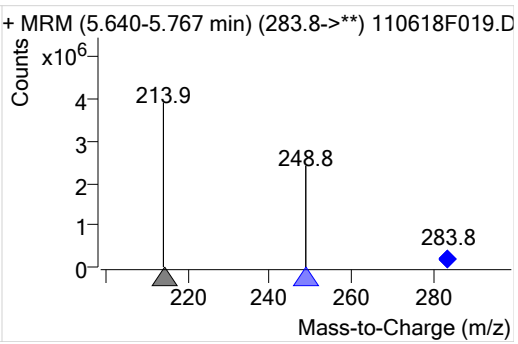




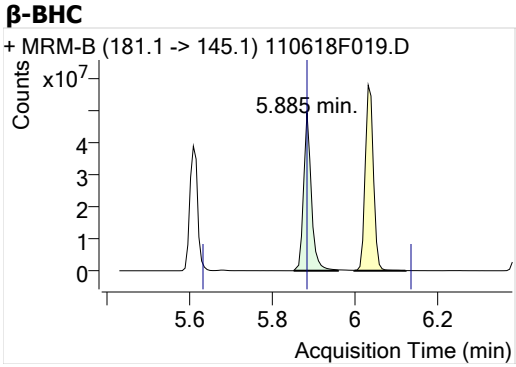
Hexachlorobenzene

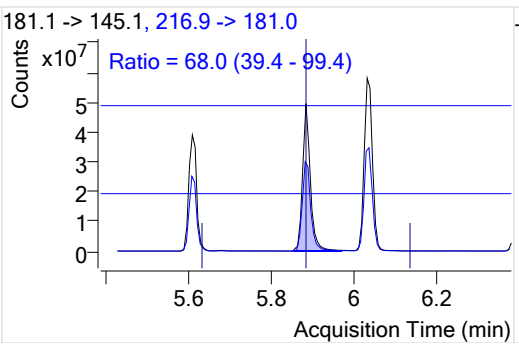


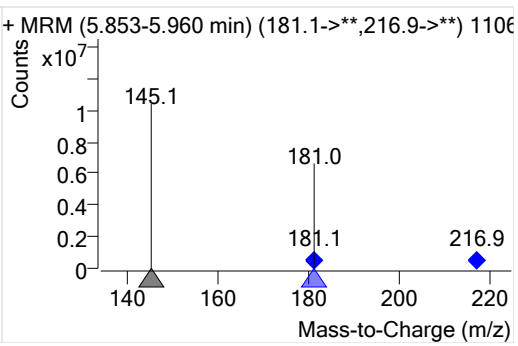




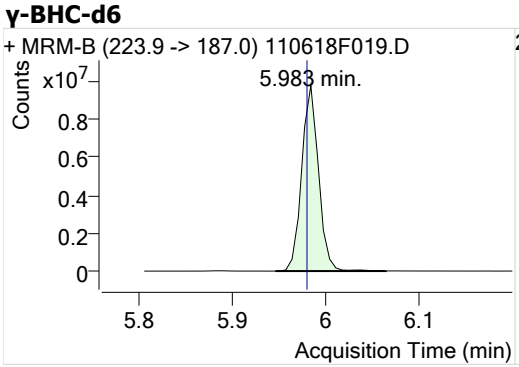
β-BHC

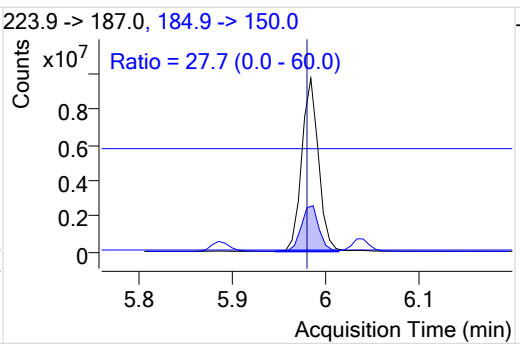


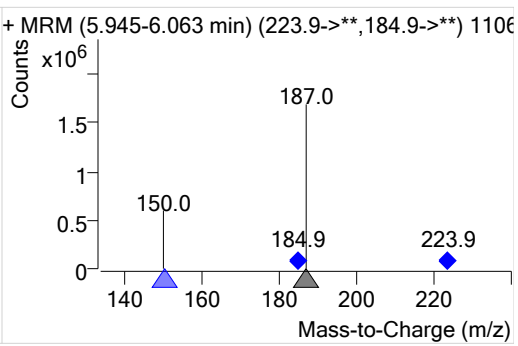




γ-BHC-d6

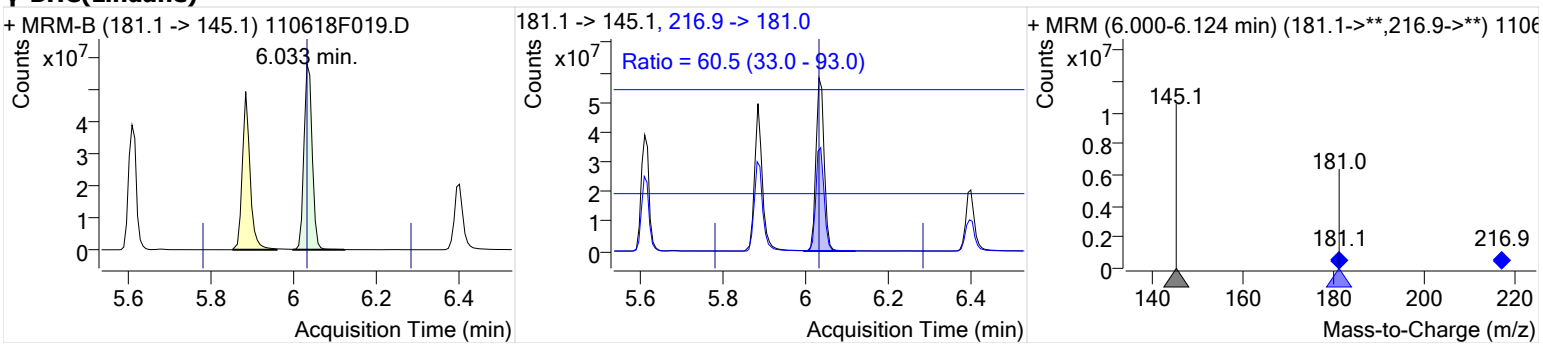




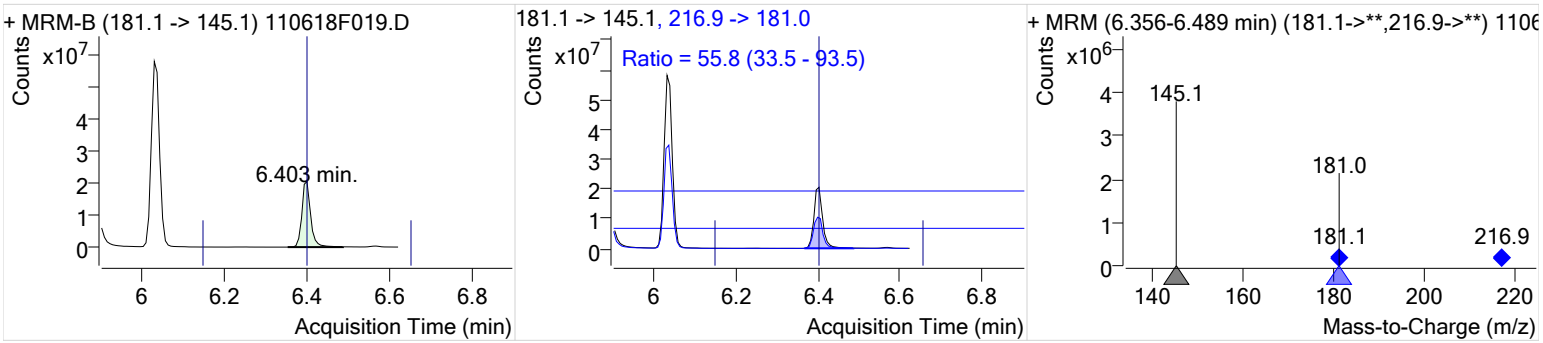


Quantitative Analysis Sample Report

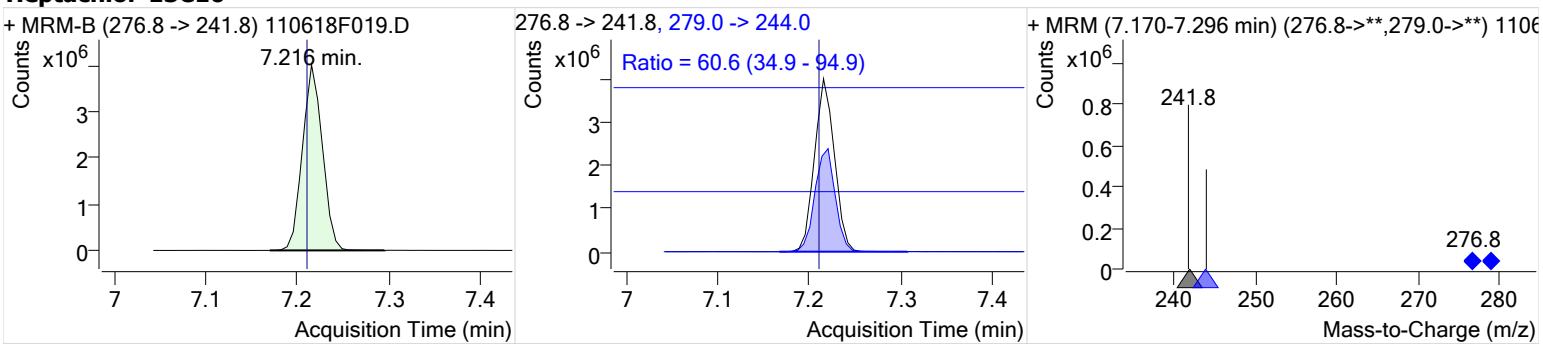
γ-BHC(Lindane)



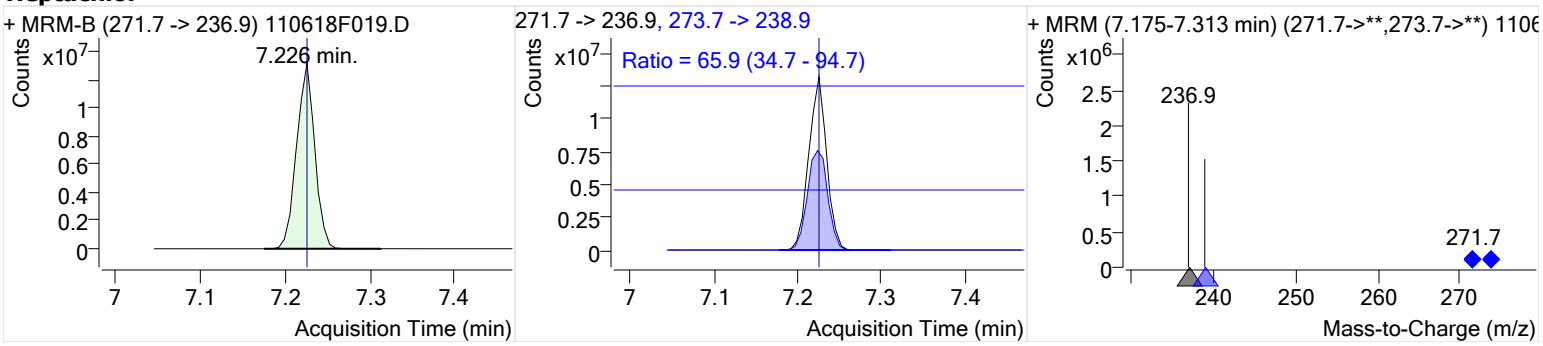
δ-BHC



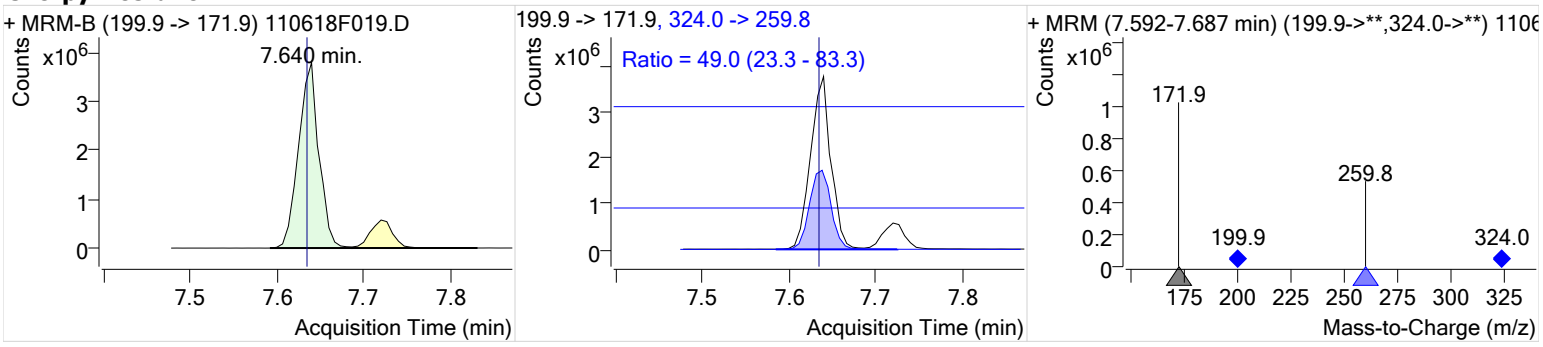
Heptachlor-13C10



Heptachlor

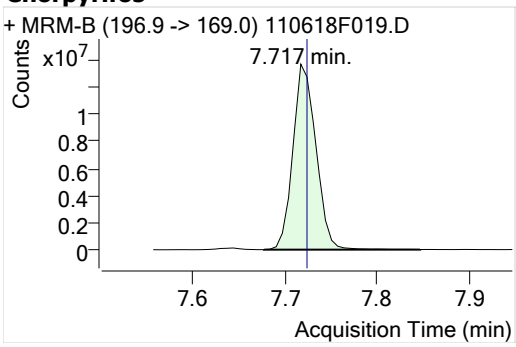


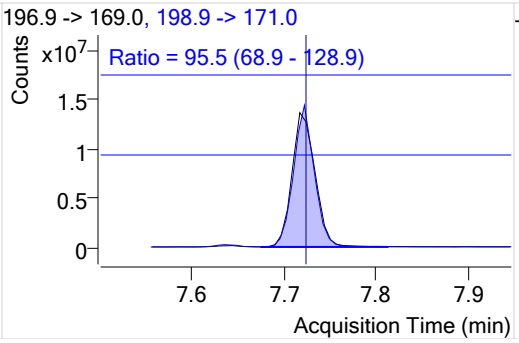
Chorpyrifos-d10

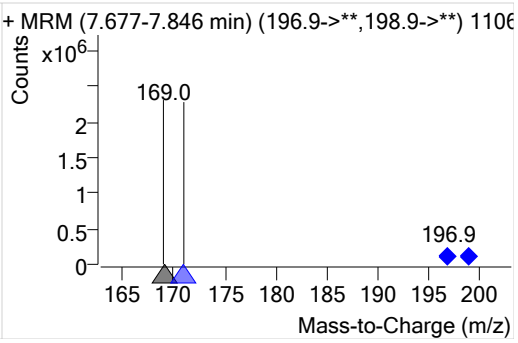


Quantitative Analysis Sample Report

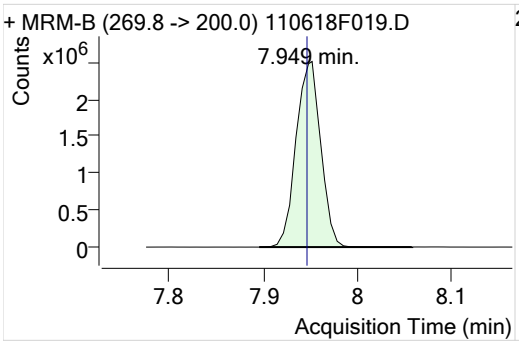
Chorpyrifos

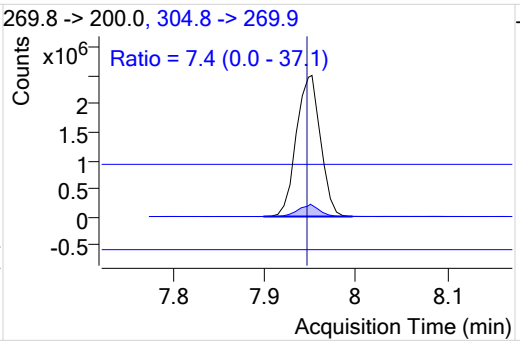


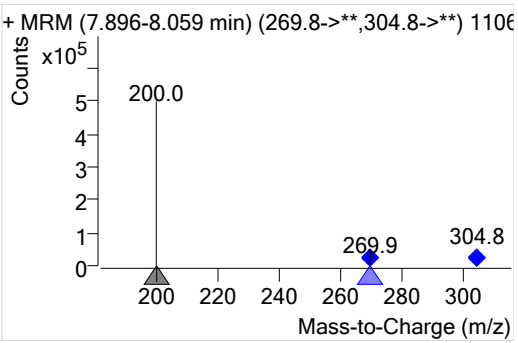




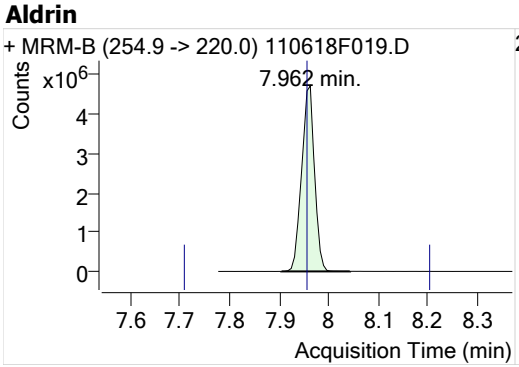
Aldrin-13C

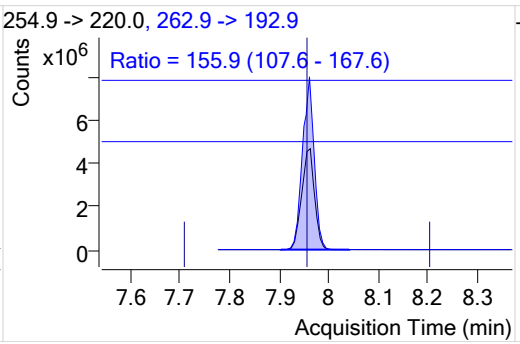


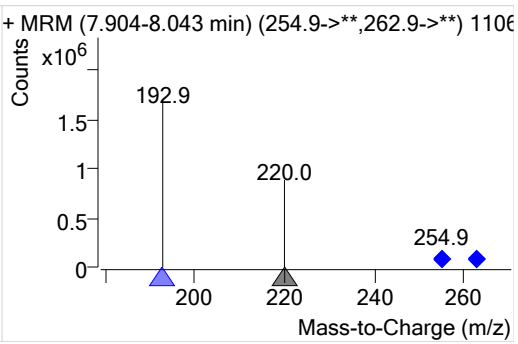




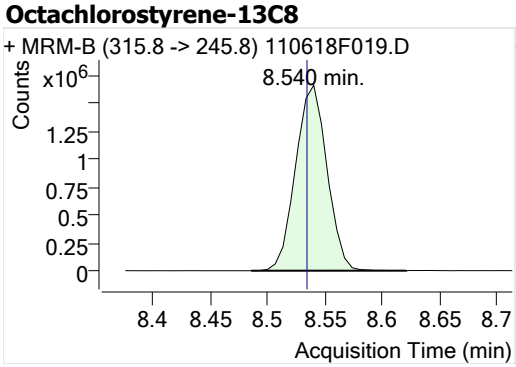
Aldrin

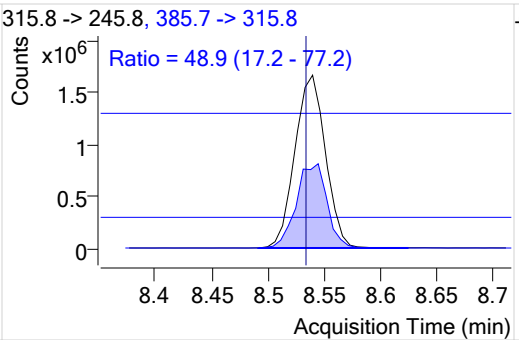


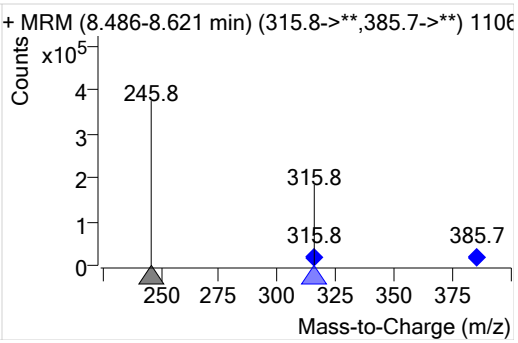




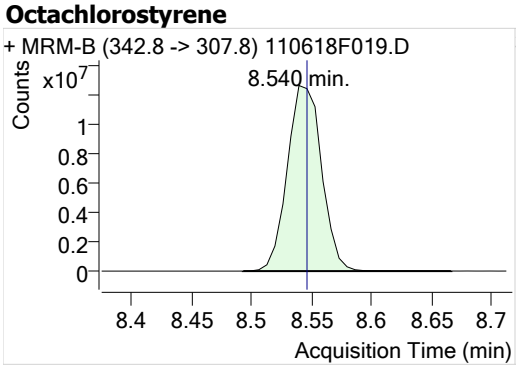
Octachlorostyrene-13C8

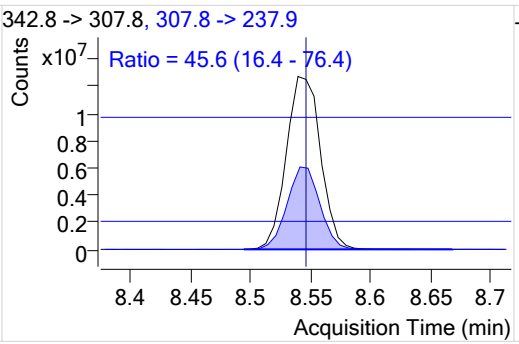


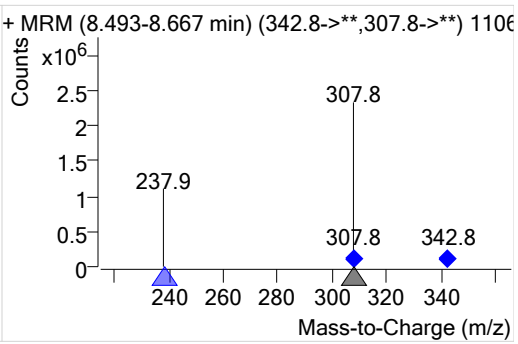




Octachlorostyrene

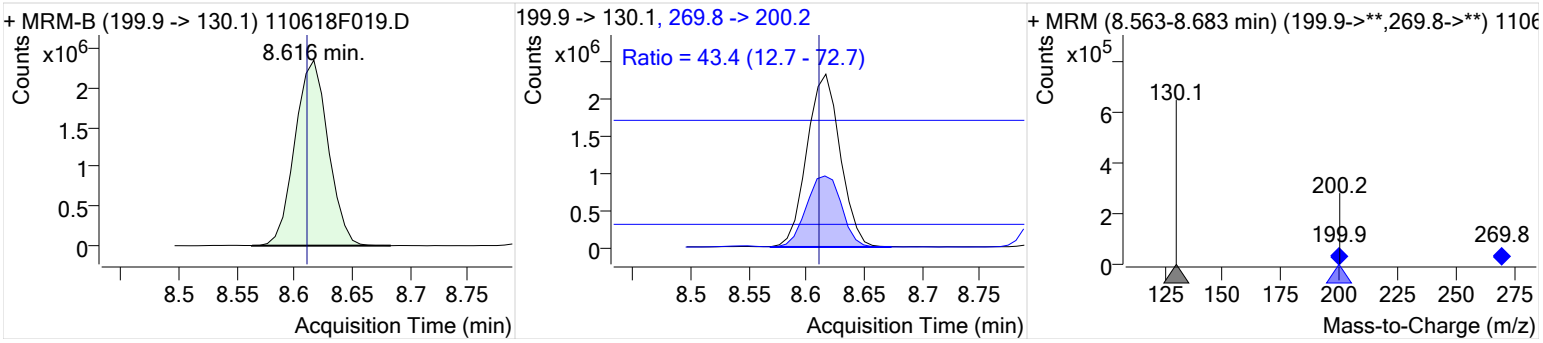




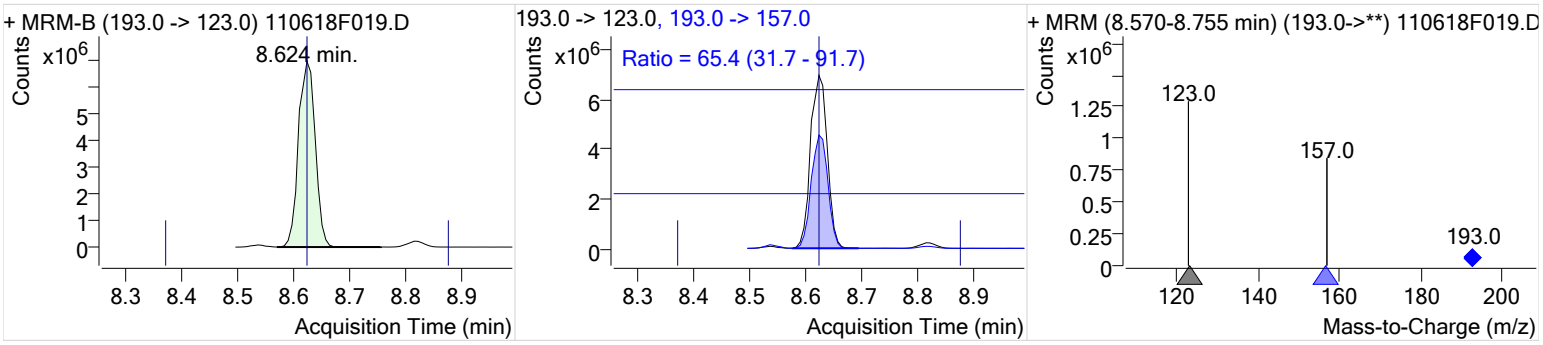


Quantitative Analysis Sample Report

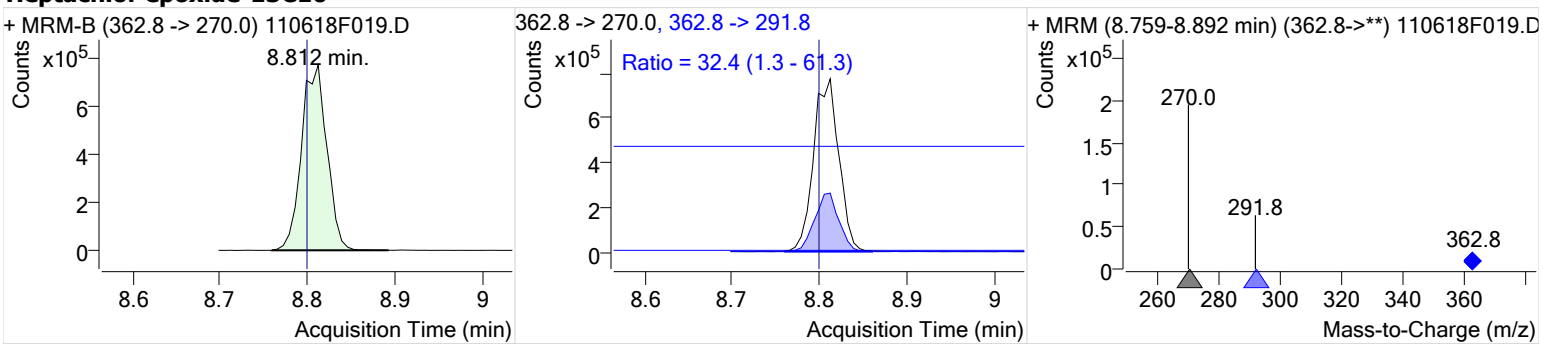
Isodrin-13C12



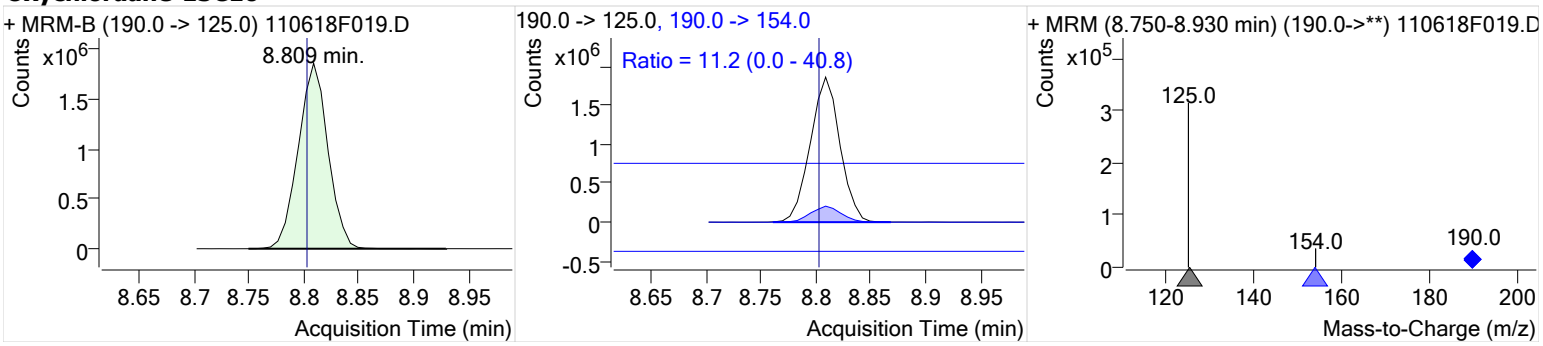
Isodrin



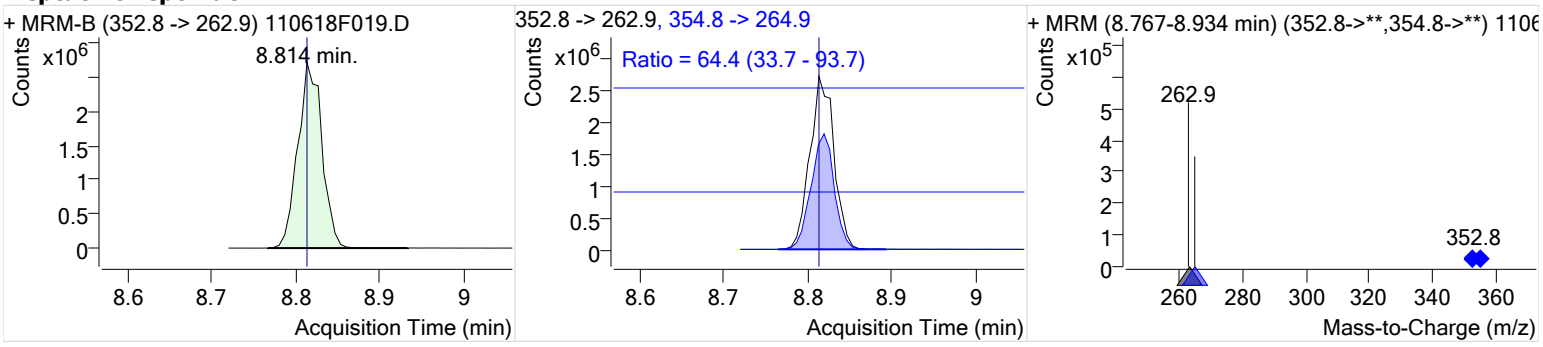
Heptachlor epoxide-13C10



Oxychlordane-13C10

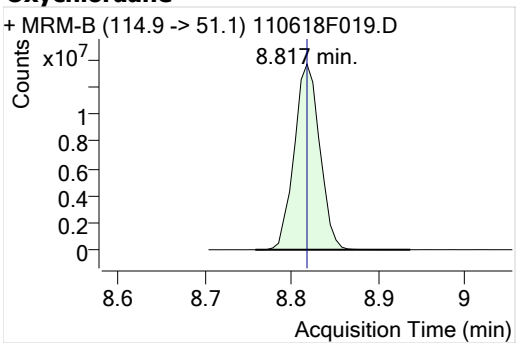


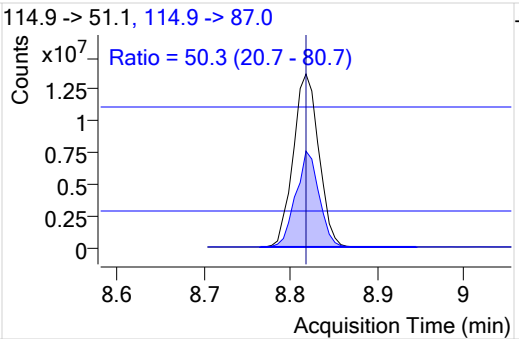
Heptachlor epoxide

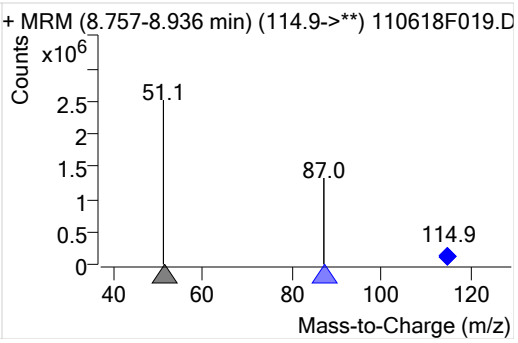


Quantitative Analysis Sample Report

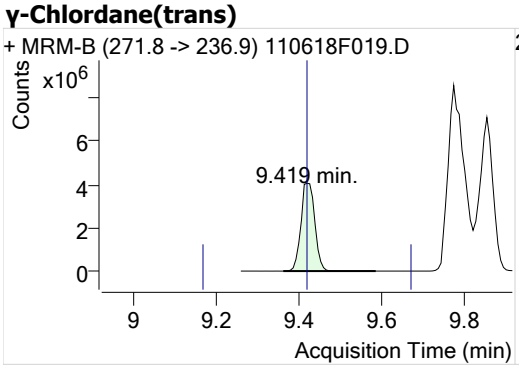
Oxychlordane

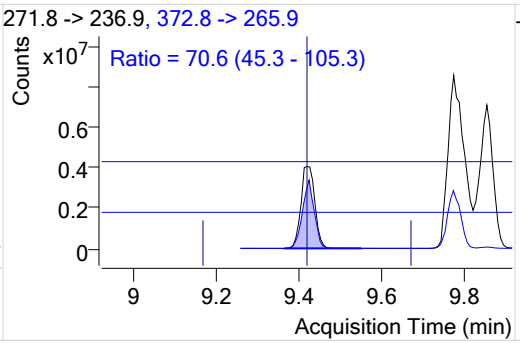


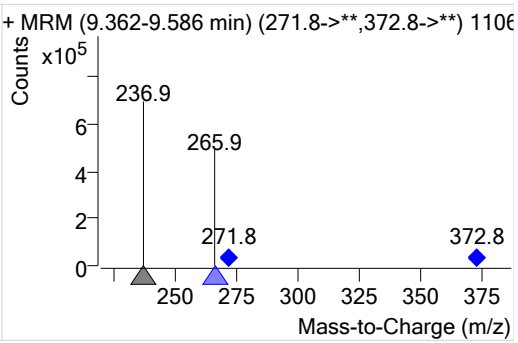




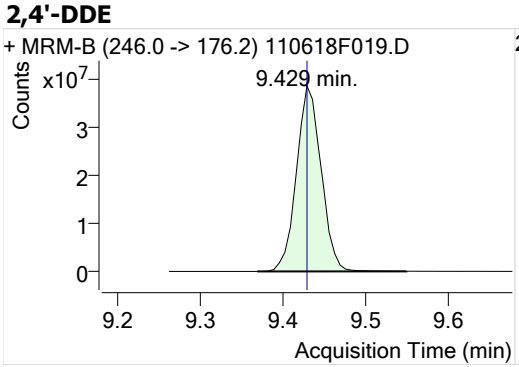
γ-Chlordane(trans)

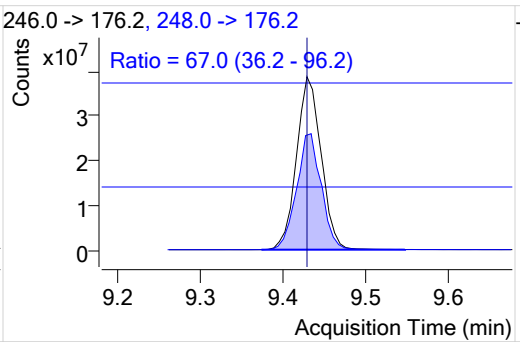


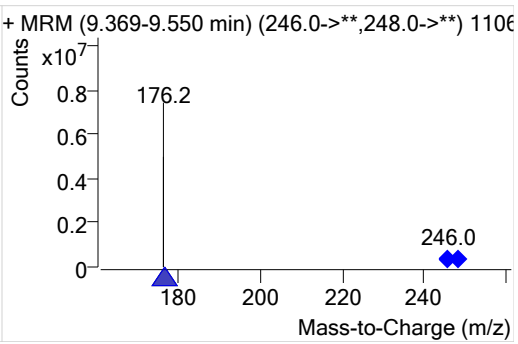




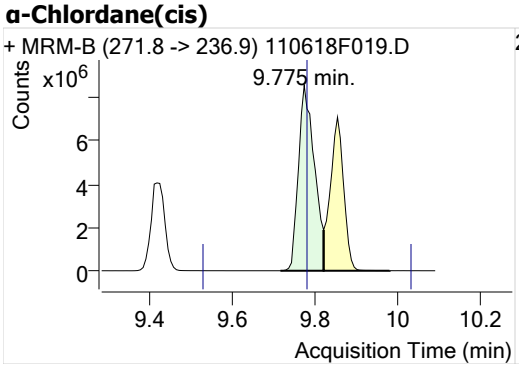
2,4'-DDE

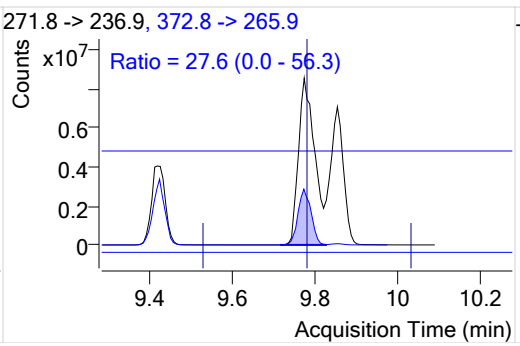


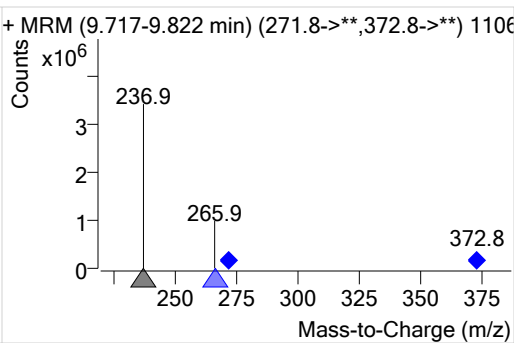




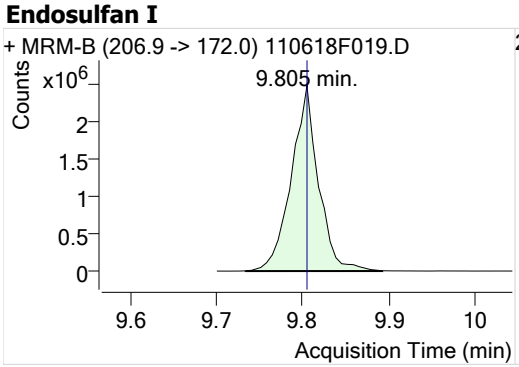
α-Chlordane(cis)

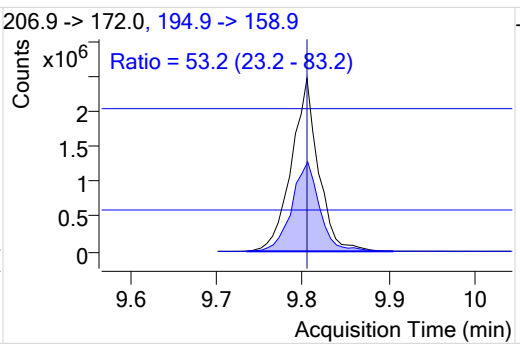


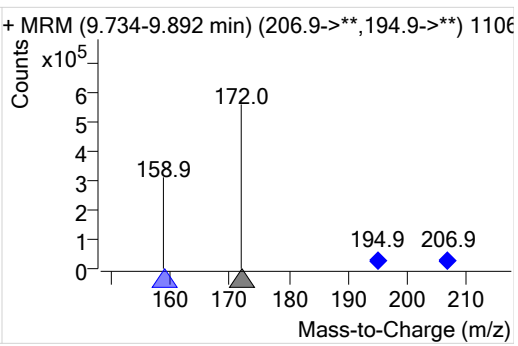




Endosulfan I

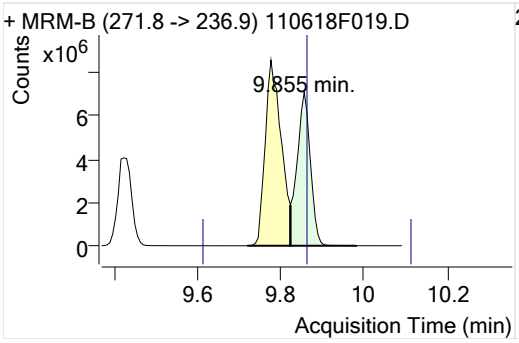


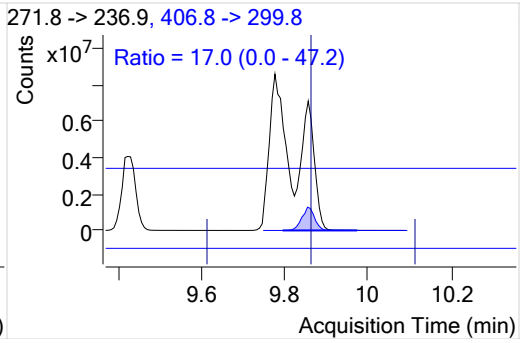


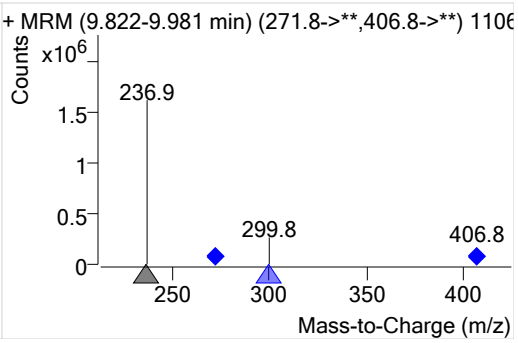


Quantitative Analysis Sample Report

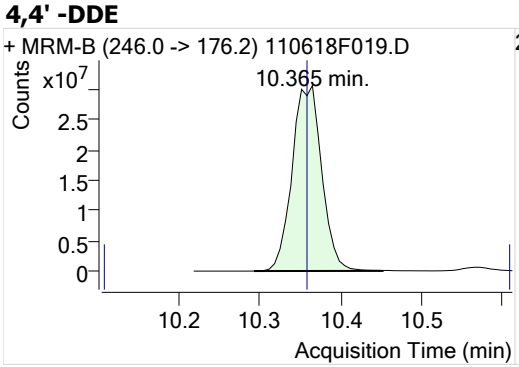
trans-Nanochlor

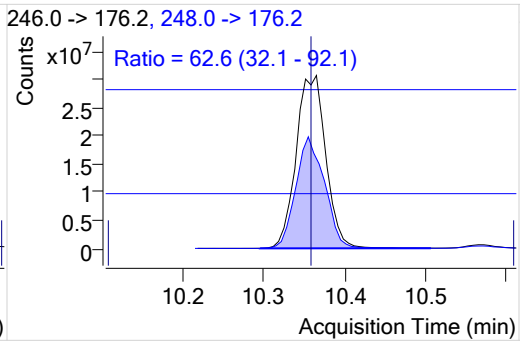


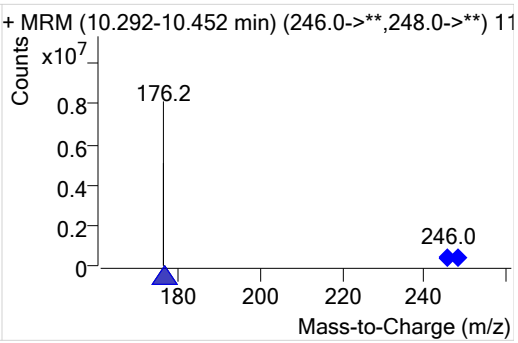




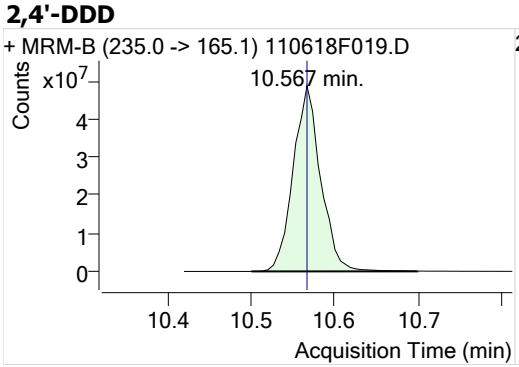
4,4' -DDE

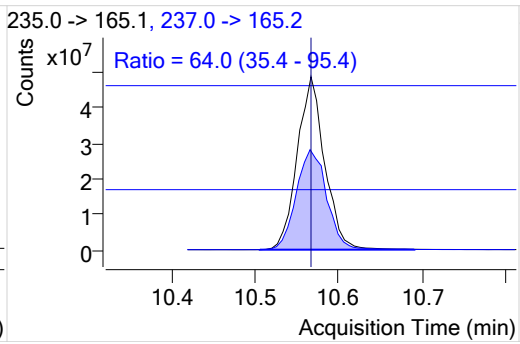


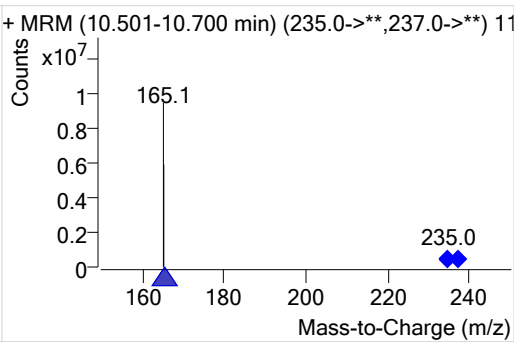




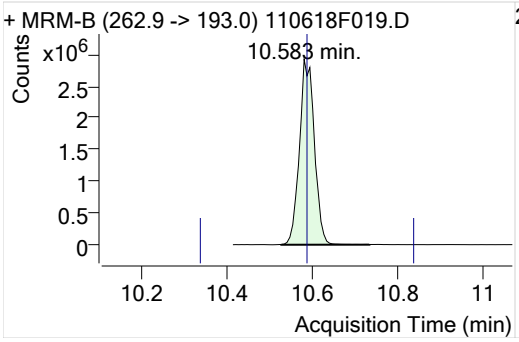
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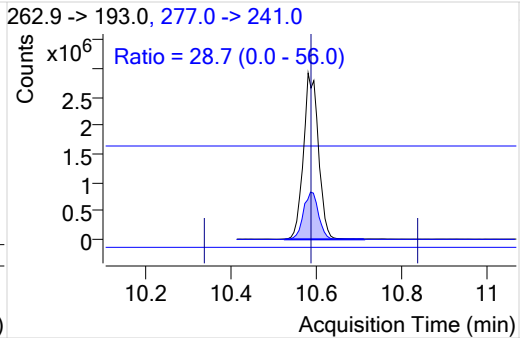


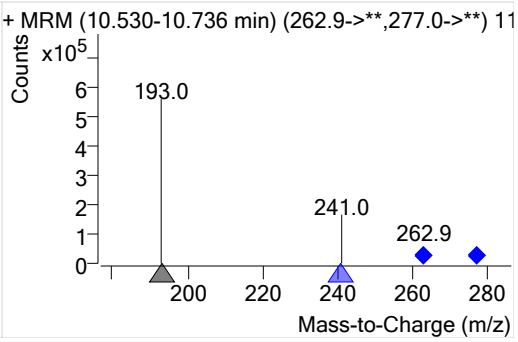




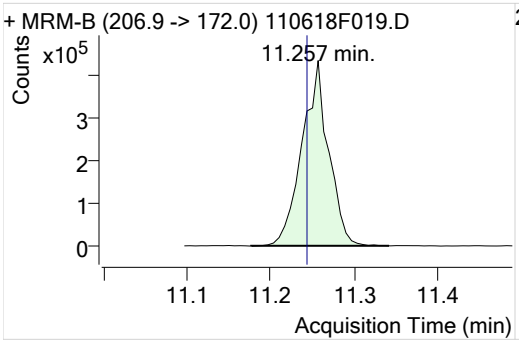
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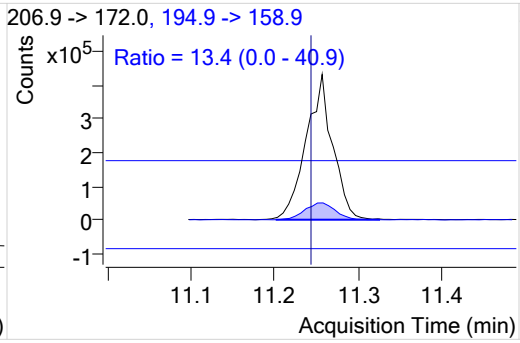


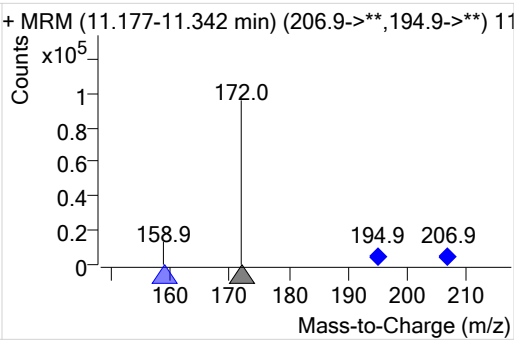




Endosulfan II

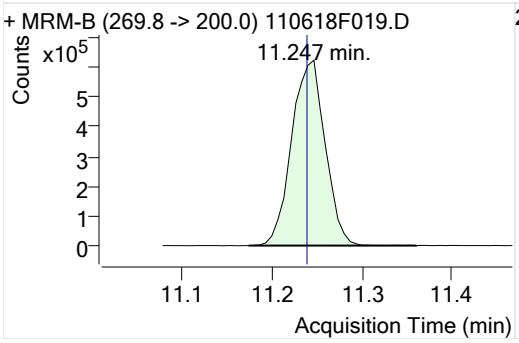


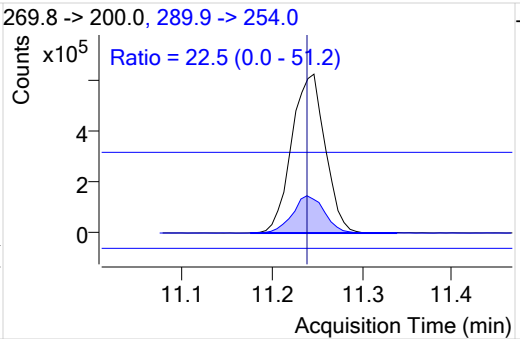


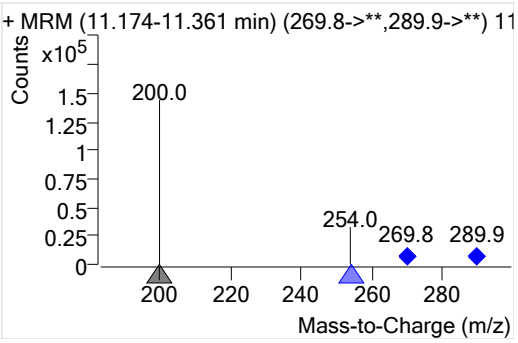


Quantitative Analysis Sample Report

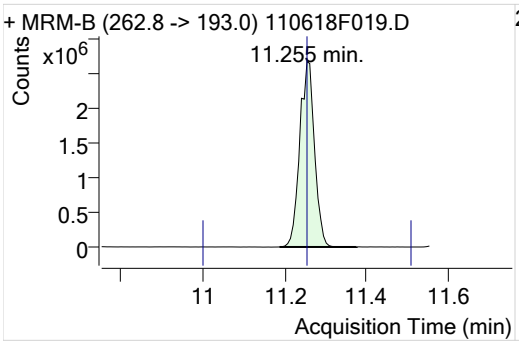
Endrin-13C12

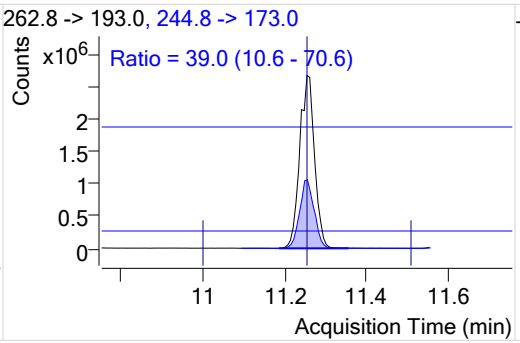


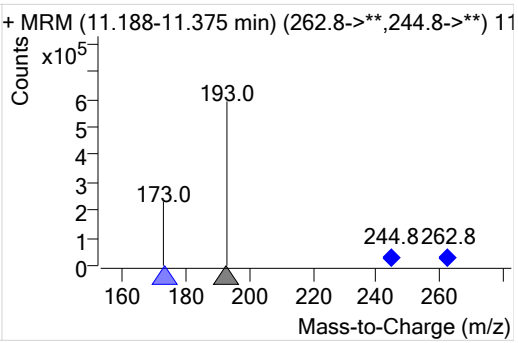




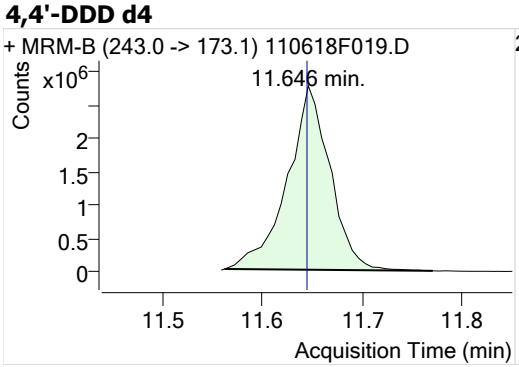
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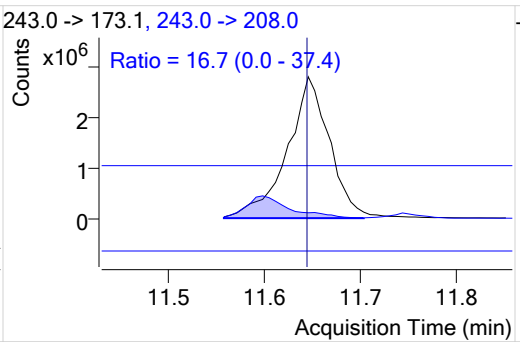


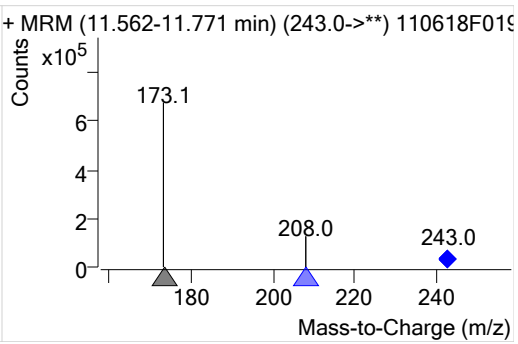




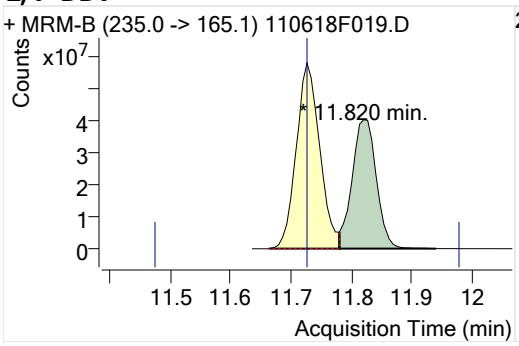
4,4'-DDD d4

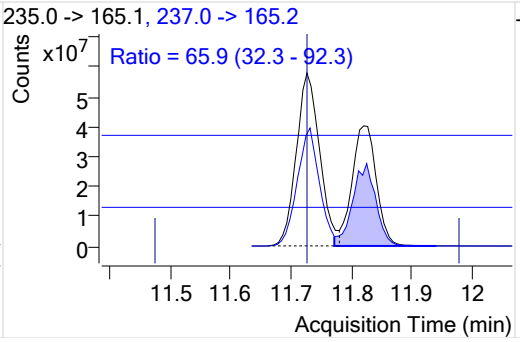


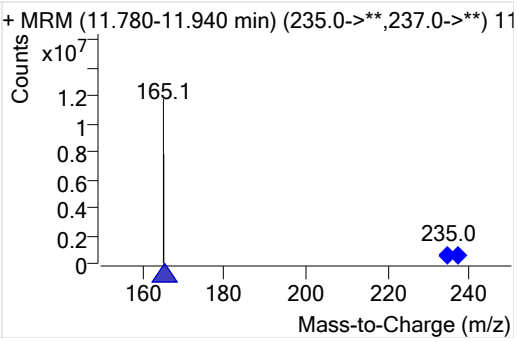




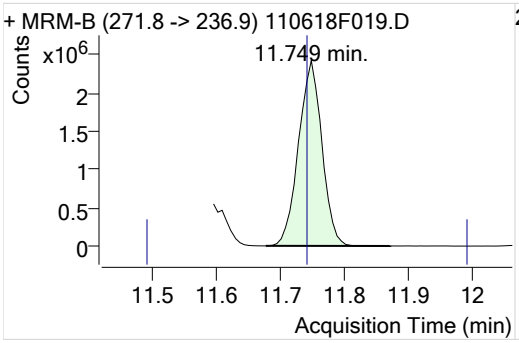
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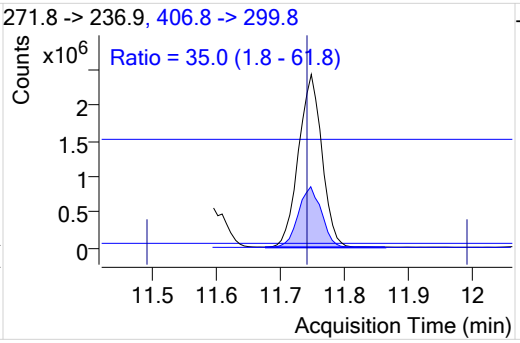


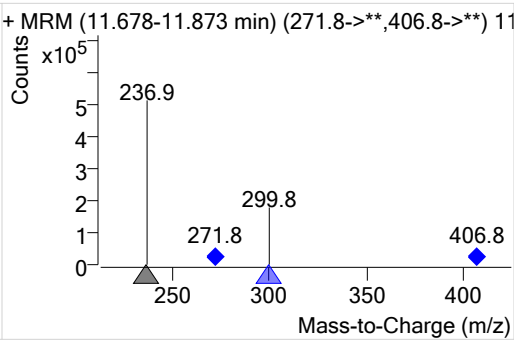




cis-Nonachlor

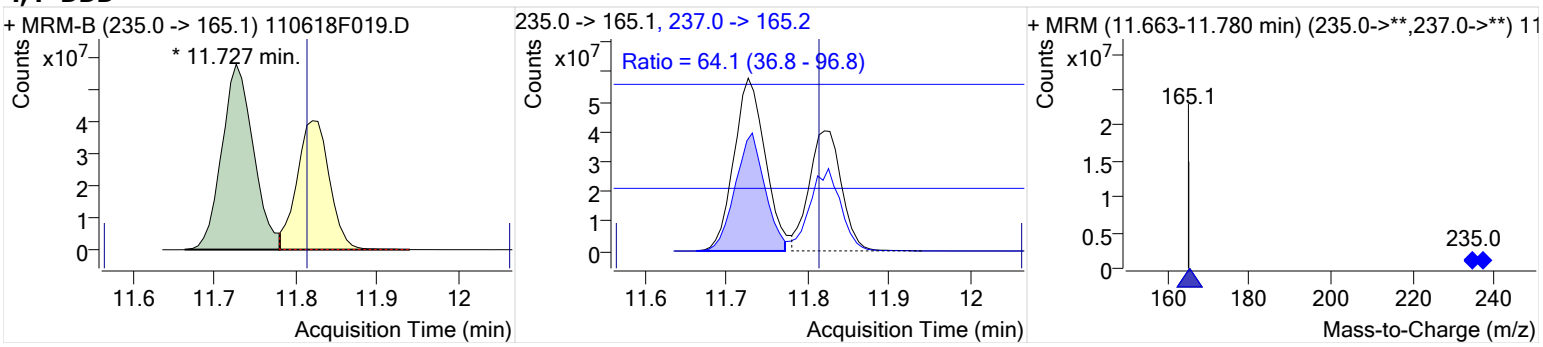




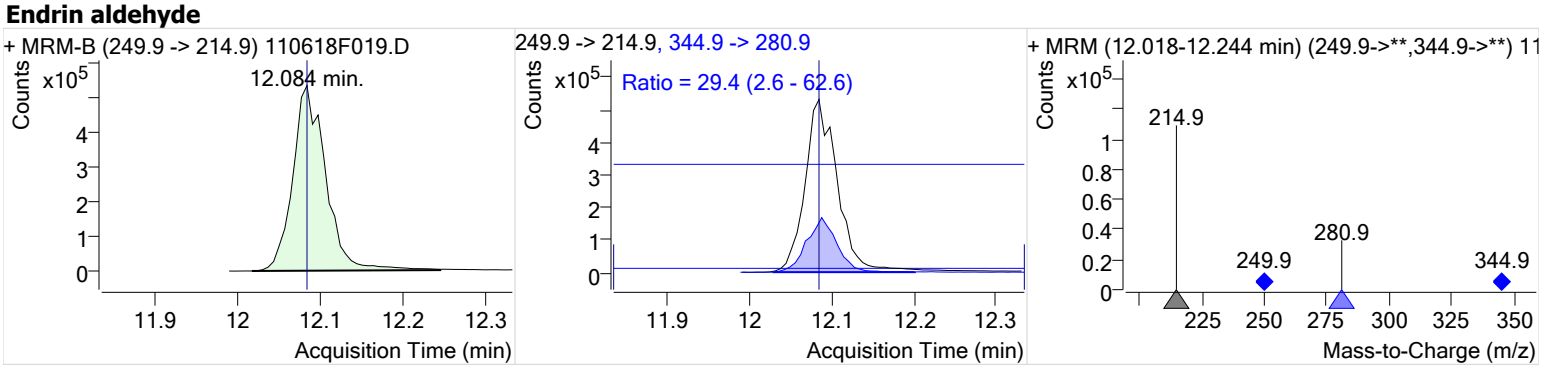


Quantitative Analysis Sample Report

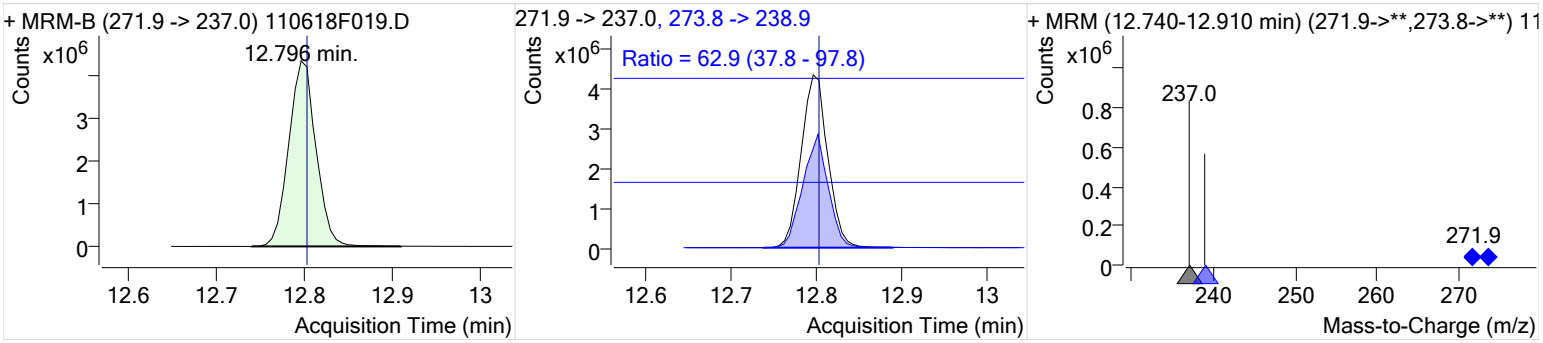
4,4'-DDD



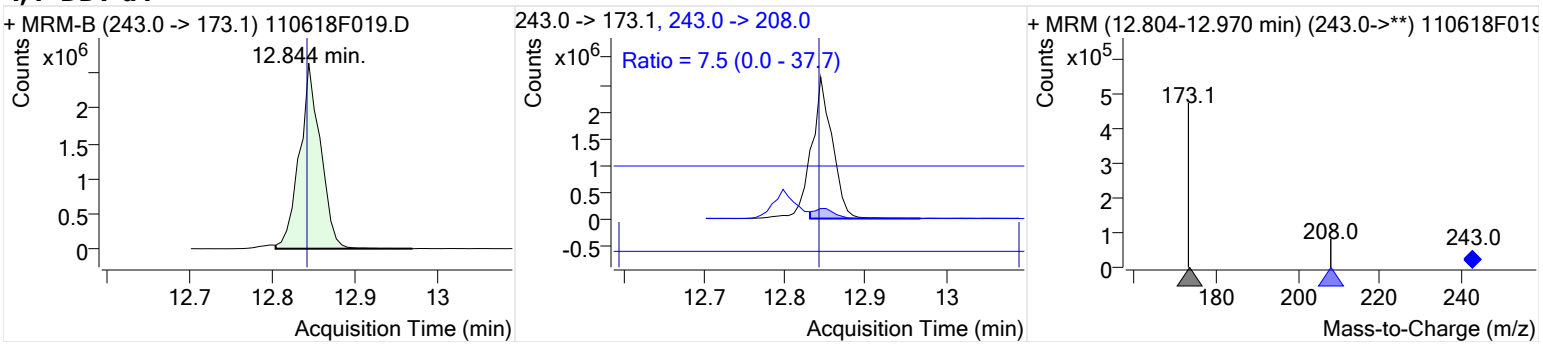
Endrin aldehyde



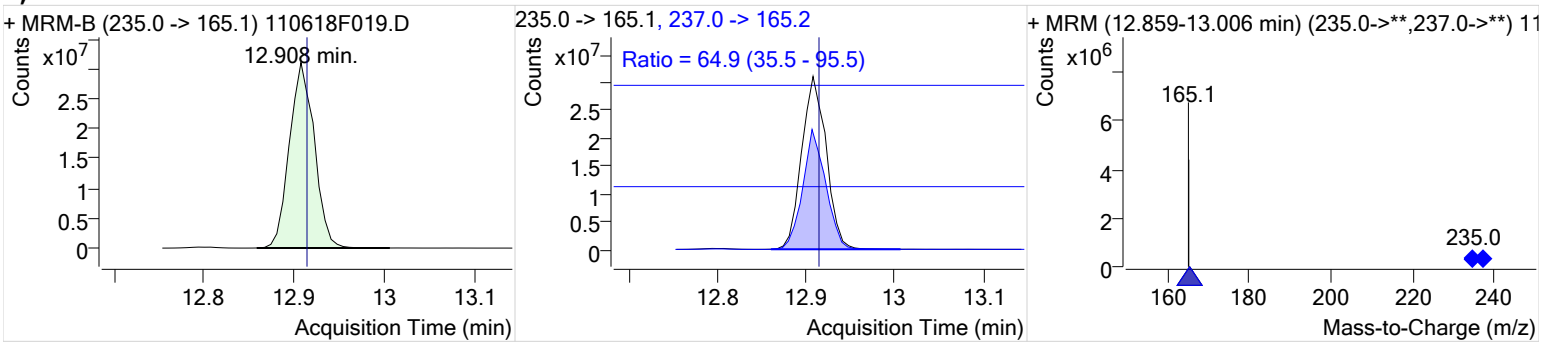
Endosulfan sulfate



4,4'-DDT-d4

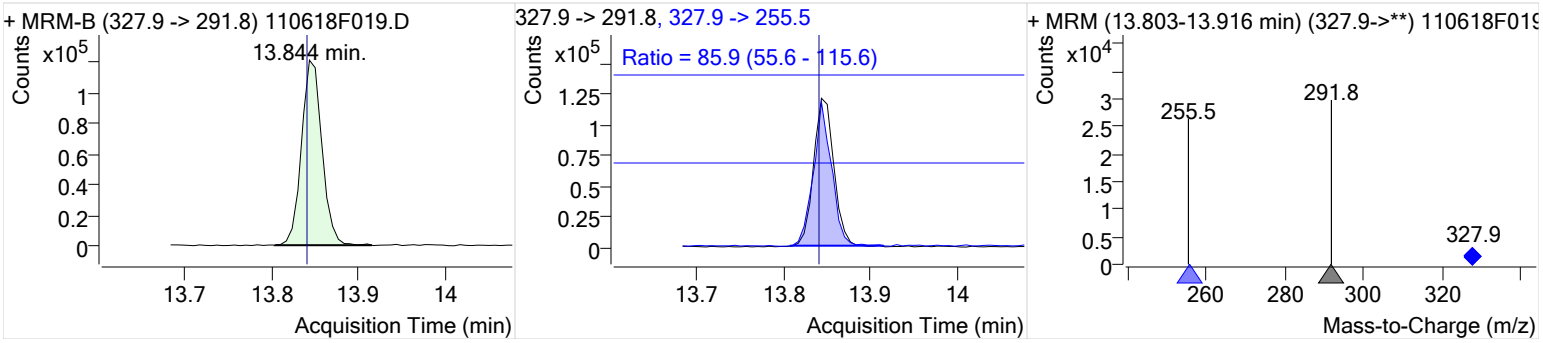


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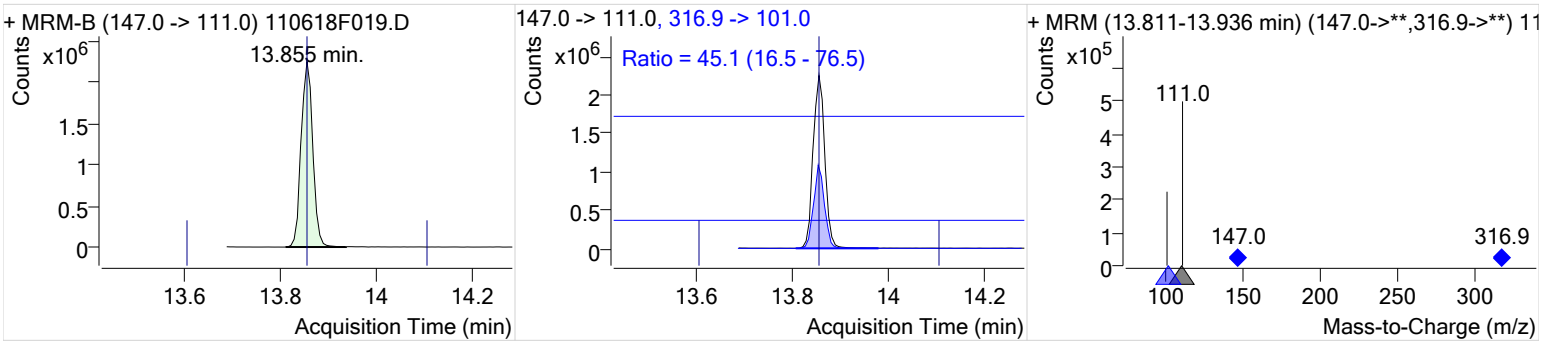


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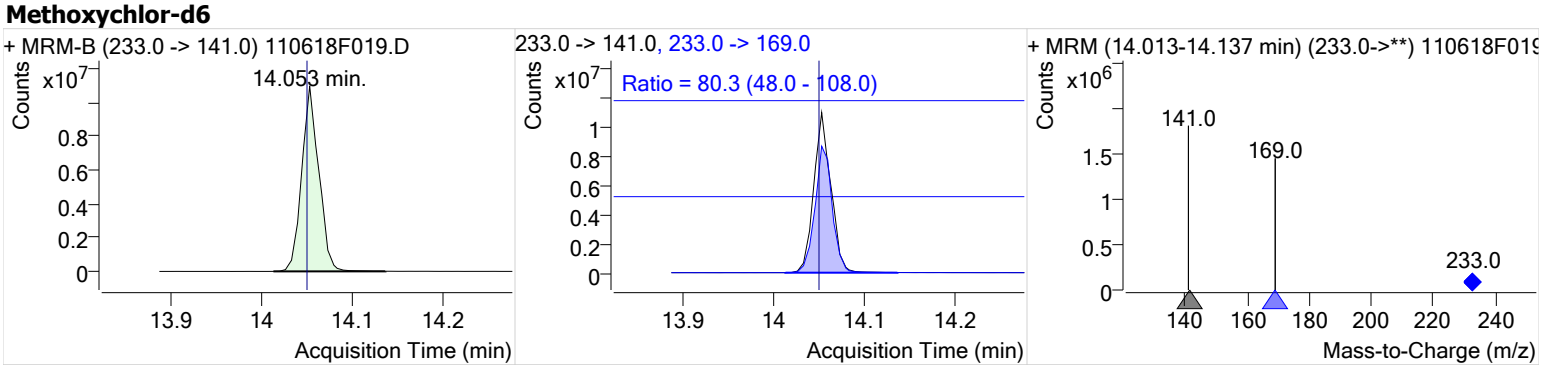
Endrin ketone-13C12



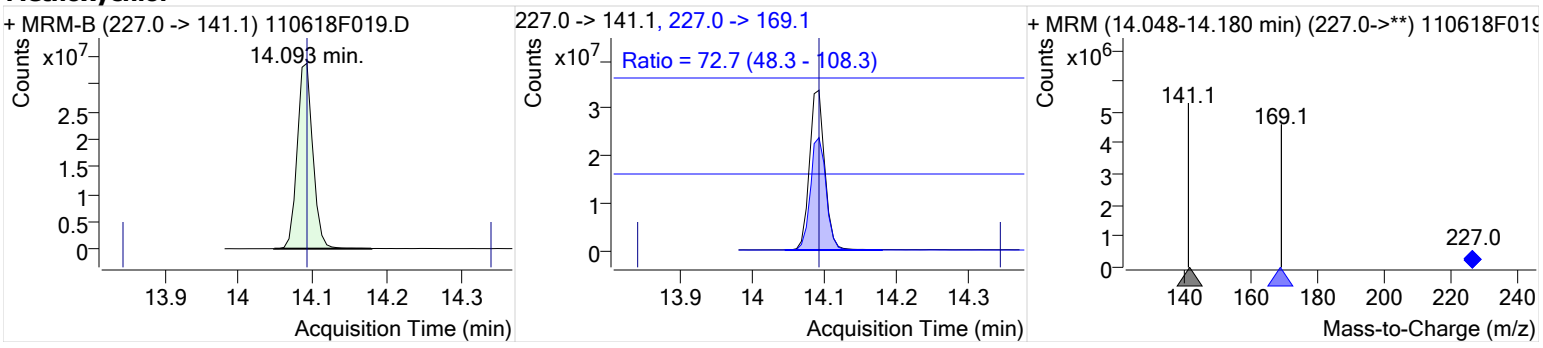
Endrin ketone



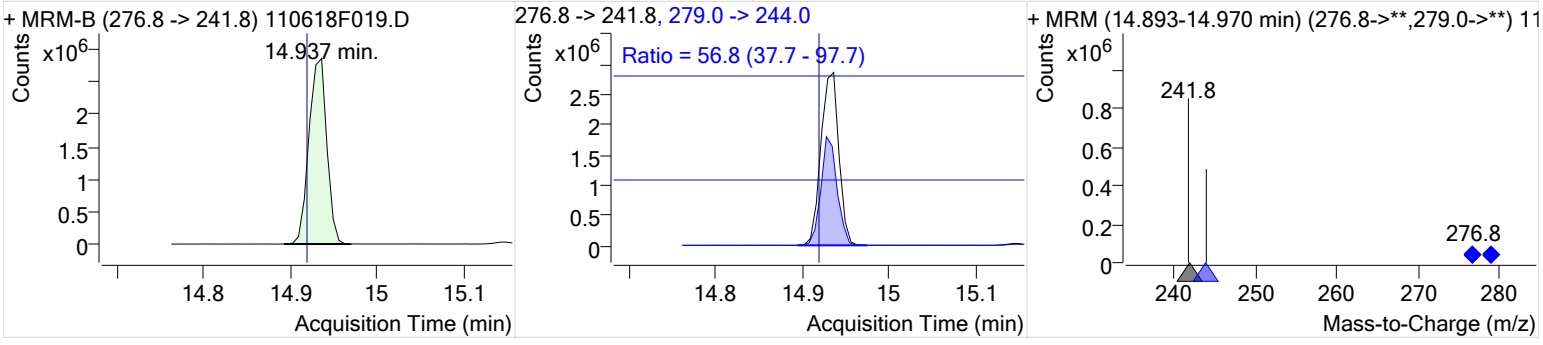
Methoxychlor-d6



Methoxychlor

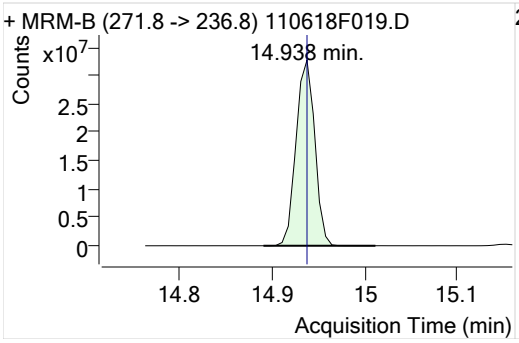


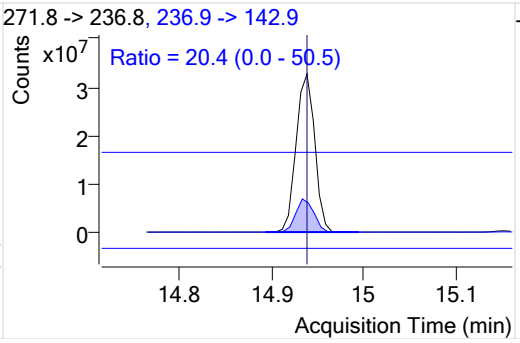
Mirex-13C10

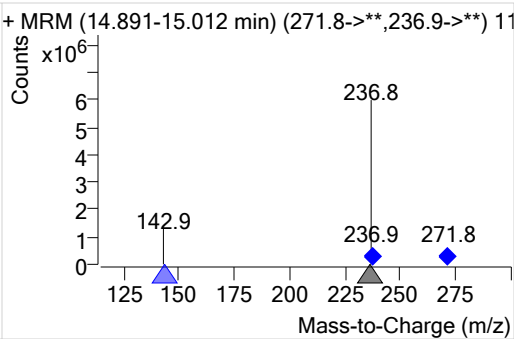


Quantitative Analysis Sample Report

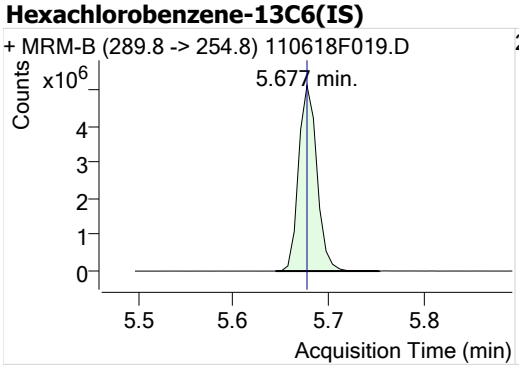
Mirex

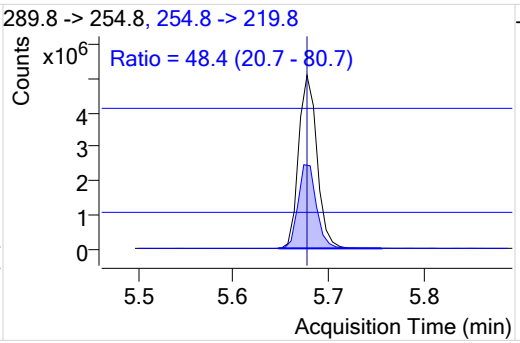


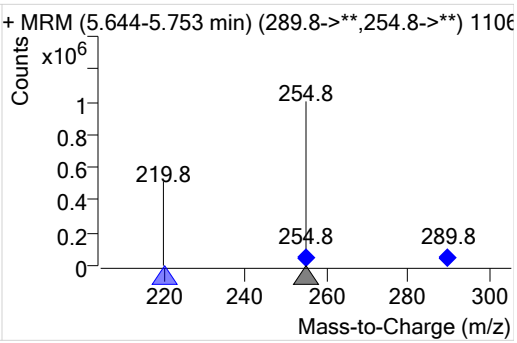




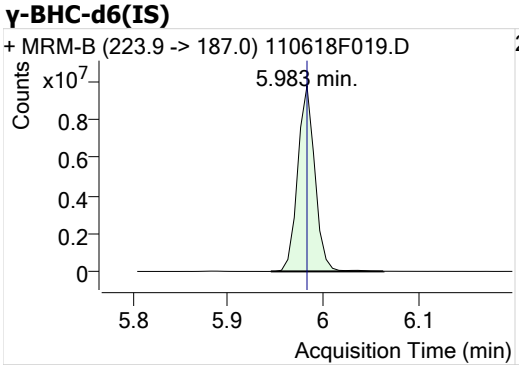
Hexachlorobenzene-13C6(IS)

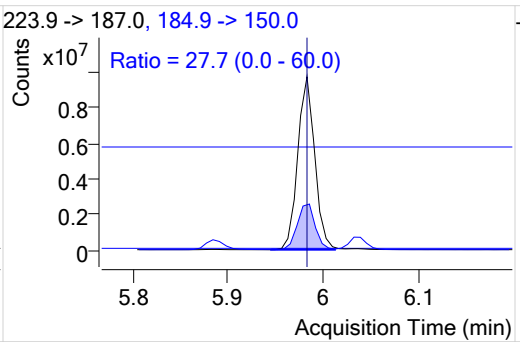


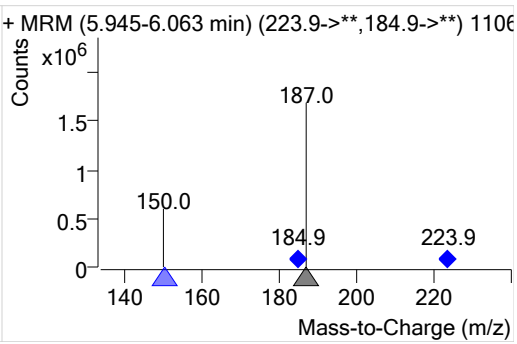




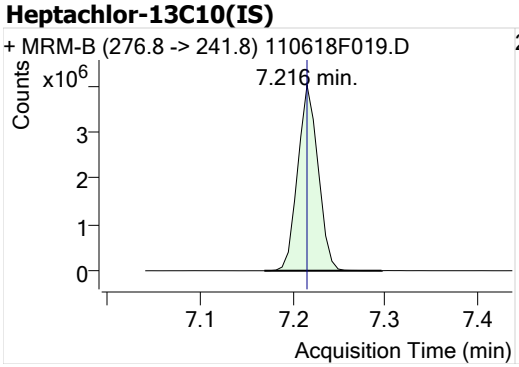
γ-BHC-d6(IS)

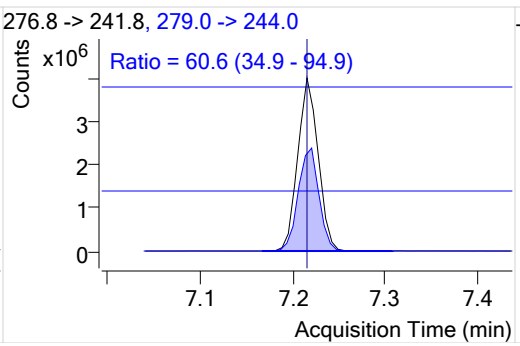


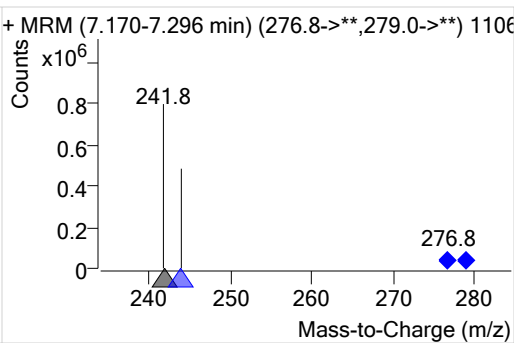




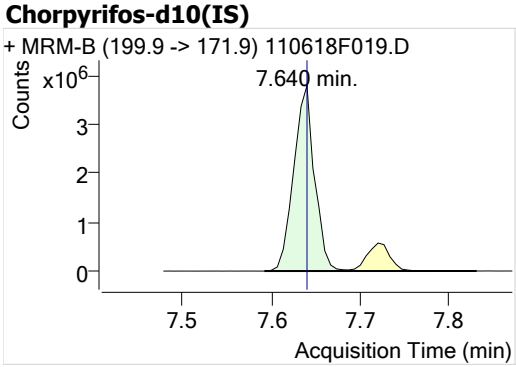
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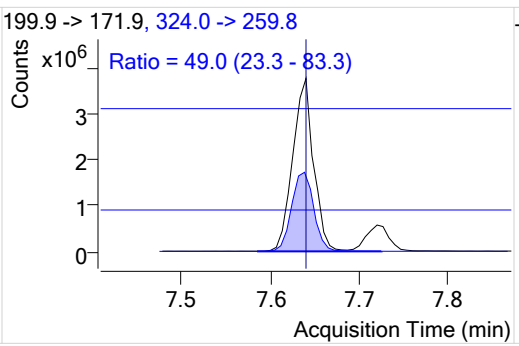


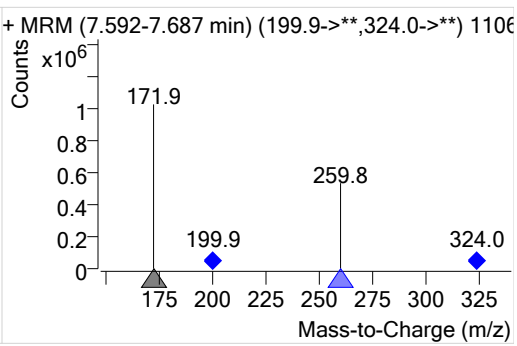




Chorpyrifos-d10(IS)

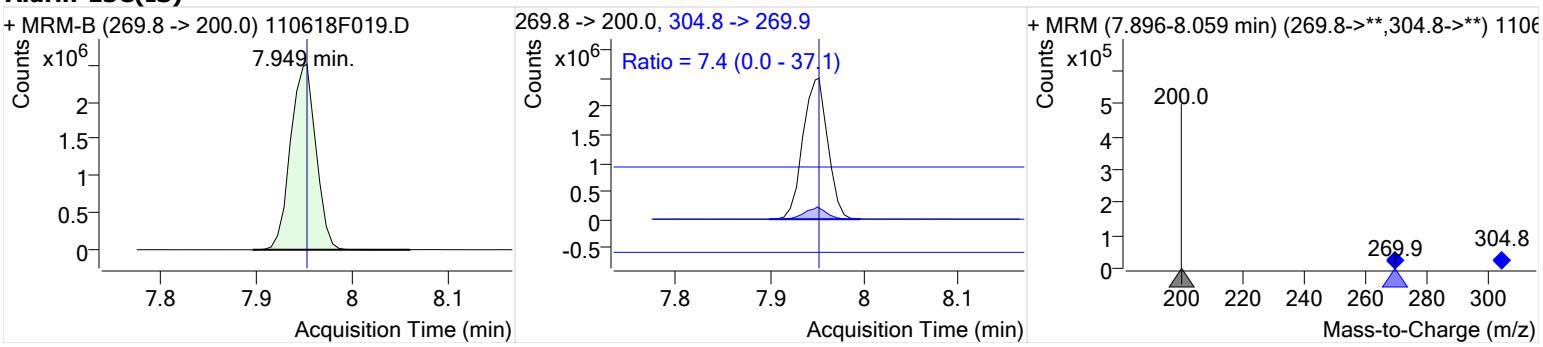




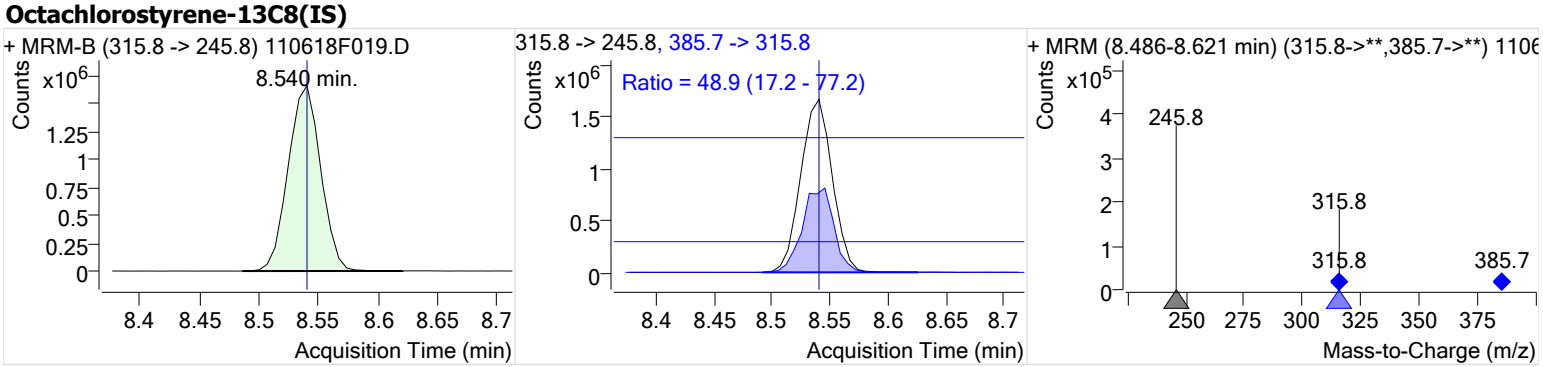


Quantitative Analysis Sample Report

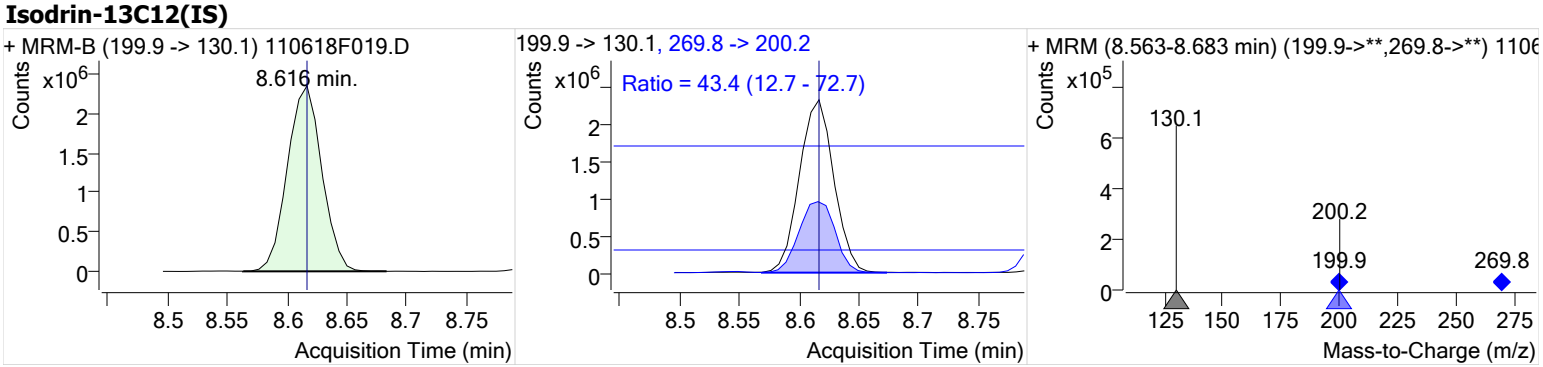
Aldrin-13C(IS)



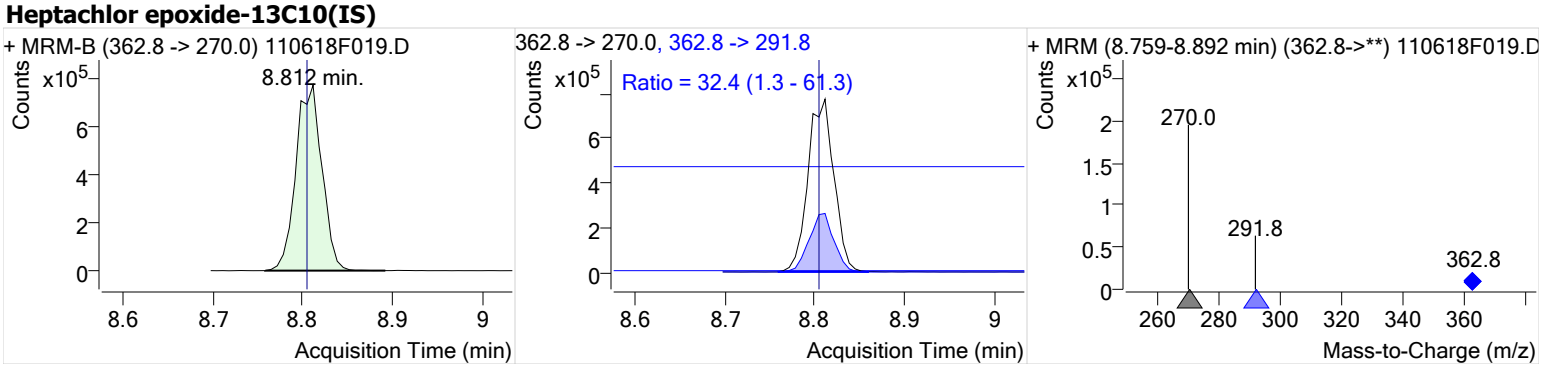
Octachlorostyrene-13C8(IS)



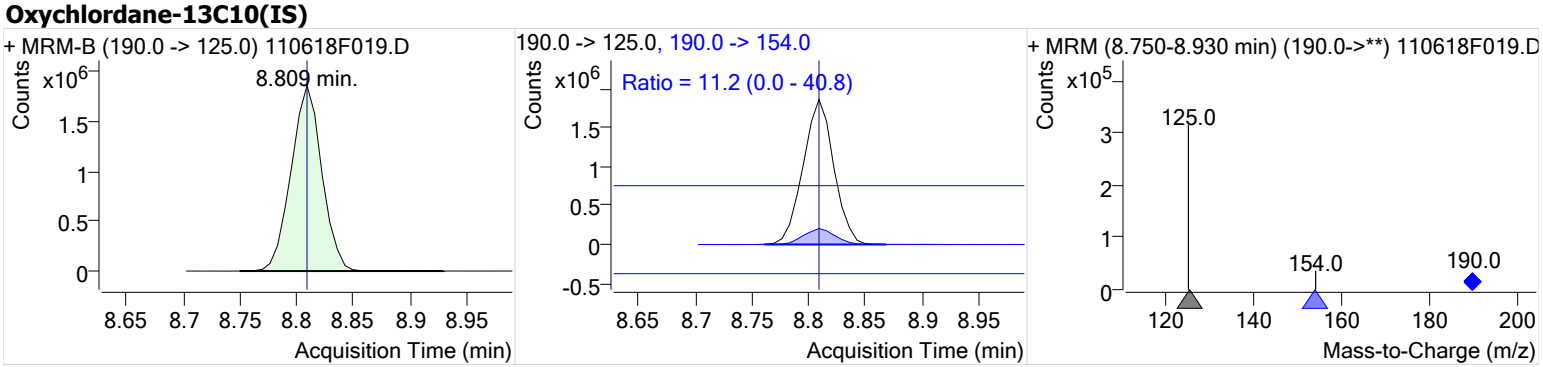
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

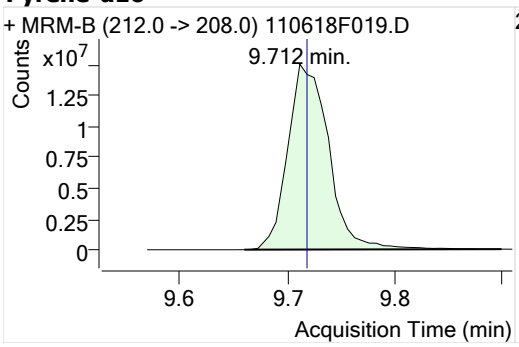


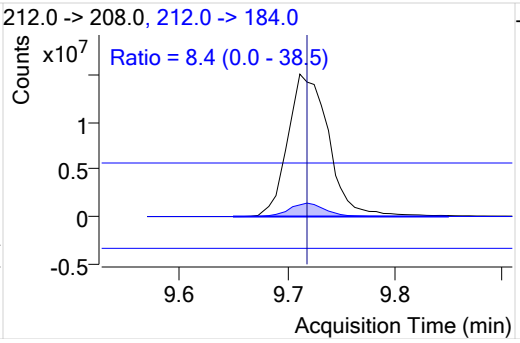
Oxychlordane-13C10(IS)

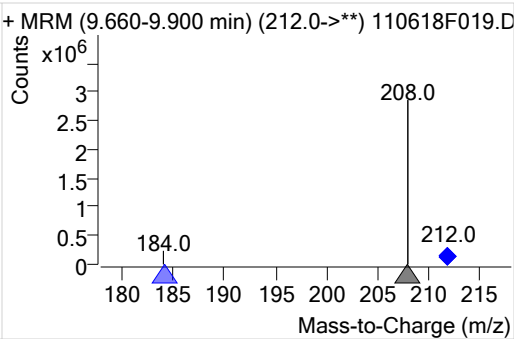


Quantitative Analysis Sample Report

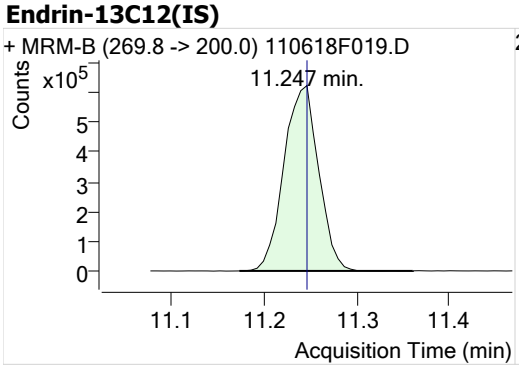
Pyrene-d10

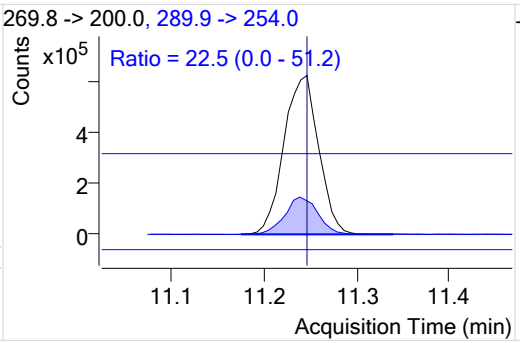


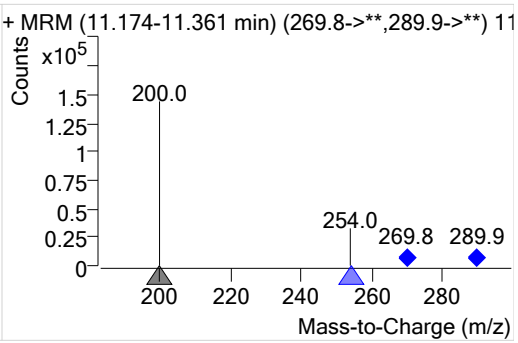




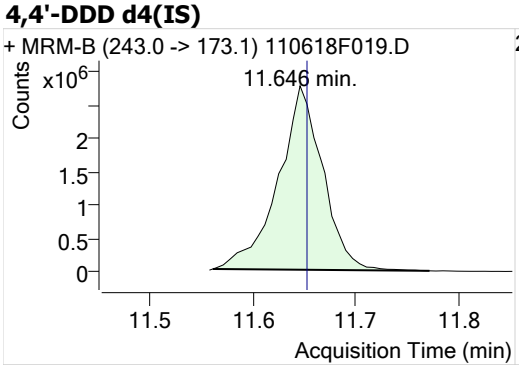
Endrin-13C12(IS)

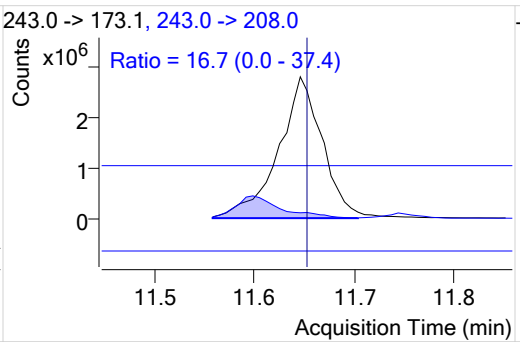


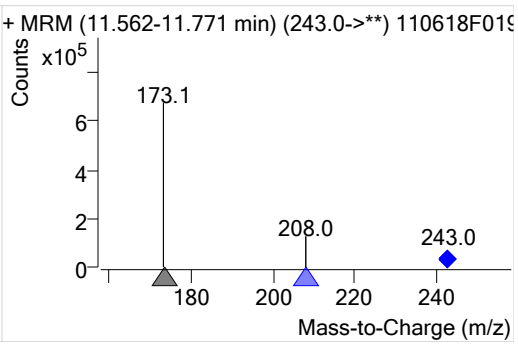




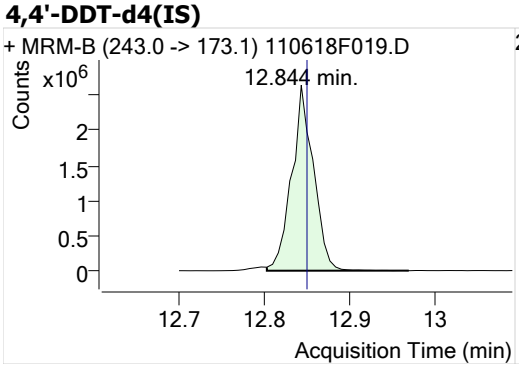
4,4'-DDD d4(IS)

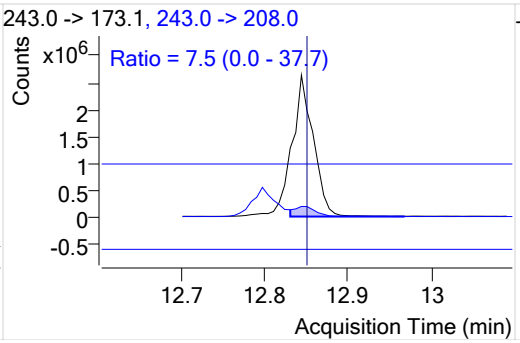


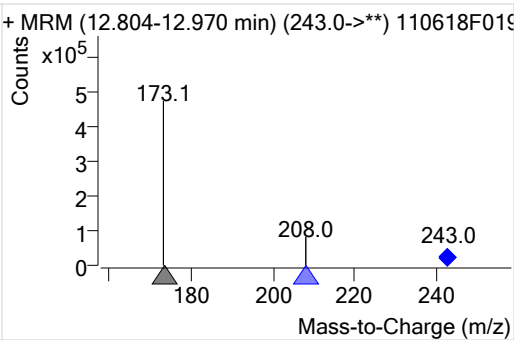




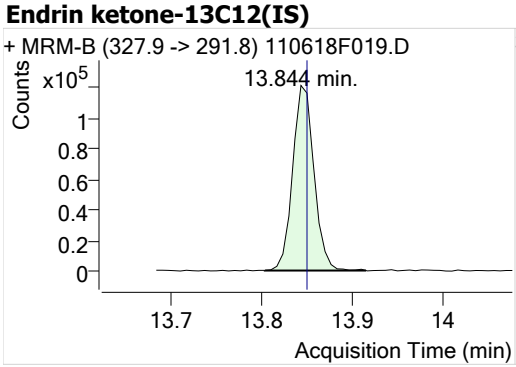
4,4'-DDT-d4(IS)

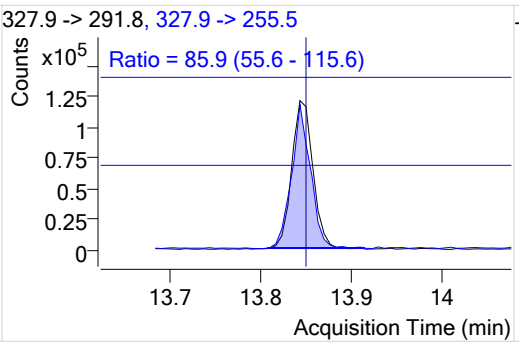


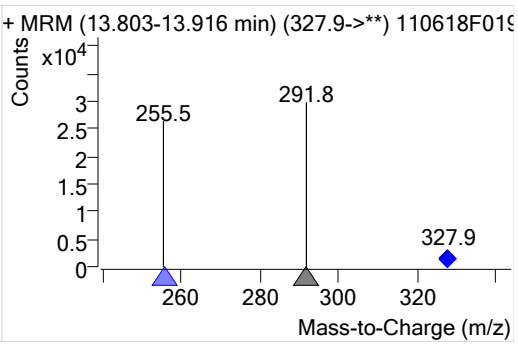




Endrin ketone-13C12(IS)

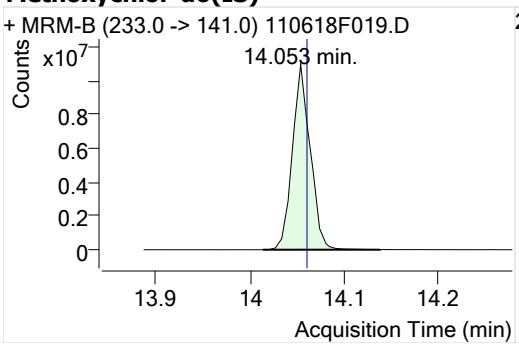


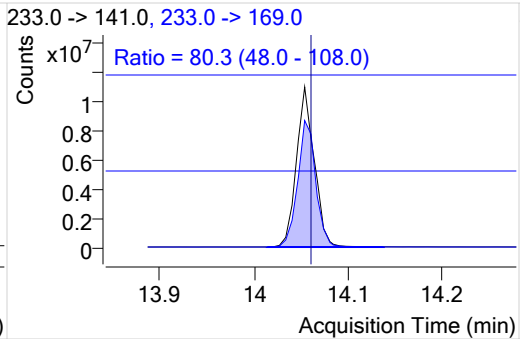


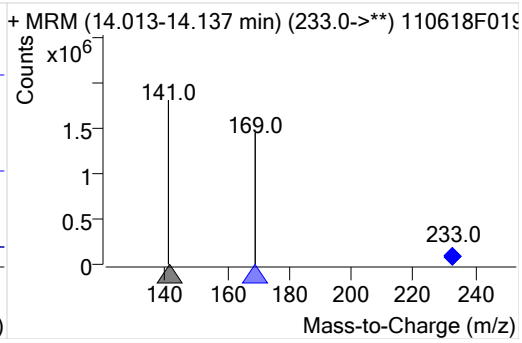


Quantitative Analysis Sample Report

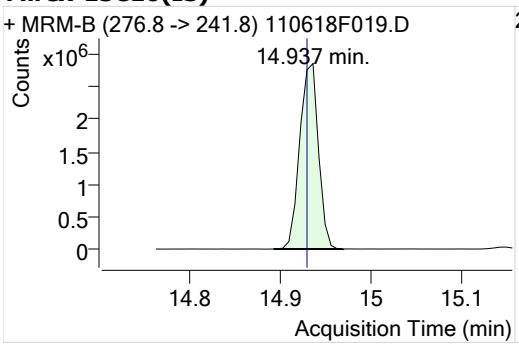
Methoxychlor-d6(IS)

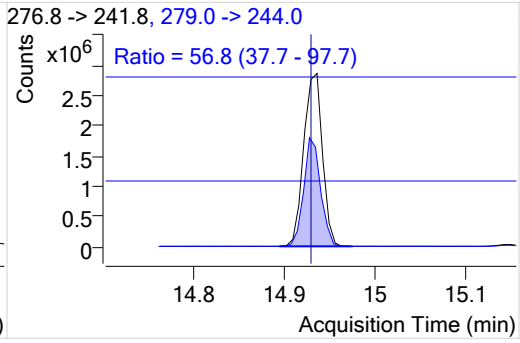


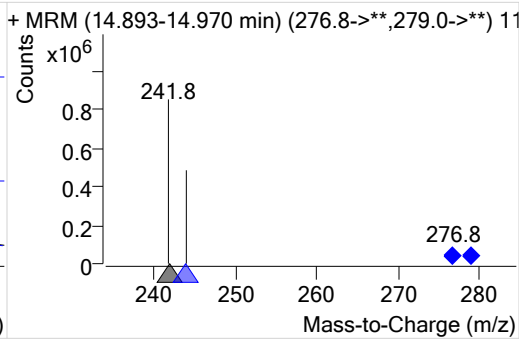




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F020.D	**Vial**	11
Acq. Date-Time	11/6/2018 7:44:05 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 80ng/mL SVM59-48I	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	6960875	20.000 ng/ml	0.001
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	12045509	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.219	276.8 -> 241.8	5957347	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.634	199.9 -> 171.9	6293326	20.000 ng/ml	0.007
Aldrin-13C(IS)	7.948	269.8 -> 200.0	4380510	20.000 ng/ml	0.003
Octachlorostyrene-13C8(IS)	8.540	315.8 -> 245.8	3147822	20.000 ng/ml	0.001
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	4669285	20.000 ng/ml	0.001
Heptachlor epoxide-13C10(IS)	8.812	362.8 -> 270.0	1608201	20.000 ng/ml	0.003
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	3227544	20.000 ng/ml	0.000
Pyrene-d10	9.719	212.0 -> 208.0	38682867	100.000 ng/ml	0.000
Endrin-13C12(IS)	11.240	269.8 -> 200.0	1631403	20.000 ng/ml	0.007
4,4'-DDD d4(IS)	11.646	243.0 -> 173.1	9092549	5.000 ng/ml	0.027
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	5075768	5.000 ng/ml	0.007
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	189339	20.000 ng/ml	0.003
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	13875116	20.000 ng/ml	0.007
Mirex-13C10(IS)	14.930	276.8 -> 241.8	4192279	5.000 ng/ml	0.003

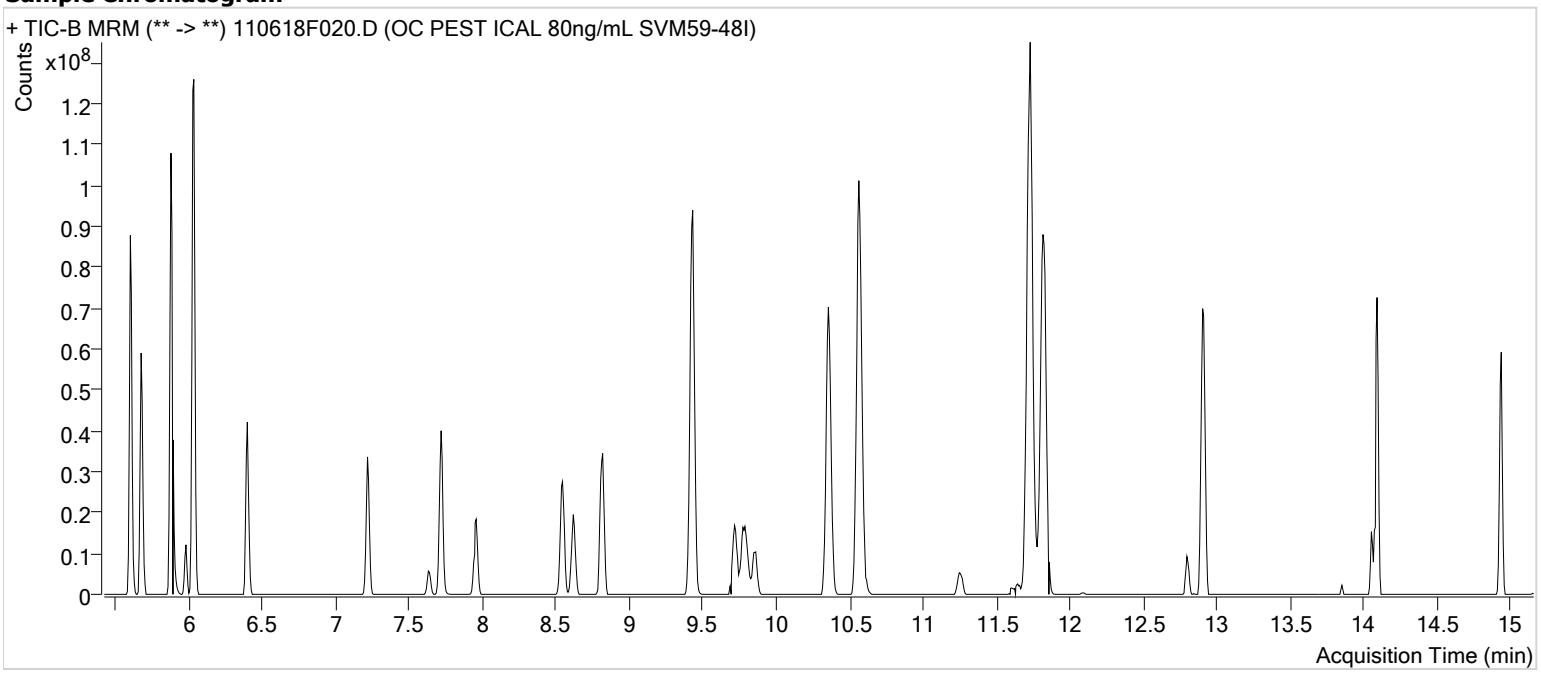
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	6960875	23.598 ng/ml	
		Spiked Amount =	20.0	Recovery =	*118.0 %*
γ-BHC-d6	5.983	223.9 -> 187.0	12045509	21.286 ng/ml	
		Spiked Amount =	20.0	Recovery =	*106.4 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	5957347	20.909 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.5 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	6293326	21.543 ng/ml	
		Spiked Amount =	20.0	Recovery =	*107.7 %*
Aldrin-13C	7.952	269.8 -> 200.0	4380510	21.665 ng/ml	
		Spiked Amount =	20.0	Recovery =	*108.3 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3147822	21.222 ng/ml	
		Spiked Amount =	20.0	Recovery =	*106.1 %*
Isodrin-13C12	8.616	199.9 -> 130.1	4669285	20.890 ng/ml	
		Spiked Amount =	20.0	Recovery =	*104.4 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1608201	21.861 ng/ml	
		Spiked Amount =	20.0	Recovery =	*109.3 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3227544	20.767 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.8 %*
Endrin-13C12	11.247	269.8 -> 200.0	1631403	21.369 ng/ml	
		Spiked Amount =	20.0	Recovery =	*106.8 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	9092549	5.769 ng/ml	
		Spiked Amount =	5.0	Recovery =	*115.4 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	5075768	5.645 ng/ml	
		Spiked Amount =	5.0	Recovery =	*112.9 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	189339	19.733 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.7 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	13875116	20.250 ng/ml	
		Spiked Amount =	20.0	Recovery =	*101.3 %*
Mirex-13C10	14.930	276.8 -> 241.8	4192279	5.956 ng/ml	
		Spiked Amount =	5.0	Recovery =	*119.1 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	66215442	78.272	ng/ml	100
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	41536285	68.764	ng/ml	96
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	90524477	81.116	ng/ml	91
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.034	181.1 -> 145.1	108542655	80.942	ng/ml	98
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	40054796	79.759	ng/ml	94
Heptachlor	Heptachlor-13C10(IS)	7.223	271.7 -> 236.9	25546062	76.787	ng/ml	94
Chorpyrifos	Chorpyrifos-d10(IS)	7.724	196.9 -> 169.0	33349134	77.673	ng/ml	95
Aldrin	Aldrin-13C(IS)	7.962	254.9 -> 220.0	10628927	78.627	ng/ml	70
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	33276371	83.022	ng/ml	99
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	18788150	78.896	ng/ml	96
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	7596629	86.826	ng/ml	95
Oxychlordane	Oxychlordane-13C10(IS)	8.824	114.9 -> 51.1	36242271	80.788	ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.426	271.8 -> 236.9	12587604	84.839	ng/ml	98
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	106374496	72.125	ng/ml	95
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.775	271.8 -> 236.9	29717360	82.481	ng/ml	95
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	7723121	90.124	ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	20772275	84.680	ng/ml	96
4,4' -DDE	4,4'-DDD d4(IS)	10.358	246.0 -> 176.2	102728081	77.403	ng/ml	99
2,4'-DDD	4,4'-DDD d4(IS)	10.568	235.0 -> 165.1	145638331	75.934	ng/ml	99
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	9731580	84.548	ng/ml	94
Endosulfan II	Endrin-13C12(IS)	11.257	206.9 -> 172.0	1271374	80.550	ng/ml	95
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	8433567	79.209	ng/ml	98
2,4'-DDT	4,4'-DDT-d4(IS)	11.820	235.0 -> 165.1	149403421 ***m***	72.324	ng/ml	94
cis-Nonachlor	Oxychlordane-13C10(IS)	11.749	271.8 -> 236.9	8020651	84.872	ng/ml	93
4,4'-DDD	4,4'-DDD d4(IS)	11.733	235.0 -> 165.1	218655553 ***m***	75.770	ng/ml	96
Endrin aldehyde	Endrin-13C12(IS)	12.098	249.9 -> 214.9	2087550	89.613	ng/ml	93
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	13782785	84.440	ng/ml	90
4,4'-DDT	4,4'-DDT-d4(IS)	12.908	235.0 -> 165.1	87409402	78.025	ng/ml	97
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	5311346	85.447	ng/ml	94
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	65147293	80.978	ng/ml	91
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	59495955	83.527	ng/ml	99

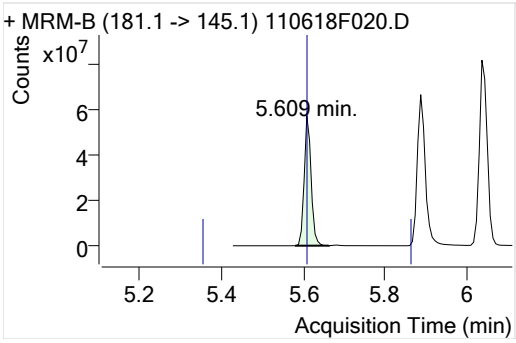
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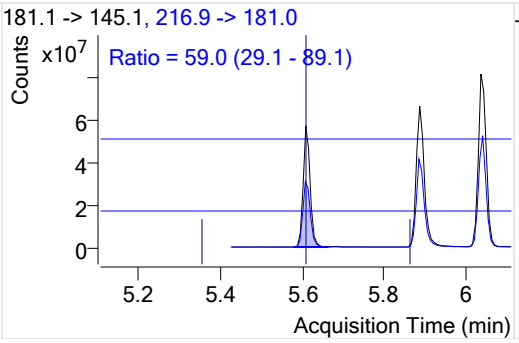
Sample Chromatogram

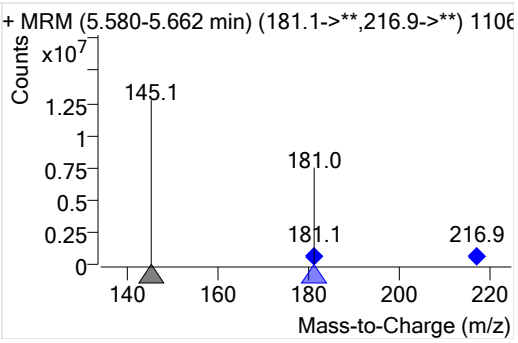


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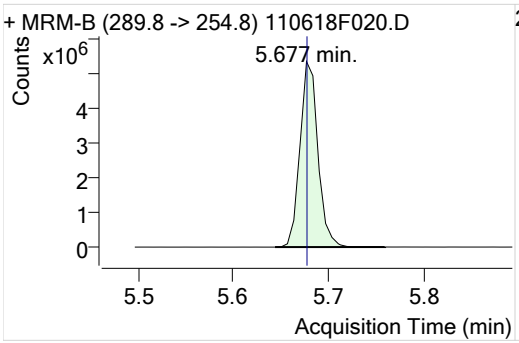
α-BHC

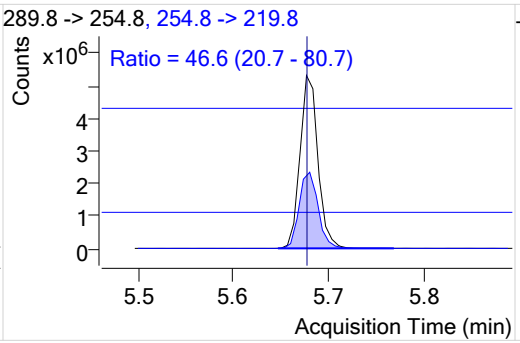


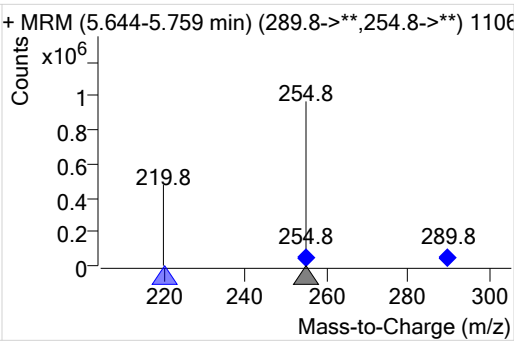




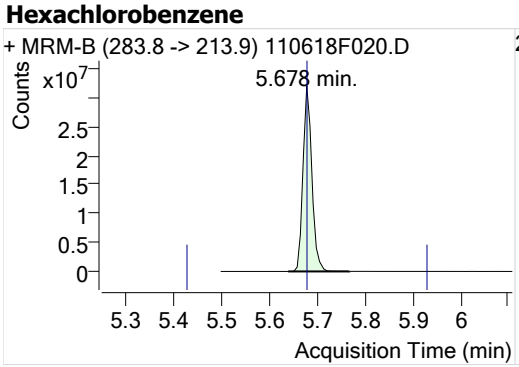
Hexachlorobenzene-13C6

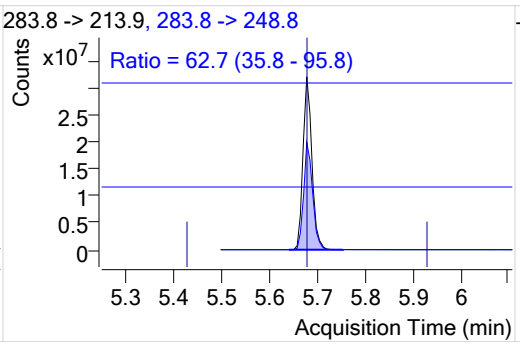


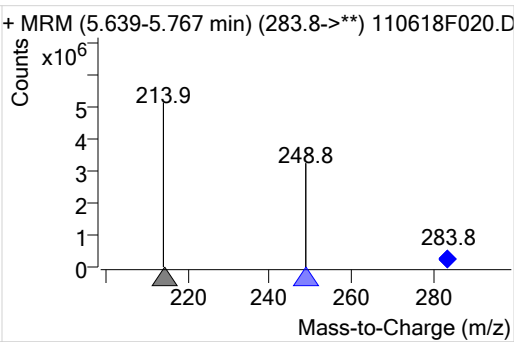




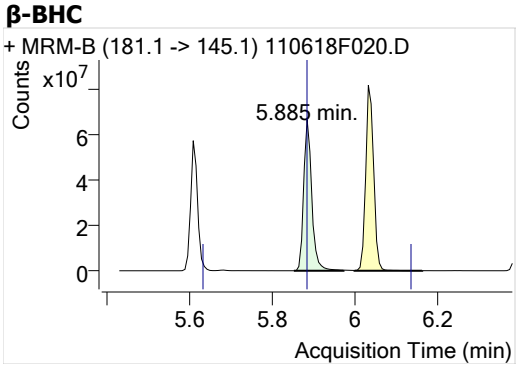
Hexachlorobenzene

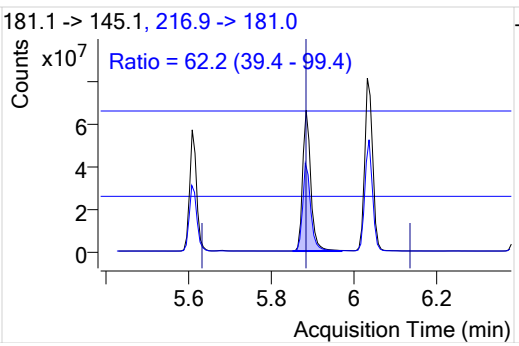


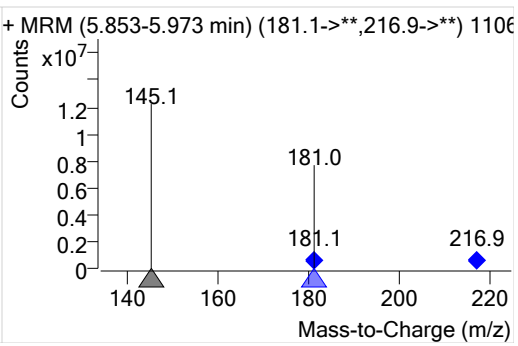




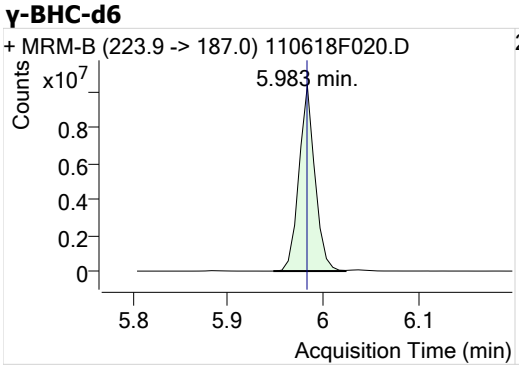
β-BHC

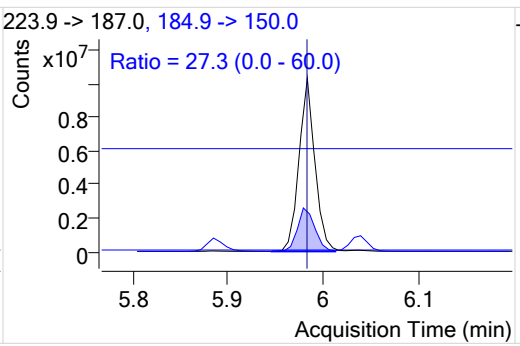


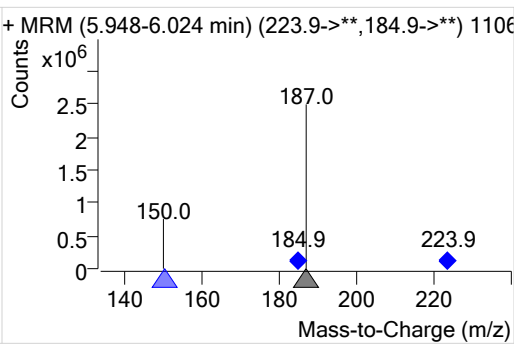




γ-BHC-d6

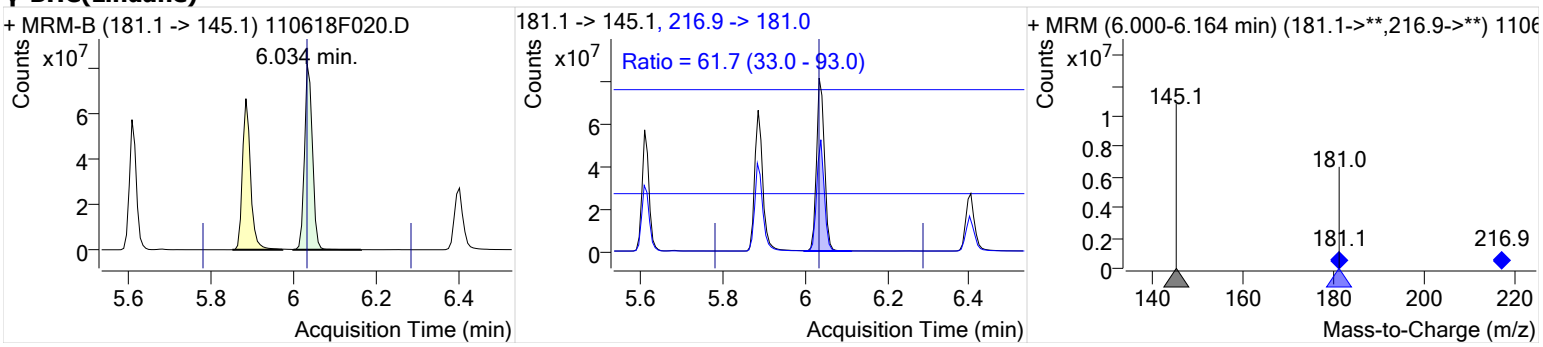




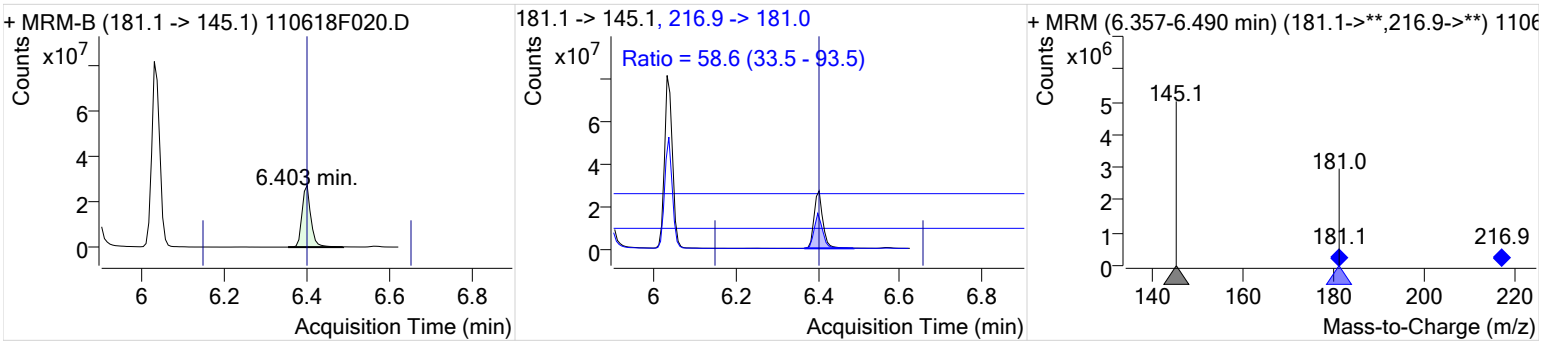


Quantitative Analysis Sample Report

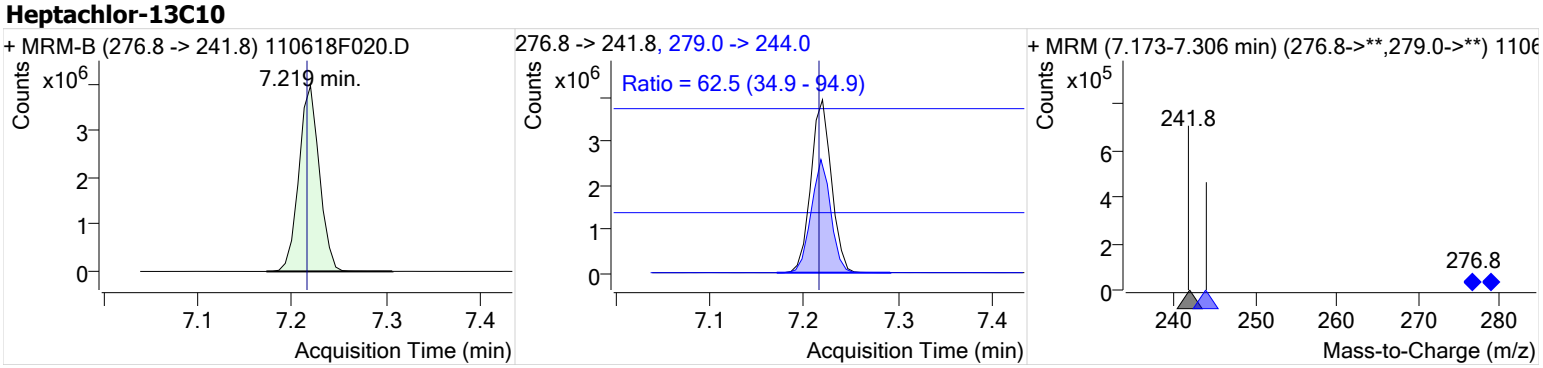
γ-BHC(Lindane)



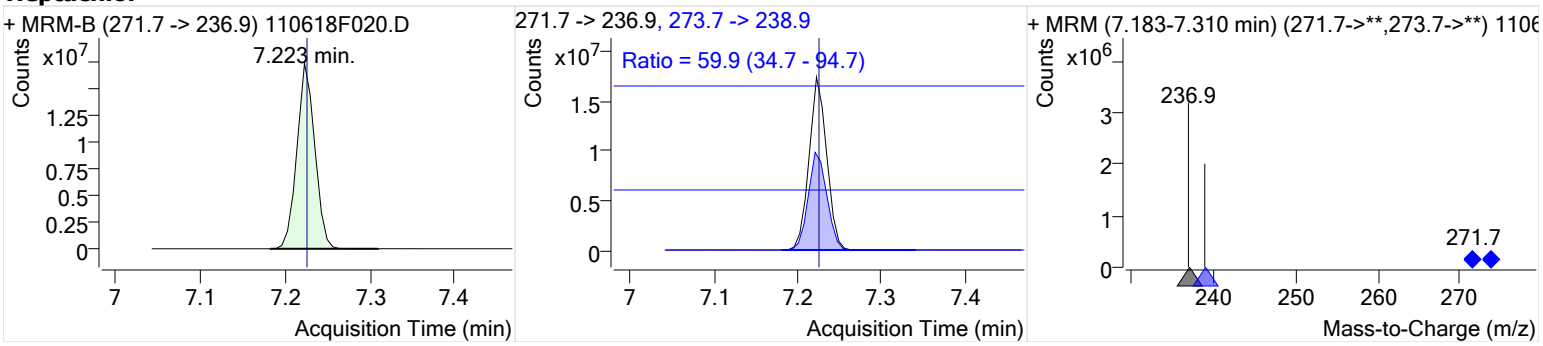
δ-BHC



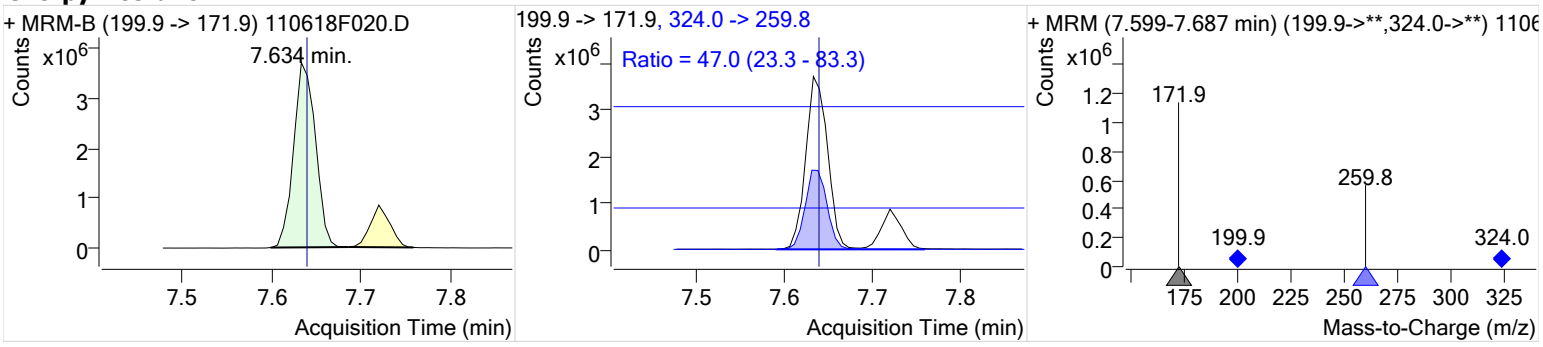
Heptachlor-13C10



Heptachlor

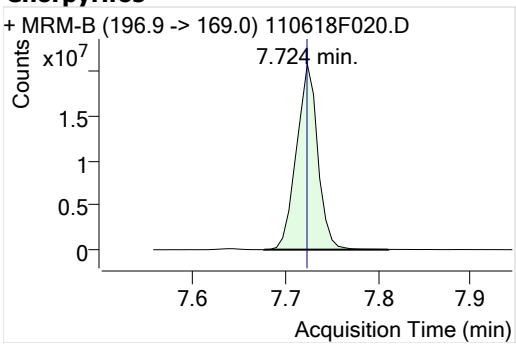


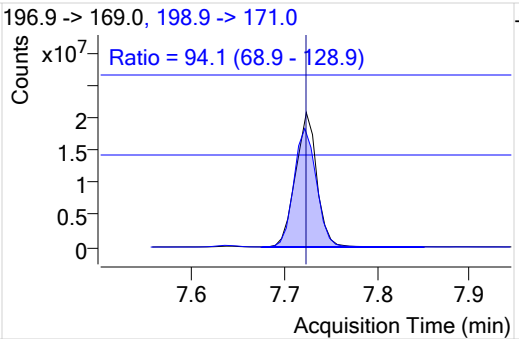
Chorpyrifos-d10

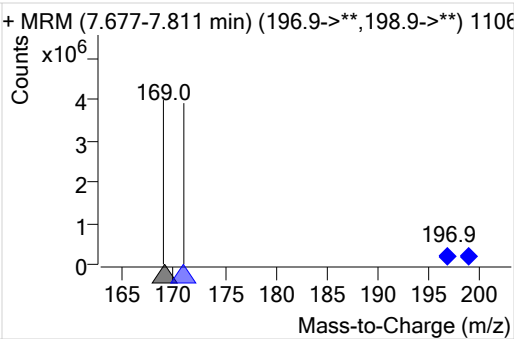


Quantitative Analysis Sample Report

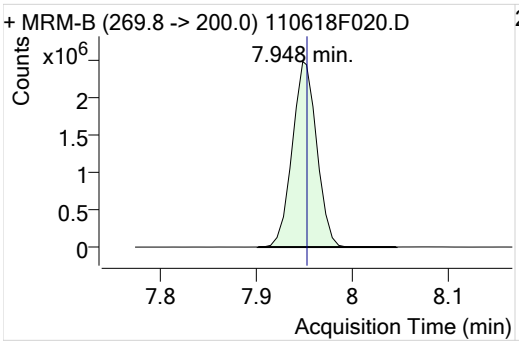
Chorpyrifos

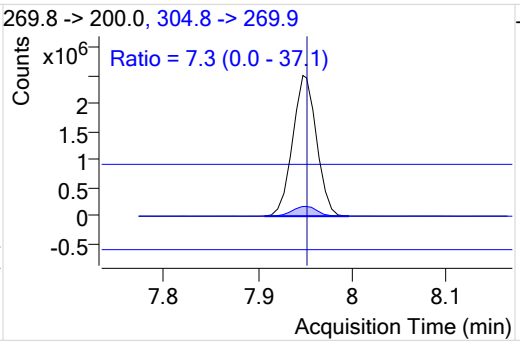


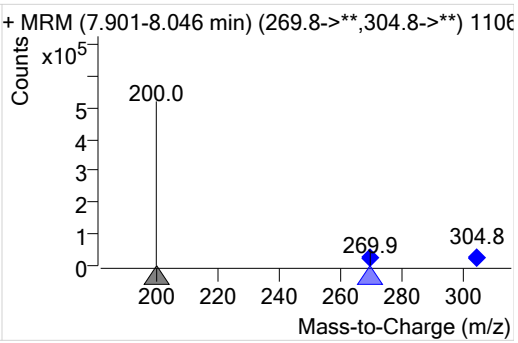




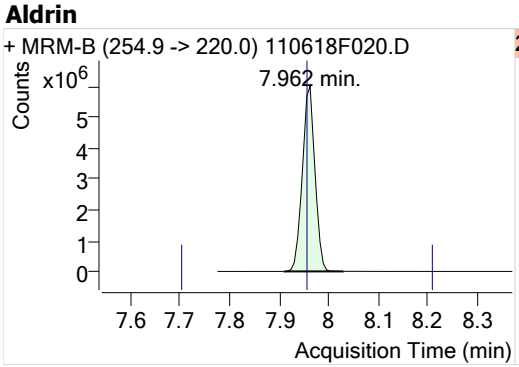
Aldrin-13C

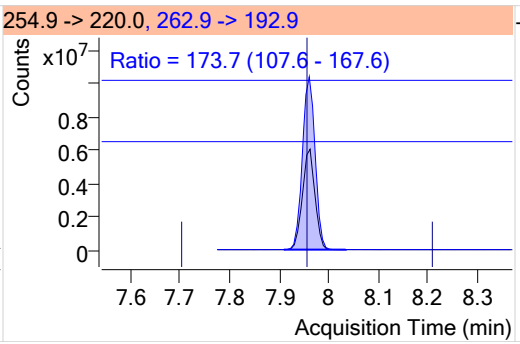


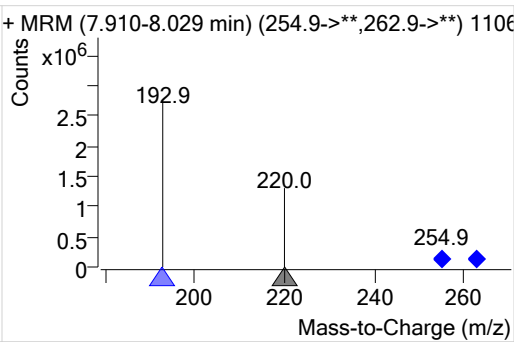




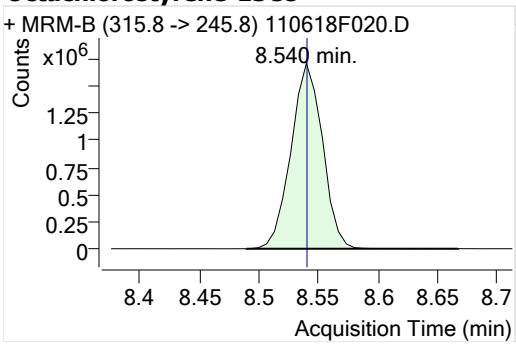
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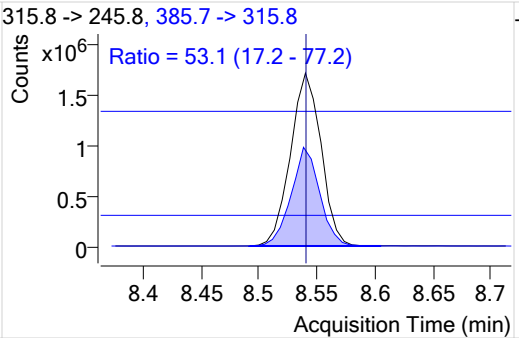


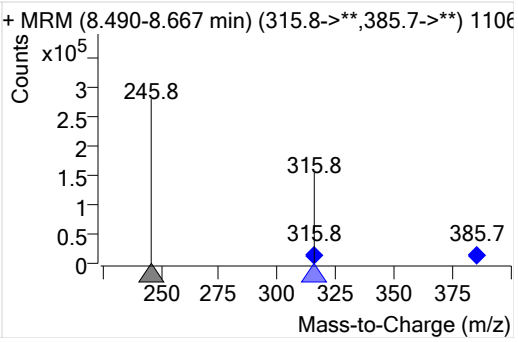




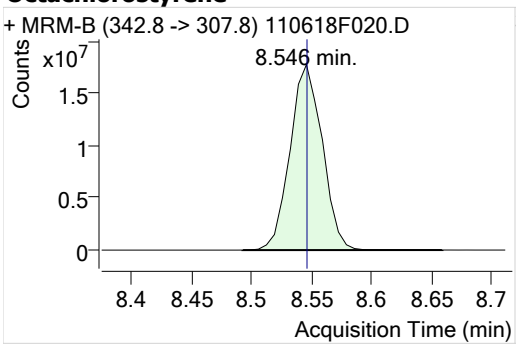
Octachlorostyrene-13C8

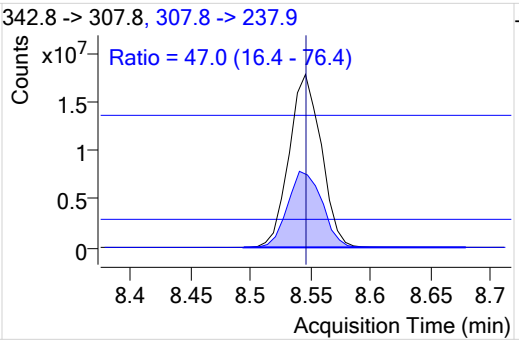


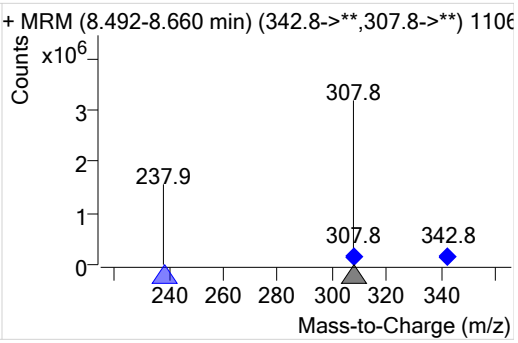




Octachlorostyrene

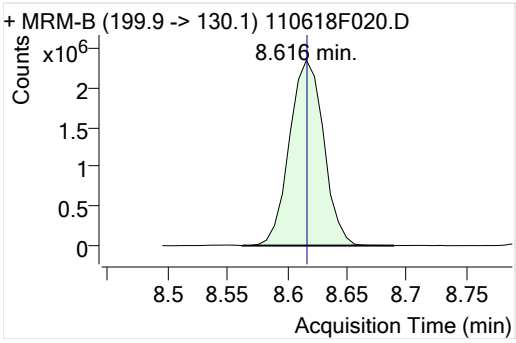


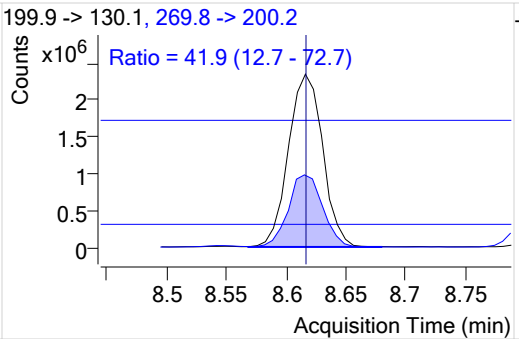


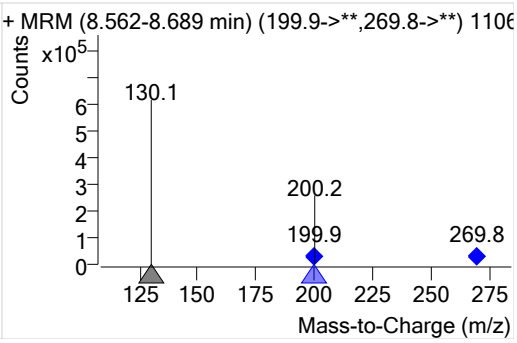


Quantitative Analysis Sample Report

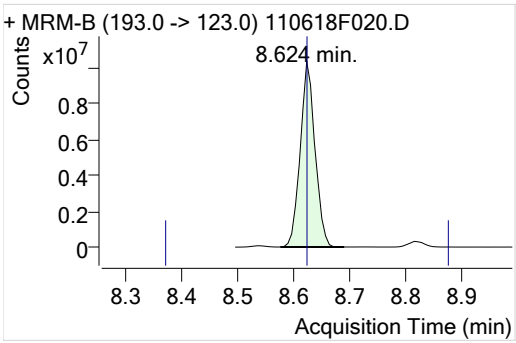
Isodrin-13C12

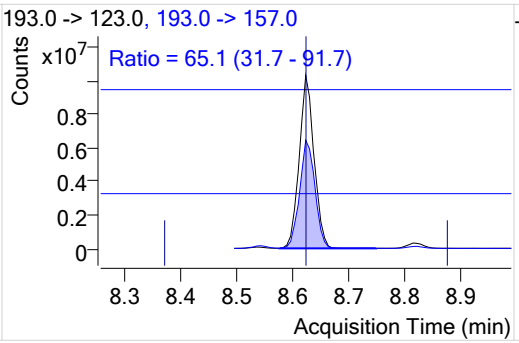


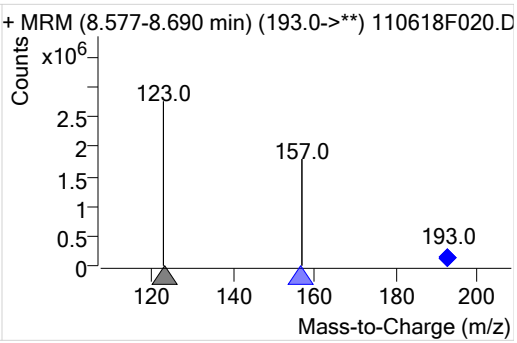




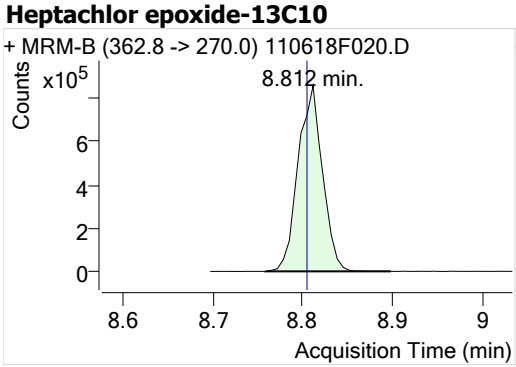
Isodrin

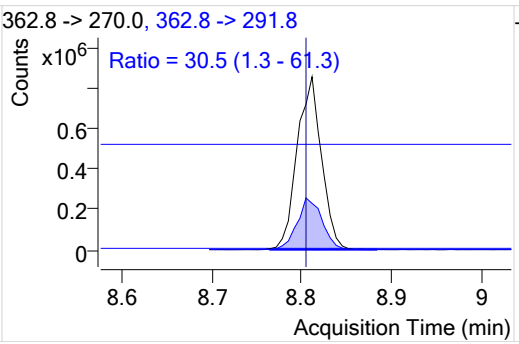


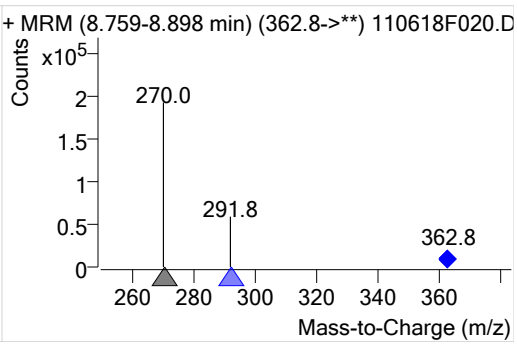




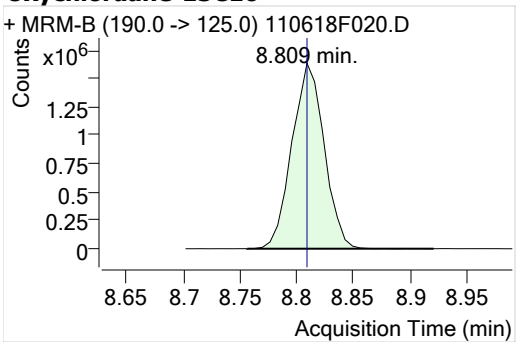
Heptachlor epoxide-13C10

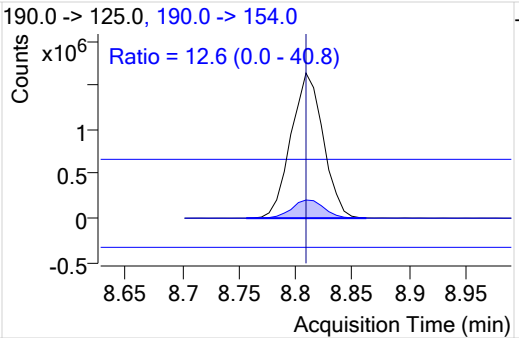


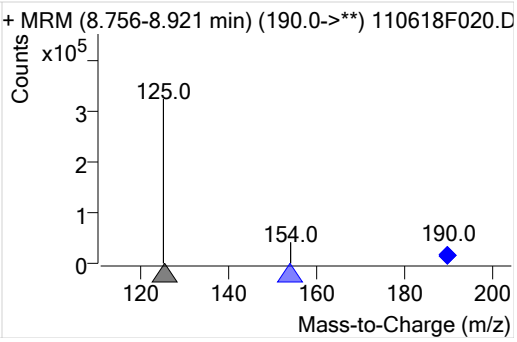




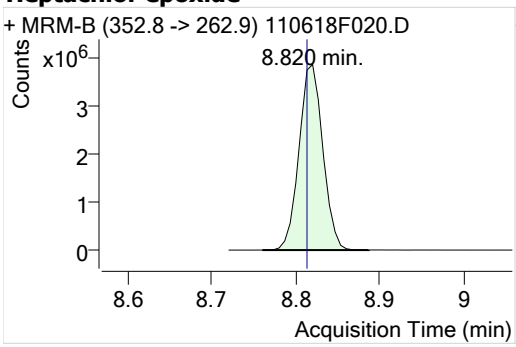
Oxychlordane-13C10

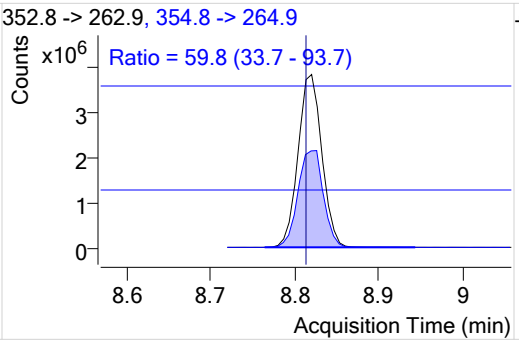


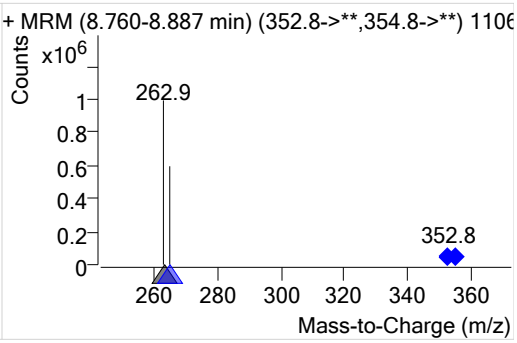




Heptachlor epoxide

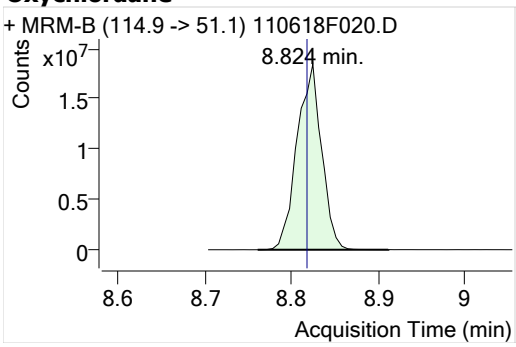


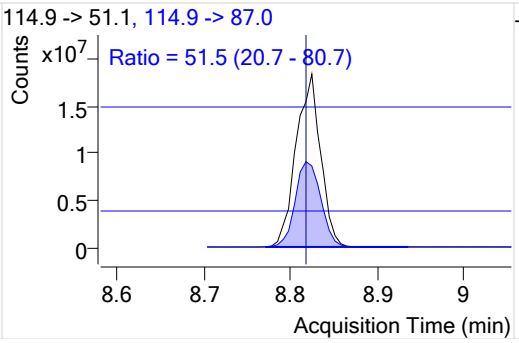


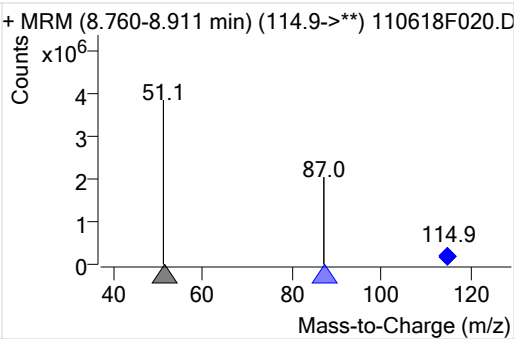


Quantitative Analysis Sample Report

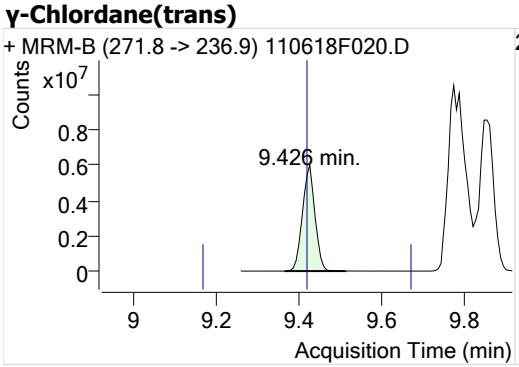
Oxychlordane

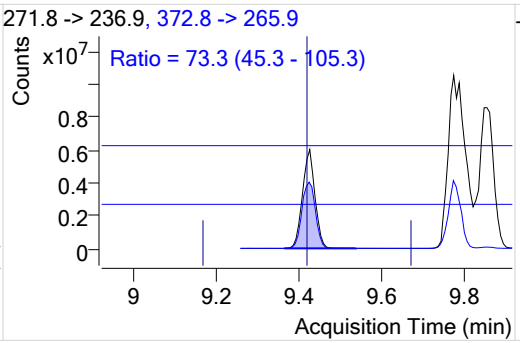


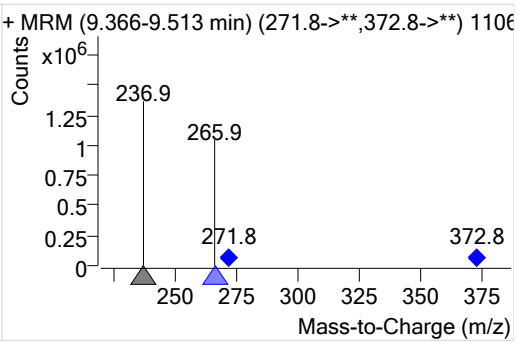




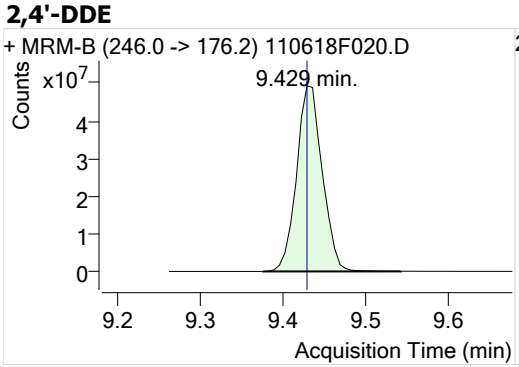
γ-Chlordane(trans)

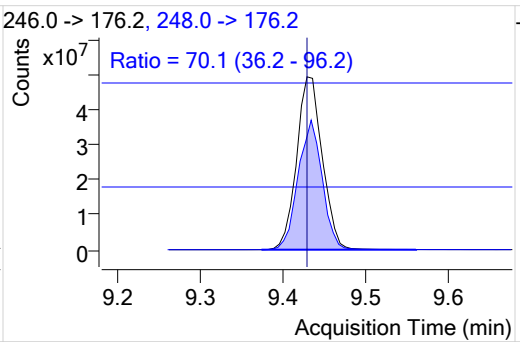


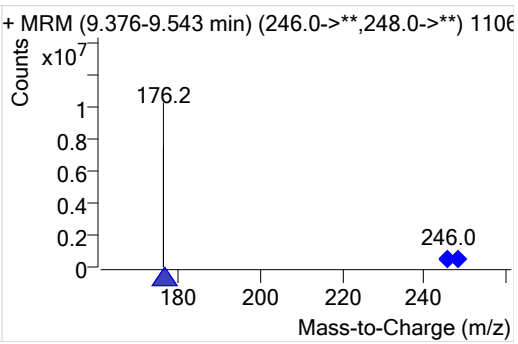




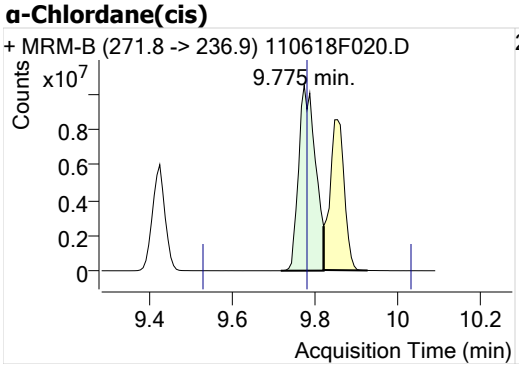
2,4'-DDE

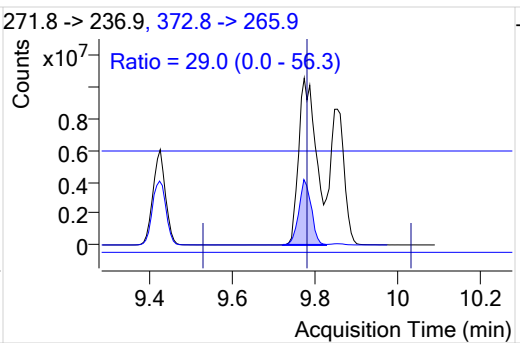


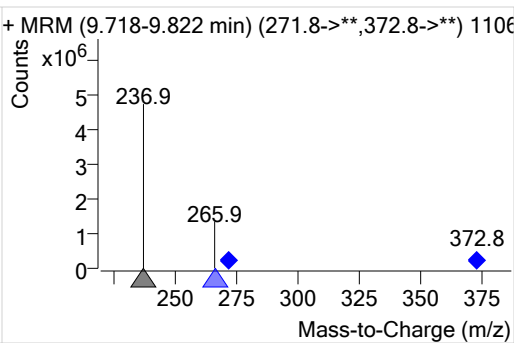




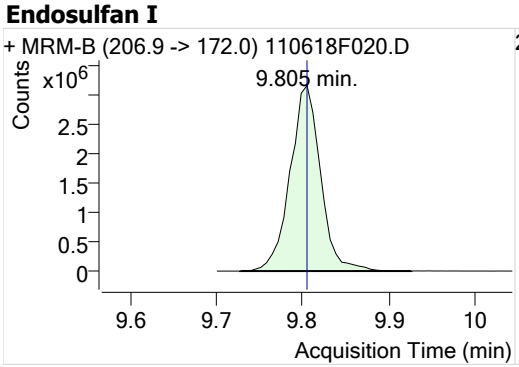
α-Chlordane(cis)

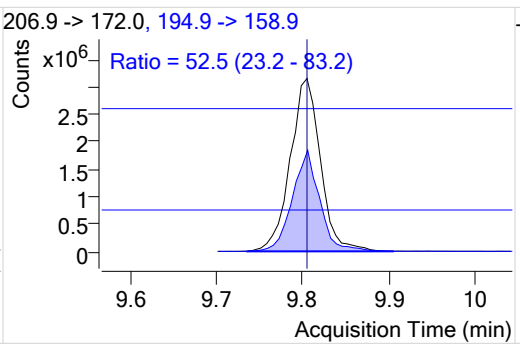


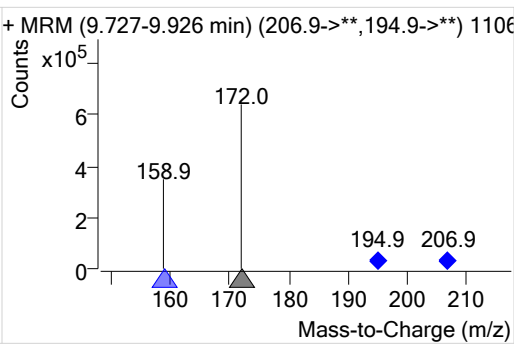




Endosulfan I

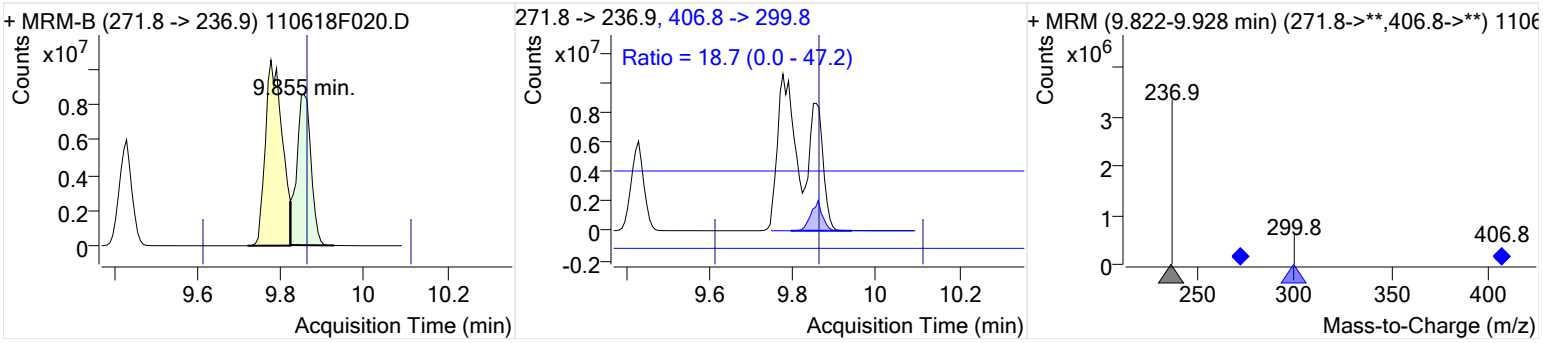




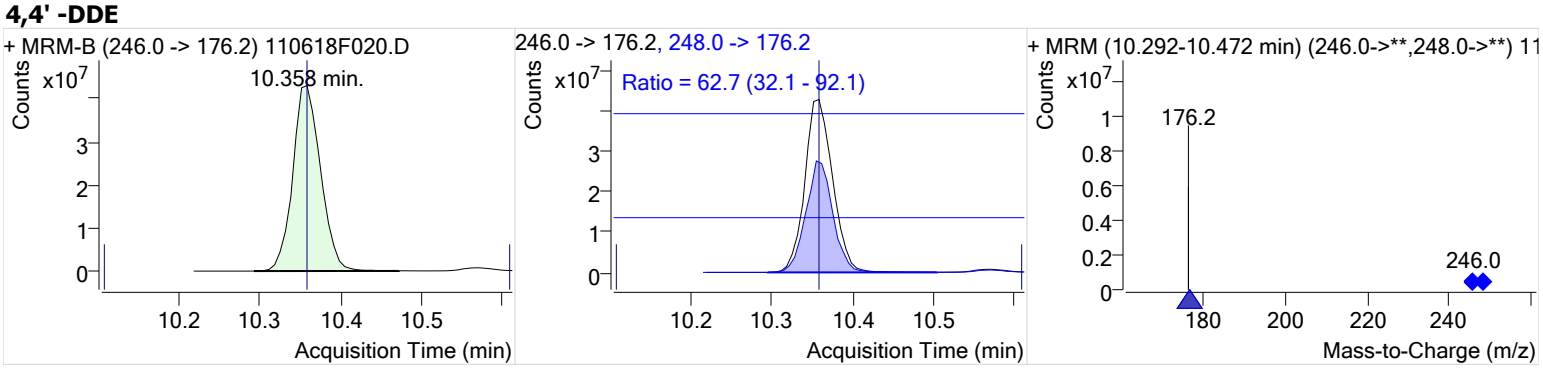


Quantitative Analysis Sample Report

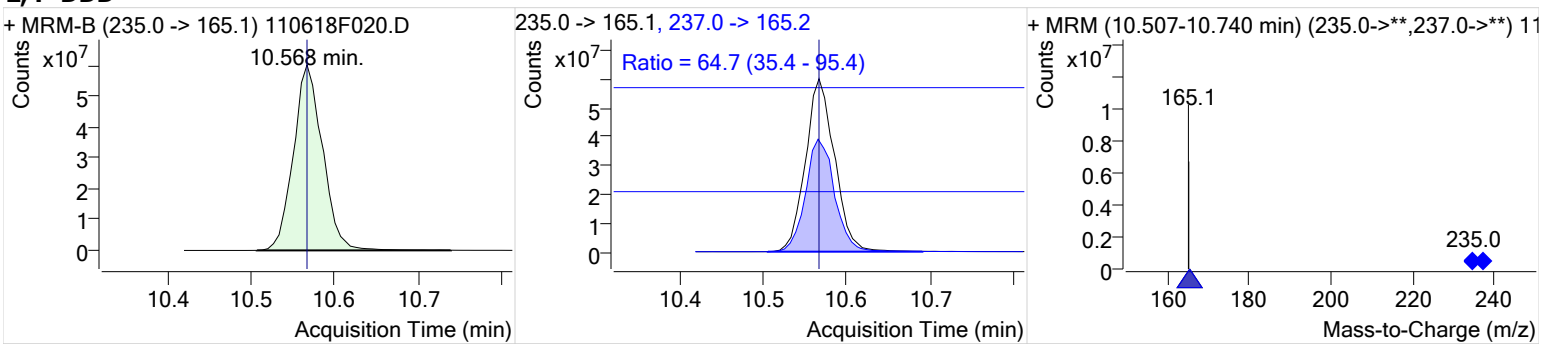
trans-Nanochlor



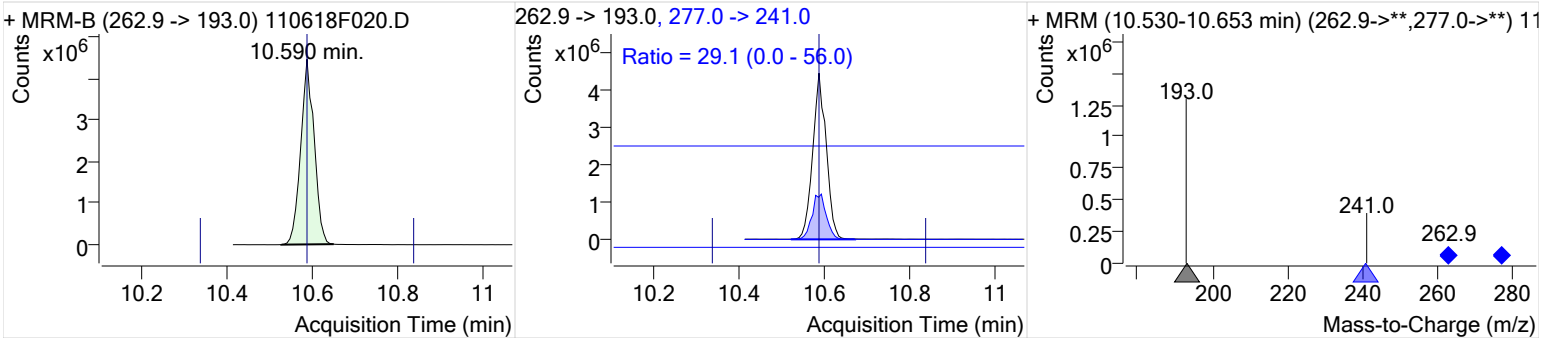
4,4' -DDE



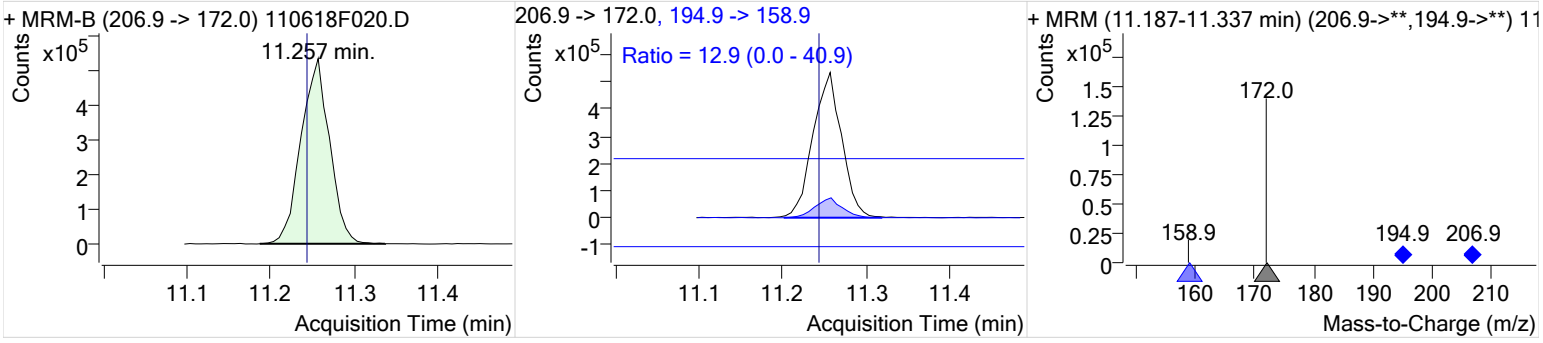
2,4'-DDD



Dieldrin

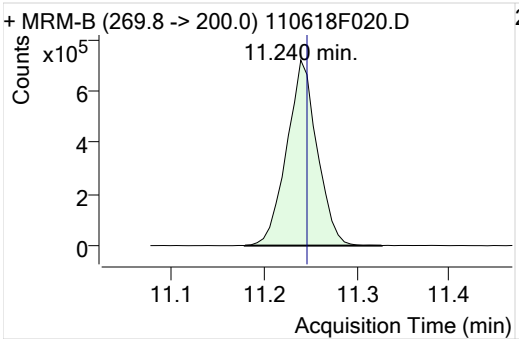


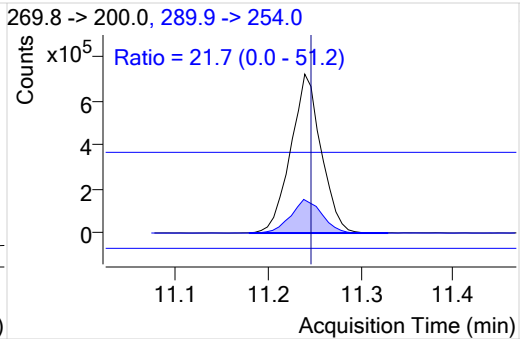
Endosulfan II

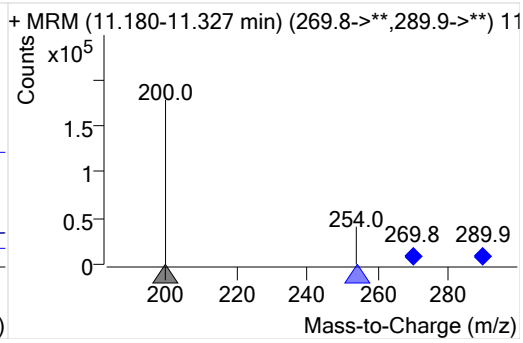


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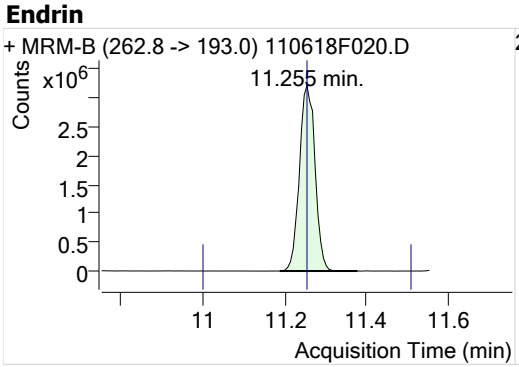
Endrin-13C12

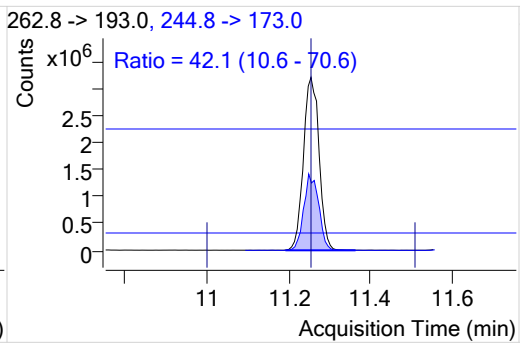


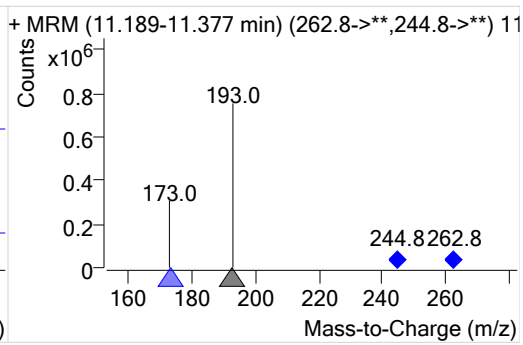




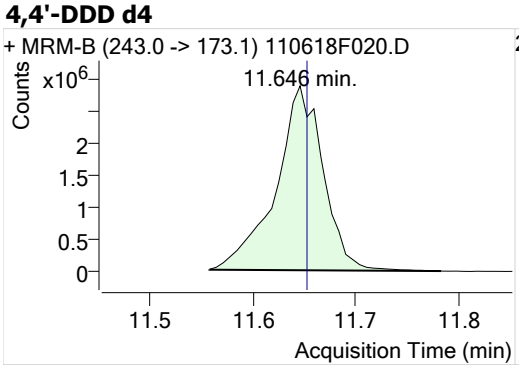
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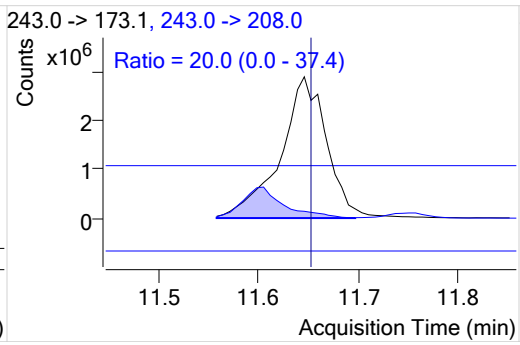


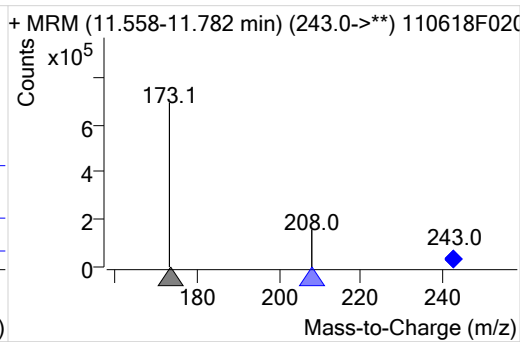




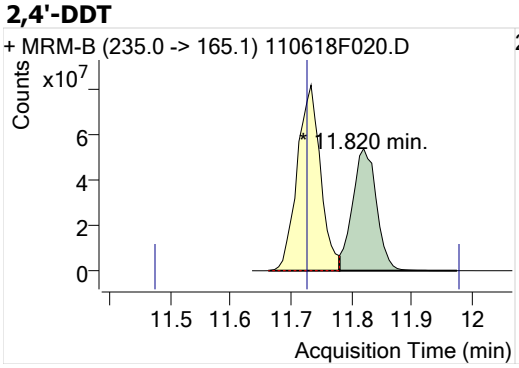
4,4'-DDD d4

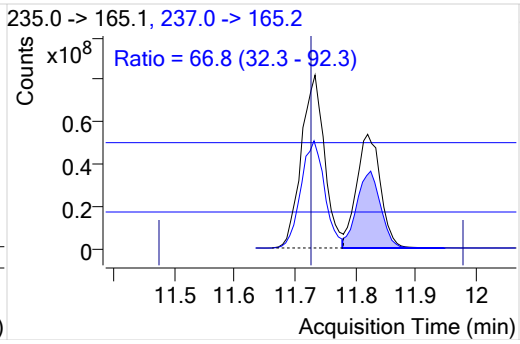


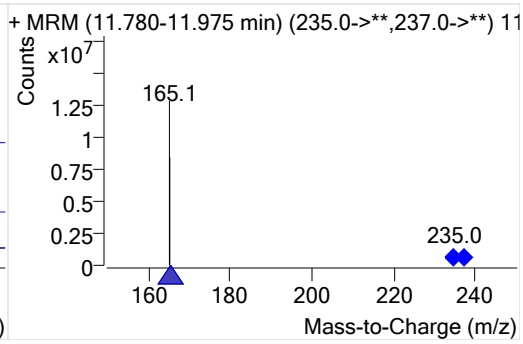




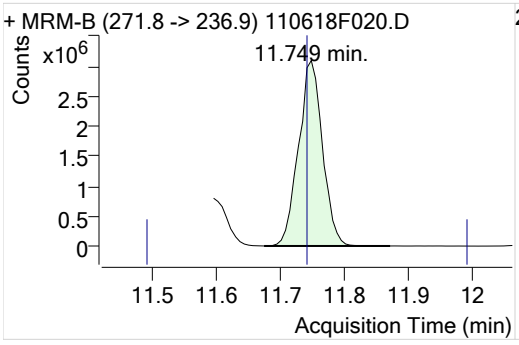
2,4'-DDT

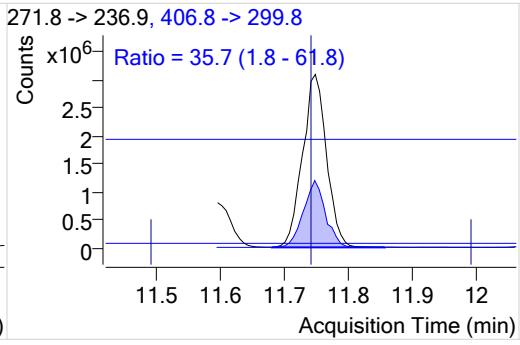


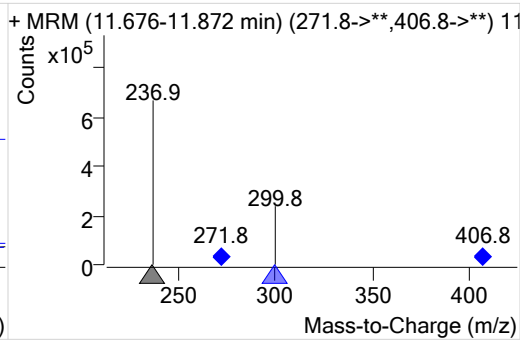




cis-Nonachlor

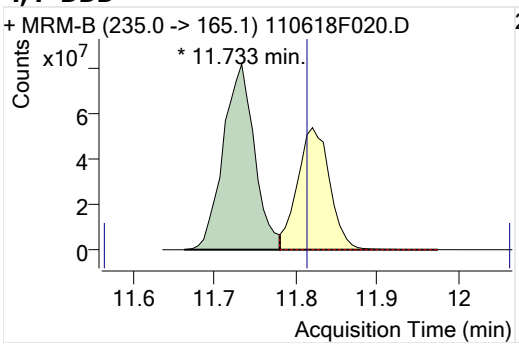


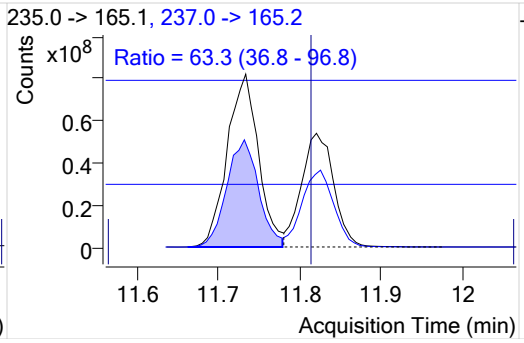


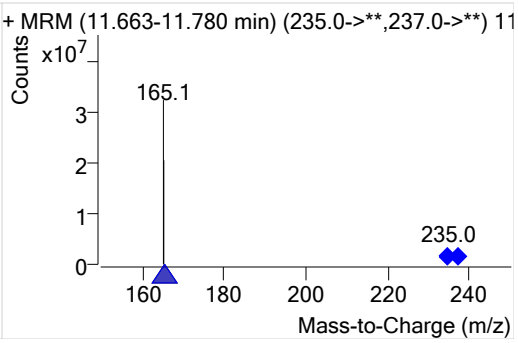


Quantitative Analysis Sample Report

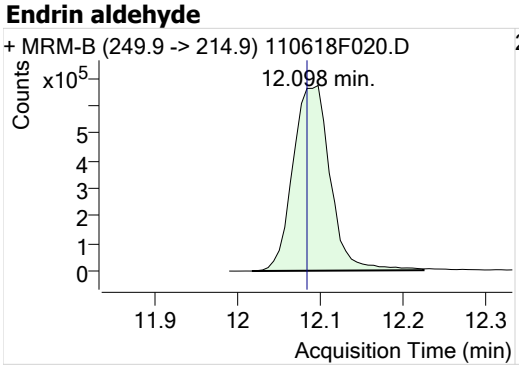
4,4'-DDD

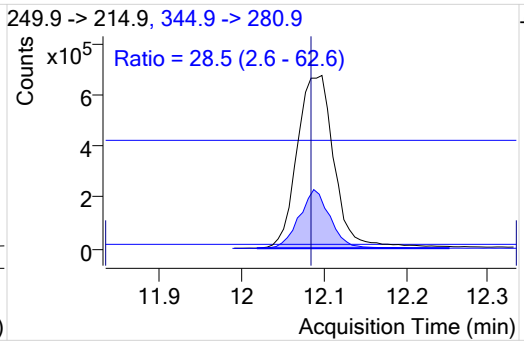


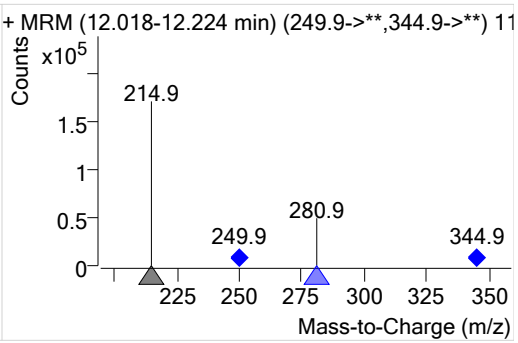




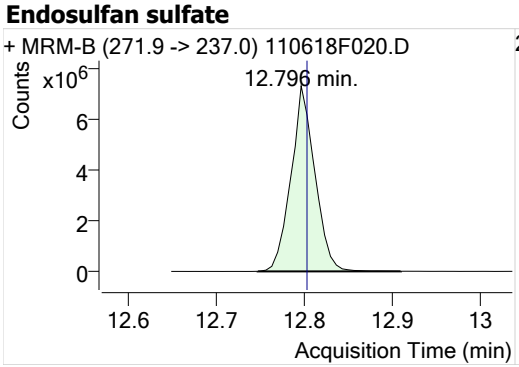
Endrin aldehyde

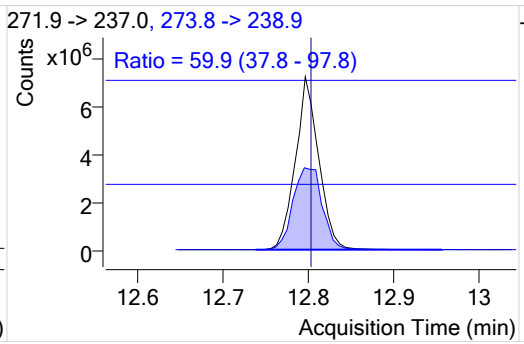


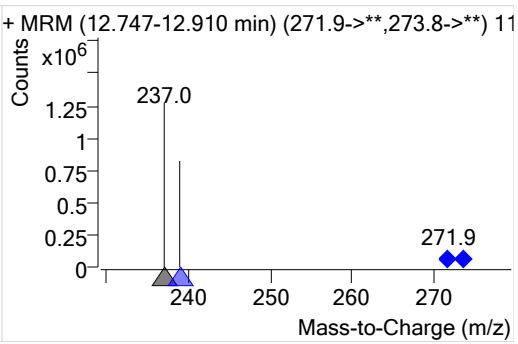




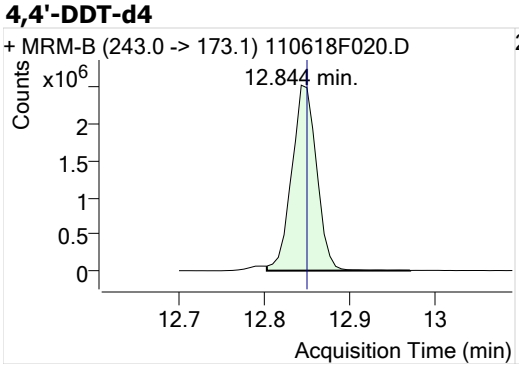
Endosulfan sulfate

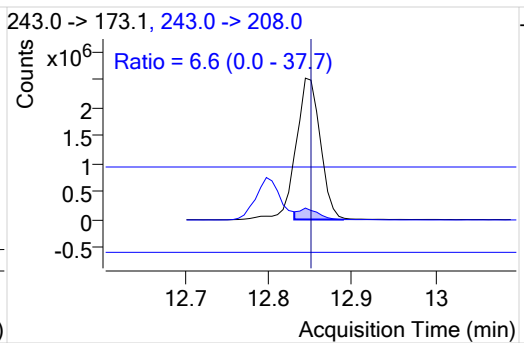


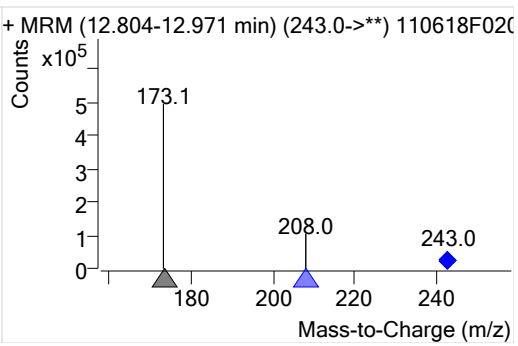




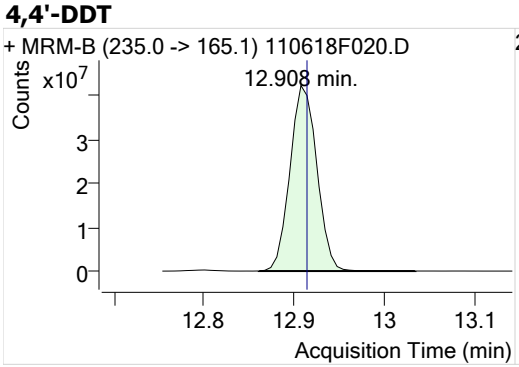
4,4'-DDT-d4

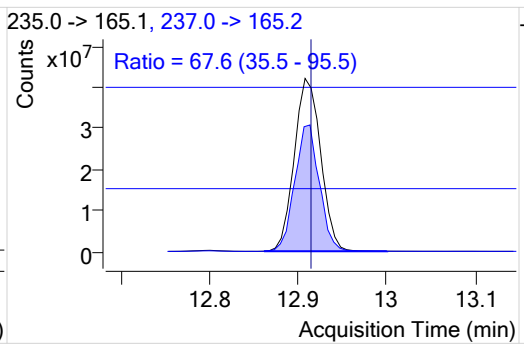


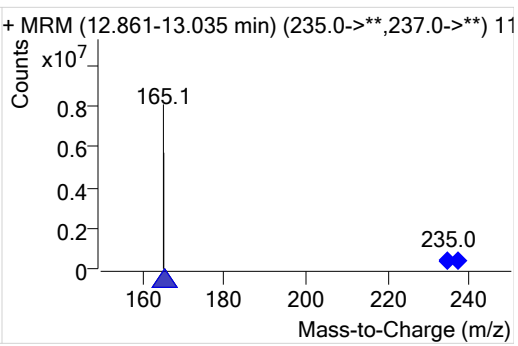




4,4'-DDT

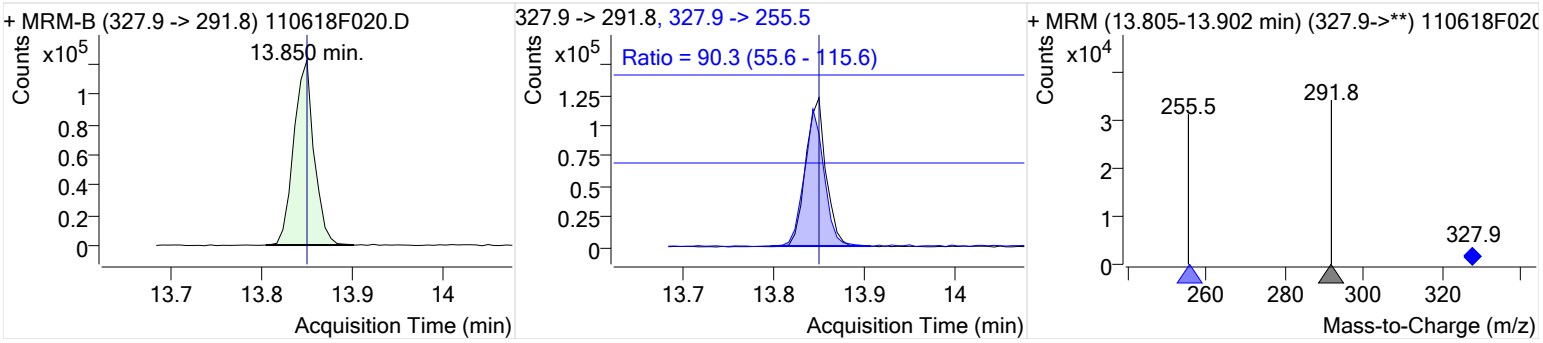




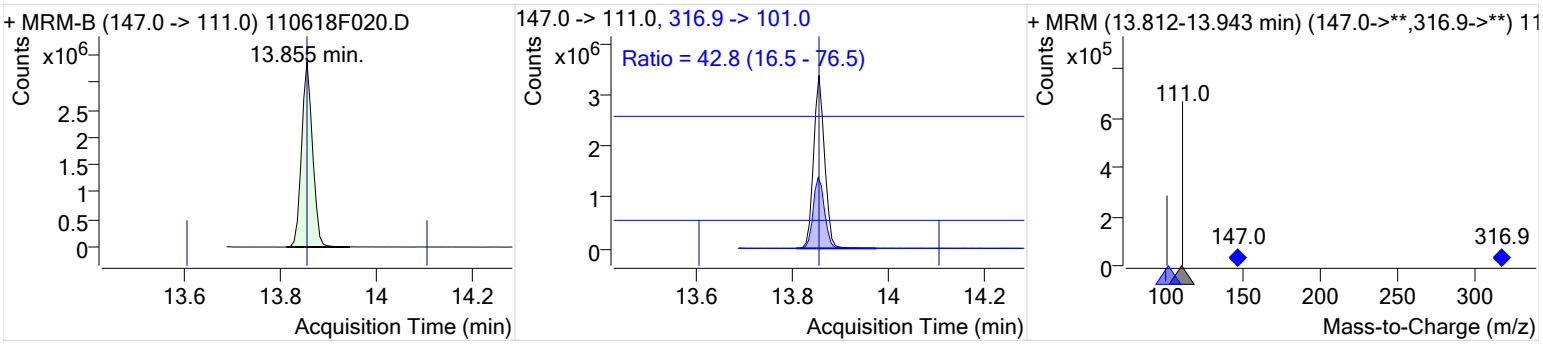


Quantitative Analysis Sample Report

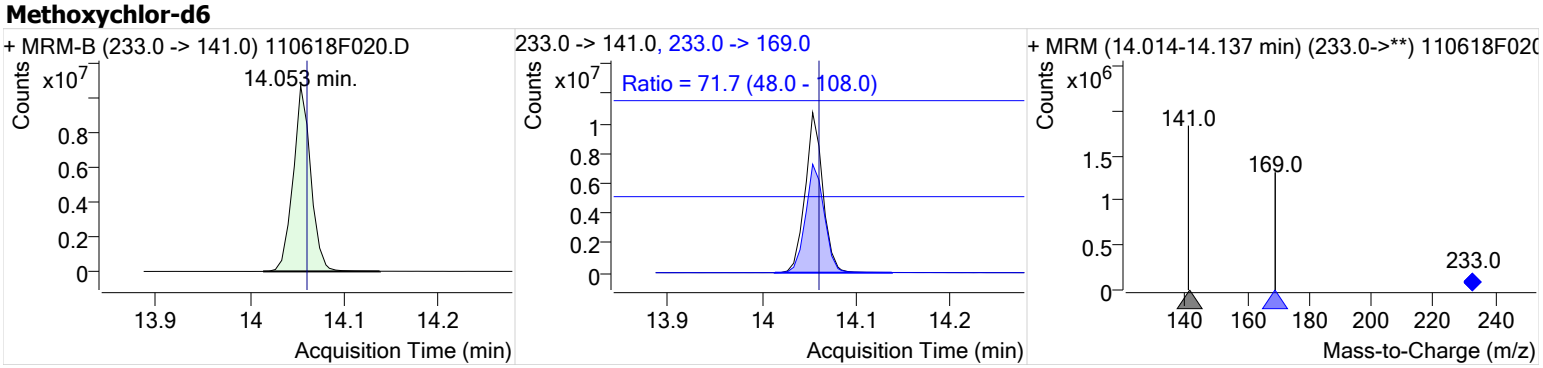
Endrin ketone-13C12



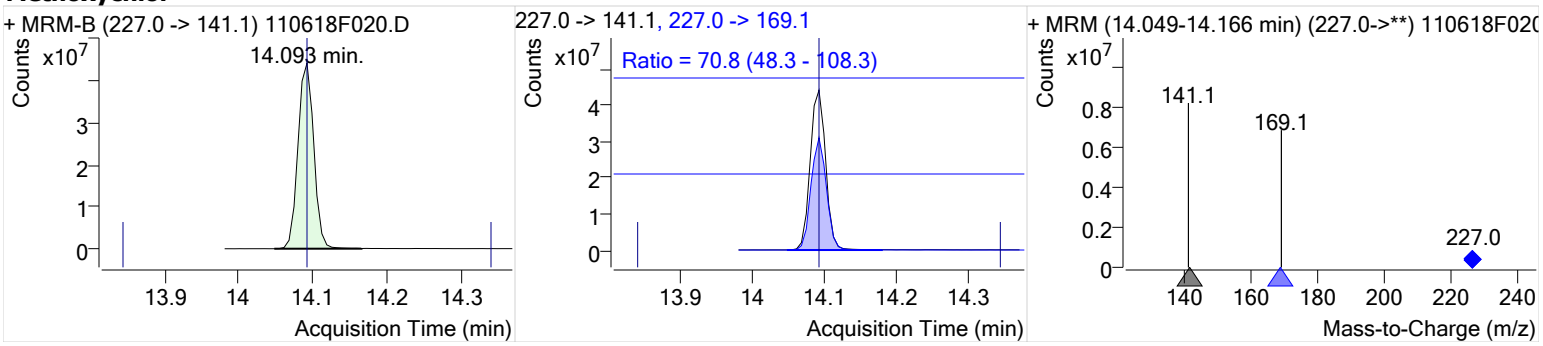
Endrin ketone



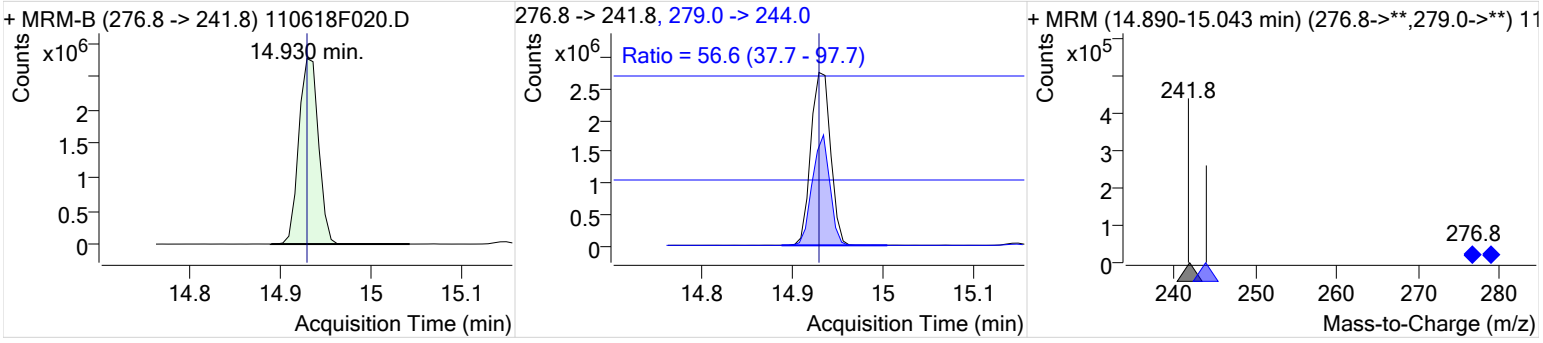
Methoxychlor-d6



Methoxychlor

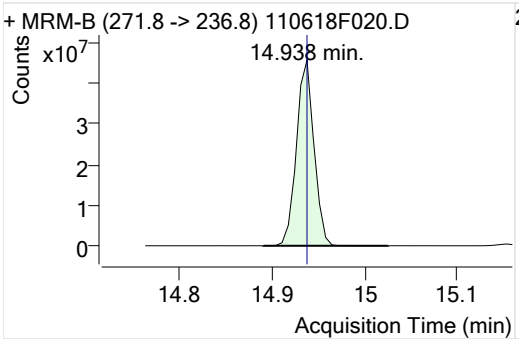


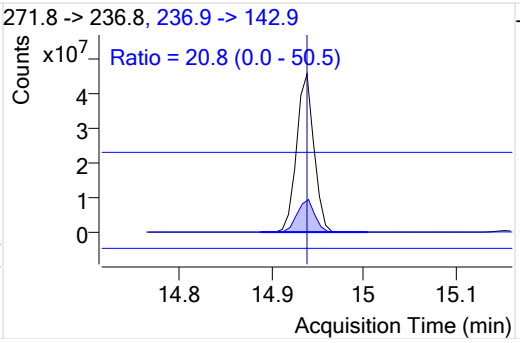
Mirex-13C10

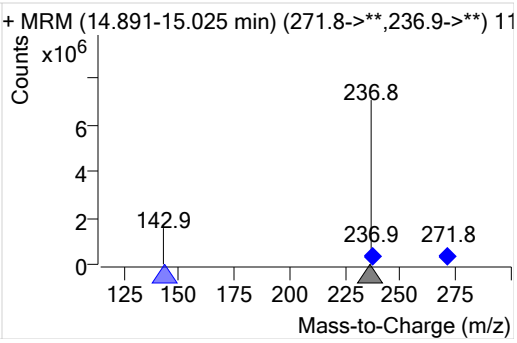


Quantitative Analysis Sample Report

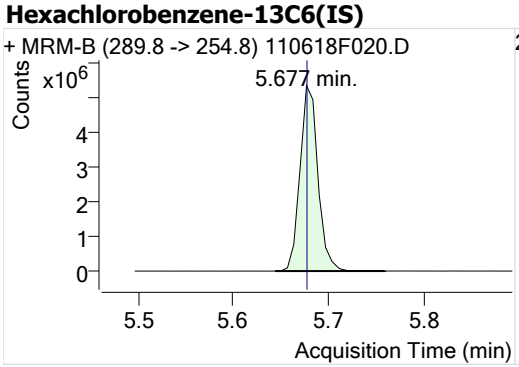
Mirex

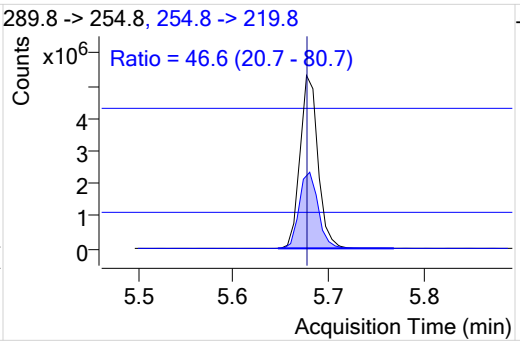


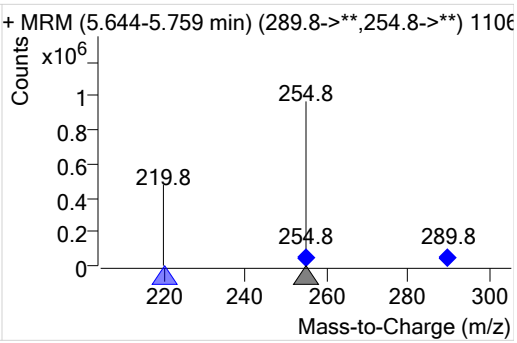




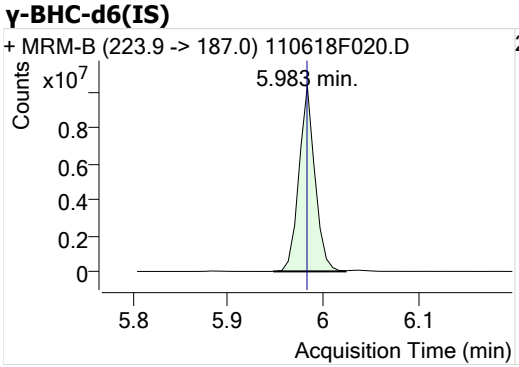
Hexachlorobenzene-13C6(IS)

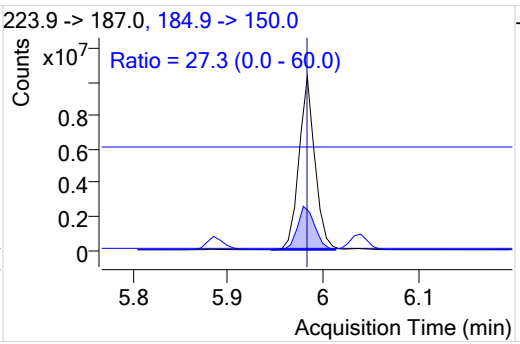


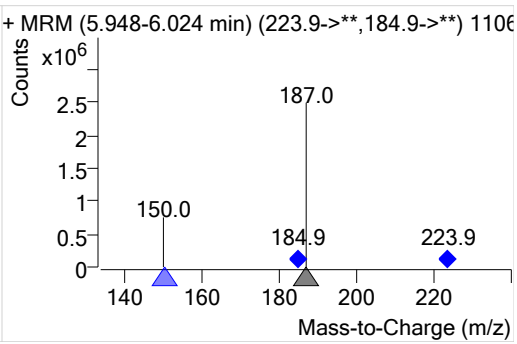




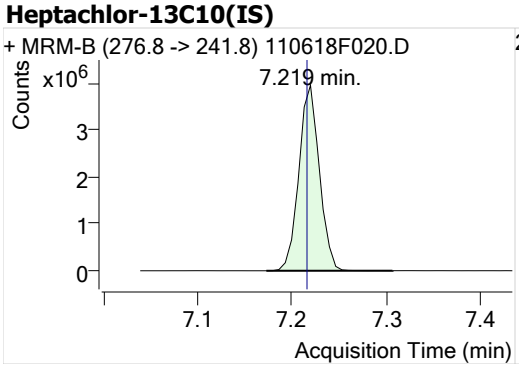
γ-BHC-d6(IS)

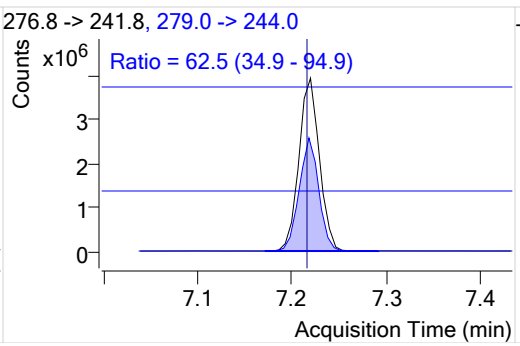


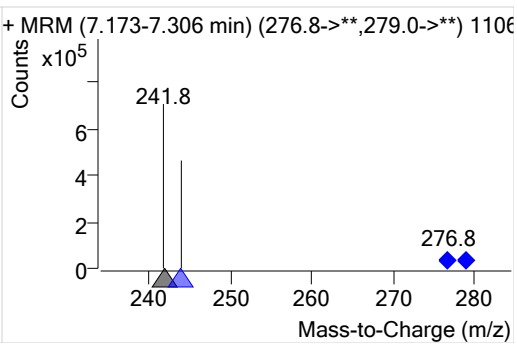




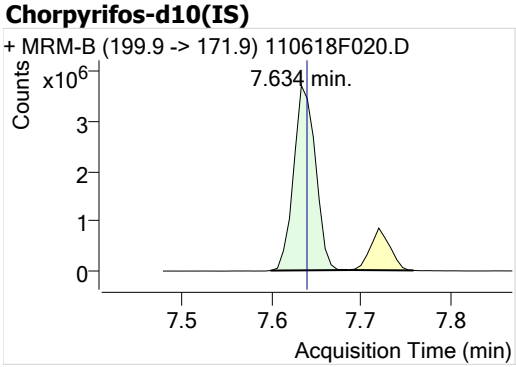
Heptachlor-13C10(IS)

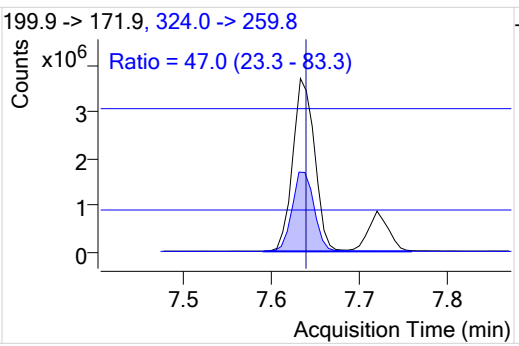


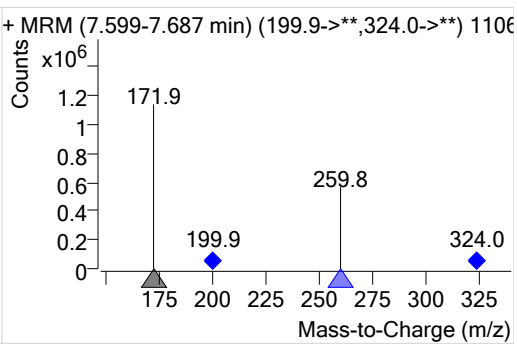




Chorpyrifos-d10(IS)

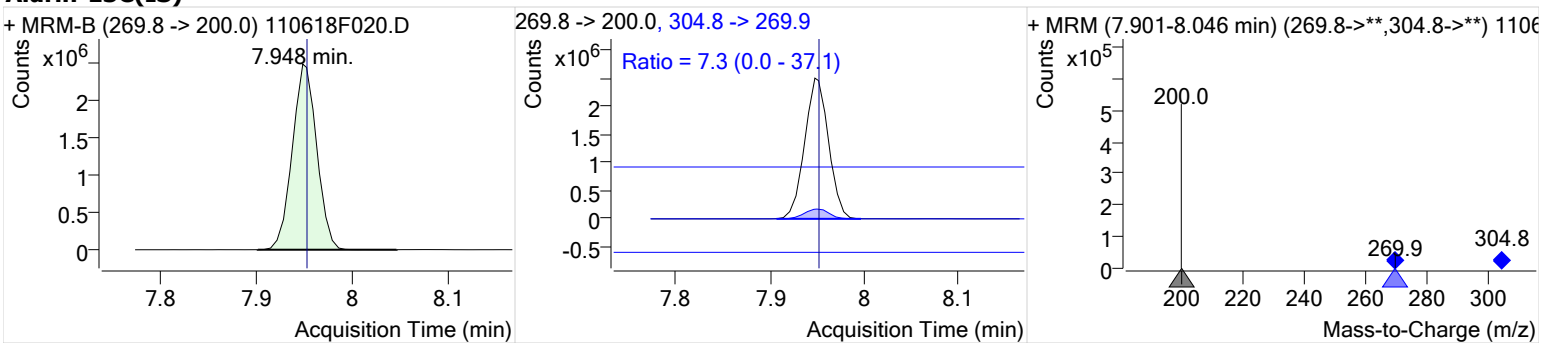




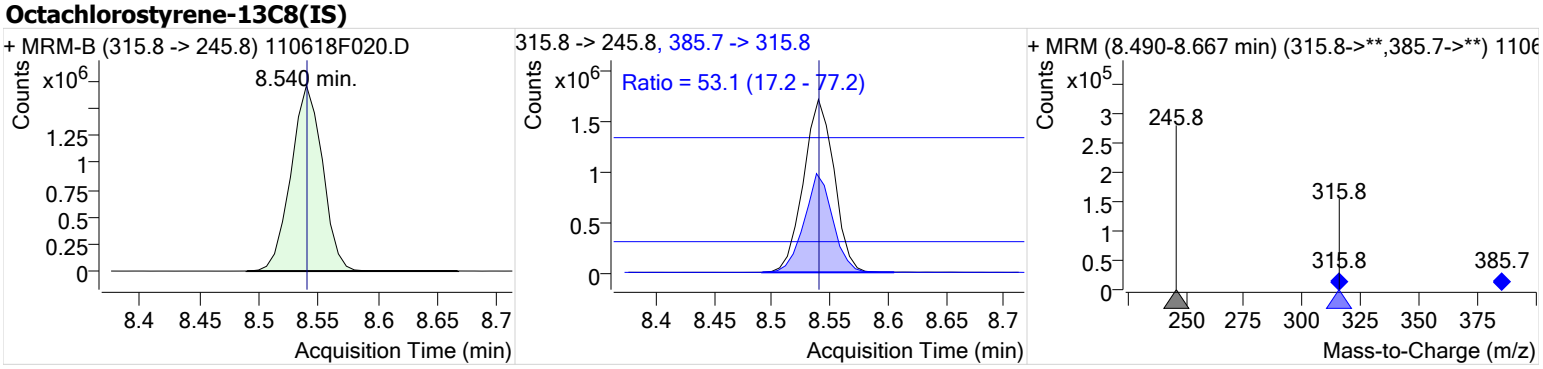


Quantitative Analysis Sample Report

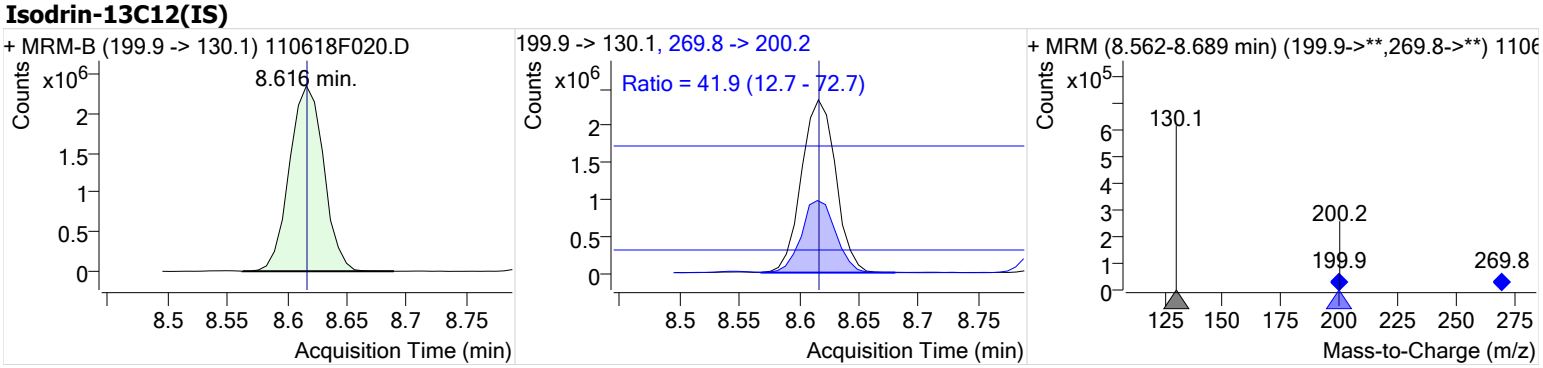
Aldrin-13C(IS)



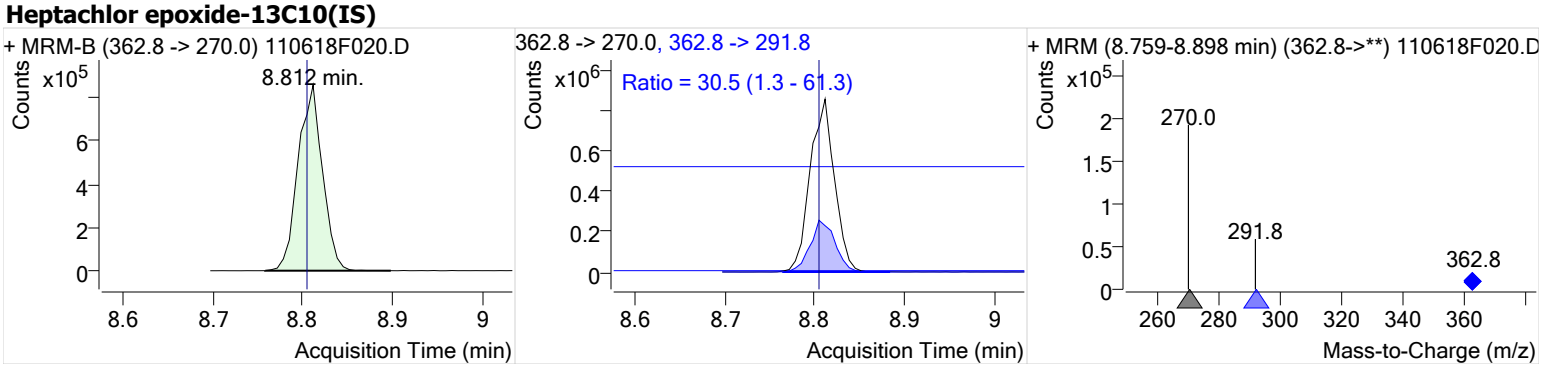
Octachlorostyrene-13C8(IS)



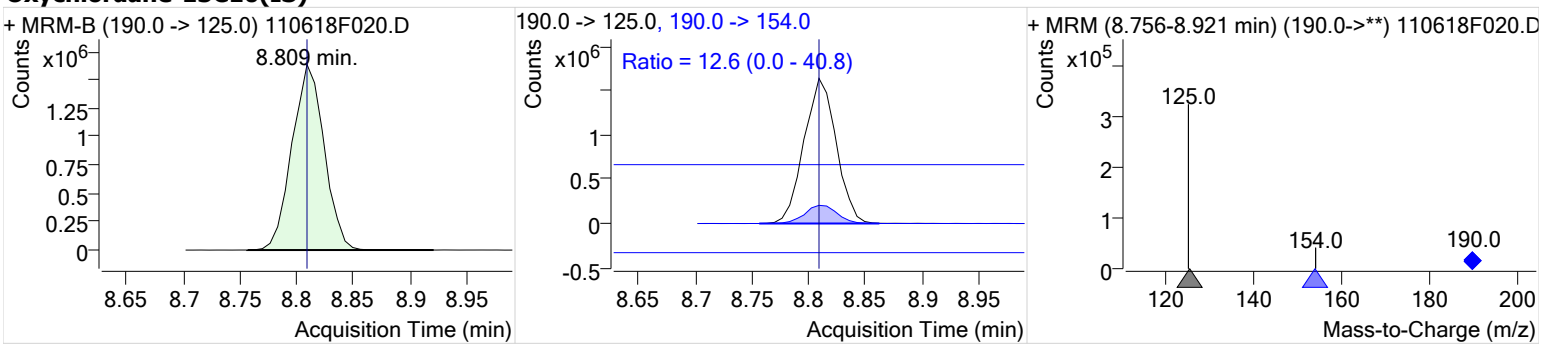
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

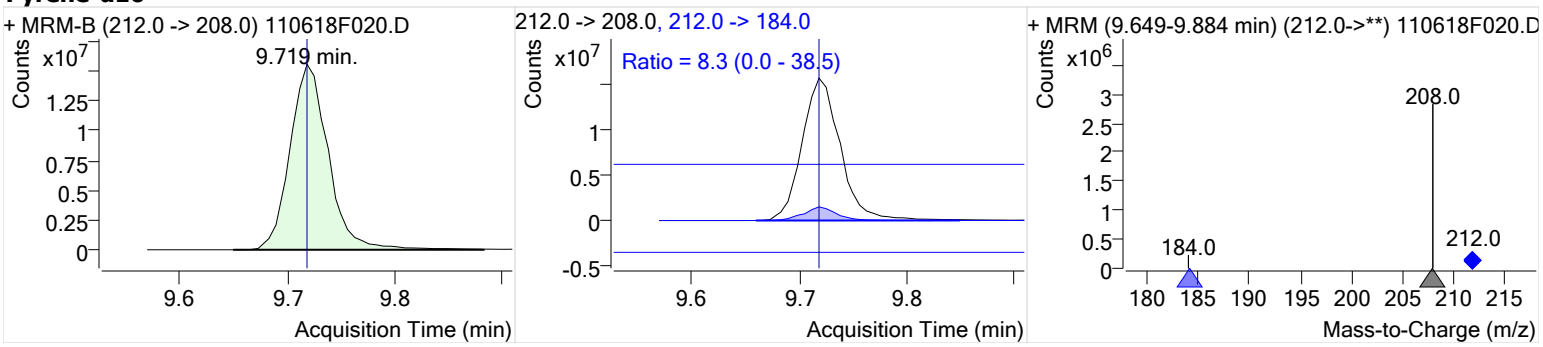


Oxychlordane-13C10(IS)

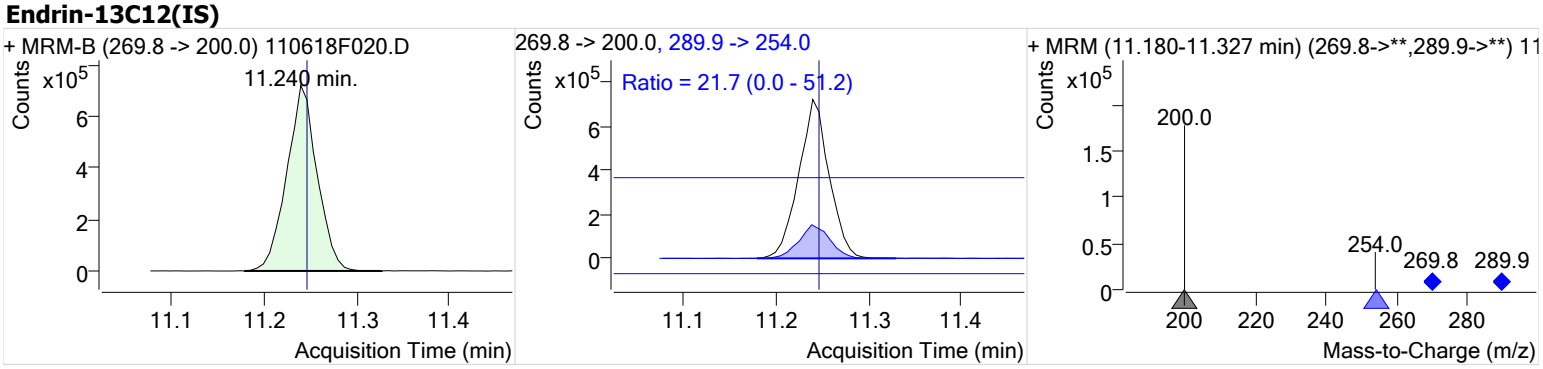


Quantitative Analysis Sample Report

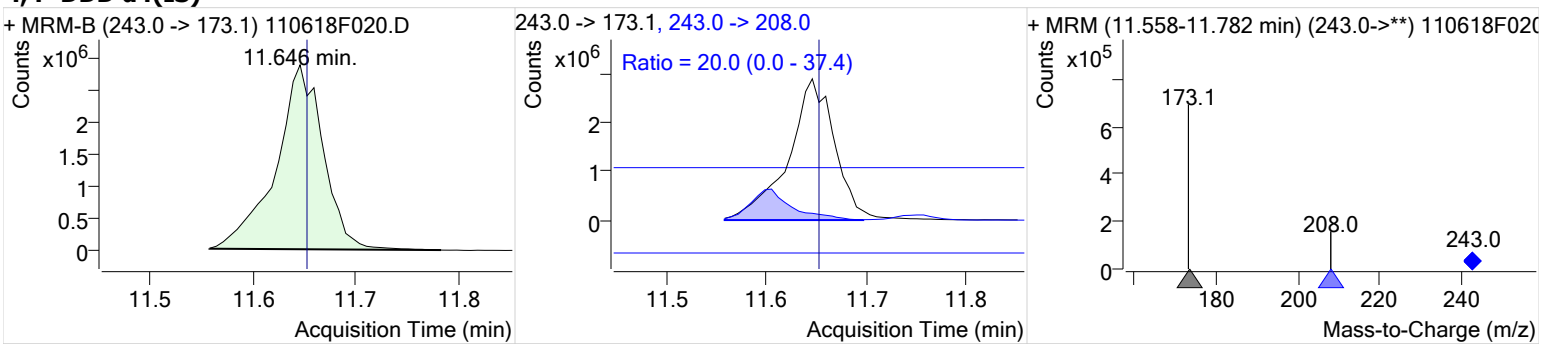
Pyrene-d10



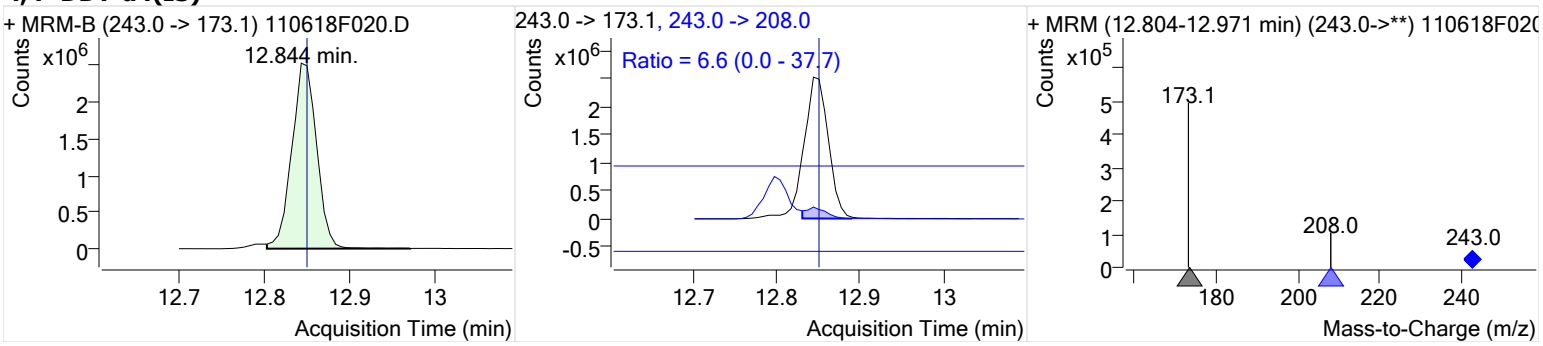
Endrin-13C12(IS)



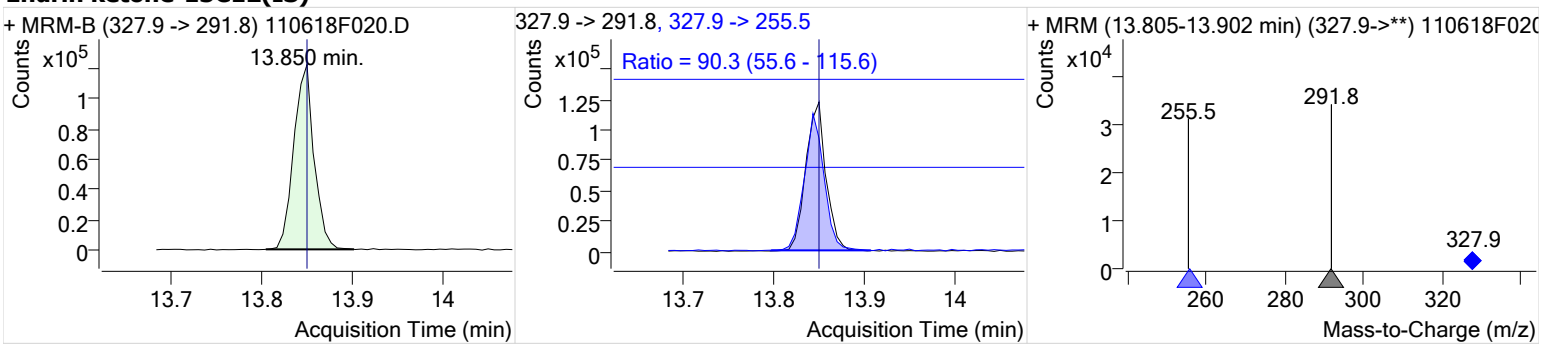
4,4'-DDD d4(IS)



4,4'-DDT-d4(IS)

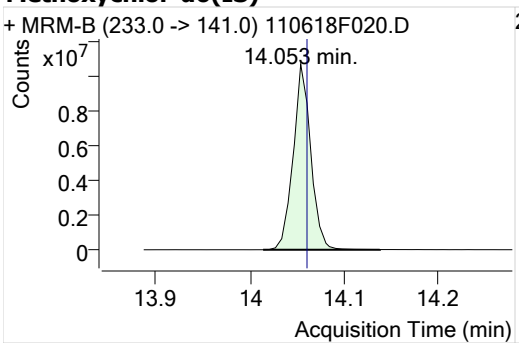


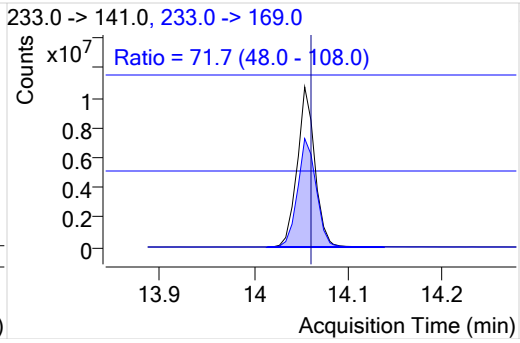
Endrin ketone-13C12(IS)

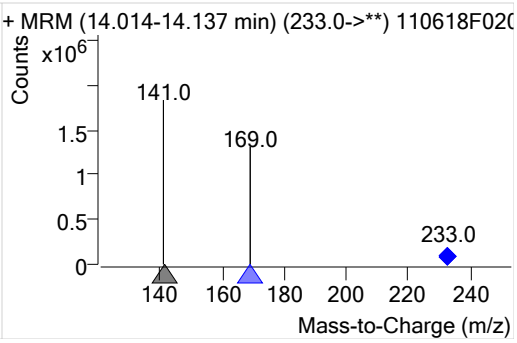


Quantitative Analysis Sample Report

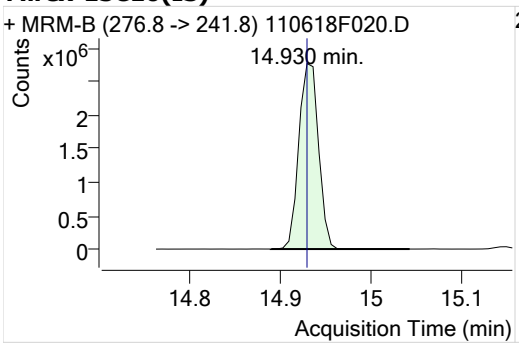
Methoxychlor-d6(IS)

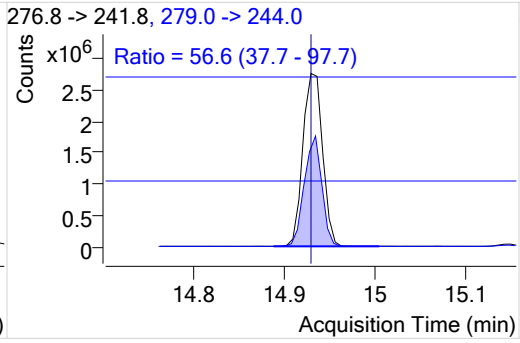


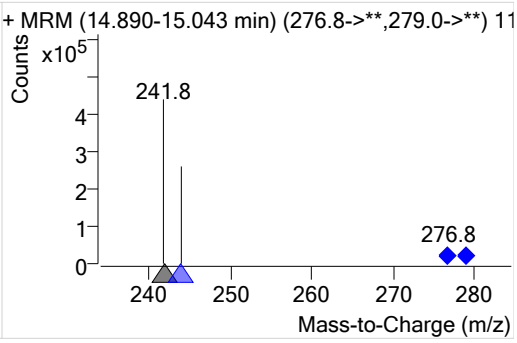




Mirex-13C10(IS)







Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F021.D	**Vial**	12
Acq. Date-Time	11/6/2018 8:01:40 PM	**Acq Operator**	EBruno
Name	OC PEST ICAL 100ng/mL SVM59-48J	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 3:26:45 PM	**Inj Vol**	1
Quant Method			
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 OC PEST ICAL.batch.bin		

Internal Standards	RT	Transition	Response	Conc. Units	Dev(Min)
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	8487505	20.000 ng/ml	0.002
γ-BHC-d6(IS)	5.983	223.9 -> 187.0	14475825	20.000 ng/ml	0.002
Heptachlor-13C10(IS)	7.222	276.8 -> 241.8	7222872	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.640	199.9 -> 171.9	7598970	20.000 ng/ml	0.001
Aldrin-13C(IS)	7.949	269.8 -> 200.0	5493193	20.000 ng/ml	0.004
Octachlorostyrene-13C8(IS)	8.547	315.8 -> 245.8	3955474	20.000 ng/ml	0.003
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	5607702	20.000 ng/ml	0.000
Heptachlor epoxide-13C10(IS)	8.818	362.8 -> 270.0	1937095	20.000 ng/ml	0.007
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	4330893	20.000 ng/ml	0.000
Pyrene-d10	9.712	212.0 -> 208.0	51266216	100.000 ng/ml	0.003
Endrin-13C12(IS)	11.240	269.8 -> 200.0	2095253	20.000 ng/ml	0.007
4,4'-DDD d4(IS)	11.646	243.0 -> 173.1	12206485	5.000 ng/ml	0.027
4,4'-DDT-d4(IS)	12.851	243.0 -> 173.1	6557089	5.000 ng/ml	0.000
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	277524	20.000 ng/ml	0.000
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	19521462	20.000 ng/ml	0.007
Mirex-13C10(IS)	14.930	276.8 -> 241.8	5643743	5.000 ng/ml	0.001

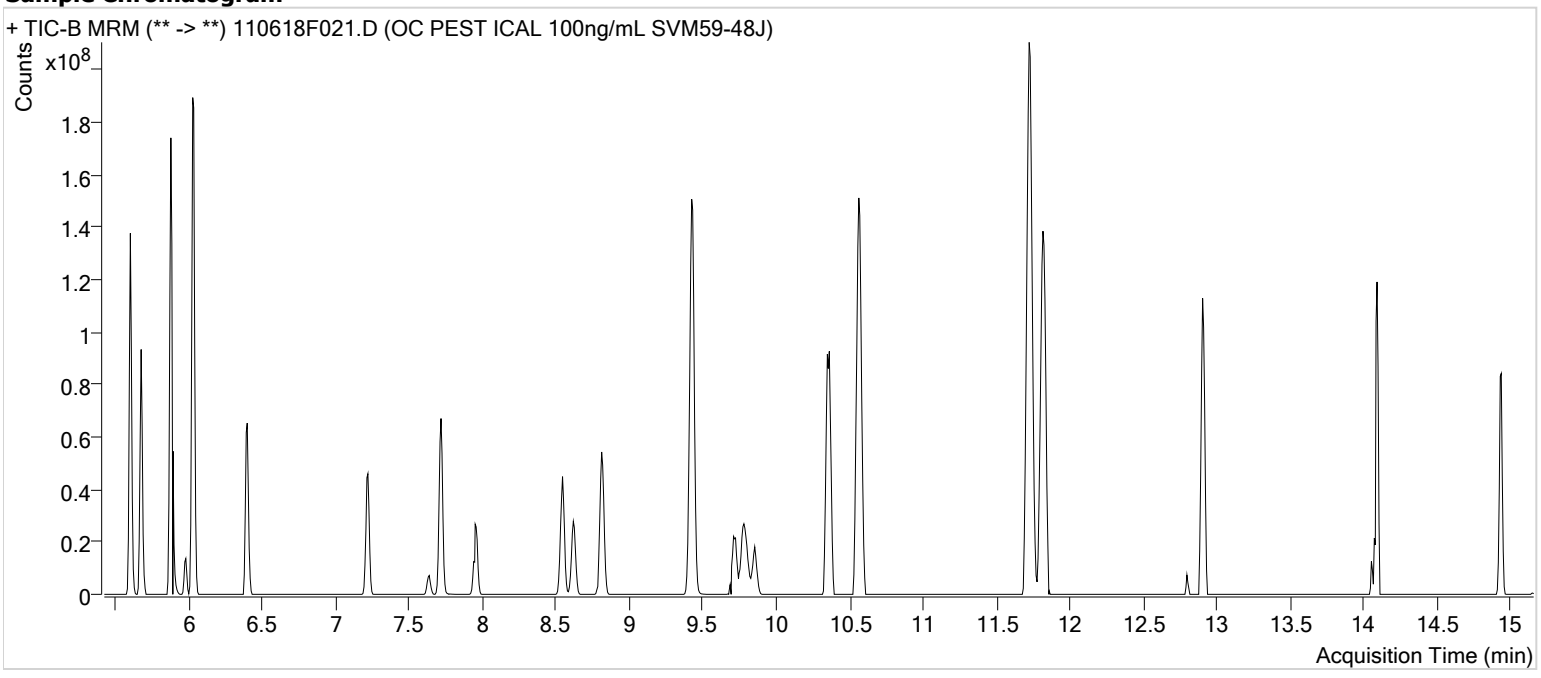
System Monitoring Compounds	RT	Transition	Response	Conc. Units	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	8487505	21.711 ng/ml	
		Spiked Amount =	20.0	Recovery =	*108.6 %*
γ-BHC-d6	5.983	223.9 -> 187.0	14475825	19.302 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.5 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	7222872	19.128 ng/ml	
		Spiked Amount =	20.0	Recovery =	*95.6 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	7598970	19.627 ng/ml	
		Spiked Amount =	20.0	Recovery =	*98.1 %*
Aldrin-13C	7.952	269.8 -> 200.0	5493193	20.500 ng/ml	
		Spiked Amount =	20.0	Recovery =	*102.5 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3955474	20.122 ng/ml	
		Spiked Amount =	20.0	Recovery =	*100.6 %*
Isodrin-13C12	8.616	199.9 -> 130.1	5607702	18.930 ng/ml	
		Spiked Amount =	20.0	Recovery =	*94.7 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1937095	19.868 ng/ml	
		Spiked Amount =	20.0	Recovery =	*99.3 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	4330893	21.026 ng/ml	
		Spiked Amount =	20.0	Recovery =	*105.1 %*
Endrin-13C12	11.247	269.8 -> 200.0	2095253	20.708 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.5 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	12206485	5.844 ng/ml	
		Spiked Amount =	5.0	Recovery =	*116.9 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	6557089	5.503 ng/ml	
		Spiked Amount =	5.0	Recovery =	*110.1 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	277524	21.824 ng/ml	
		Spiked Amount =	20.0	Recovery =	*109.1 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	19521462	21.498 ng/ml	
		Spiked Amount =	20.0	Recovery =	*107.5 %*
Mirex-13C10	14.930	276.8 -> 241.8	5643743	6.050 ng/ml	
		Spiked Amount =	5.0	Recovery =	*121.0 %*

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Target Compounds	ISTD	RT	Transition	Resp.	Conc. Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	100006315	98.368 ng/ml	98
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	59648367	80.987 ng/ml	97
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	139608465	104.096 ng/ml	92
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.033	181.1 -> 145.1	160904832	99.844 ng/ml	99
δ-BHC	γ-BHC-d6(IS)	6.396	181.1 -> 145.1	64408923	106.722 ng/ml	91
Heptachlor	Heptachlor-13C10(IS)	7.226	271.7 -> 236.9	38468933	95.371 ng/ml	99
Chorpyrifos	Chorpyrifos-d10(IS)	7.723	196.9 -> 169.0	57804970	111.500 ng/ml	91
Aldrin	Aldrin-13C(IS)	7.956	254.9 -> 220.0	16676883	101.762 ng/ml	81
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.547	342.8 -> 307.8	53607321	106.437 ng/ml	93
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	28378504	99.226 ng/ml	97
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.814	352.8 -> 262.9	10771139	102.207 ng/ml	96
Oxychlordane	Oxychlordane-13C10(IS)	8.817	114.9 -> 51.1	54545545	90.612 ng/ml	99
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.426	271.8 -> 236.9	19822043	99.562 ng/ml	96
2,4'-DDE	4,4'-DDD d4(IS)	9.436	246.0 -> 176.2	167998673	84.850 ng/ml	90
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	46826894	96.857 ng/ml	94
Endosulfan I	Endrin-13C12(IS)	9.798	206.9 -> 172.0	11633740	105.704 ng/ml	99
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	31702859	96.314 ng/ml	94
4,4' -DDE	4,4'-DDD d4(IS)	10.351	246.0 -> 176.2	156563902	87.874 ng/ml	94
2,4'-DDD	4,4'-DDD d4(IS)	10.567	235.0 -> 165.1	231495838	89.909 ng/ml	99
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	15496025	104.826 ng/ml	95
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	2074590	99.709 ng/ml	94
Endrin	Endrin-13C12(IS)	11.261	262.8 -> 193.0	14226819	104.039 ng/ml	99
2,4'-DDT	4,4'-DDT-d4(IS)	11.820	235.0 -> 165.1	251170171 ***m***	94.119 ng/ml	95
cis-Nonachlor	Oxychlordane-13C10(IS)	11.749	271.8 -> 236.9	12930204	101.966 ng/ml	92
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	359670390 ***m***	92.841 ng/ml	98
Endrin aldehyde	Endrin-13C12(IS)	12.084	249.9 -> 214.9	3499693	116.974 ng/ml	96
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	22520968	107.429 ng/ml	97
4,4'-DDT	4,4'-DDT-d4(IS)	12.908	235.0 -> 165.1	146422931	101.176 ng/ml	98
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	8648418	94.922 ng/ml	99
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	111750111	98.728 ng/ml	96
Mirex	Mirex-13C10(IS)	14.938	271.8 -> 236.8	88254560	96.958 ng/ml	97

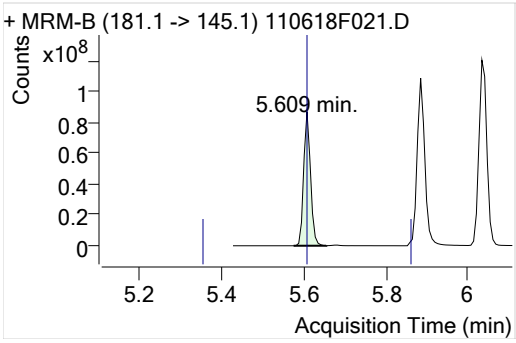
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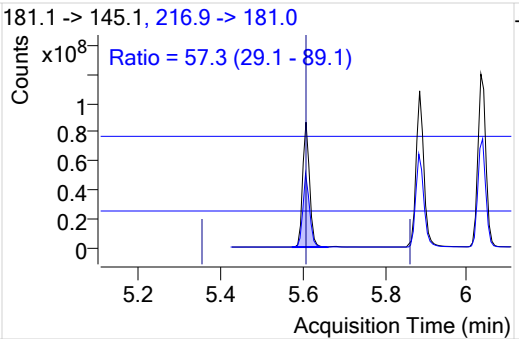
Sample Chromatogram

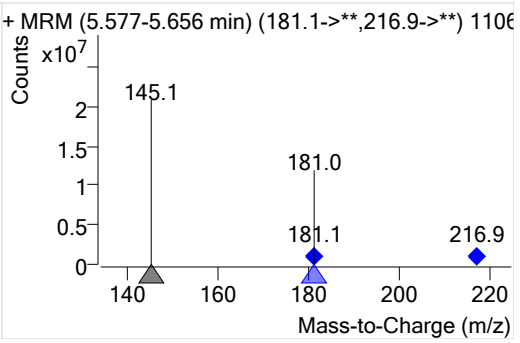


Quantitative Analysis Sample Report

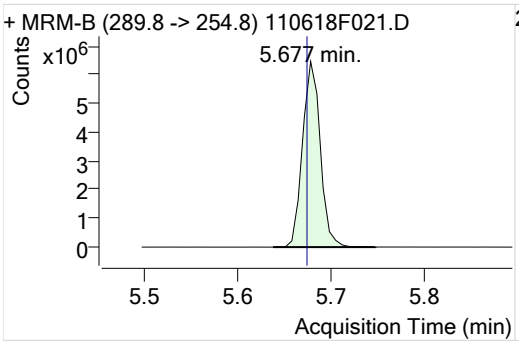
α-BHC

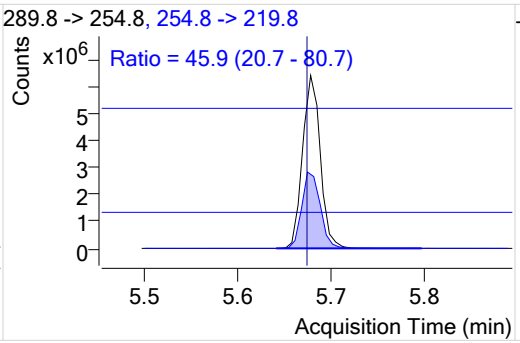


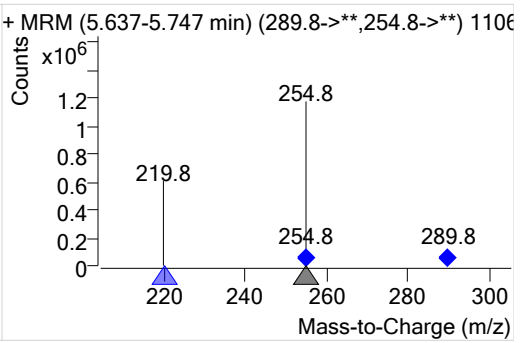




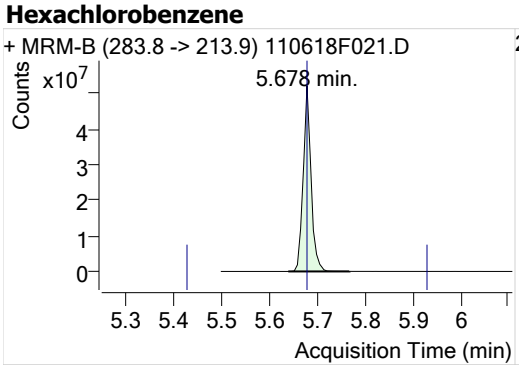
Hexachlorobenzene-13C6

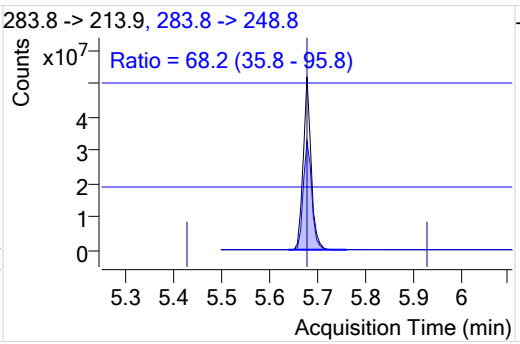


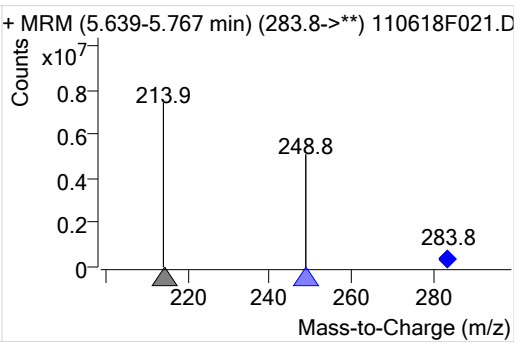




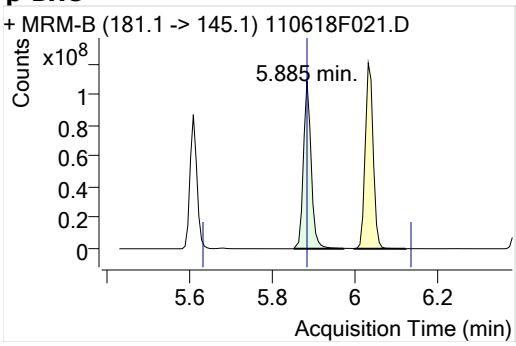
Hexachlorobenzene

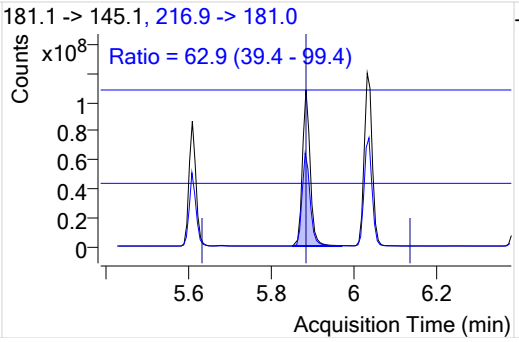


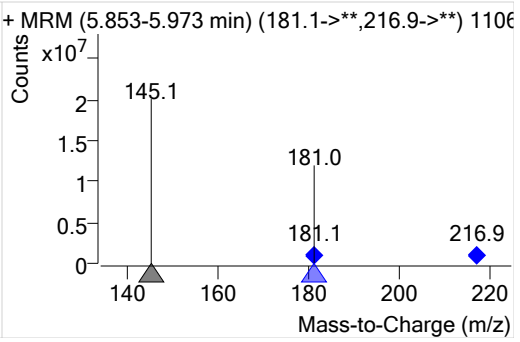




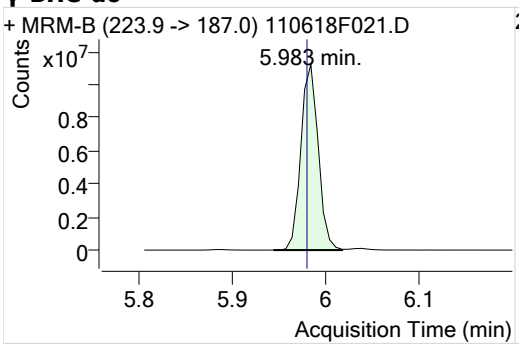
β-BHC

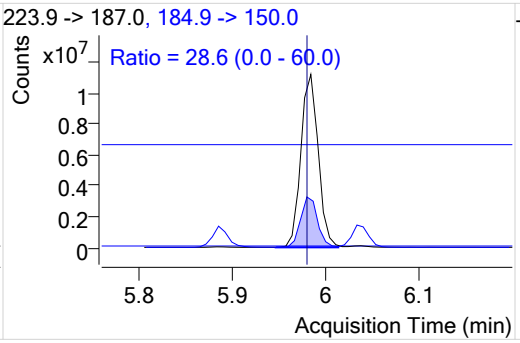


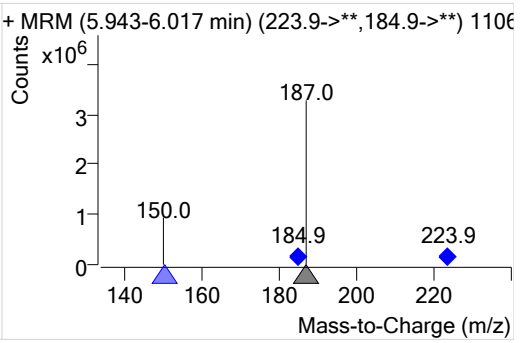




γ-BHC-d6

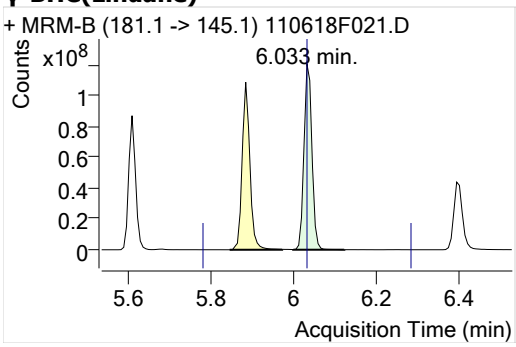


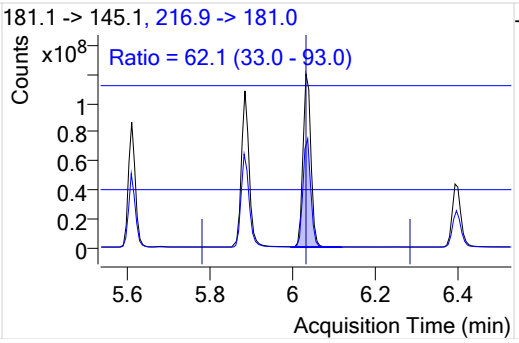


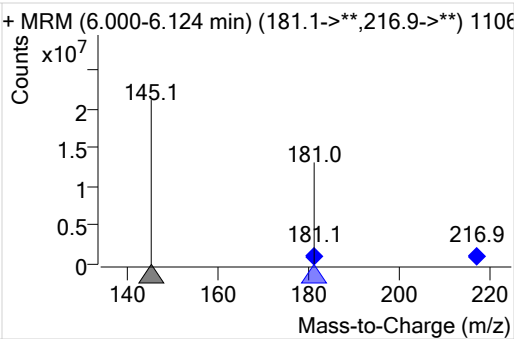


Quantitative Analysis Sample Report

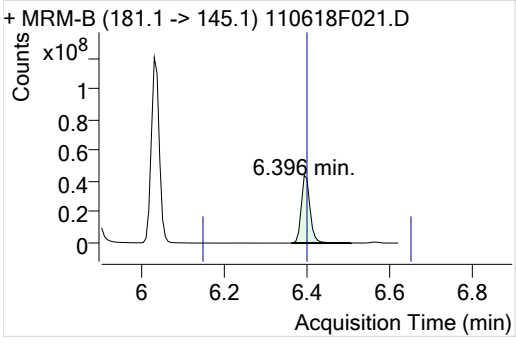
γ-BHC(Lindane)

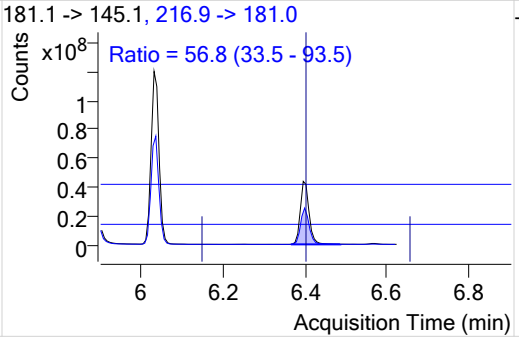


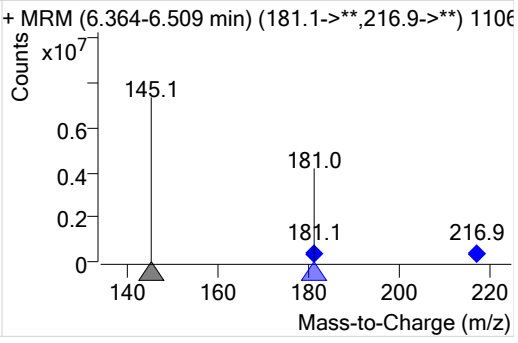




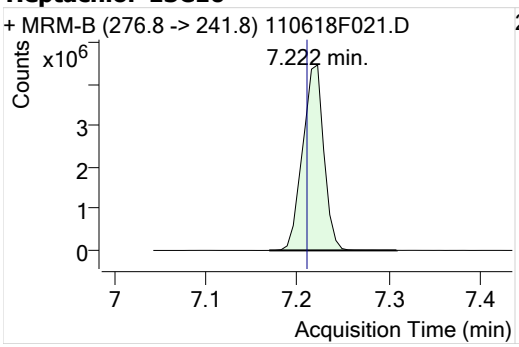
δ-BHC

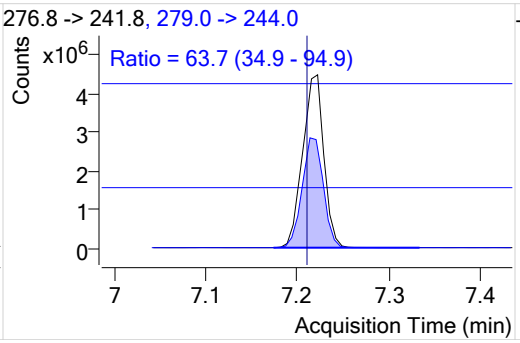


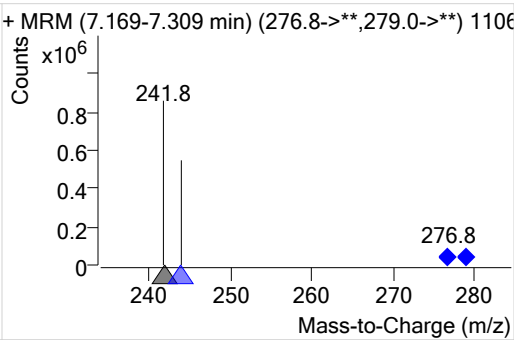




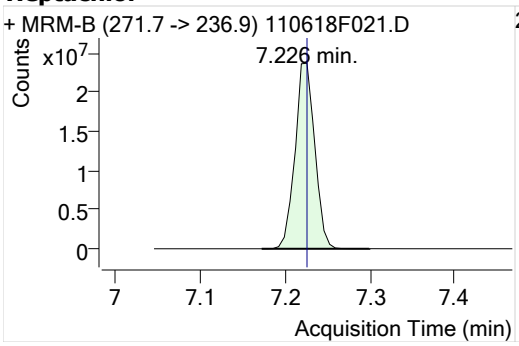
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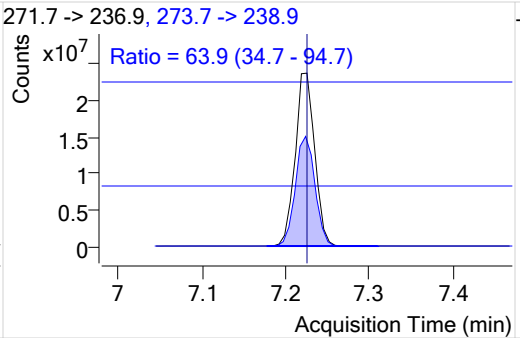


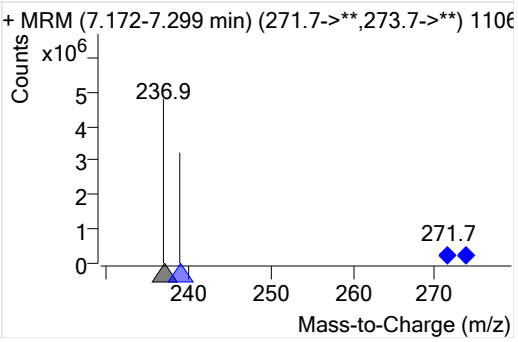




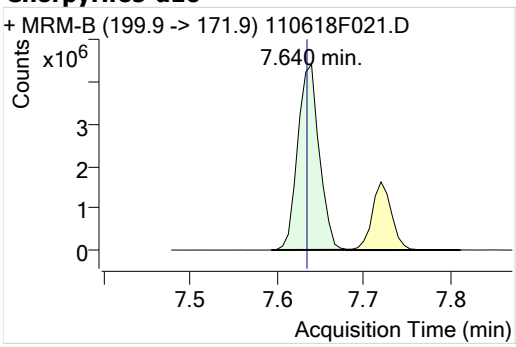
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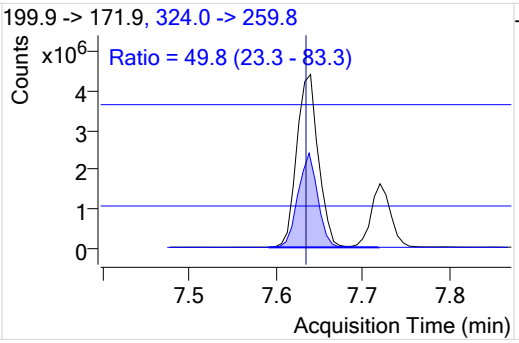


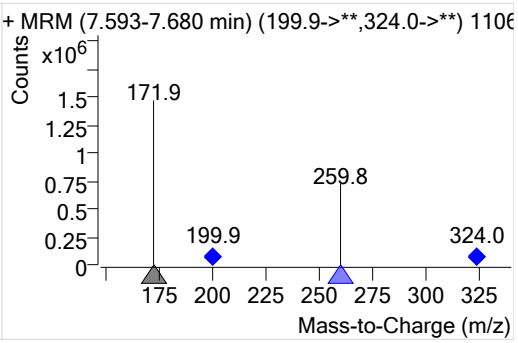




Chorpyrifos-d10

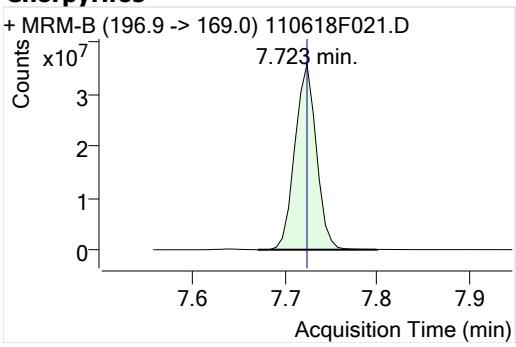


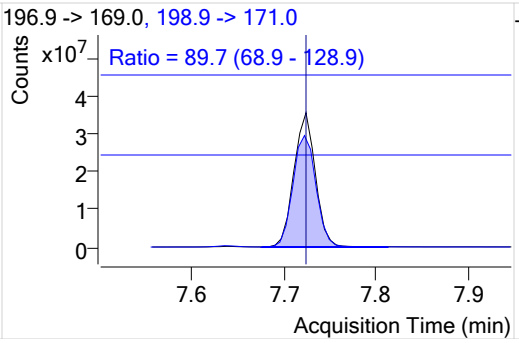


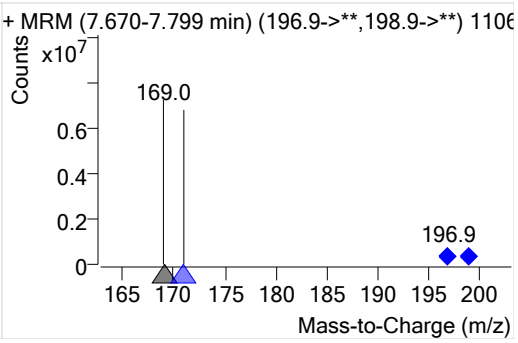


Quantitative Analysis Sample Report

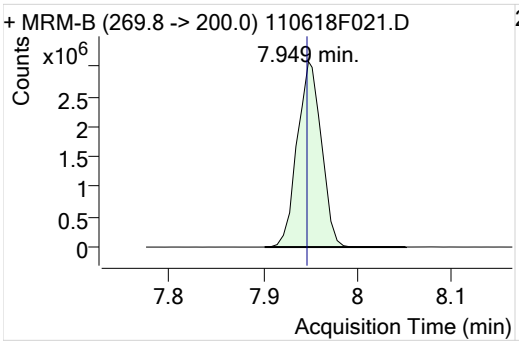
Chorpyrifos

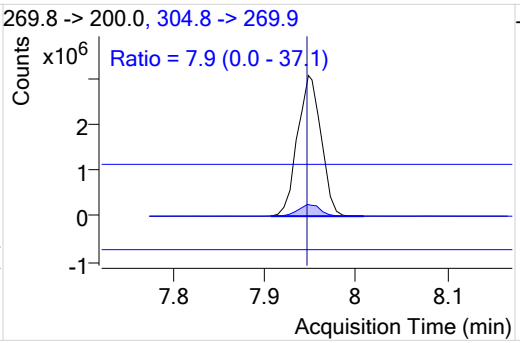


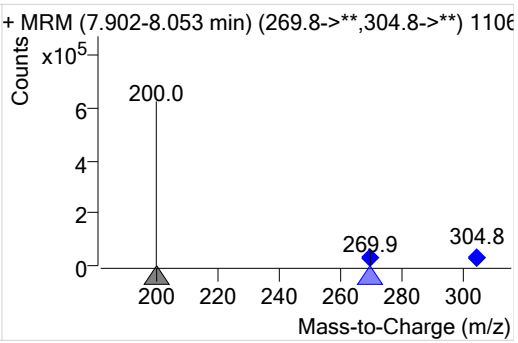




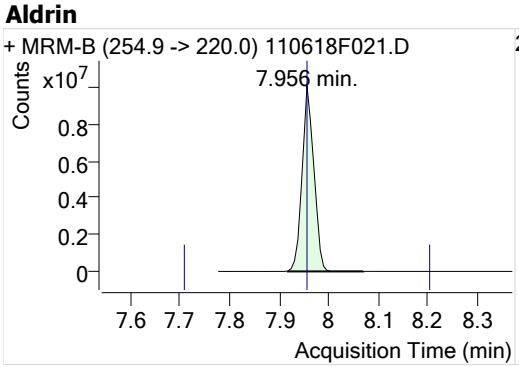
Aldrin-13C

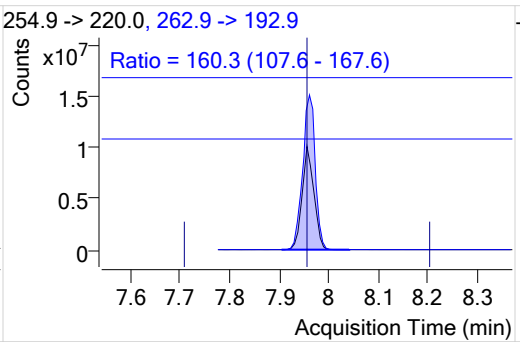


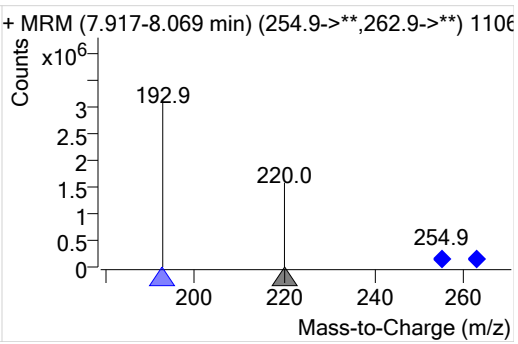




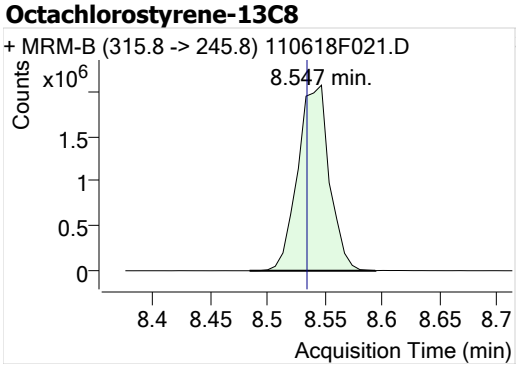
Aldrin

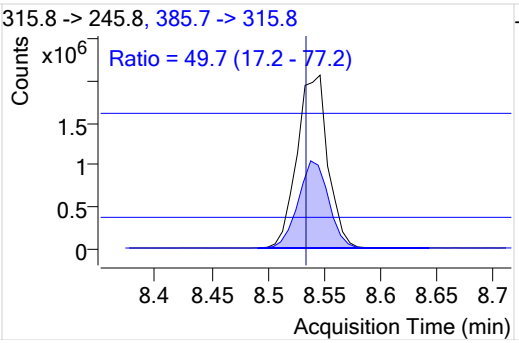


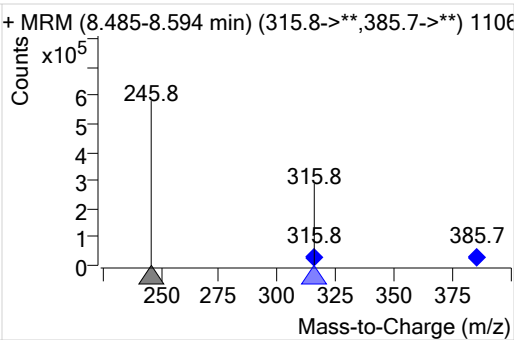




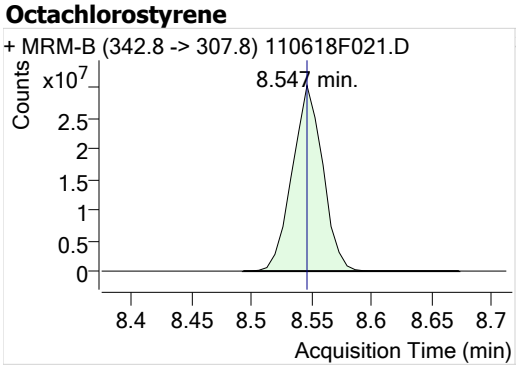
Octachlorostyrene-13C8

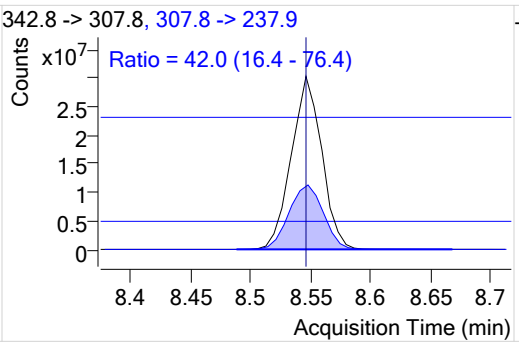


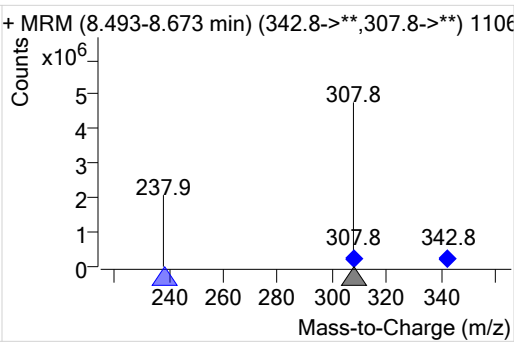




Octachlorostyrene

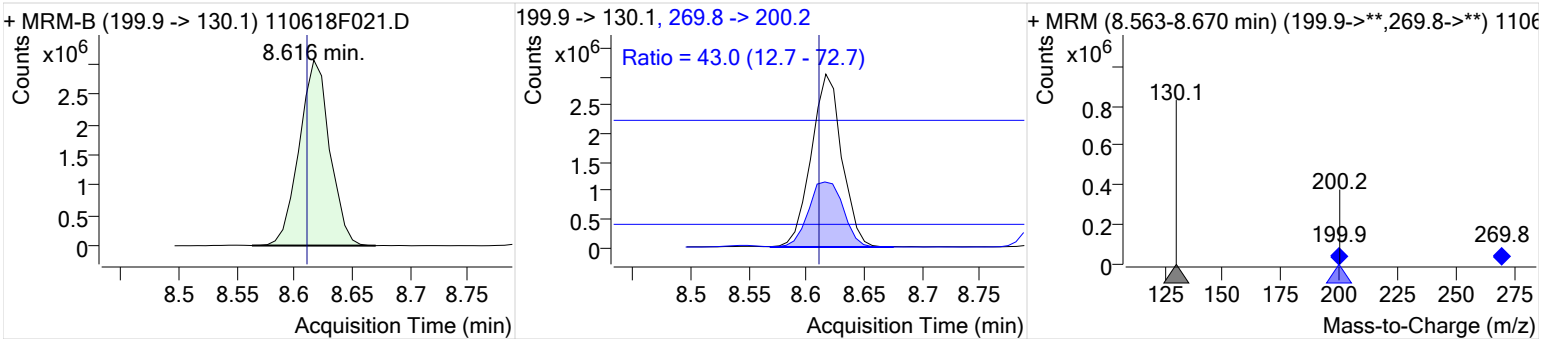




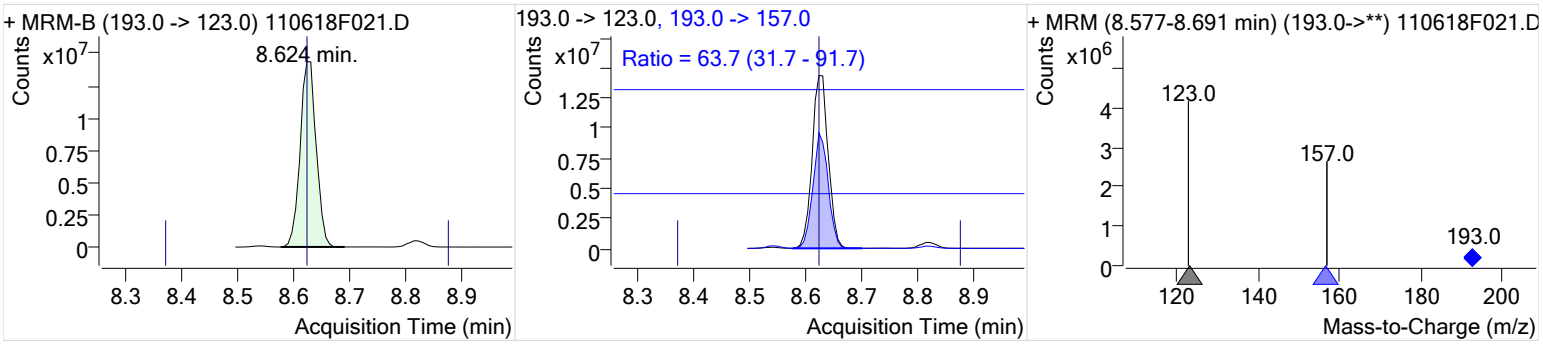


Quantitative Analysis Sample Report

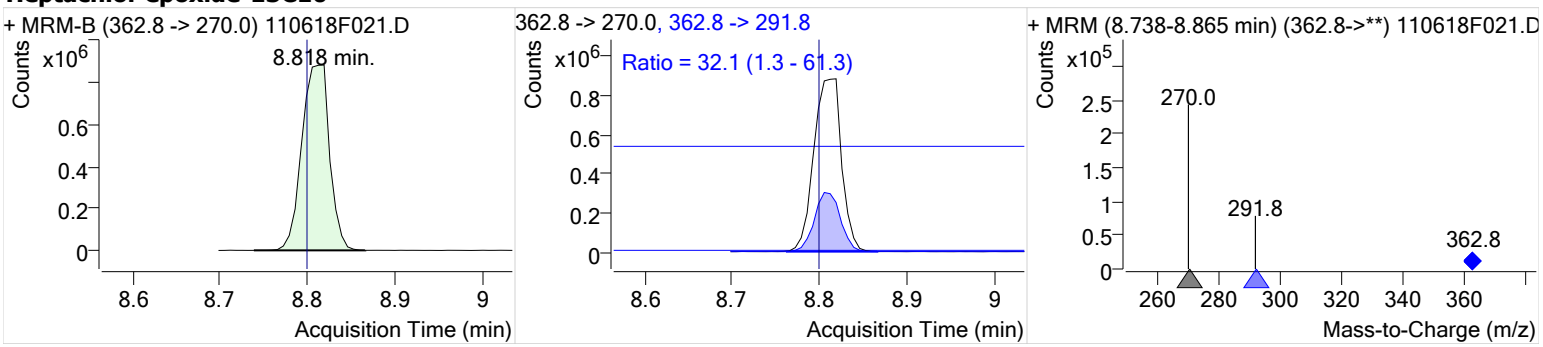
Isodrin-13C12



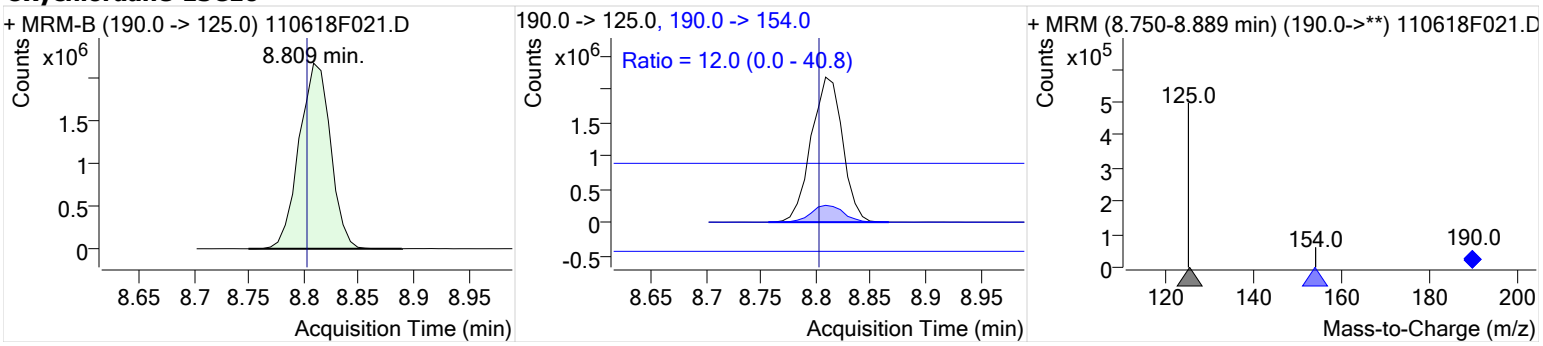
Isodrin



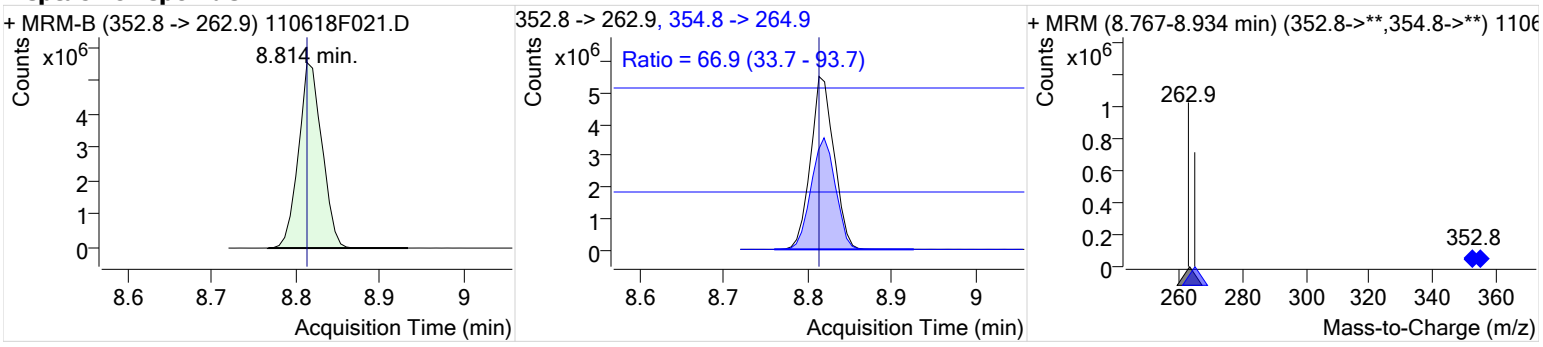
Heptachlor epoxide-13C10



Oxychlordane-13C10

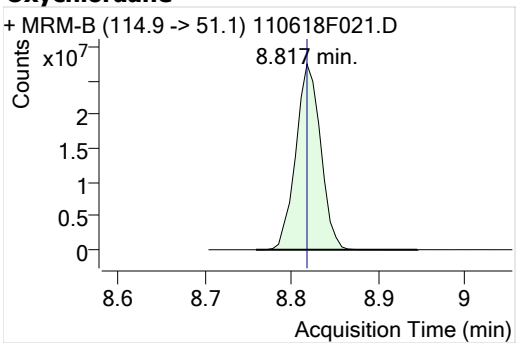


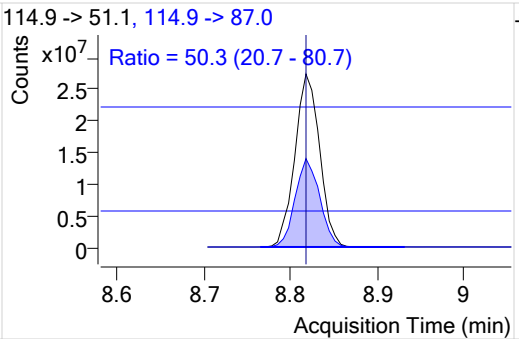
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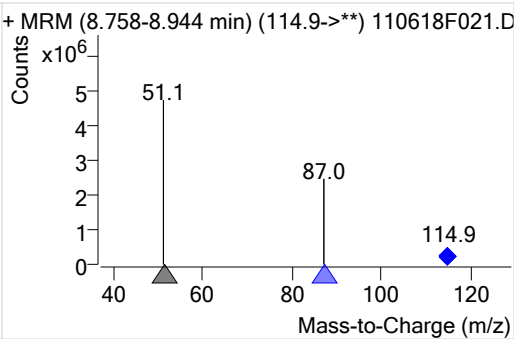


Quantitative Analysis Sample Report

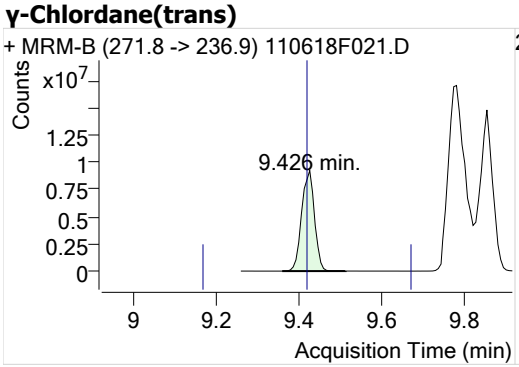
Oxychlordane

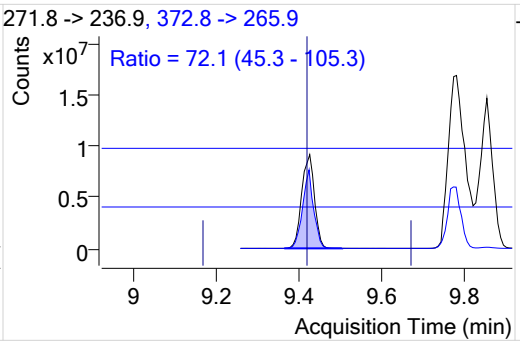


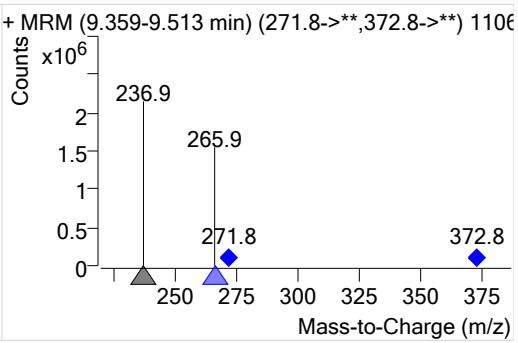




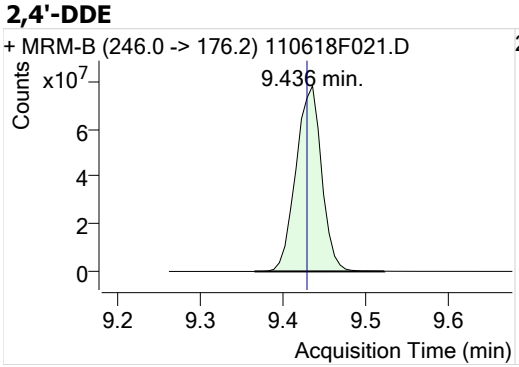
γ-Chlordane(trans)

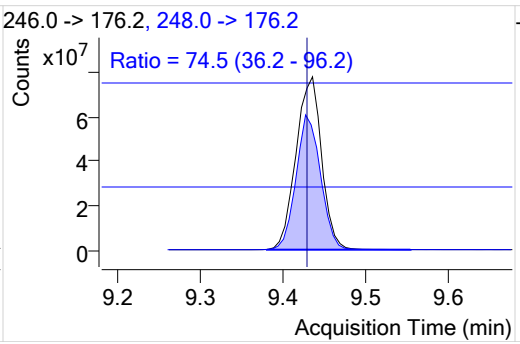


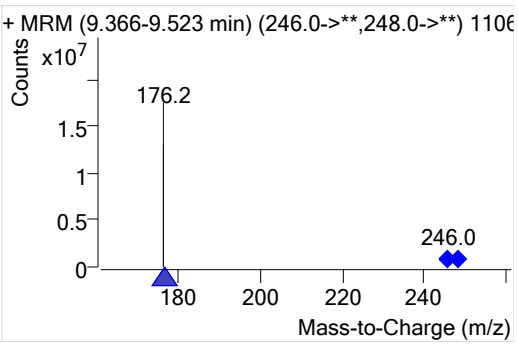




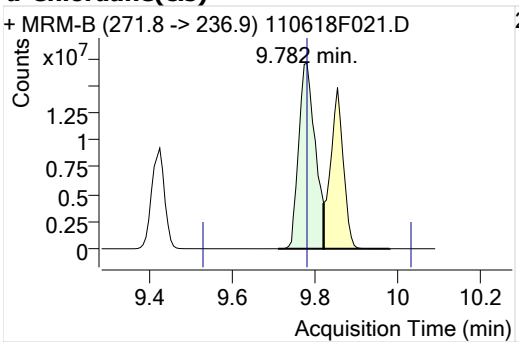
2,4'-DDE

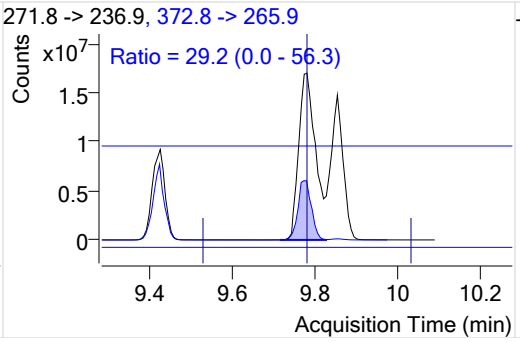


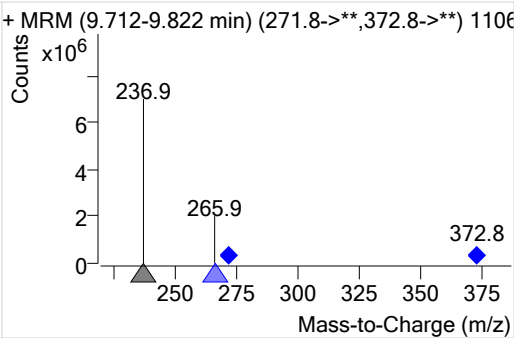




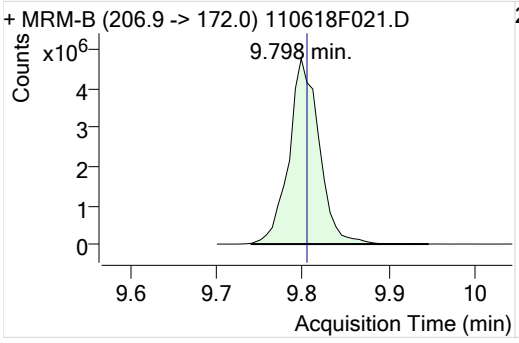
α-Chlordane(cis)

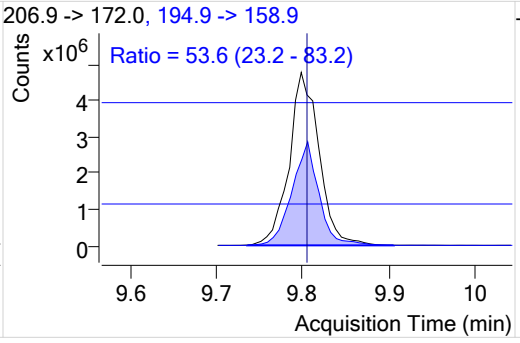


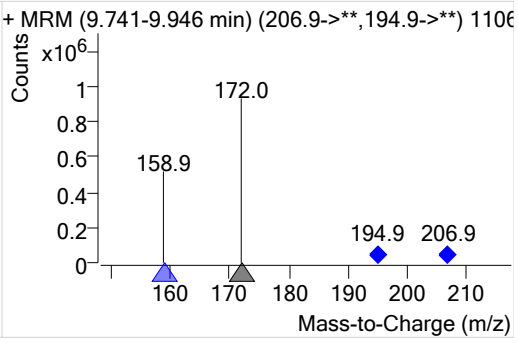




Endosulfan I

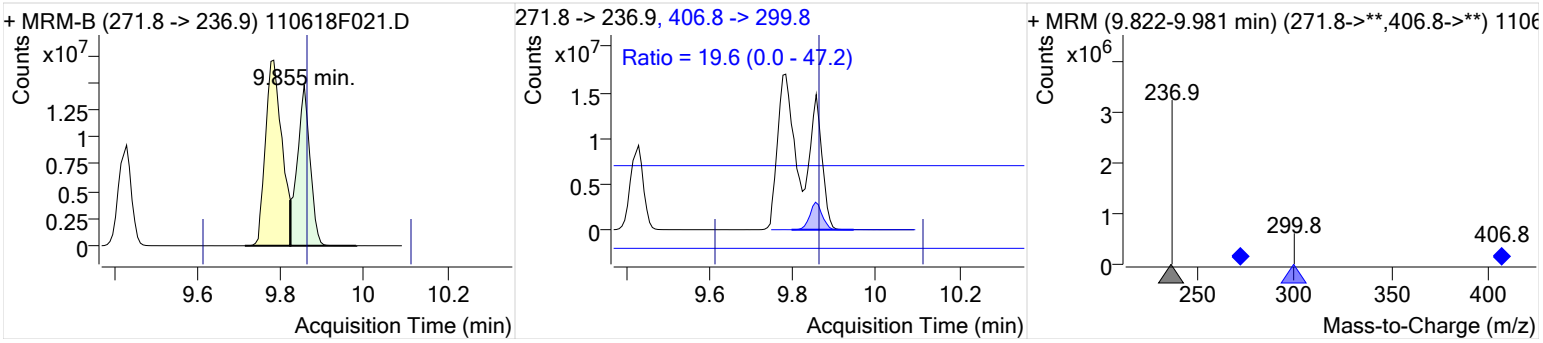




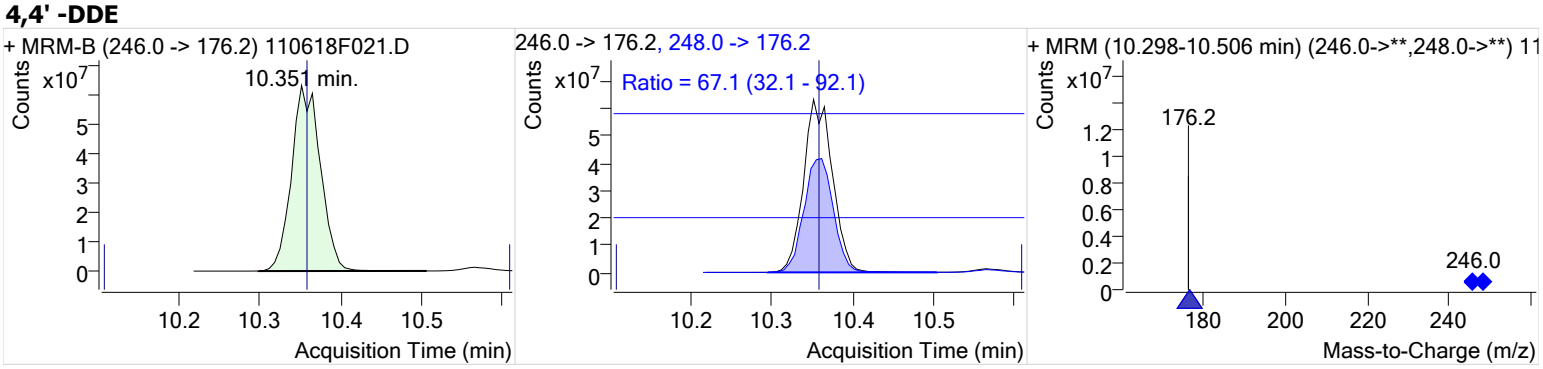


Quantitative Analysis Sample Report

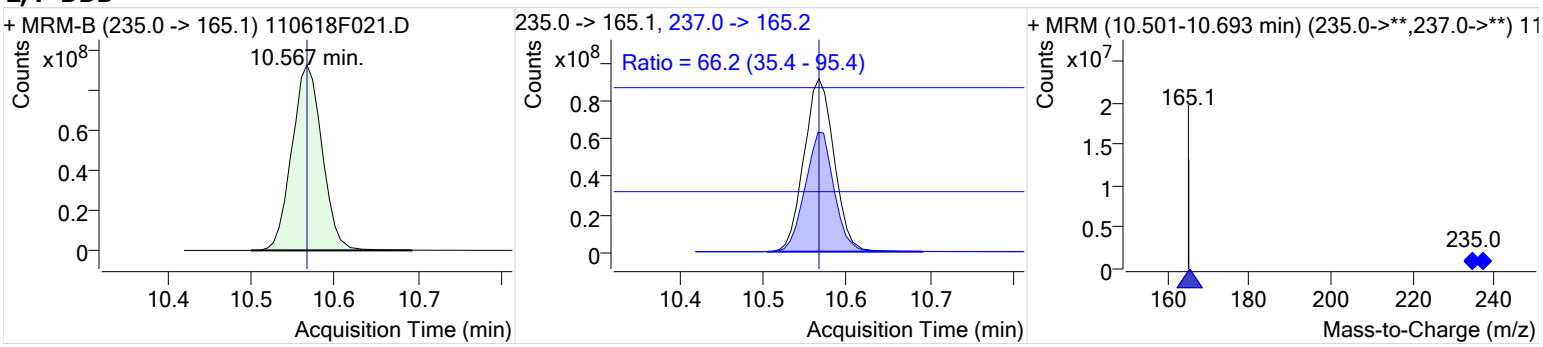
trans-Nanochlor



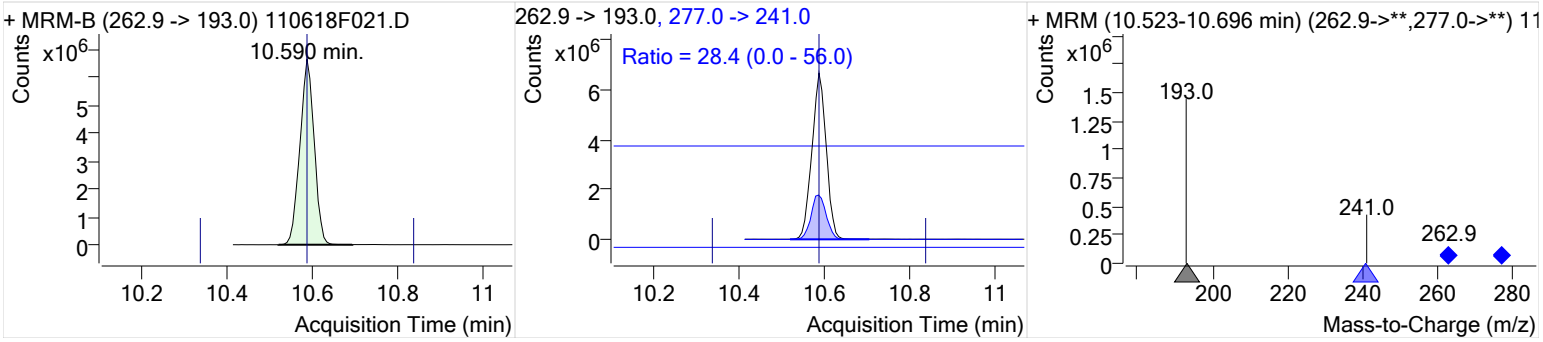
4,4' -DDE



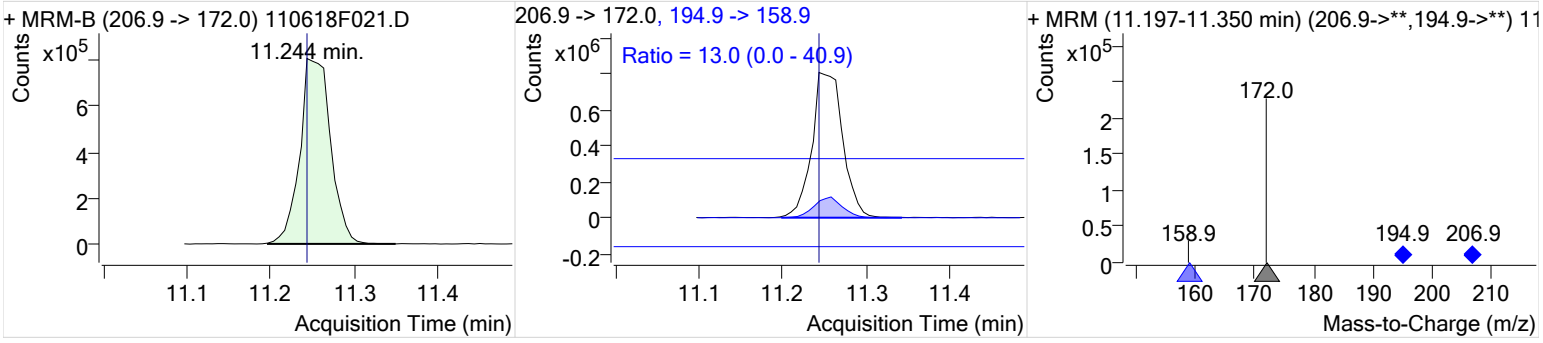
2,4'-DDD



Dieldrin

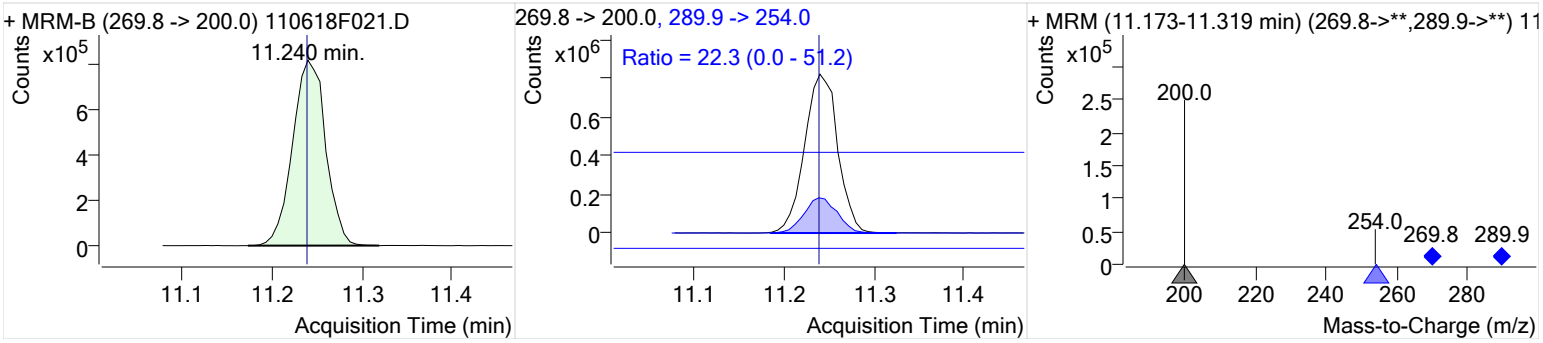


Endosulfan II

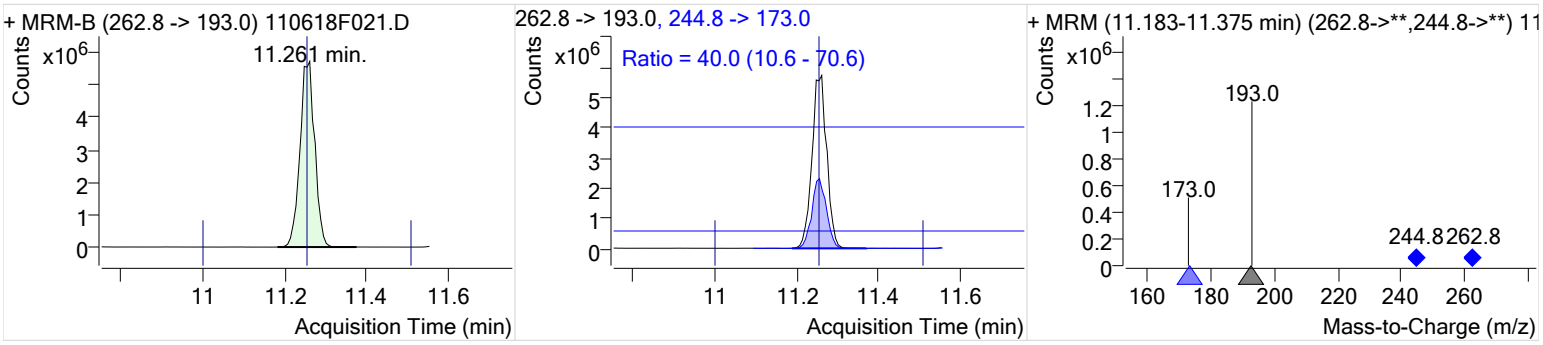


Quantitative Analysis Sample Report

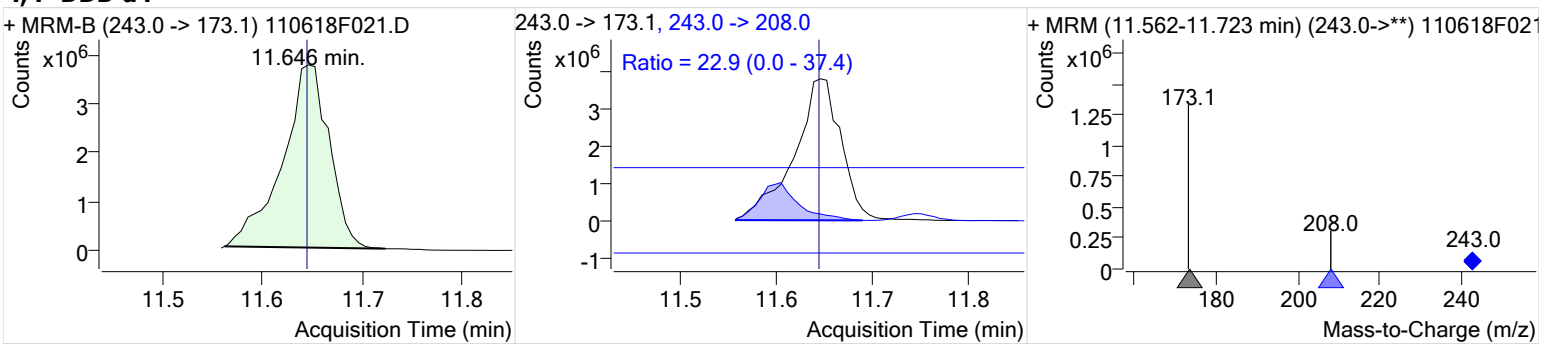
Endrin-13C12



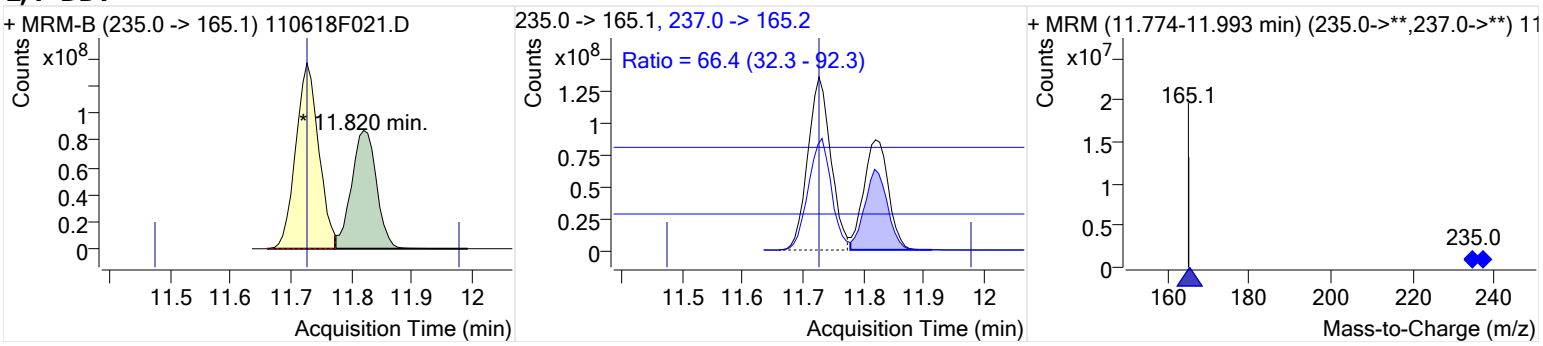
Endrin



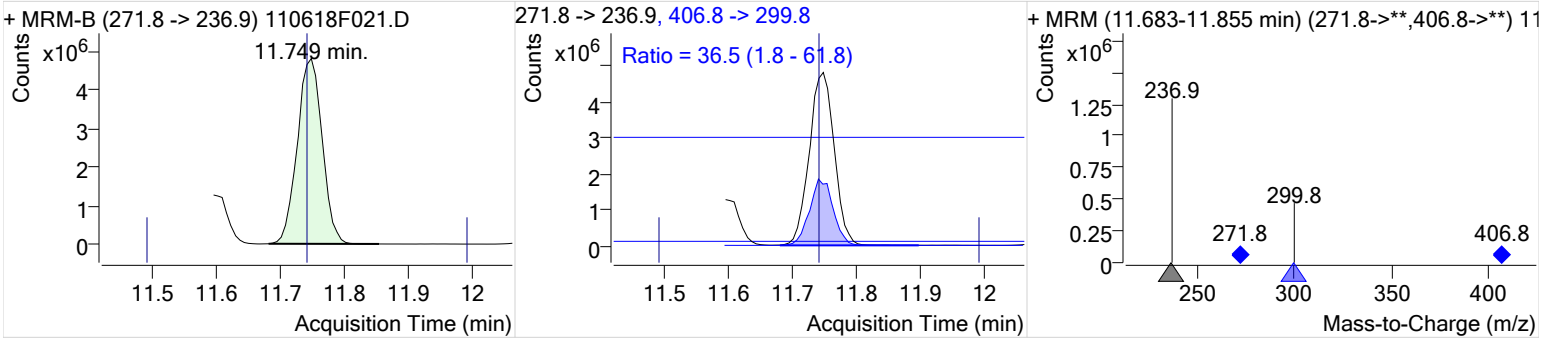
4,4'-DDD d4



2,4'-DDT

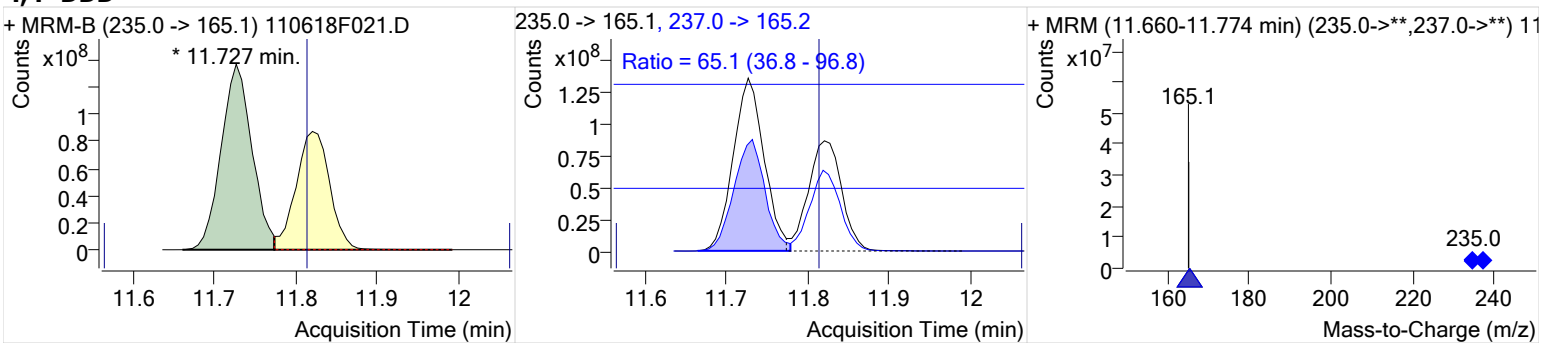


cis-Nonachlor

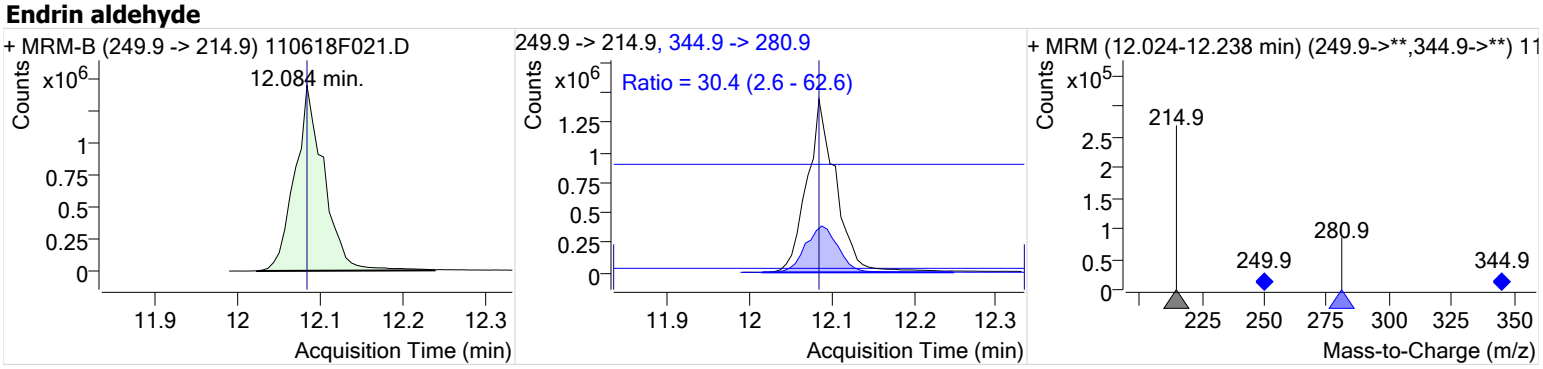


Quantitative Analysis Sample Report

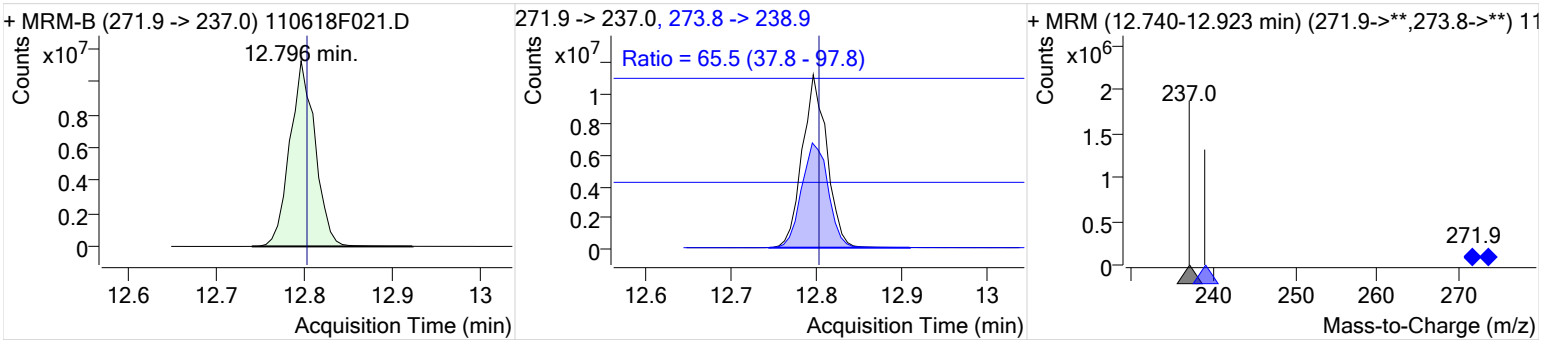
4,4'-DDD



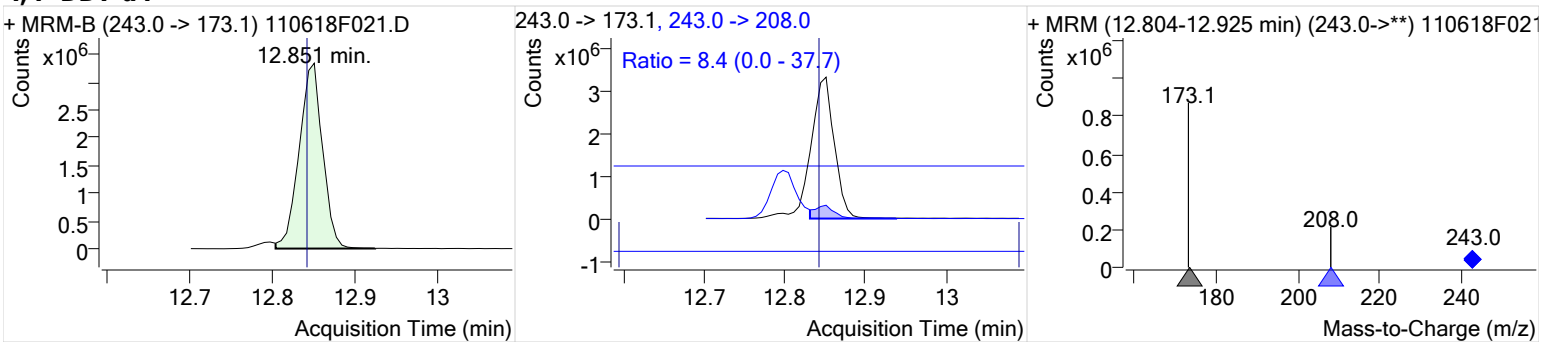
Endrin aldehyde



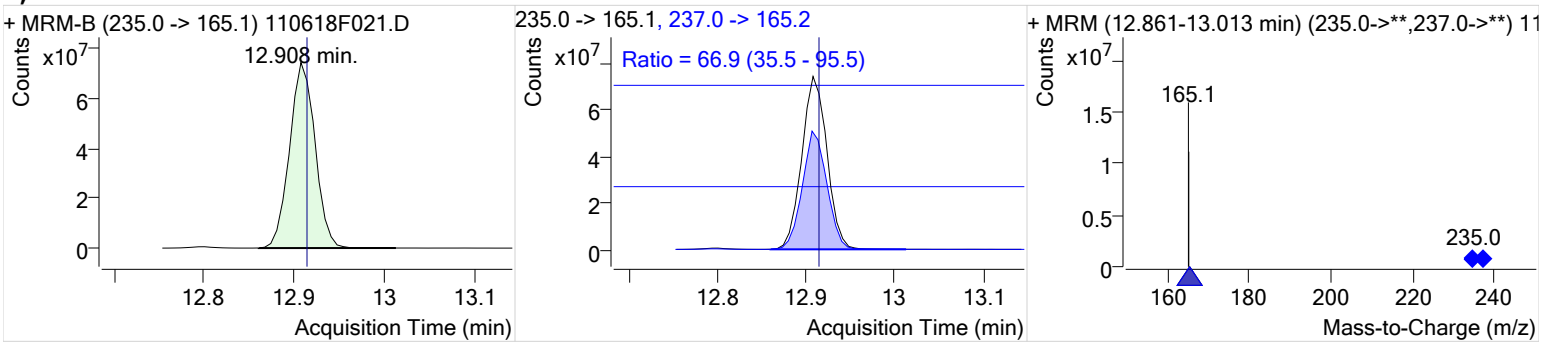
Endosulfan sulfate



4,4'-DDT-d4

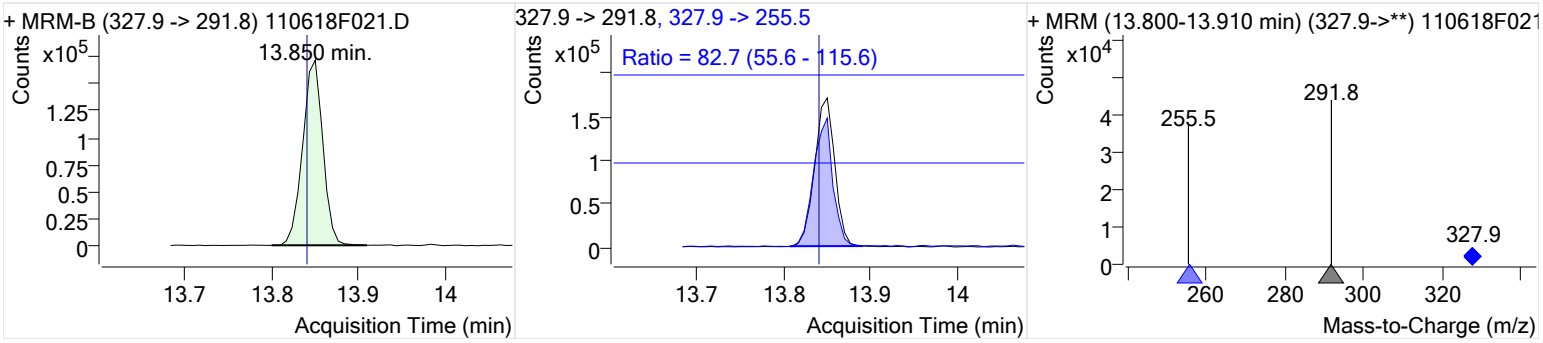


4,4'-DDT

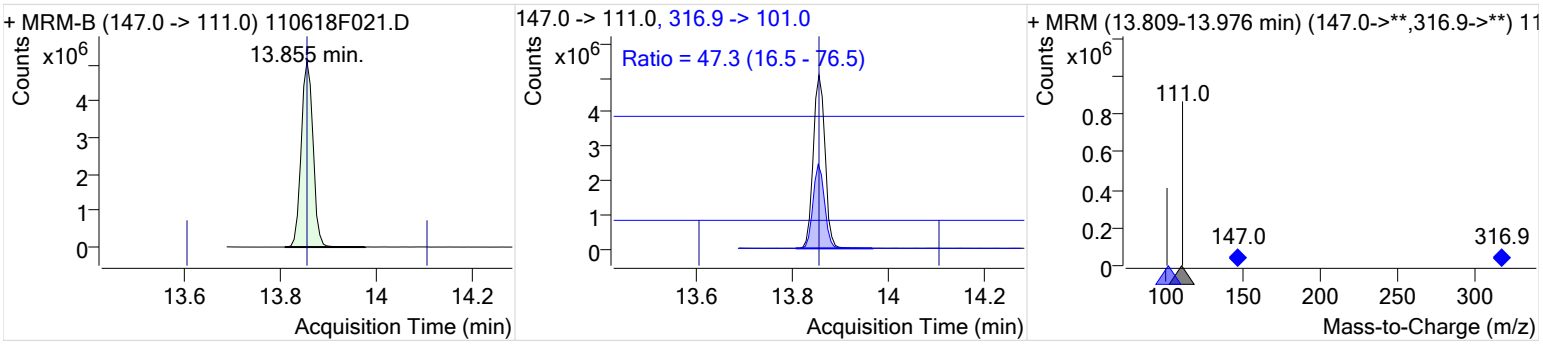


Quantitative Analysis Sample Report

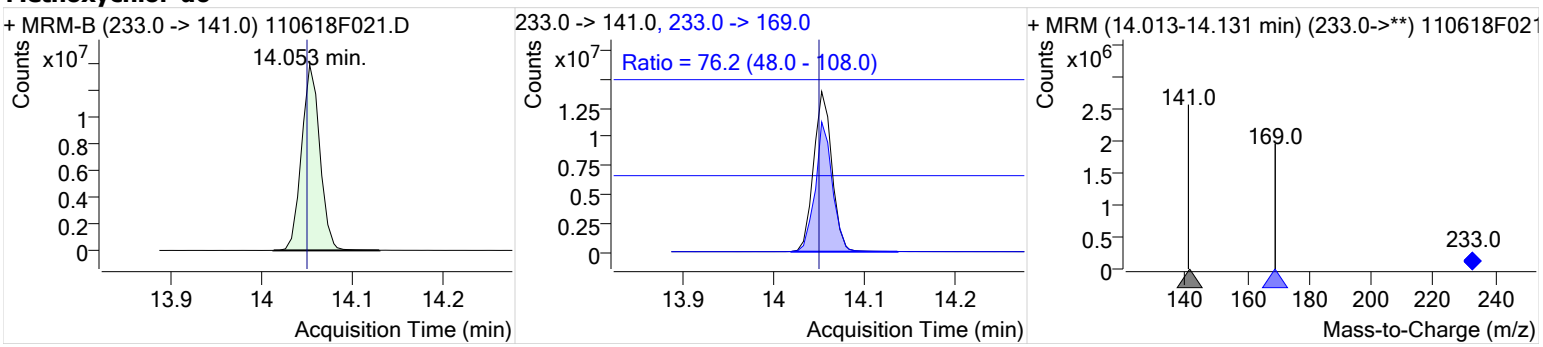
Endrin ketone-13C12



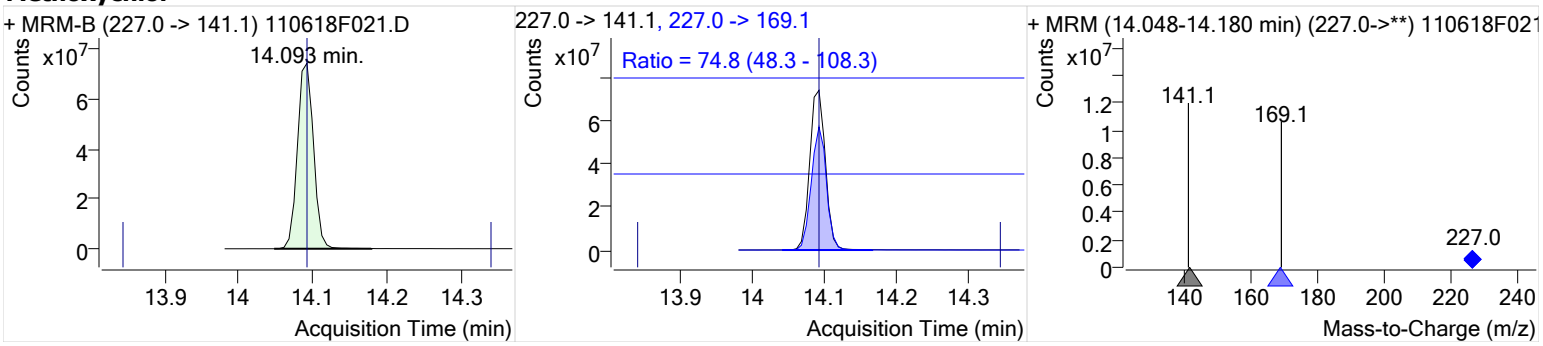
Endrin ketone



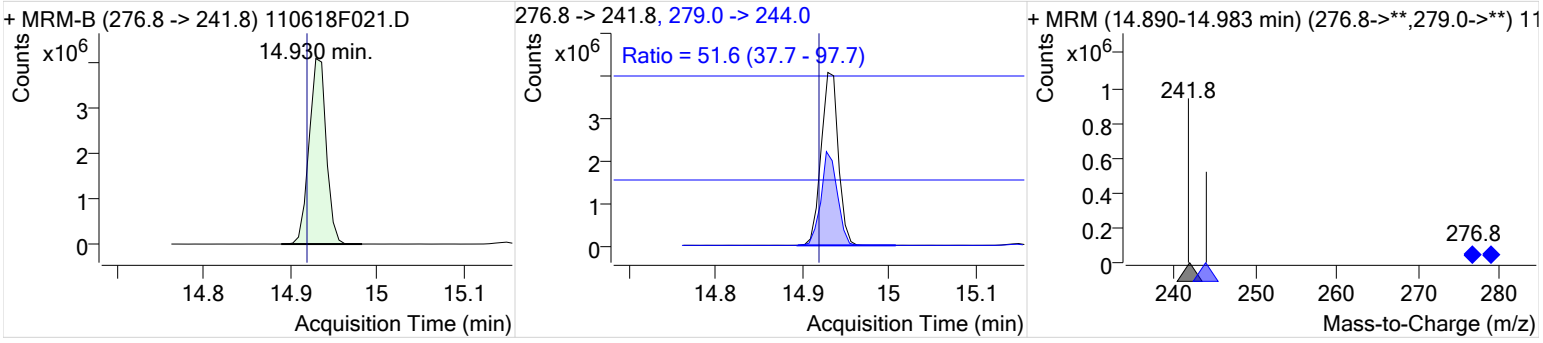
Methoxychlor-d6



Methoxychlor

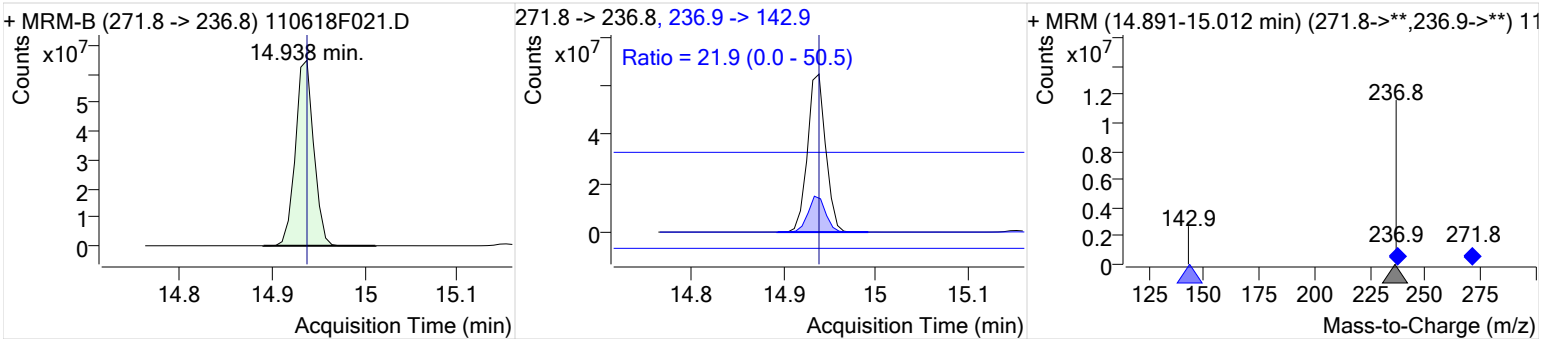


Mirex-13C10

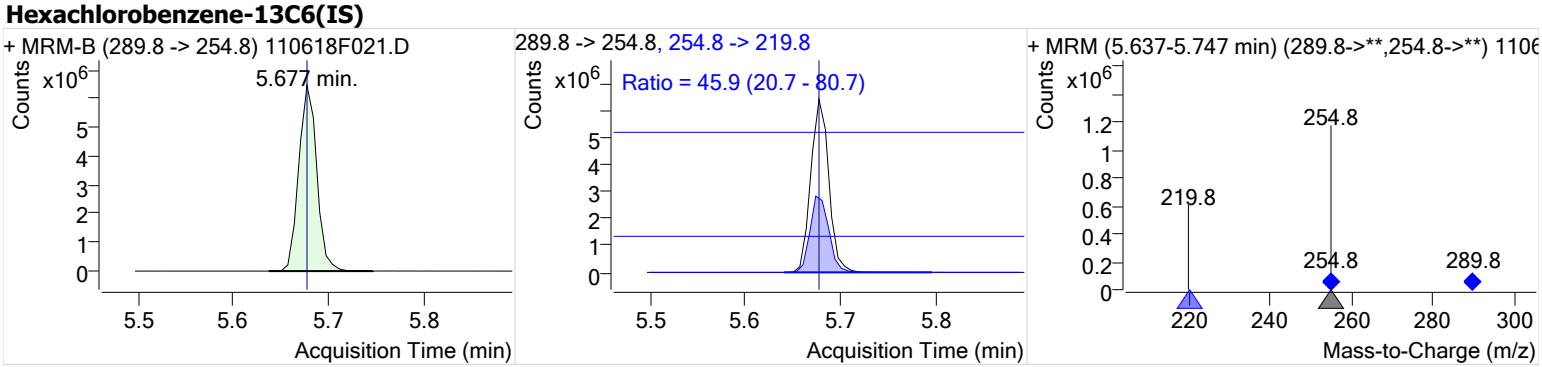


Quantitative Analysis Sample Report

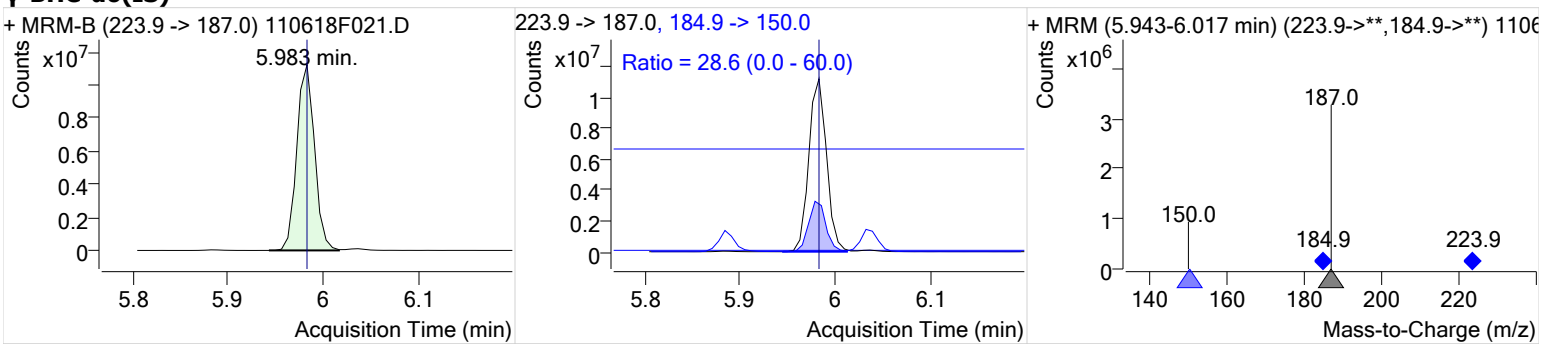
Mirex



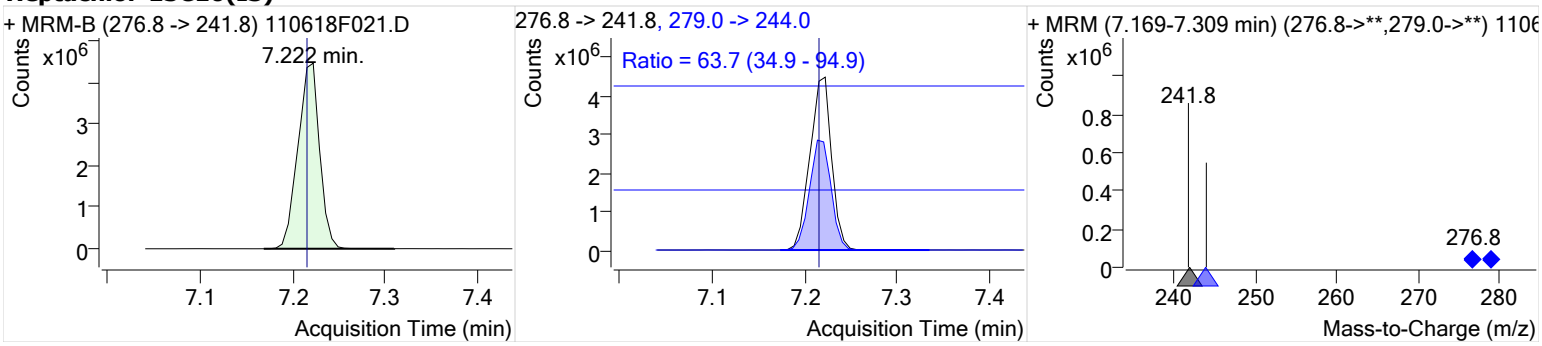
Hexachlorobenzene-13C6(IS)



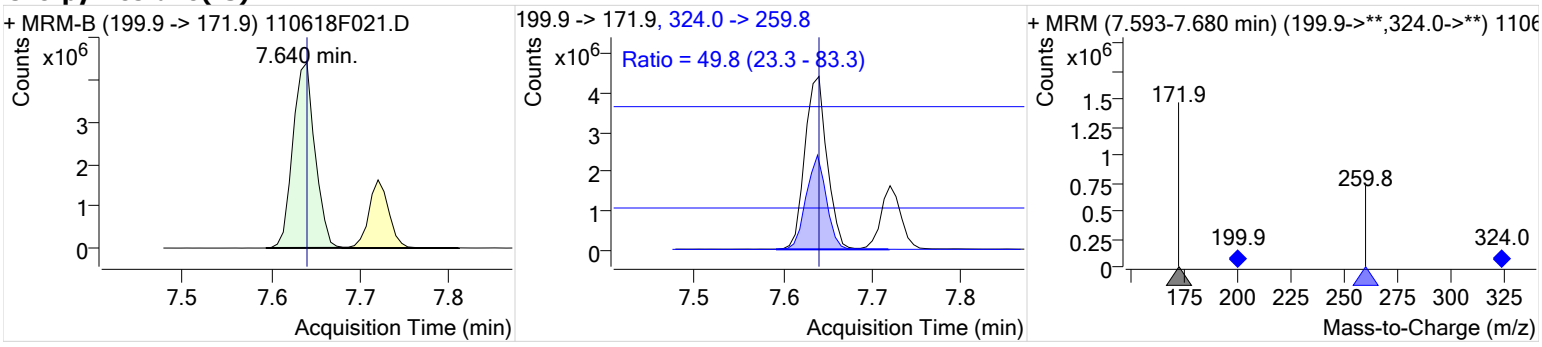
γ-BHC-d6(IS)



Heptachlor-13C10(IS)

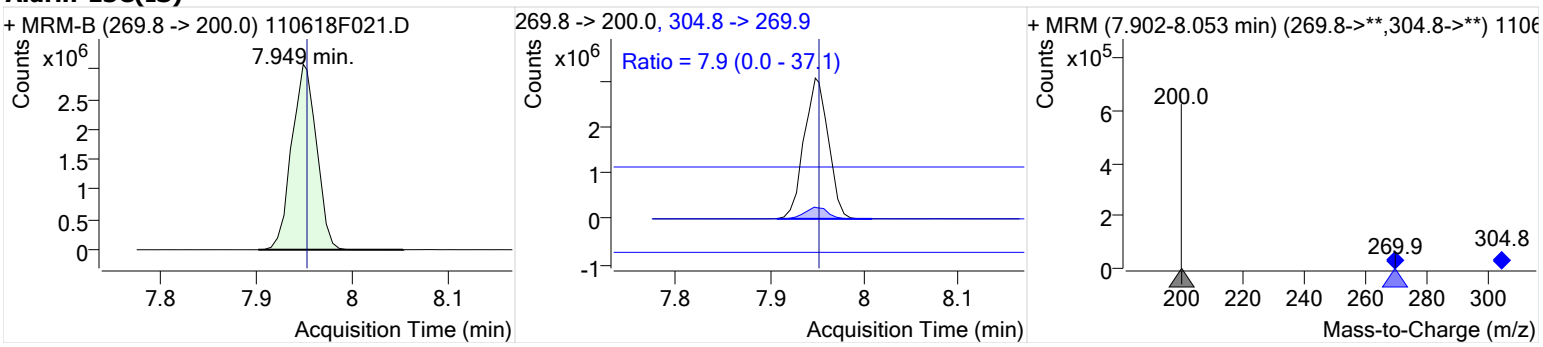


Chorpyrifos-d10(IS)

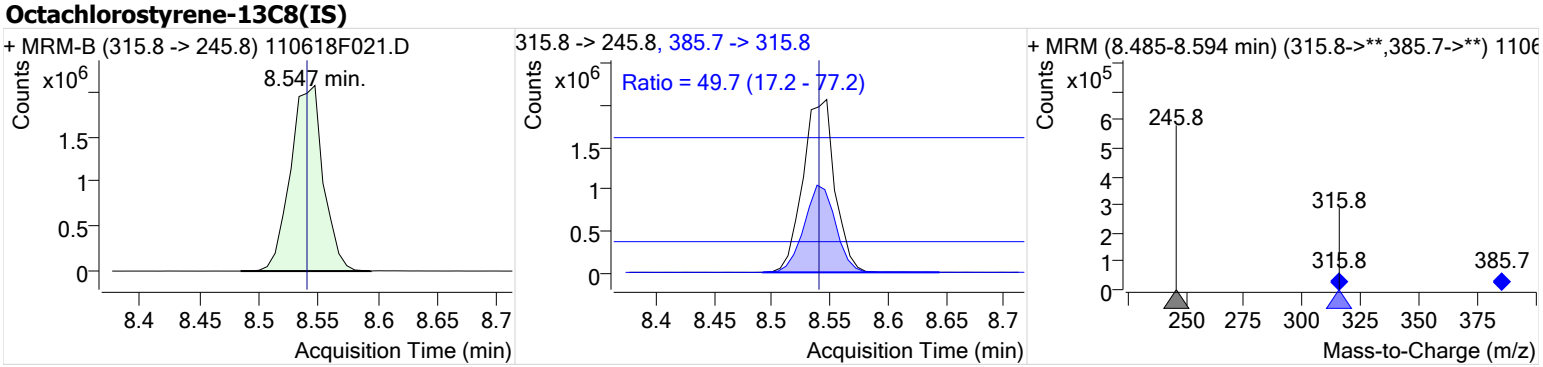


Quantitative Analysis Sample Report

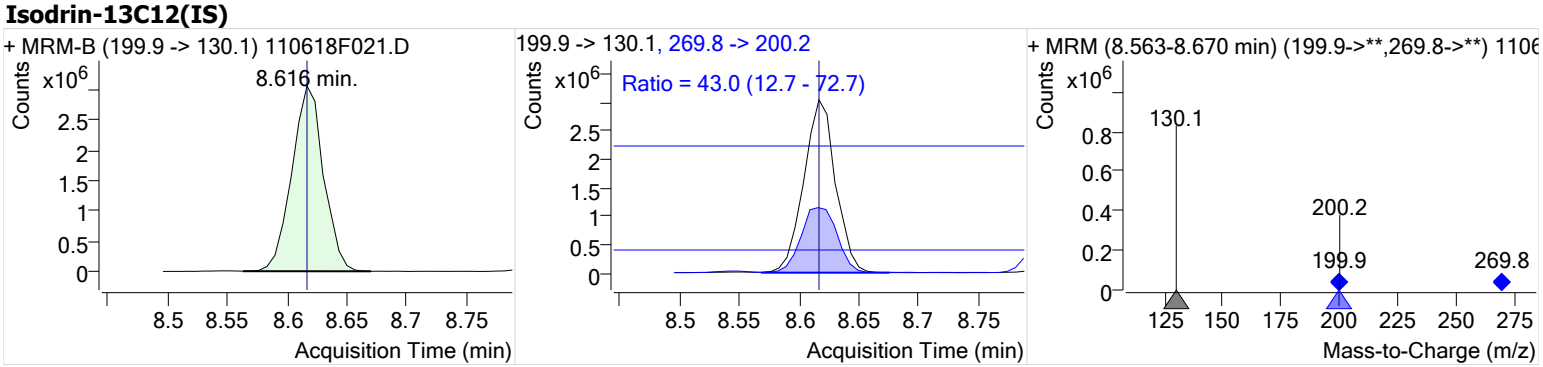
Aldrin-13C(IS)



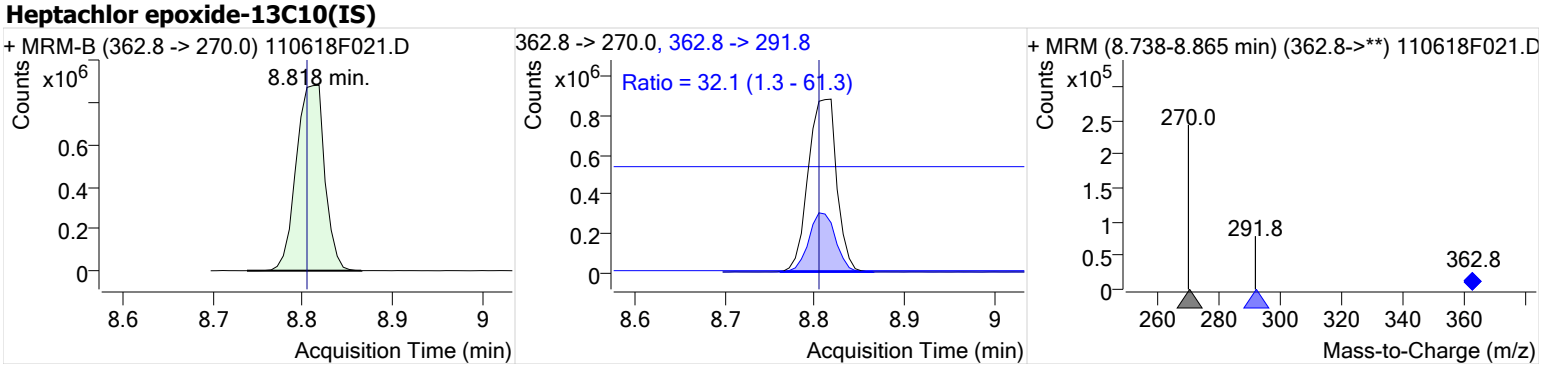
Octachlorostyrene-13C8(IS)



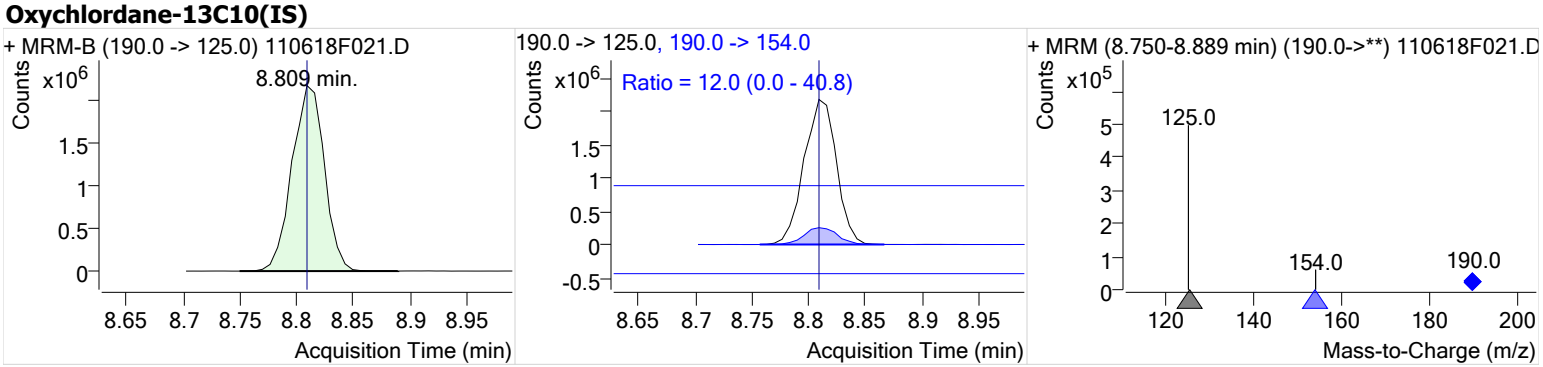
Isodrin-13C12(IS)



Heptachlor epoxide-13C10(IS)

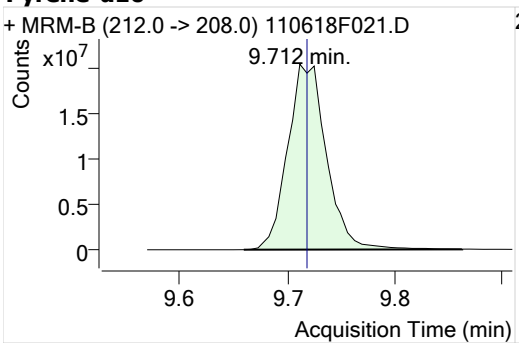


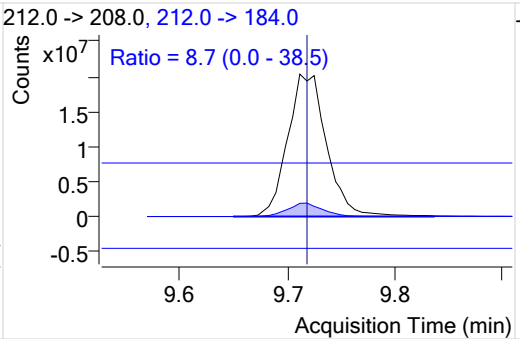
Oxychlordane-13C10(IS)

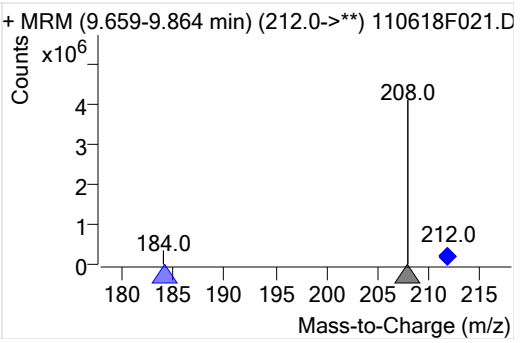


Quantitative Analysis Sample Report

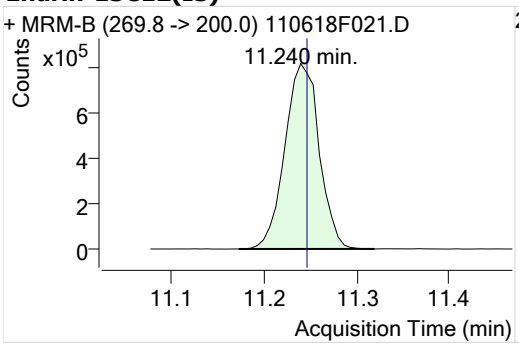
Pyrene-d10

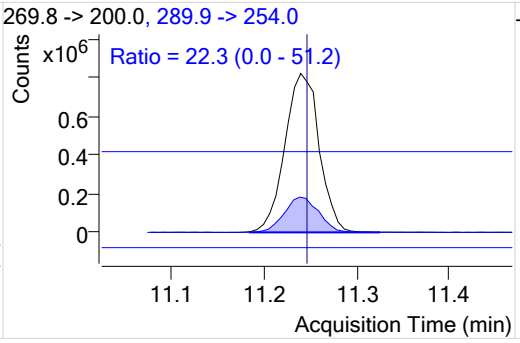


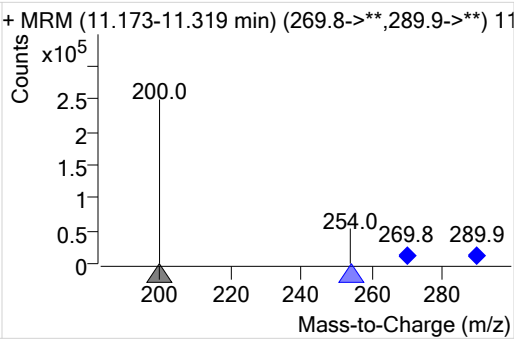




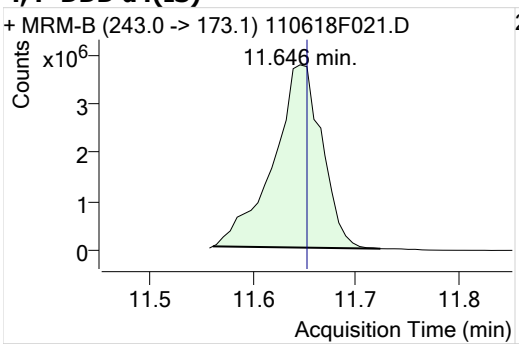
Endrin-13C12(IS)

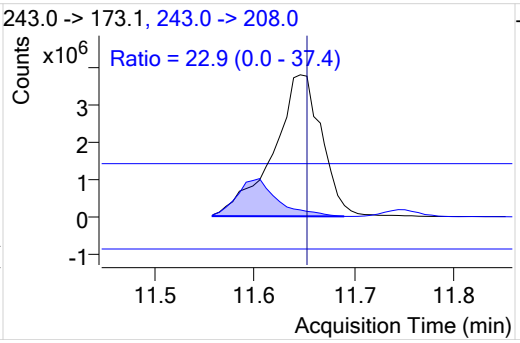


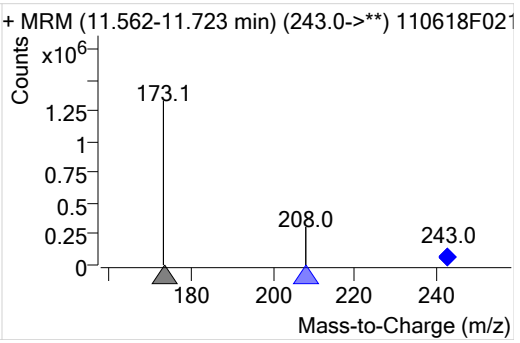




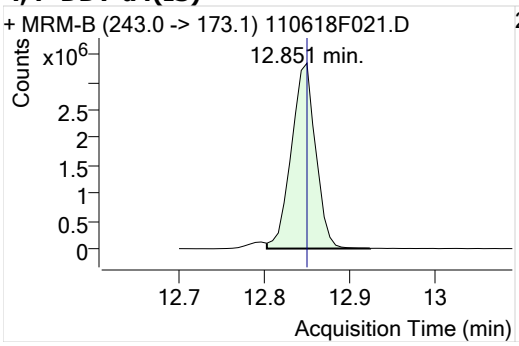
4,4'-DDD d4(IS)

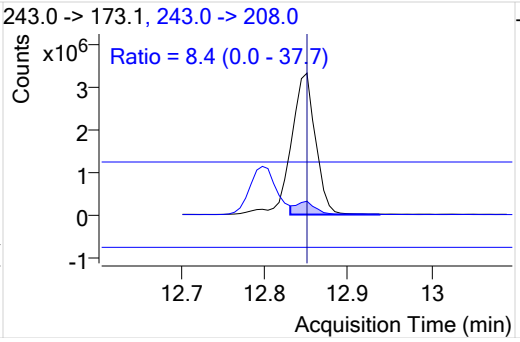


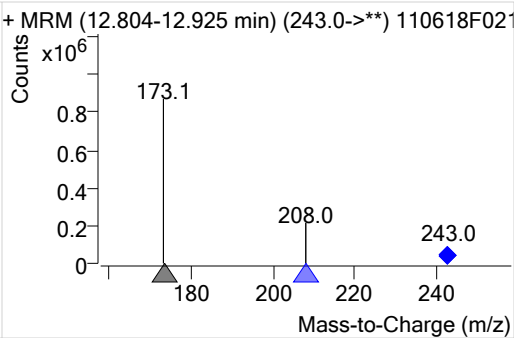




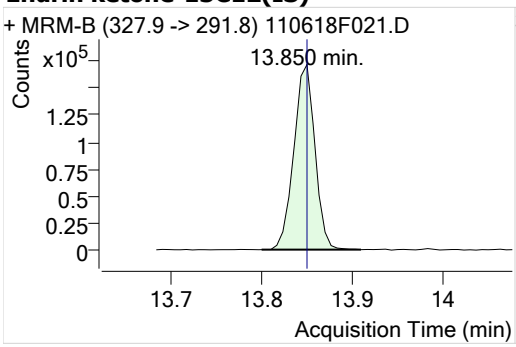
4,4'-DDT-d4(IS)

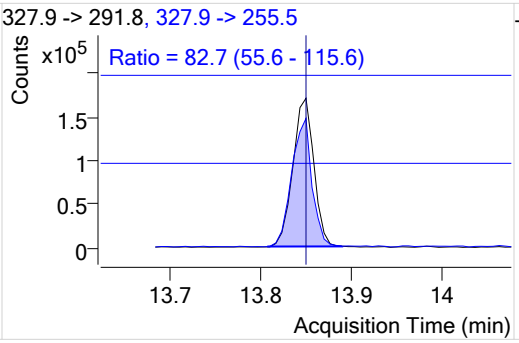


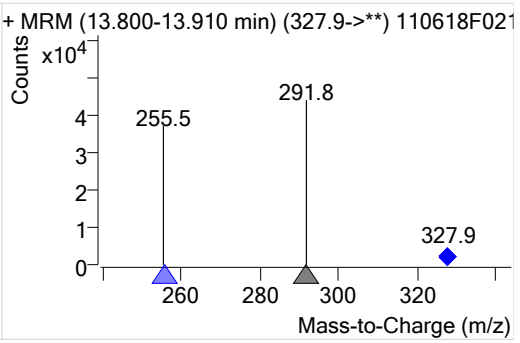




Endrin ketone-13C12(IS)

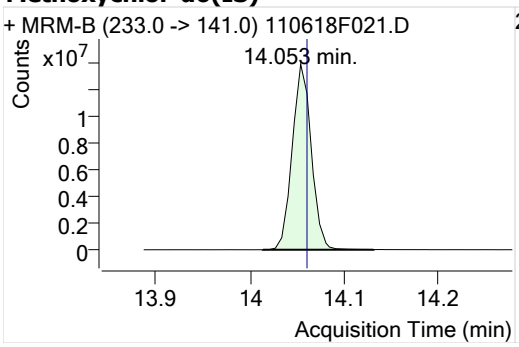


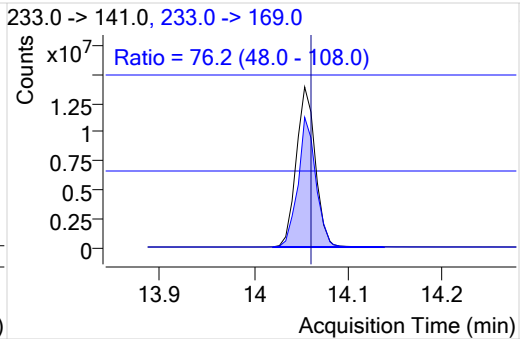


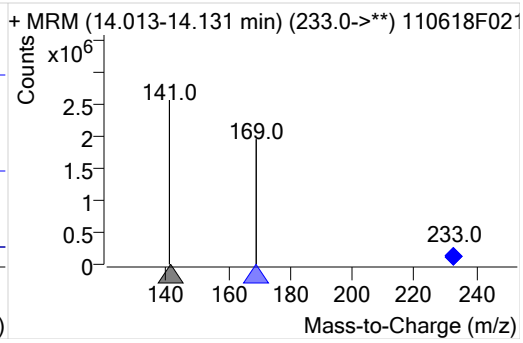


Quantitative Analysis Sample Report

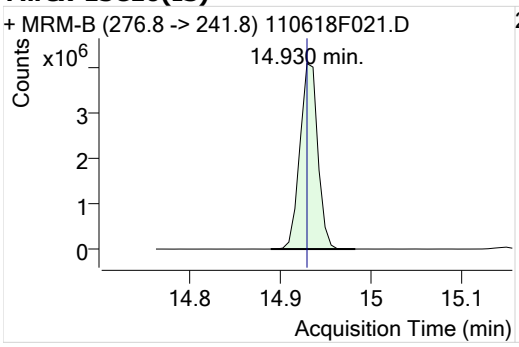
Methoxychlor-d6(IS)

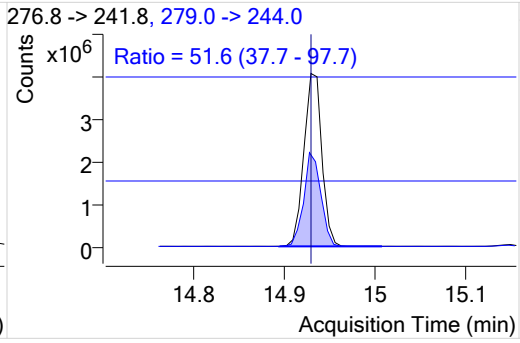


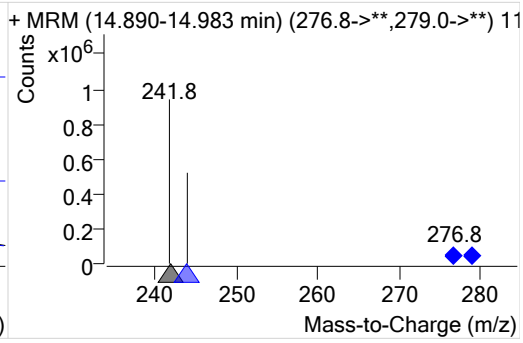




Mirex-13C10(IS)







1st 03/14/19
2nd 03/20/19

Validation Report

Data File: Y:\MS42\data\110618\110618F022.D
Lab ID: KQ1816235-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/6/18 20:19
Batch ID: 614105
Analysis Method: ALS SOP/OC_Pest

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Printed: 3/13/19 16:41
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st 03/14/19
2nd 03/20/19

Quantitation Report

Data File:	Y:\MS42\data\110618\110618F022.D	**Instrument:**	K-MS-42
Acqu Date:	11/6/18 20:19	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816235-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	OC_Pest	**Collect Date:**	10/13/18	**Receive Date:**	10/15/18

Analysis Lot:	614105	**Prep Lot:**		**Report Group:**	KQ1816235
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Organochlorine Pesticides by GC/MS/MS	**Calibration ID:**	KC1900099
		Report List ID:	18862

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Pyrene-d10	9.712		51408184.63	100	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
S_4,4'DDD-d4	11.639		10175162.67	4.857859018	Y
S_4,4'-DDT-d4	12.844		6055563.372	5.067888483	Y
S_Aldrin-13C12	7.941		4980317.142	18.53457671	Y
S_Endrin-13C12	11.247		1950534.2	19.22442366	Y
S_GBHCD6	5.977		13766435.13	18.30506888	Y
S_Heptachlor-13C10	7.219		6755325.27	17.84069875	Y
S_Heptachlrepox13C10	8.812		1898354.092	19.41735067	Y
S_Oxychlordane-13C10	8.809		3871856.33	18.74577523	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
2,4'-DDD	10.574		45988835.43	21.4269057	Y
2,4'-DDE	9.429		34013585.28	20.60856521	Y
2,4'-DDT	11.814		41159637.86	16.7008231	Y
4,4'-DDD	11.727		62898459.08	19.47705406	Y
4,4'-DDE	10.358		33248773.61	22.38676082	Y
4,4'-DDT	12.908		27073077.19	20.25637212	Y
Aldrin	7.955		3378564.156	18.67588638	Y
alpha-Chlordane	9.782		9059641.976	20.96073891	Y
cis-Nonachlor	11.743		2257770.208	19.91525721	Y
Dieldrin	10.590		2689882.818	19.54625093	Y
gamma-BHC (Lindane)	6.034		29226524.73	19.0700639	Y
gamma-Chlordane	9.419		3597264.298	20.21052433	Y

1st 03/14/19
2nd 03/20/19

Data File:	Y:\MS42\data\110618\110618F022.D	**Instrument:**	K-MS-42
Acqu Date:	11/6/18 20:19	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816235-02	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Heptachlor	7.223		7708831.471	20.43417994	Y
Oxychlordane	8.824		11390014.93	21.16446832	Y
trans-Nonachlor	9.855		5878183.689	19.97524896	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Quantitative Analysis Sample Report

Data File	Y:\MS42\data\110618\110618F022.D	**Vial**	13
Acq. Date-Time	11/6/2018 8:19:16 PM	**Acq Operator**	EBruno
Name	OC PEST ICV 20ng/mL SVM59-48K	**Instrument Name**	MS42
Info.		**Instrument Type**	QQQ
Quant Time	3/13/2019 4:24:15 PM	**Inj Vol**	1
Quant Method	110618 OC PEST ICAL.batch.bin		
Last Update	3/13/2019 3:26:44 PM		
Acq. Method File	OC Pest_dMRM	**Tune File Name**	atunes.eihs.tune.xml
Batch File Name	Y:\MS42\data\110618\QuantResults\110618 oc.batch.bin		

Internal Standards	**RT**	**Transition**	**Response**	**Conc. Units**	**Dev(Min)**
Hexachlorobenzene-13C6(IS)	5.677	289.8 -> 254.8	6680712	20.000 ng/ml	0.001
γ-BHC-d6(IS)	5.977	223.9 -> 187.0	13766435	20.000 ng/ml	0.005
Heptachlor-13C10(IS)	7.219	276.8 -> 241.8	6755325	20.000 ng/ml	0.003
Chorpyrifos-d10(IS)	7.634	199.9 -> 171.9	8052300	20.000 ng/ml	0.004
Aldrin-13C(IS)	7.941	269.8 -> 200.0	4980317	20.000 ng/ml	0.007
Octachlorostyrene-13C8(IS)	8.547	315.8 -> 245.8	3692311	20.000 ng/ml	0.004
Isodrin-13C12(IS)	8.616	199.9 -> 130.1	5286365	20.000 ng/ml	0.000
Heptachlor epoxide-13C10(IS)	8.812	362.8 -> 270.0	1898354	20.000 ng/ml	0.007
Oxychlordane-13C10(IS)	8.809	190.0 -> 125.0	3871856	20.000 ng/ml	0.003
Pyrene-d10	9.712	212.0 -> 208.0	51408185	100.000 ng/ml	0.007
Endrin-13C12(IS)	11.247	269.8 -> 200.0	1950534	20.000 ng/ml	0.001
4,4'-DDD d4(IS)	11.639	243.0 -> 173.1	10175163	5.000 ng/ml	0.010
4,4'-DDT-d4(IS)	12.844	243.0 -> 173.1	6055563	5.000 ng/ml	0.003
Endrin ketone-13C12(IS)	13.850	327.9 -> 291.8	262383	20.000 ng/ml	0.003
Methoxychlor-d6(IS)	14.053	233.0 -> 141.0	17064563	20.000 ng/ml	0.003
Mirex-13C10(IS)	14.930	276.8 -> 241.8	4322399	5.000 ng/ml	0.003

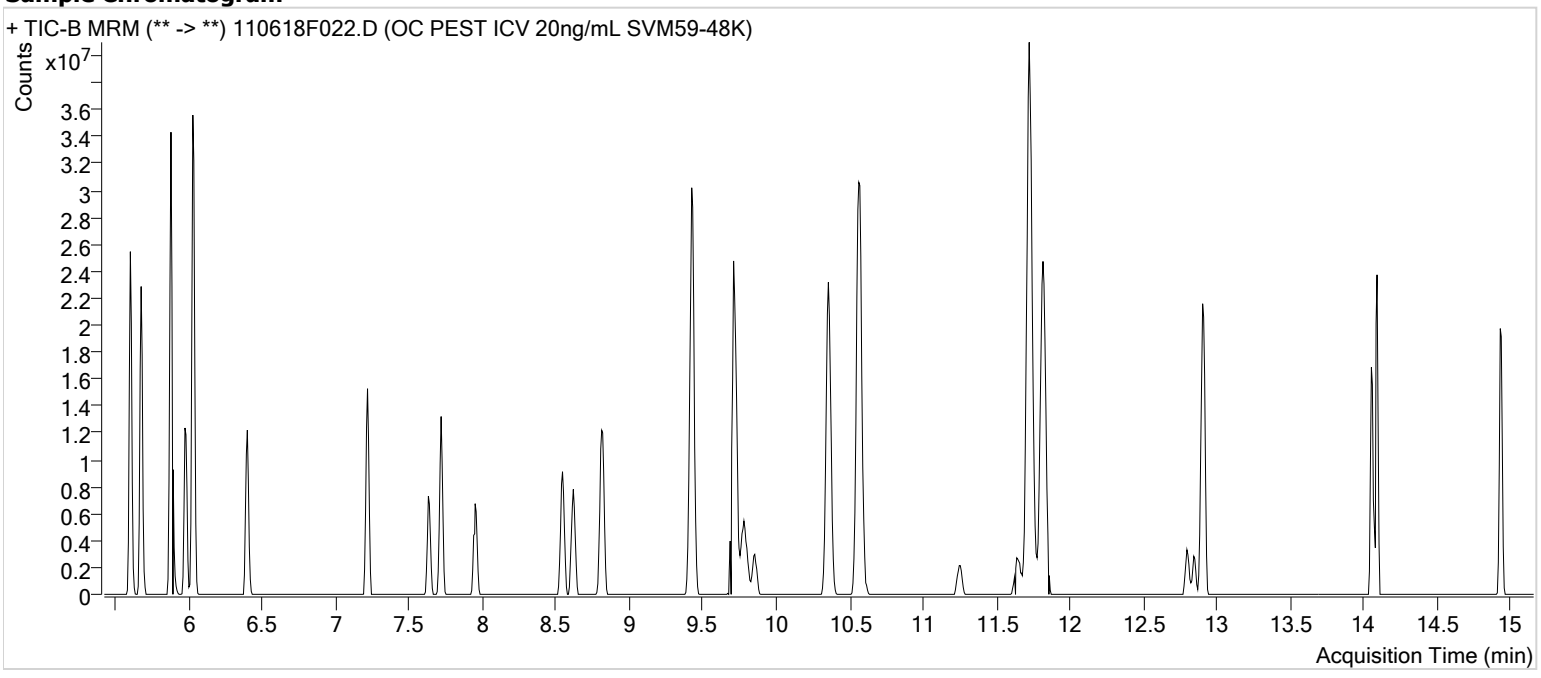
System Monitoring Compounds	**RT**	**Transition**	**Response**	**Conc. Units**	
Hexachlorobenzene-13C6	5.677	289.8 -> 254.8	6680712	17.042 ng/ml	
		Spiked Amount =	20.0	Recovery =	*85.2 %*
γ-BHC-d6	5.983	223.9 -> 187.0	13766435	18.305 ng/ml	
		Spiked Amount =	20.0	Recovery =	*91.5 %*
Heptachlor-13C10	7.216	276.8 -> 241.8	6755325	17.841 ng/ml	
		Spiked Amount =	20.0	Recovery =	*89.2 %*
Chorpyrifos-d10	7.640	199.9 -> 171.9	8052300	20.741 ng/ml	
		Spiked Amount =	20.0	Recovery =	*103.7 %*
Aldrin-13C	7.952	269.8 -> 200.0	4980317	18.535 ng/ml	
		Spiked Amount =	20.0	Recovery =	*92.7 %*
Octachlorostyrene-13C8	8.540	315.8 -> 245.8	3692311	18.731 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.7 %*
Isodrin-13C12	8.616	199.9 -> 130.1	5286365	17.796 ng/ml	
		Spiked Amount =	20.0	Recovery =	*89.0 %*
Heptachlor epoxide-13C10	8.805	362.8 -> 270.0	1898354	19.417 ng/ml	
		Spiked Amount =	20.0	Recovery =	*97.1 %*
Oxychlordane-13C10	8.809	190.0 -> 125.0	3871856	18.746 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.7 %*
Endrin-13C12	11.247	269.8 -> 200.0	1950534	19.224 ng/ml	
		Spiked Amount =	20.0	Recovery =	*96.1 %*
4,4'-DDD d4	11.652	243.0 -> 173.1	10175163	4.858 ng/ml	
		Spiked Amount =	5.0	Recovery =	*97.2 %*
4,4'-DDT-d4	12.851	243.0 -> 173.1	6055563	5.068 ng/ml	
		Spiked Amount =	5.0	Recovery =	*101.4 %*
Endrin ketone-13C12	13.850	327.9 -> 291.8	262383	20.577 ng/ml	
		Spiked Amount =	20.0	Recovery =	*102.9 %*
Methoxychlor-d6	14.060	233.0 -> 141.0	17064563	18.740 ng/ml	
		Spiked Amount =	20.0	Recovery =	*93.7 %*
Mirex-13C10	14.930	276.8 -> 241.8	4322399	4.621 ng/ml	
		Spiked Amount =	5.0	Recovery =	*92.4 %*

Quantitative Analysis Sample Report

Target Compounds	ISTD	RT	Transition	Resp.	Conc.	Units	Qvalue
α-BHC	γ-BHC-d6(IS)	5.609	181.1 -> 145.1	19905495	20.588	ng/ml	96
Hexachlorobenzene	Hexachlorobenzene-13C6(IS)	5.678	283.8 -> 213.9	11924375	20.569	ng/ml	95
β-BHC	γ-BHC-d6(IS)	5.885	181.1 -> 145.1	26180719	20.527	ng/ml	97
γ-BHC(Lindane)	γ-BHC-d6(IS)	6.034	181.1 -> 145.1	29226525	19.070	ng/ml	99
δ-BHC	γ-BHC-d6(IS)	6.403	181.1 -> 145.1	11817963	20.591	ng/ml	95
Heptachlor	Heptachlor-13C10(IS)	7.223	271.7 -> 236.9	7708831	20.434	ng/ml	94
Chorpyrifos	Chorpyrifos-d10(IS)	7.724	196.9 -> 169.0	10527934	19.164	ng/ml	93
Aldrin	Aldrin-13C(IS)	7.955	254.9 -> 220.0	3378564	18.676	ng/ml	93
Octachlorostyrene	Octachlorostyrene-13C8(IS)	8.546	342.8 -> 307.8	8222775	17.490	ng/ml	94
Isodrin	Isodrin-13C12(IS)	8.624	193.0 -> 123.0	5361163	19.885	ng/ml	98
Heptachlor epoxide	Heptachlor epoxide-13C10(IS)	8.820	352.8 -> 262.9	2018540	19.545	ng/ml	97
Oxychlordane	Oxychlordane-13C10(IS)	8.824	114.9 -> 51.1	11390015	21.164	ng/ml	96
γ-Chlordane(trans)	Oxychlordane-13C10(IS)	9.419	271.8 -> 236.9	3597264	20.211	ng/ml	100
2,4'-DDE	4,4'-DDD d4(IS)	9.429	246.0 -> 176.2	34013585	20.609	ng/ml	98
α-Chlordane(cis)	Oxychlordane-13C10(IS)	9.782	271.8 -> 236.9	9059642	20.961	ng/ml	99
Endosulfan I	Endrin-13C12(IS)	9.805	206.9 -> 172.0	2224761	21.714	ng/ml	96
trans-Nanochlor	Oxychlordane-13C10(IS)	9.855	271.8 -> 236.9	5878184	19.975	ng/ml	100
4,4' -DDE	4,4'-DDD d4(IS)	10.358	246.0 -> 176.2	33248774	22.387	ng/ml	100
2,4'-DDD	4,4'-DDD d4(IS)	10.574	235.0 -> 165.1	45988835	21.427	ng/ml	98
Dieldrin	Endrin-13C12(IS)	10.590	262.9 -> 193.0	2689883	19.546	ng/ml	96
Endosulfan II	Endrin-13C12(IS)	11.244	206.9 -> 172.0	470785	21.737	ng/ml	99
Endrin	Endrin-13C12(IS)	11.255	262.8 -> 193.0	2583994	20.298	ng/ml	98
4,4'-DDD	4,4'-DDD d4(IS)	11.727	235.0 -> 165.1	62898459	19.477	ng/ml	91
cis-Nonachlor	Oxychlordane-13C10(IS)	11.743	271.8 -> 236.9	2257770	19.915	ng/ml	98
2,4'-DDT	4,4'-DDT-d4(IS)	11.814	235.0 -> 165.1	41159638	16.701	ng/ml	100
Endrin aldehyde	Endrin-13C12(IS)	12.084	249.9 -> 214.9	603446	21.666	ng/ml	96
Endosulfan sulfate	Endrin-13C12(IS)	12.796	271.9 -> 237.0	4172243	21.379	ng/ml	97
4,4'-DDT	4,4'-DDT-d4(IS)	12.908	235.0 -> 165.1	27073077	20.256	ng/ml	98
Endrin ketone	Endrin ketone-13C12(IS)	13.855	147.0 -> 111.0	1527977	17.738	ng/ml	99
Methoxychlor	Methoxychlor-d6(IS)	14.093	227.0 -> 141.1	22482120	22.722	ng/ml	93
Mirex	Mirex-13C10(IS)	14.932	271.8 -> 236.8	17025291	18.462	ng/ml	98

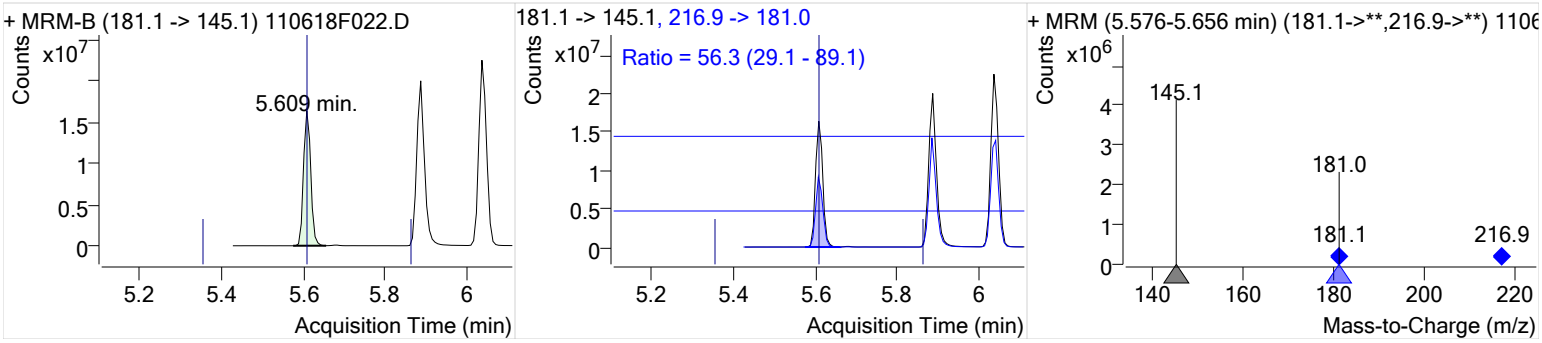
(m) = manual integration ND = Not Detected NC = Not Calculated

Sample Chromatogram

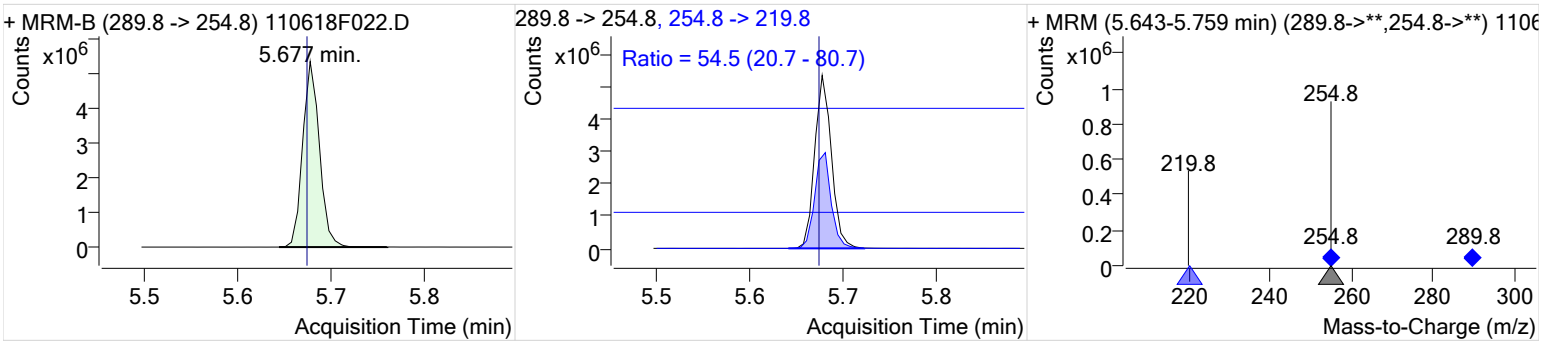


Quantitative Analysis Sample Report

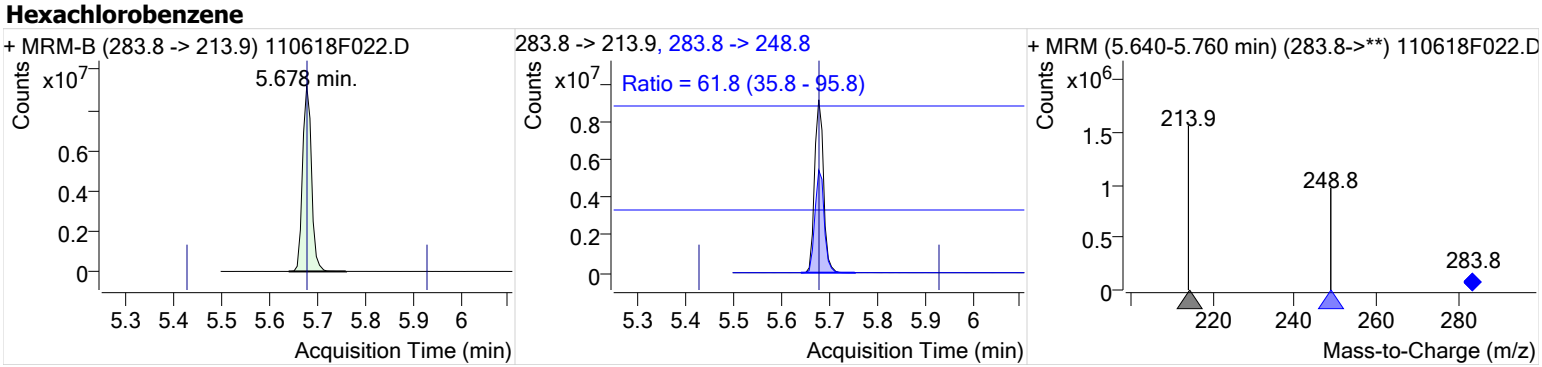
α-BHC



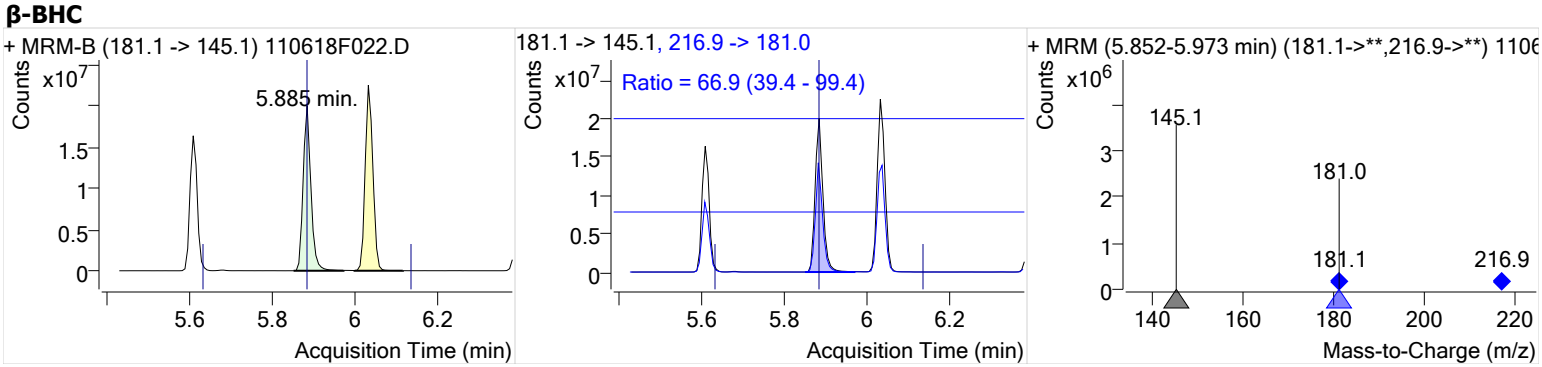
Hexachlorobenzene-13C6



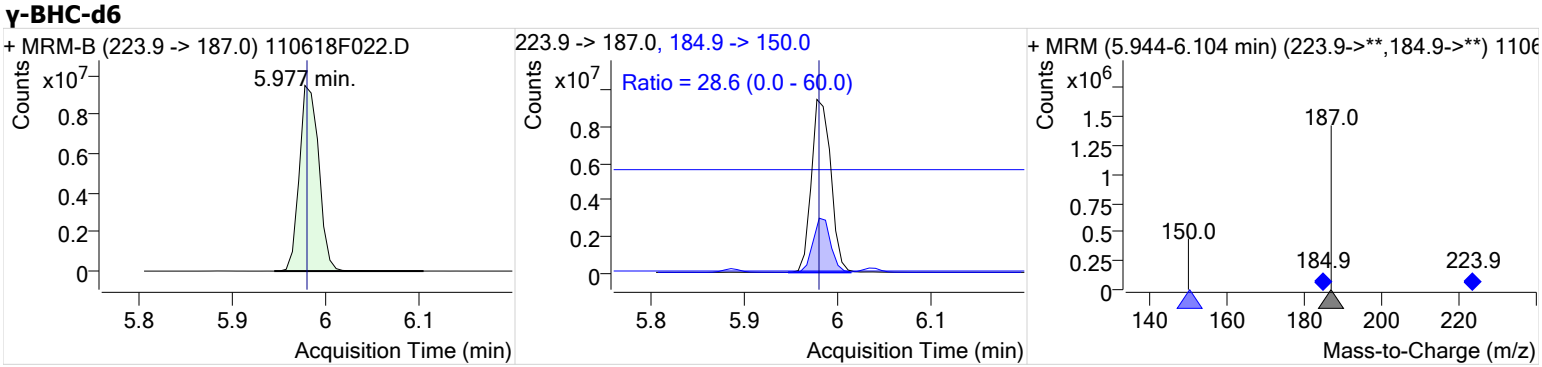
Hexachlorobenzene



β-BHC

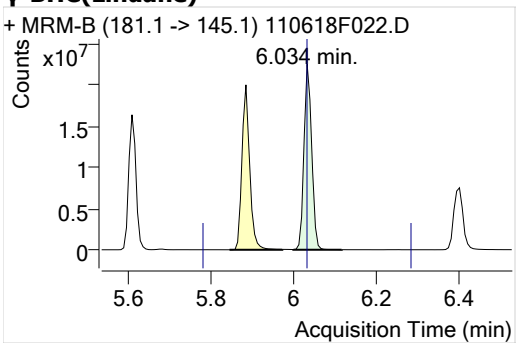


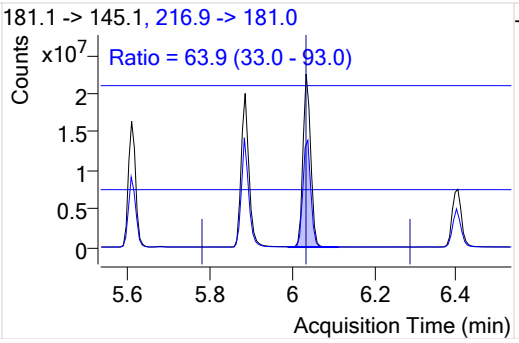
γ-BHC-d6

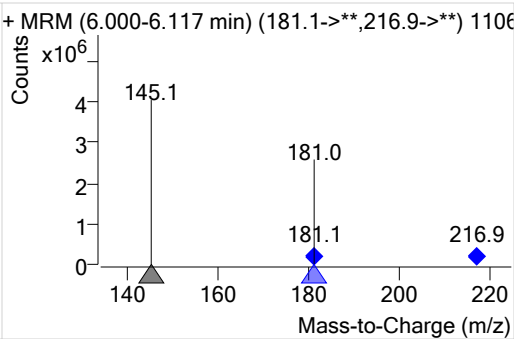


Quantitative Analysis Sample Report

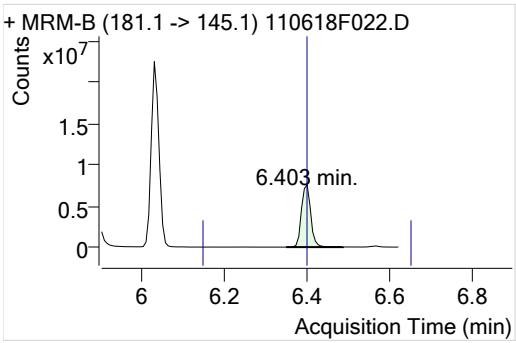
γ-BHC(Lindane)

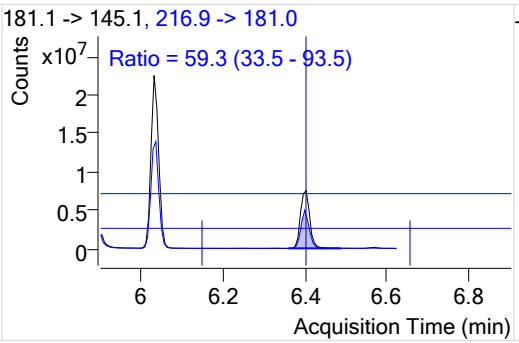


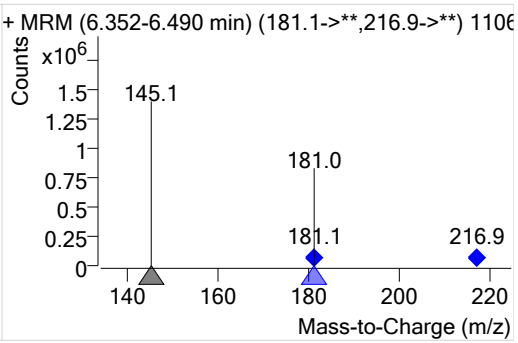




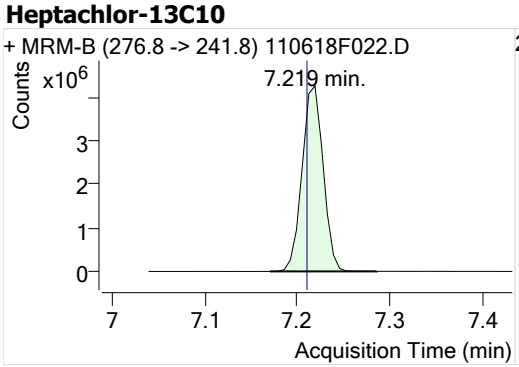
δ-BHC

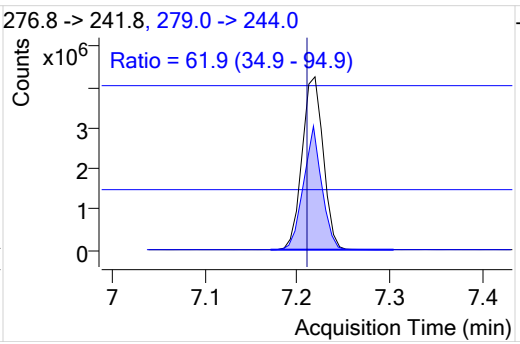


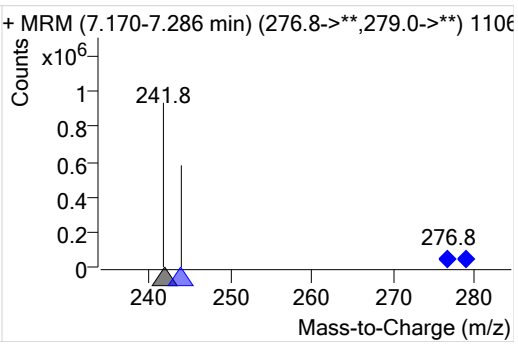




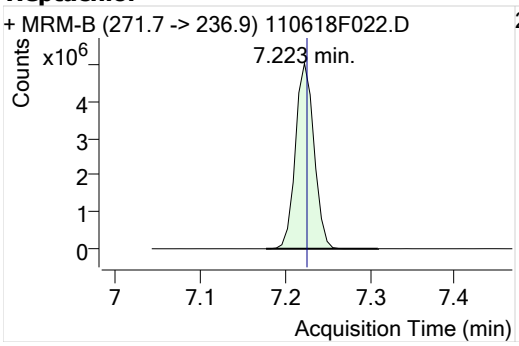
Heptachlor-13C10

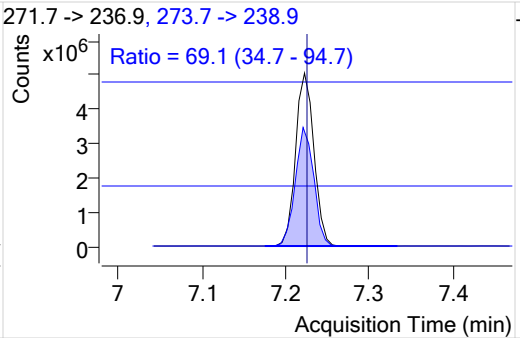


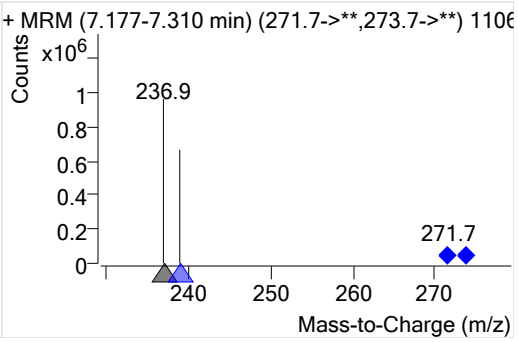




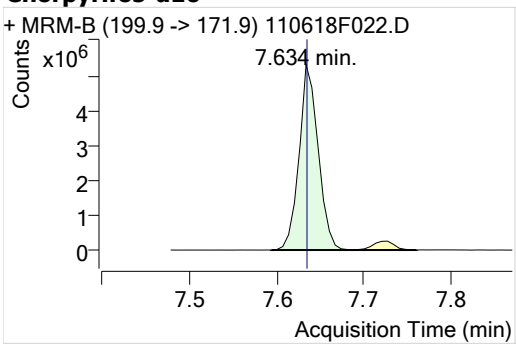
Heptachlor

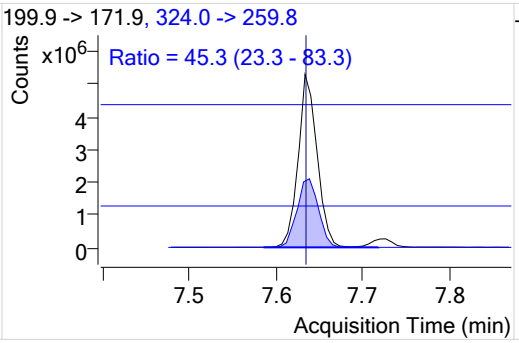


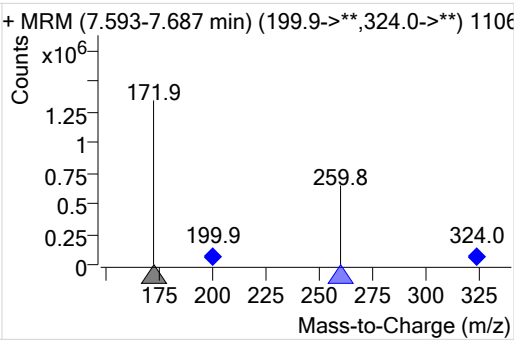




Chorpyrifos-d10

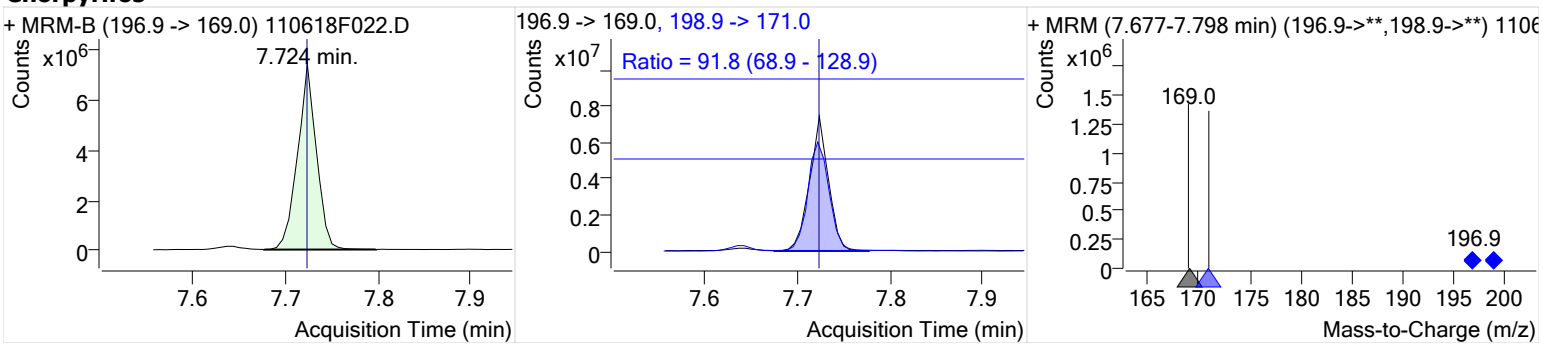




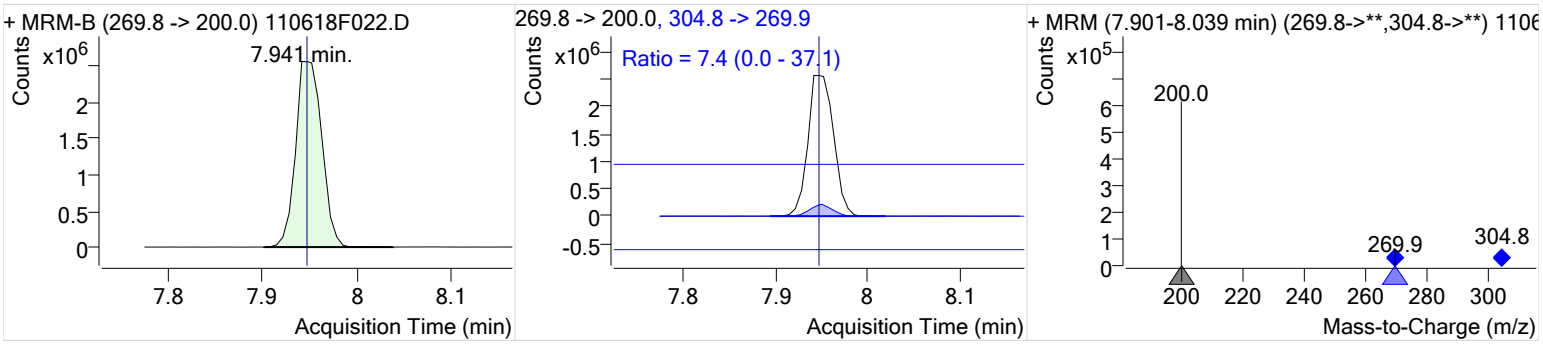


Quantitative Analysis Sample Report

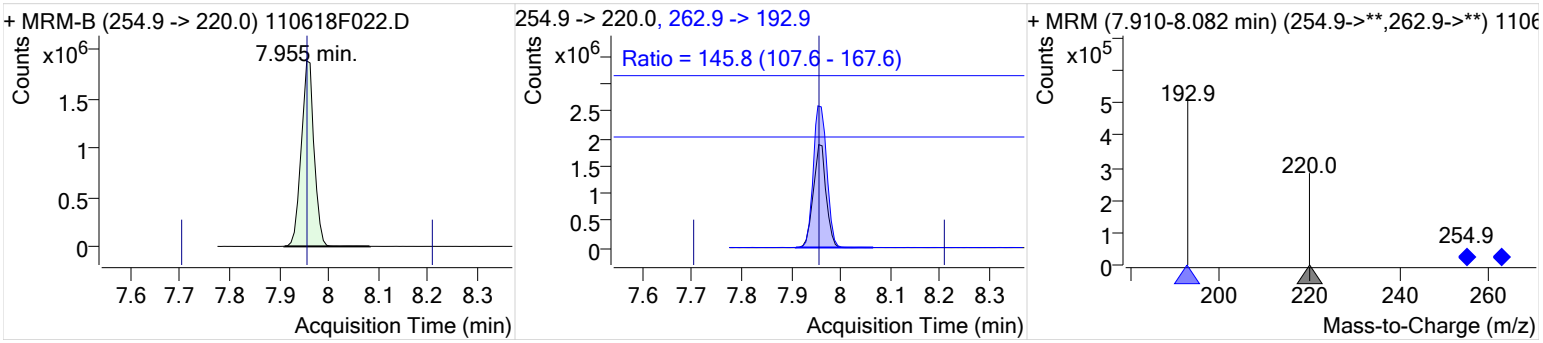
Chorpyrifos



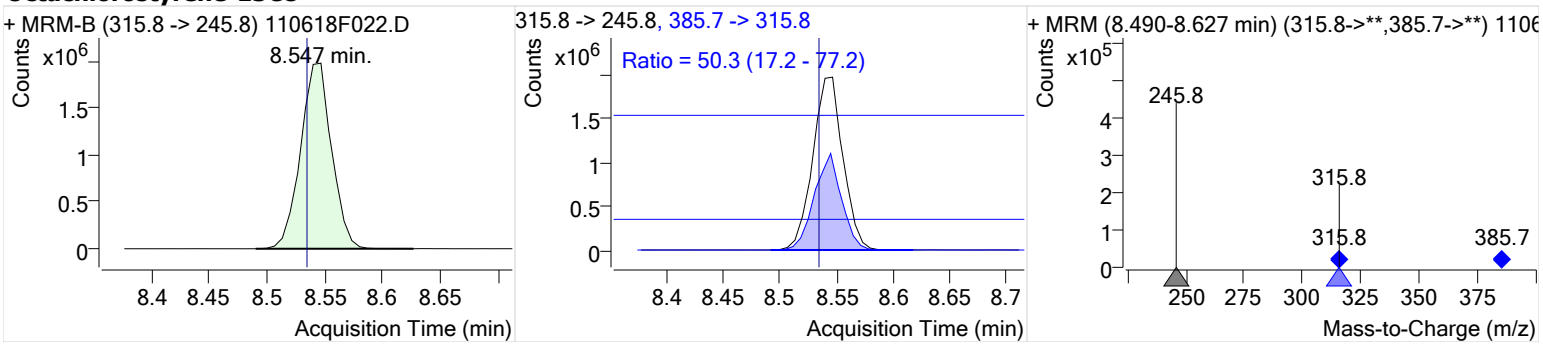
Aldrin-13C



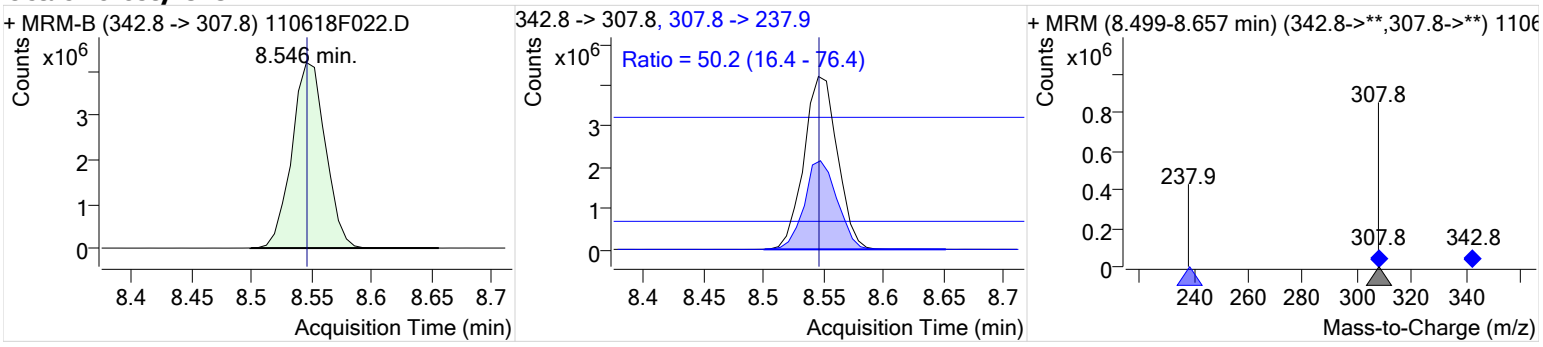
Aldrin



Octachlorostyrene-13C8

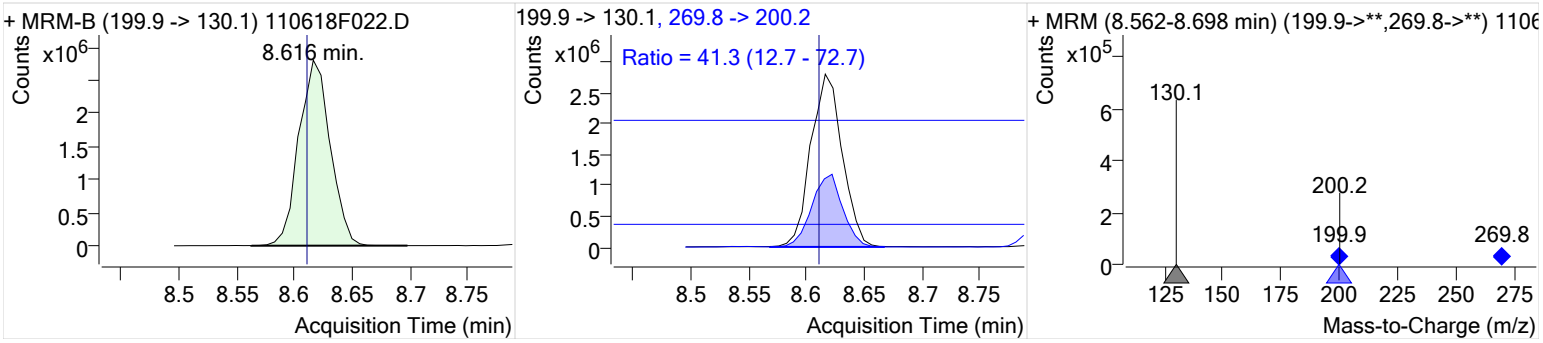


Octachlorostyrene

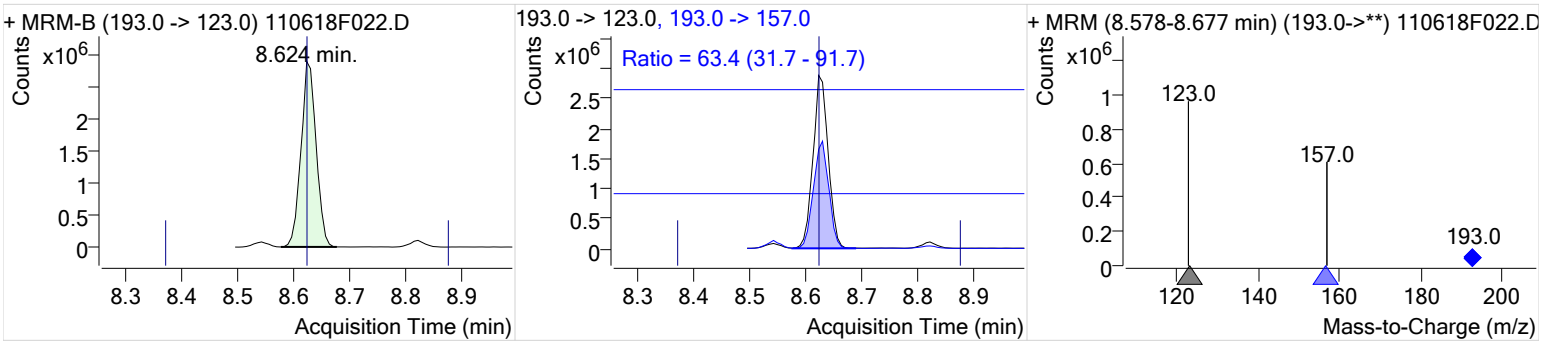


Quantitative Analysis Sample Report

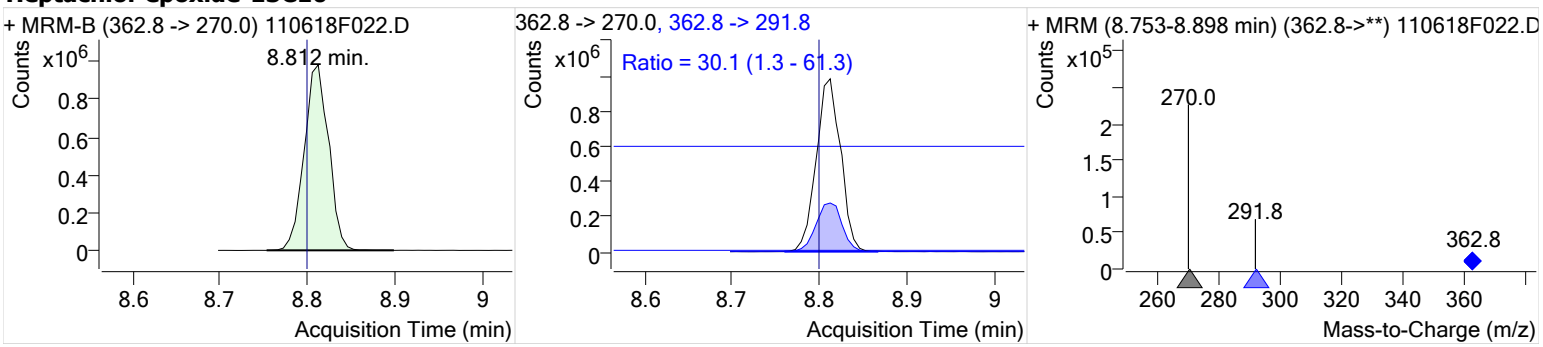
Isodrin-13C12



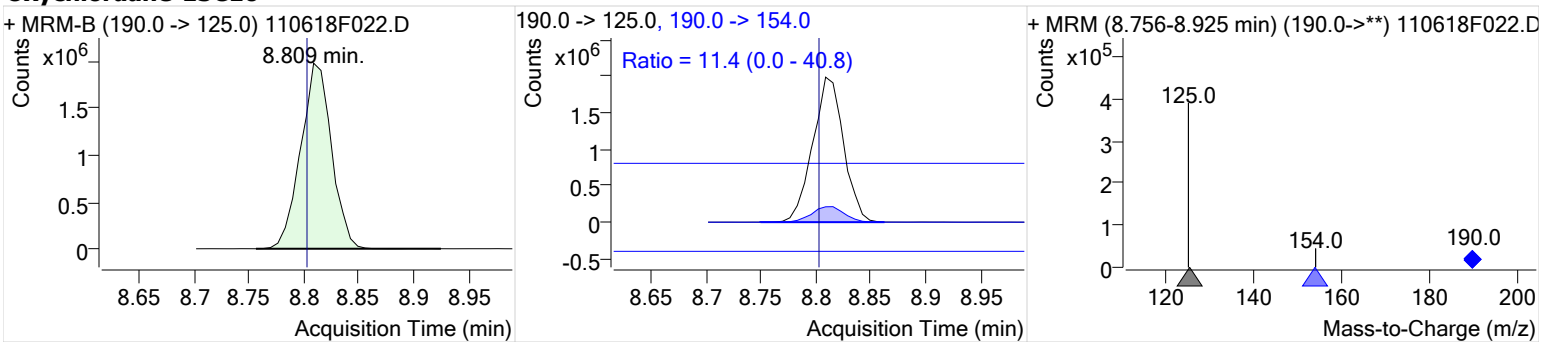
Isodrin



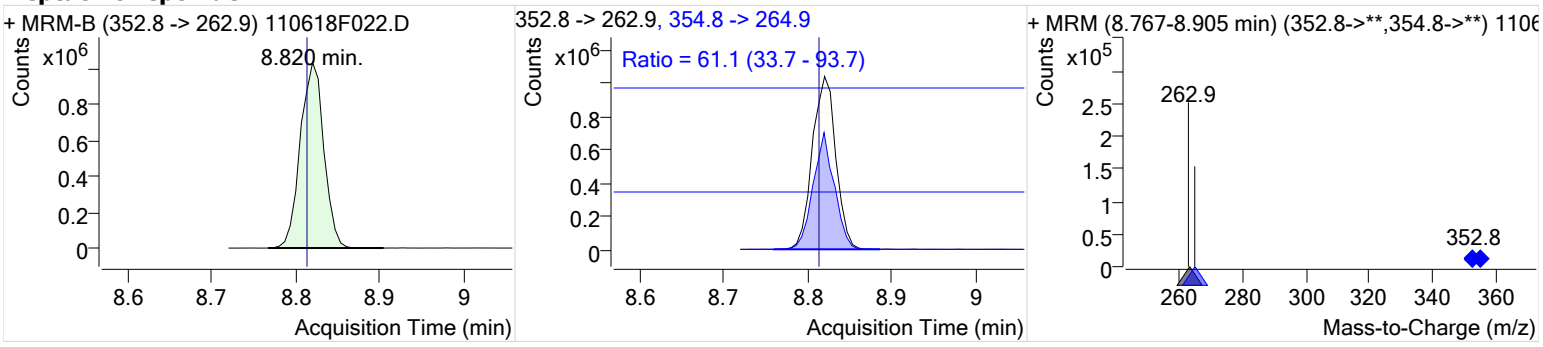
Heptachlor epoxide-13C10



Oxychlordane-13C10

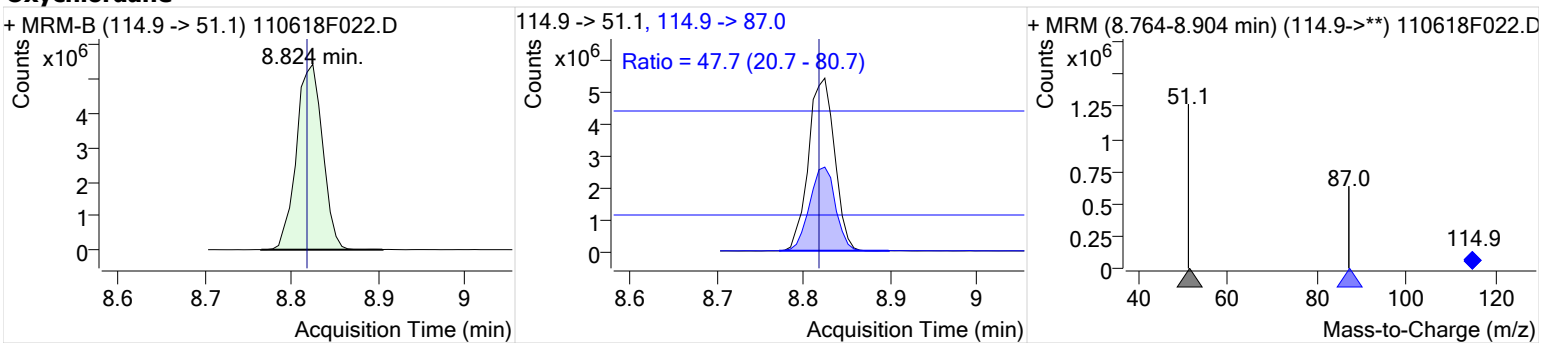


Heptachlor epoxide

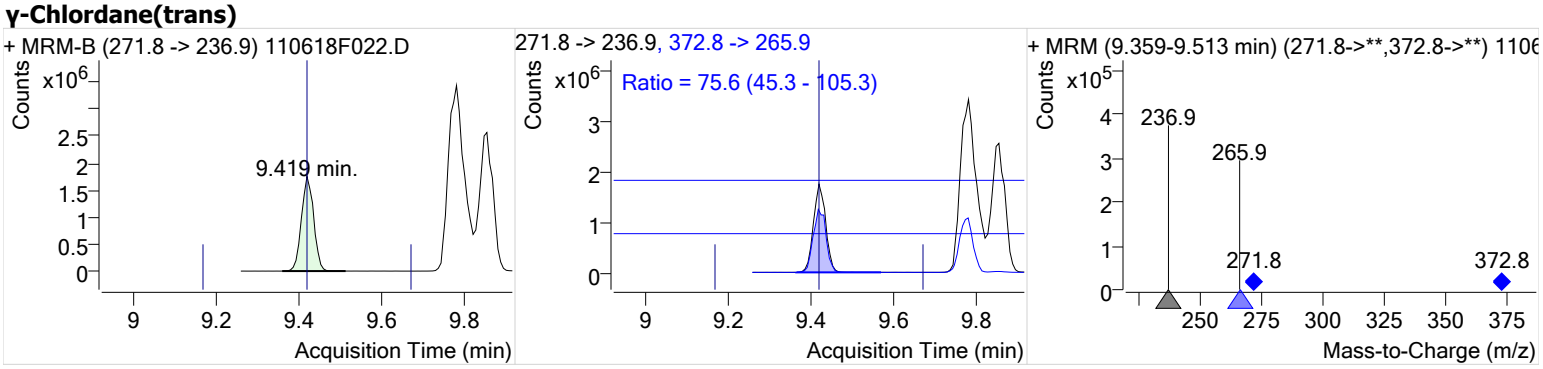


Quantitative Analysis Sample Report

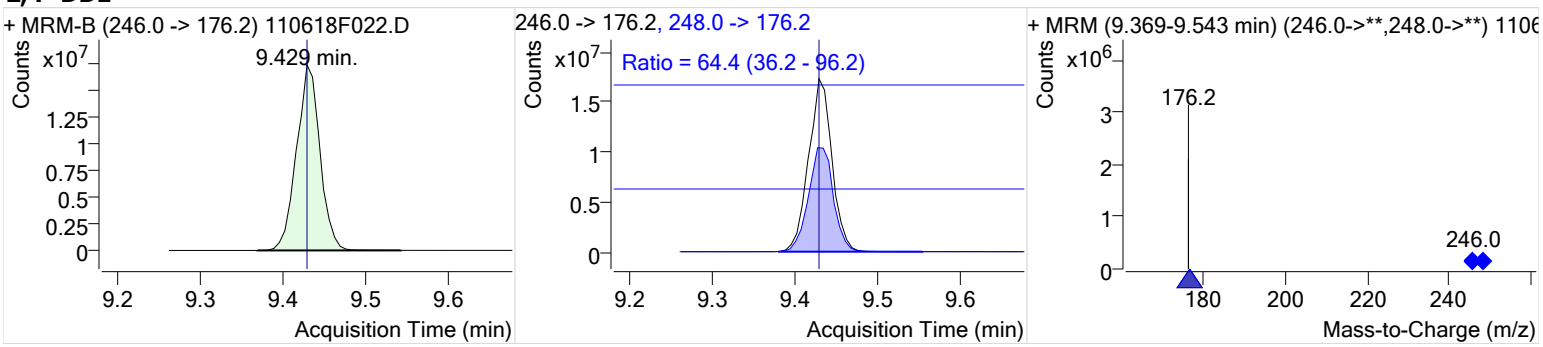
Oxychlordane



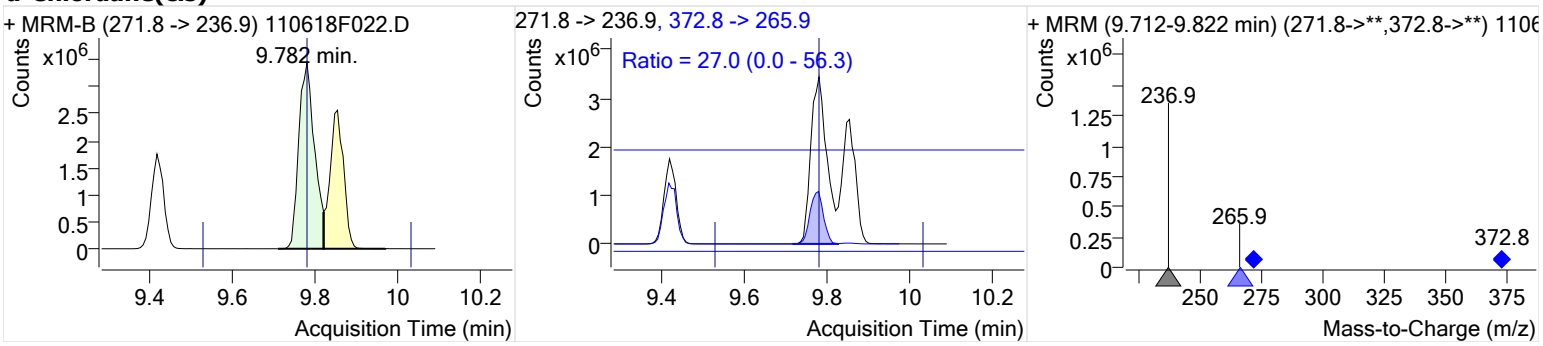
γ-Chlordane(trans)



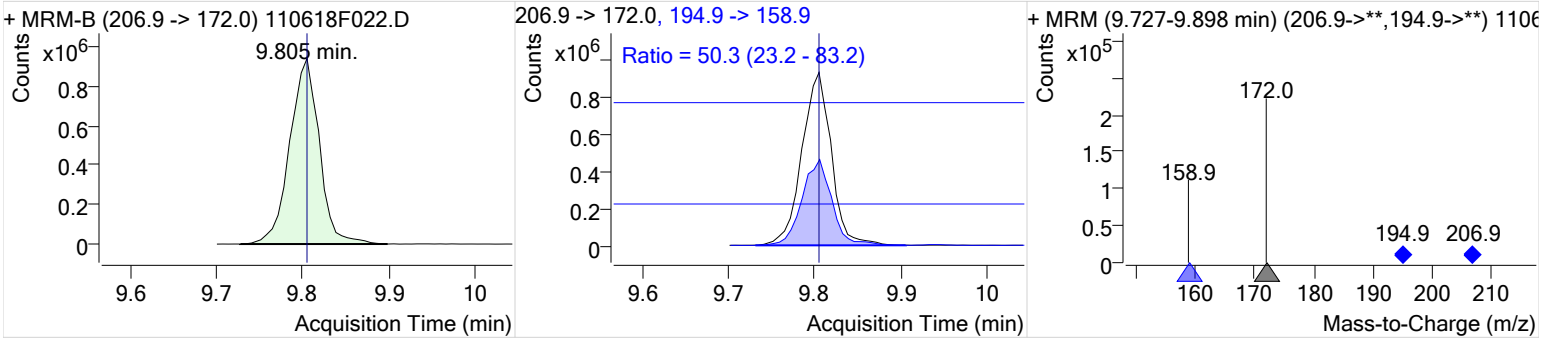
2,4'-DDE



α-Chlordane(cis)

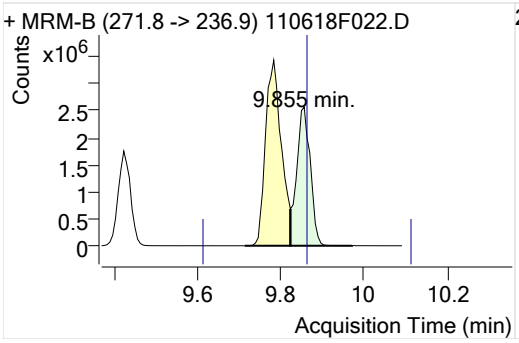


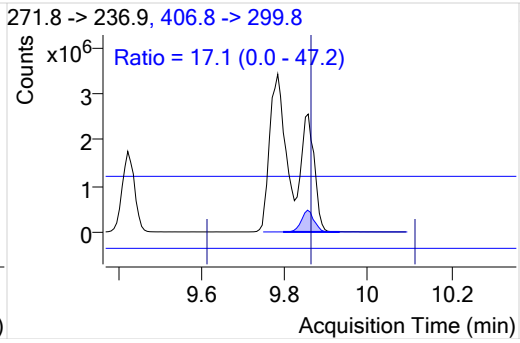
Endosulfan I

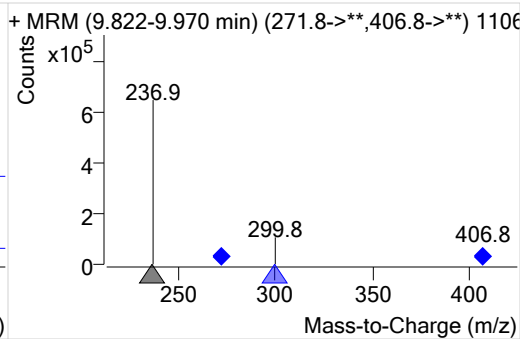


Quantitative Analysis Sample Report

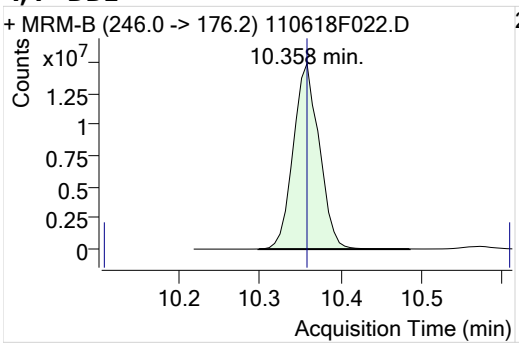
trans-Nanochlor

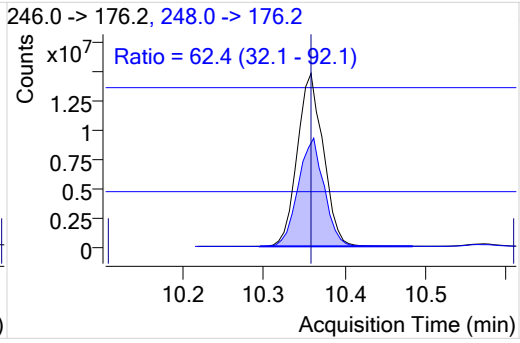


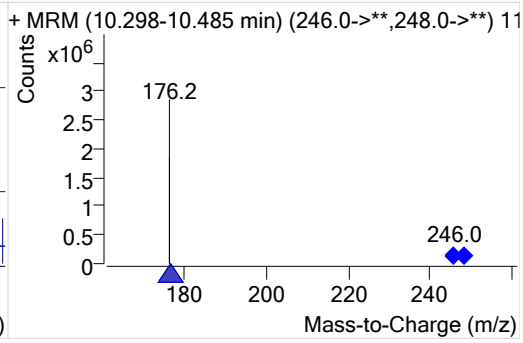




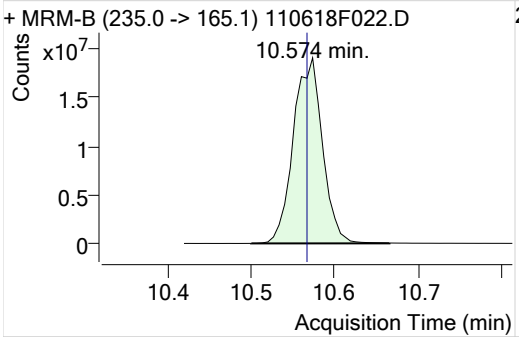
4,4' -DDE

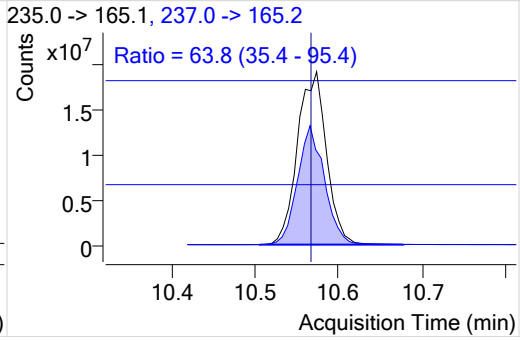


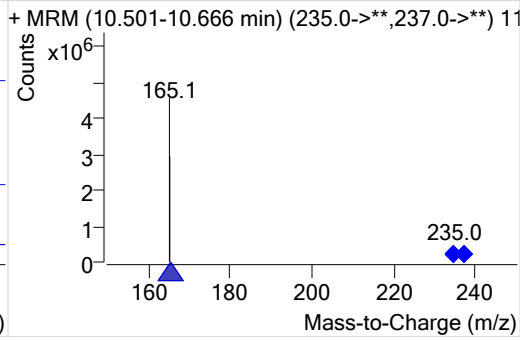




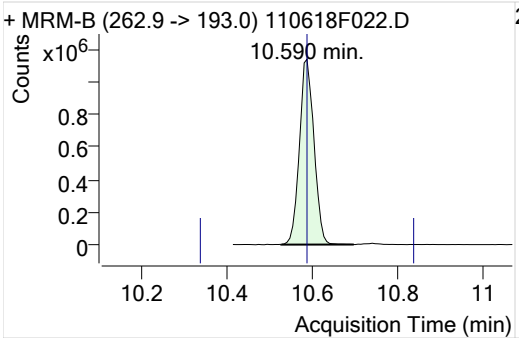
2,4'-DDD

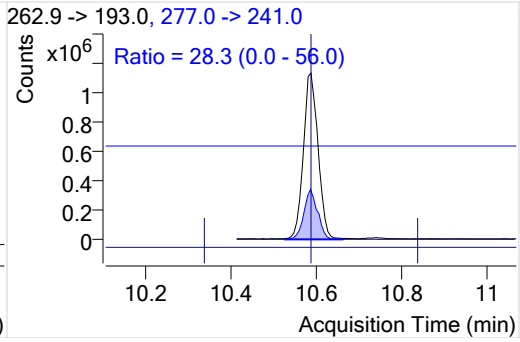


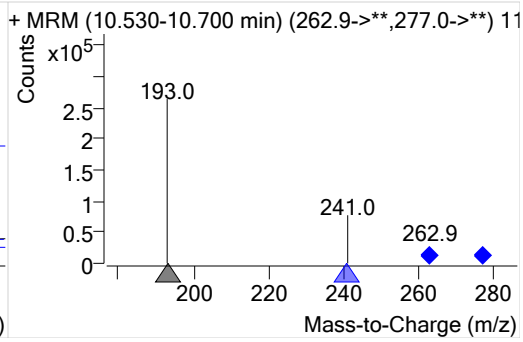




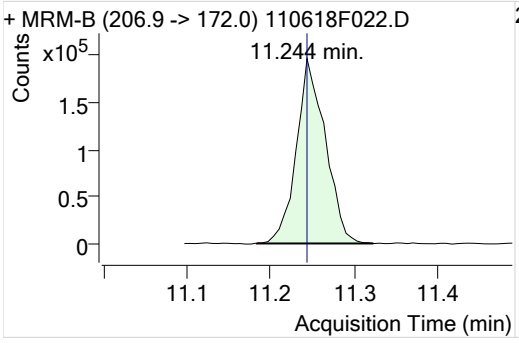
Dieldrin

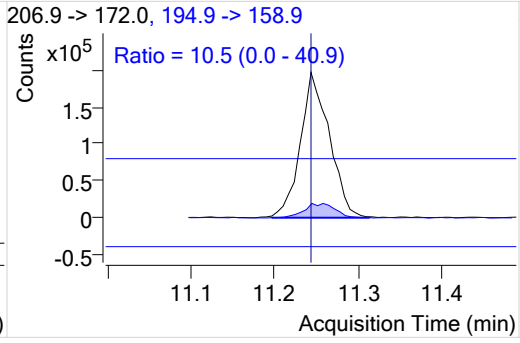


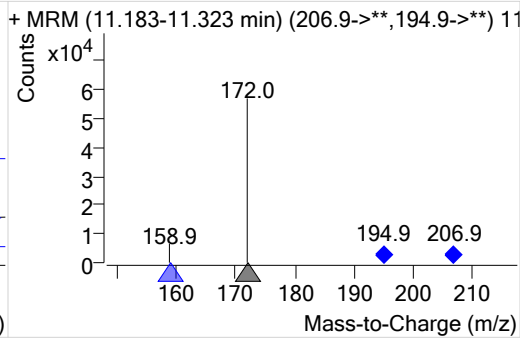




Endosulfan II

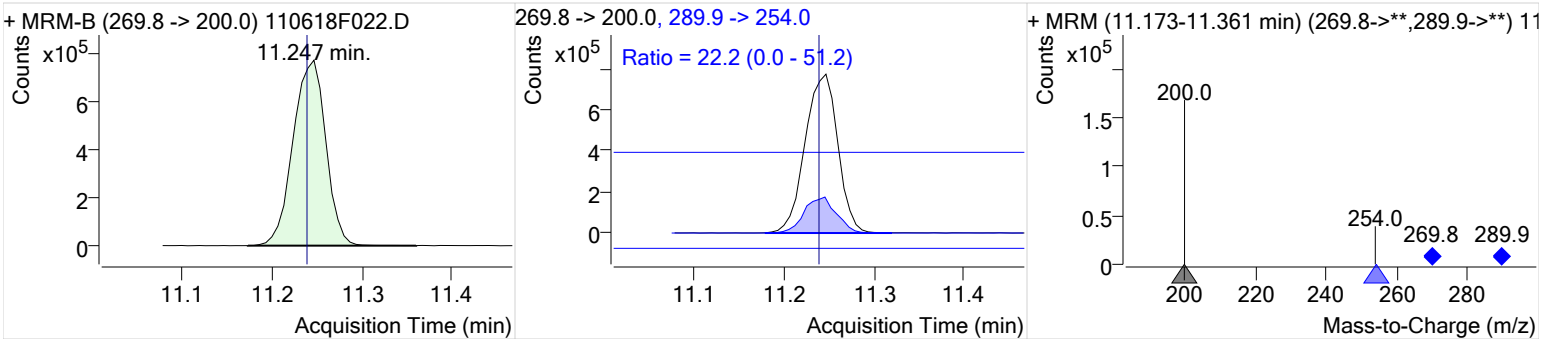




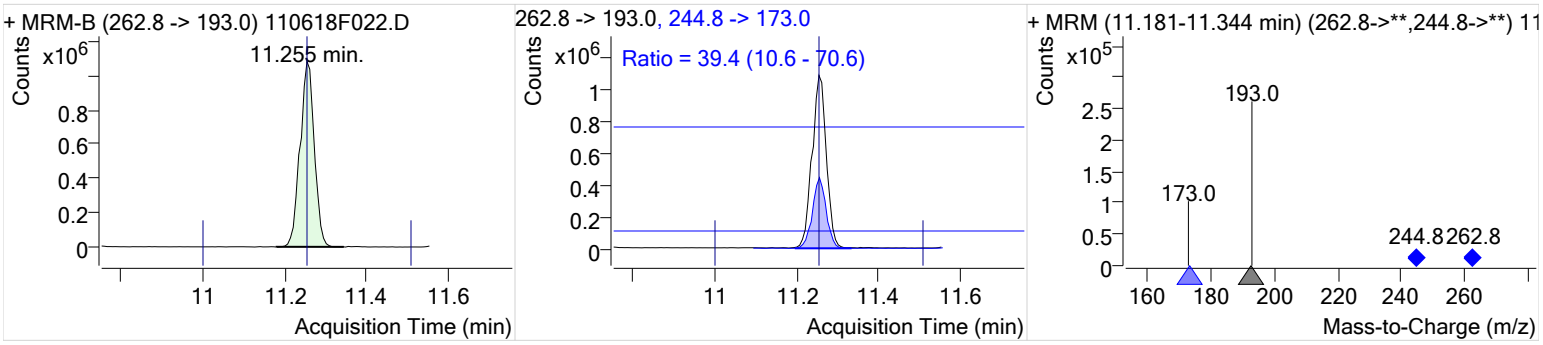


Quantitative Analysis Sample Report

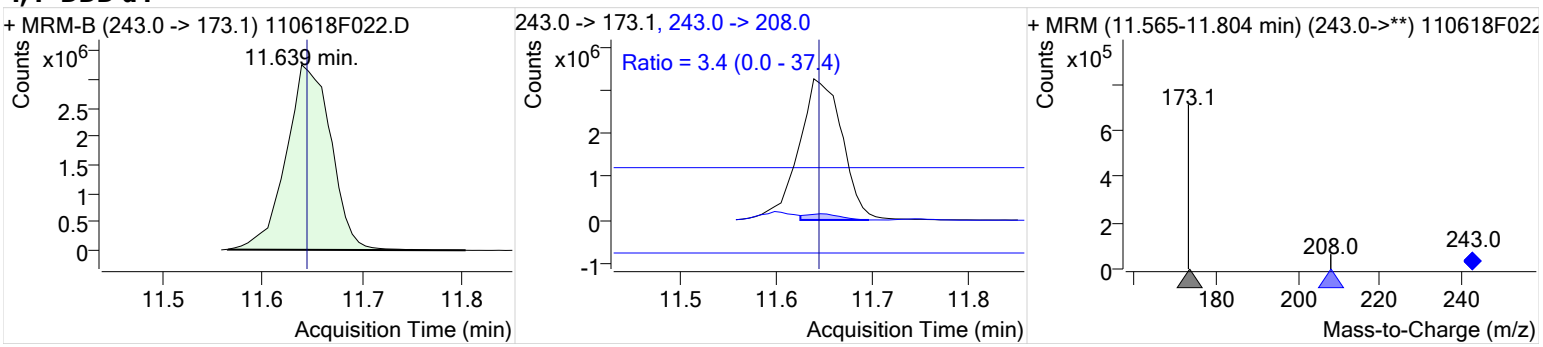
Endrin-13C12



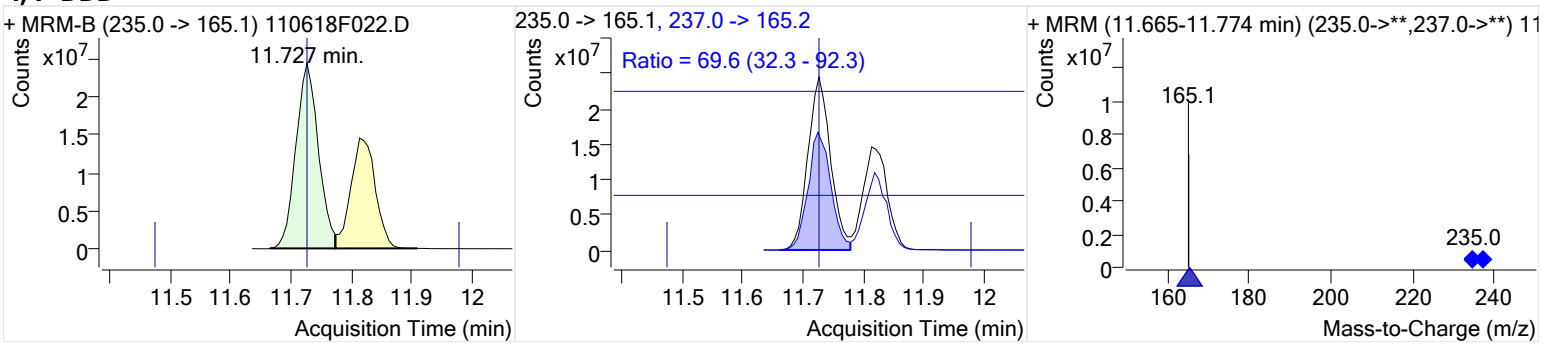
Endrin



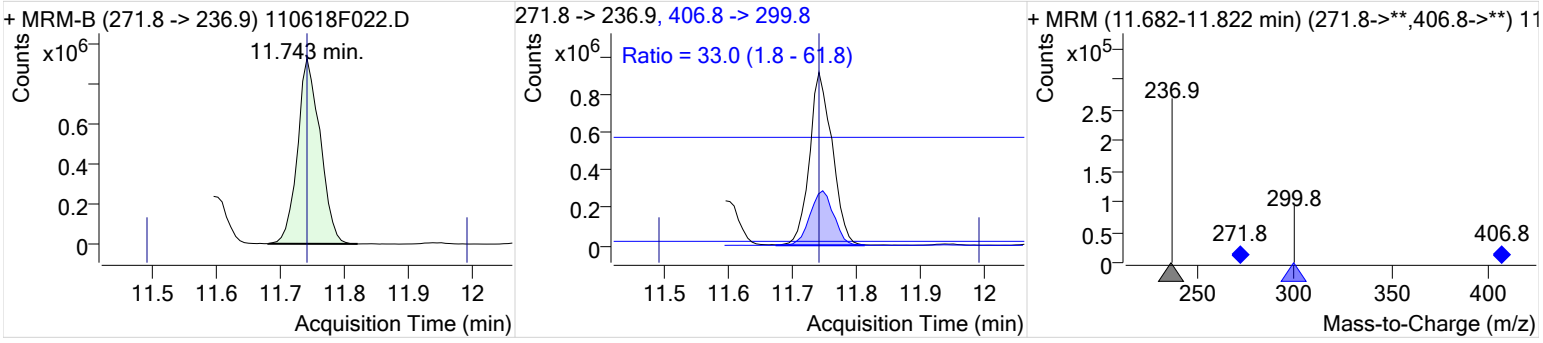
4,4'-DDD d4



4,4'-DDD

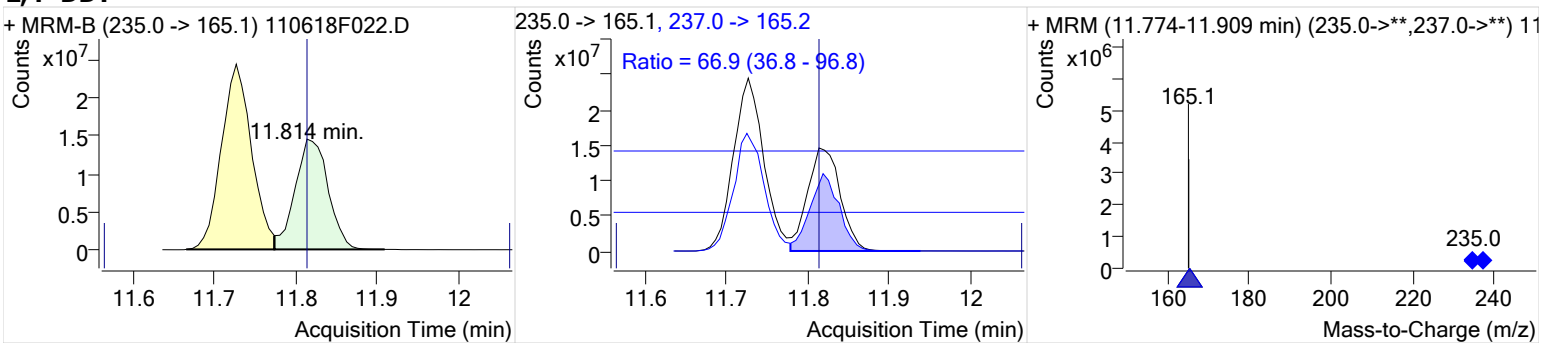


cis-Nonachlor

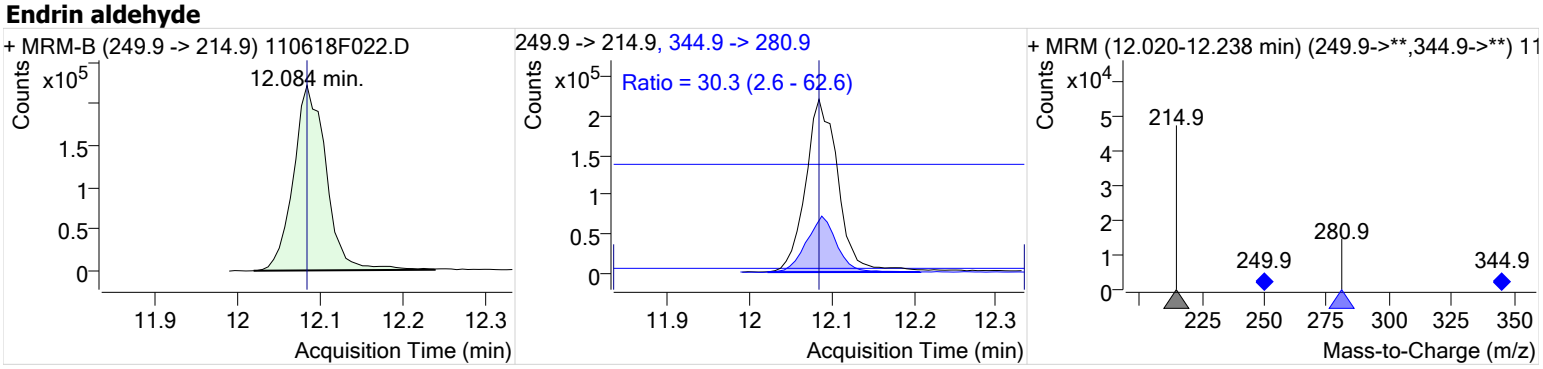


Quantitative Analysis Sample Report

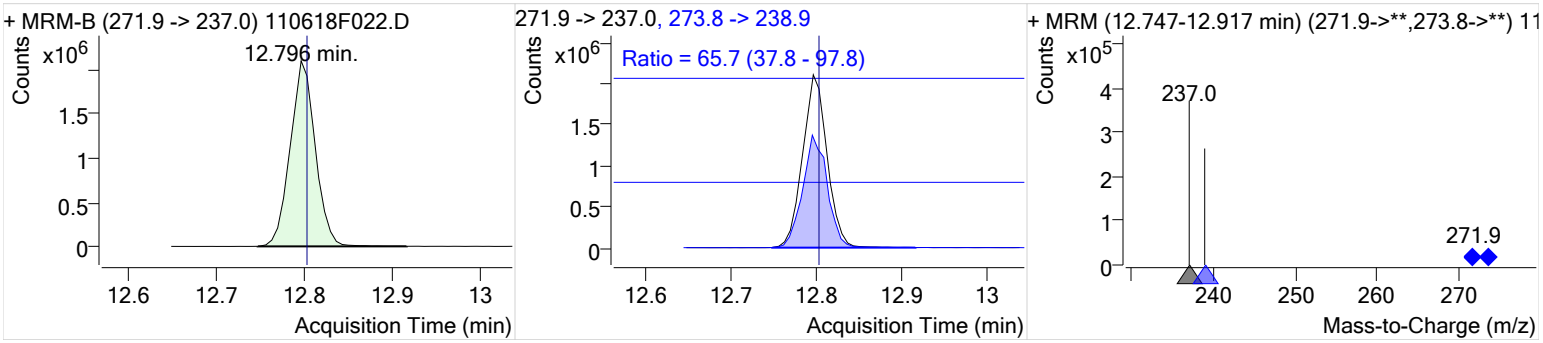
2,4'-DDT



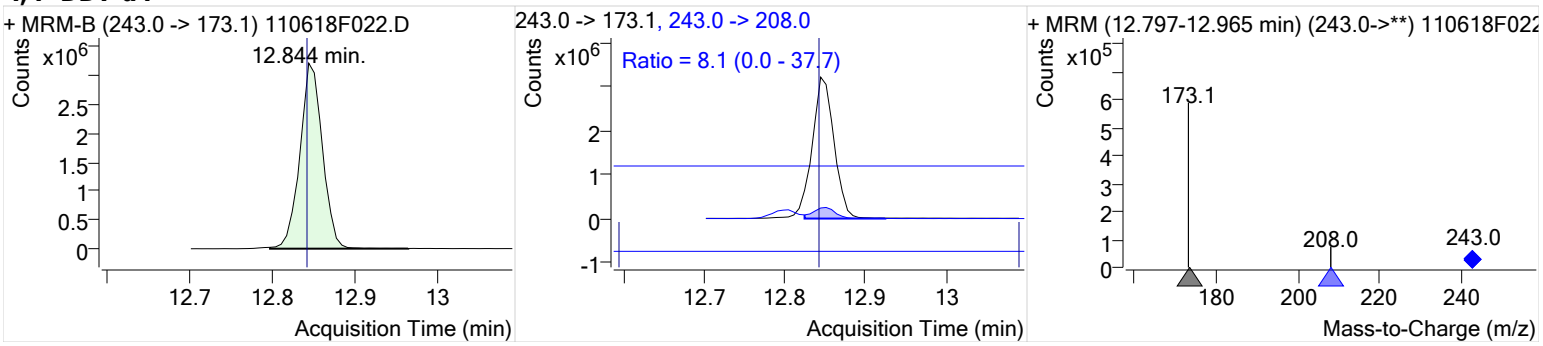
Endrin aldehyde



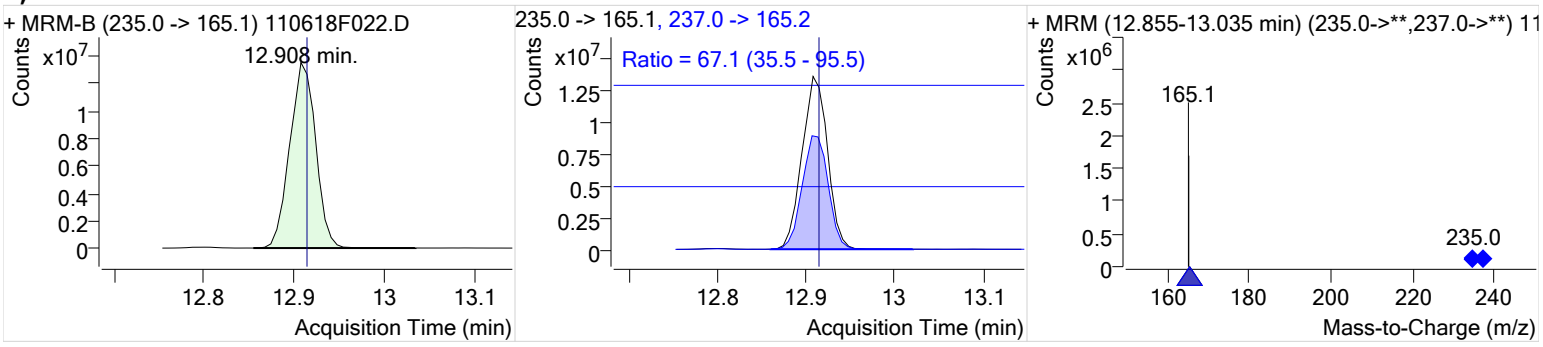
Endosulfan sulfate



4,4'-DDT-d4

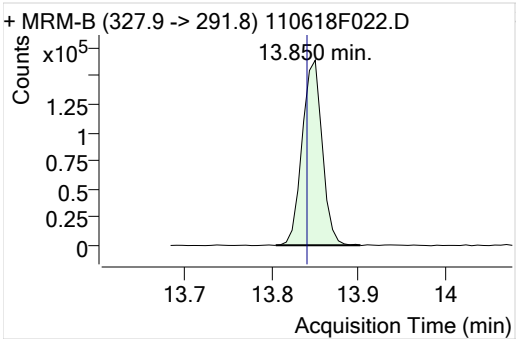


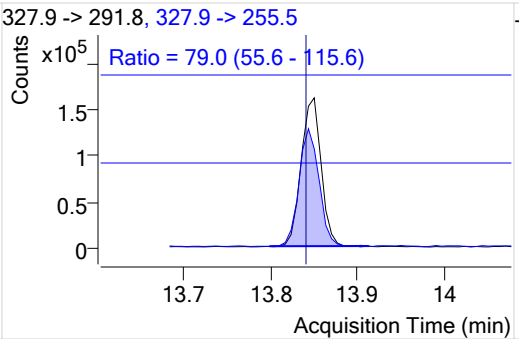
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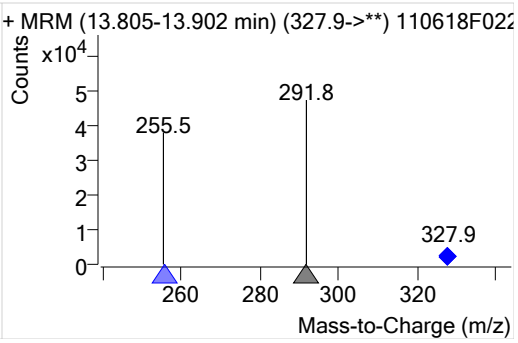


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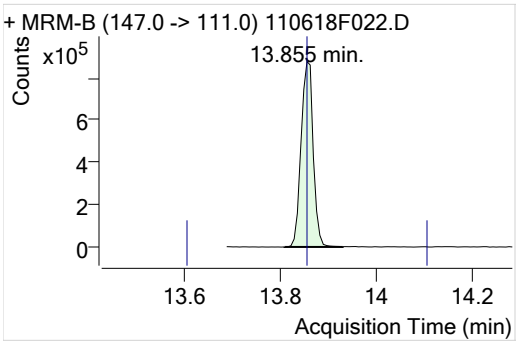
Endrin ketone-13C12

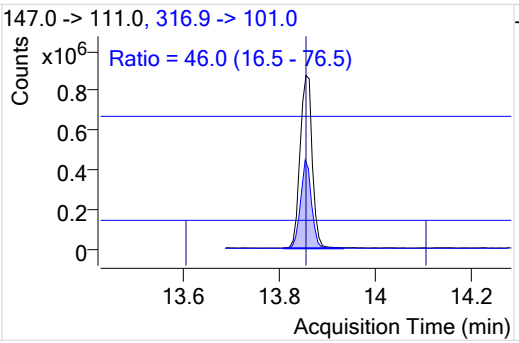


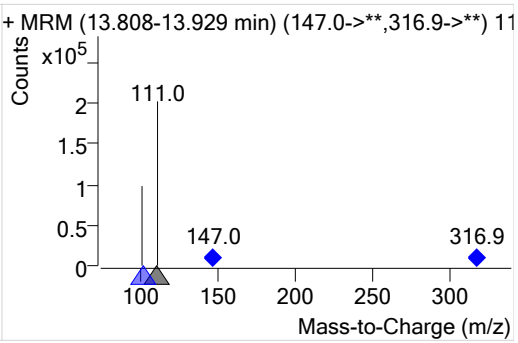




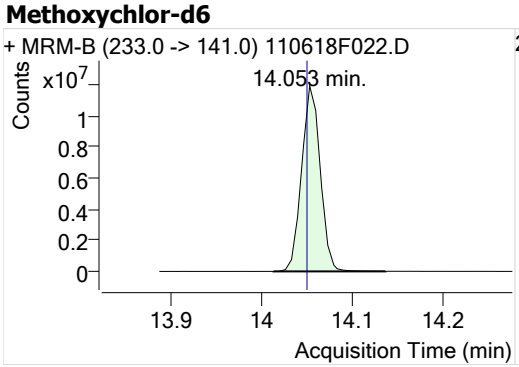
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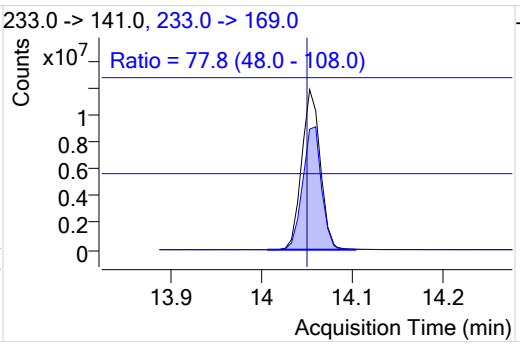


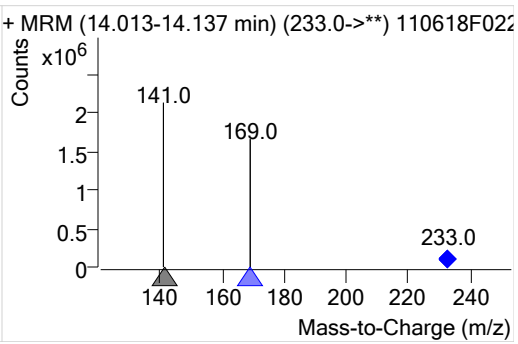




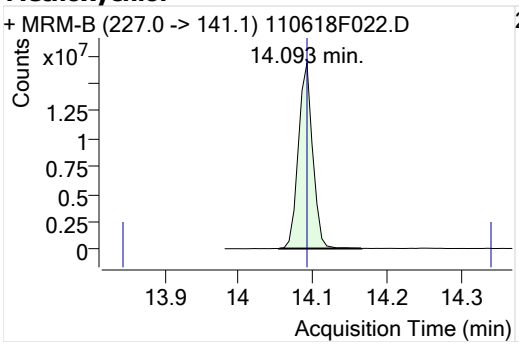
Methoxychlor-d6

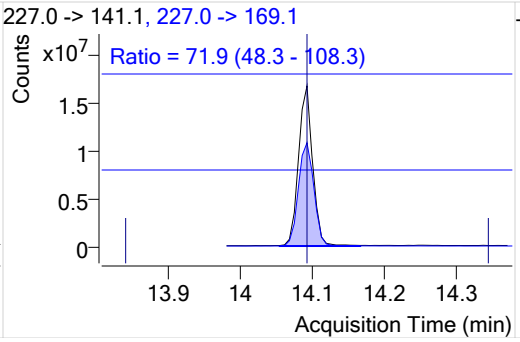


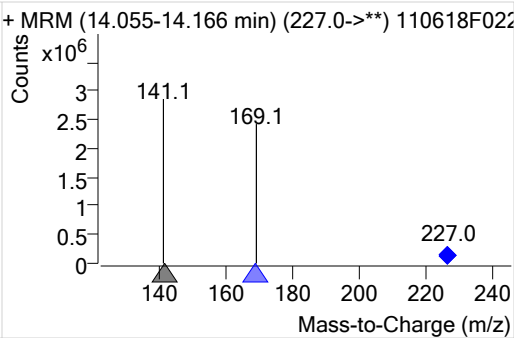




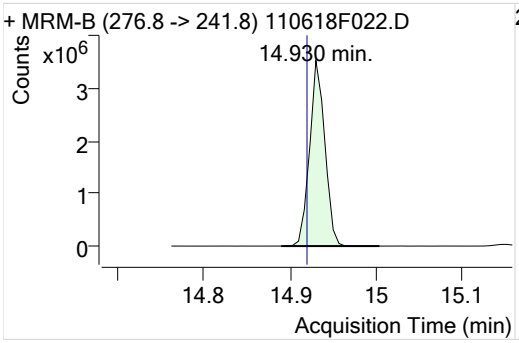
Methoxychlor

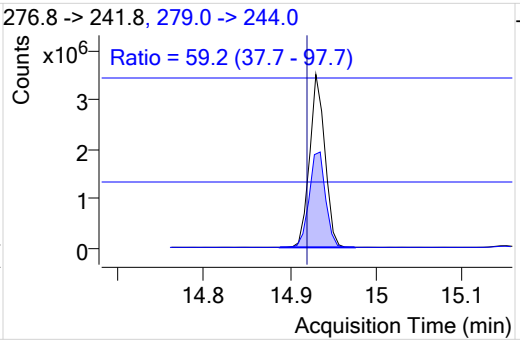


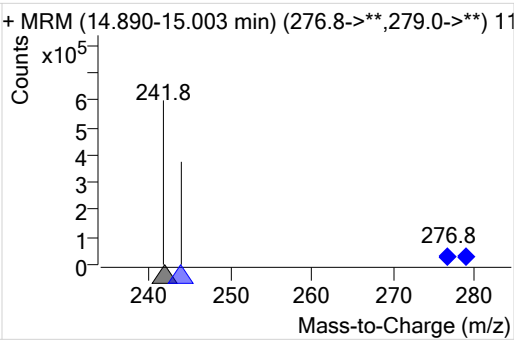




Mirex-13C10

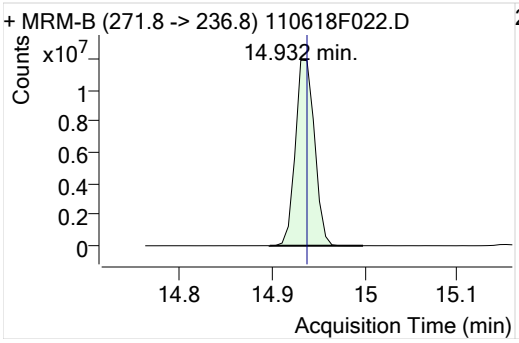


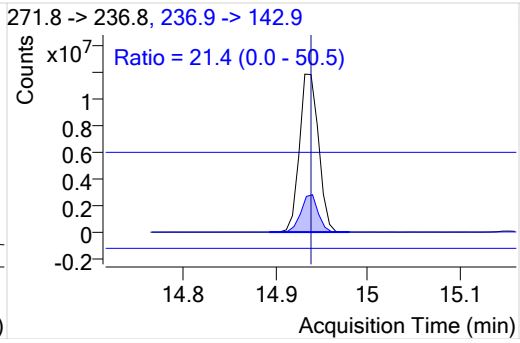


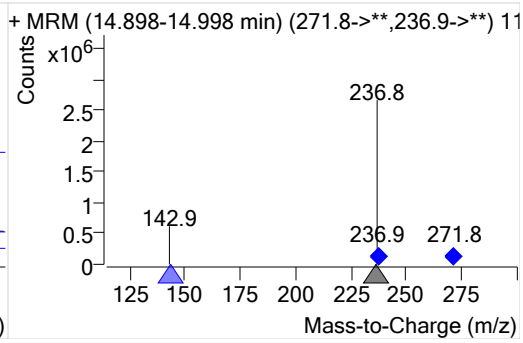


Quantitative Analysis Sample Report

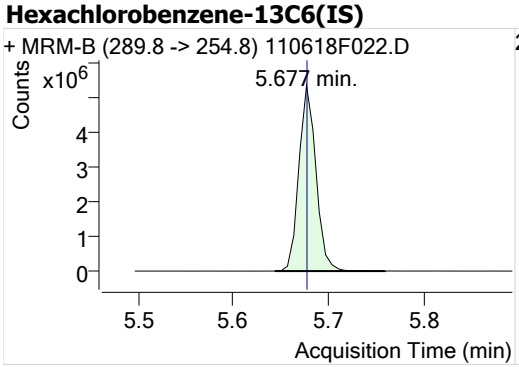
Mirex

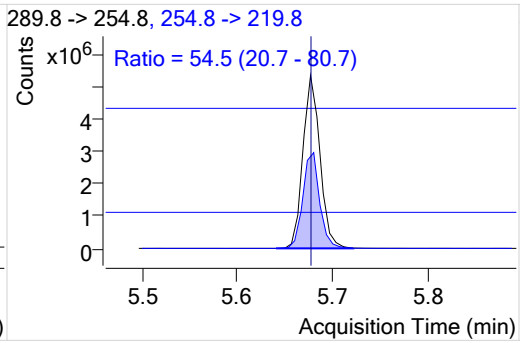


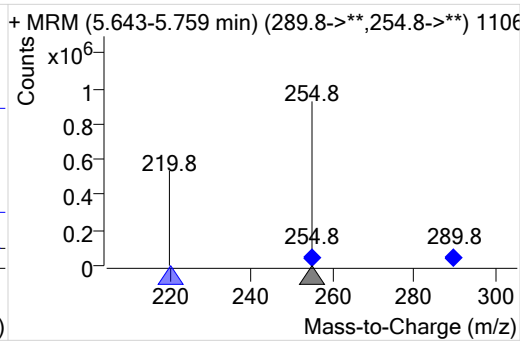




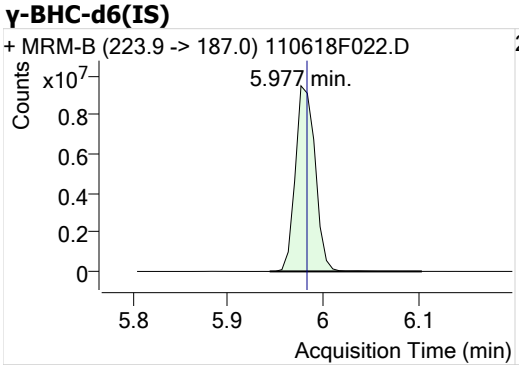
Hexachlorobenzene-13C6(IS)

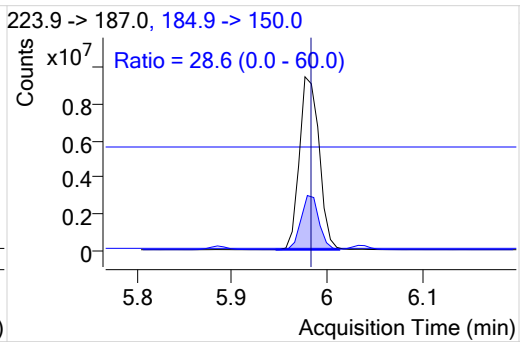


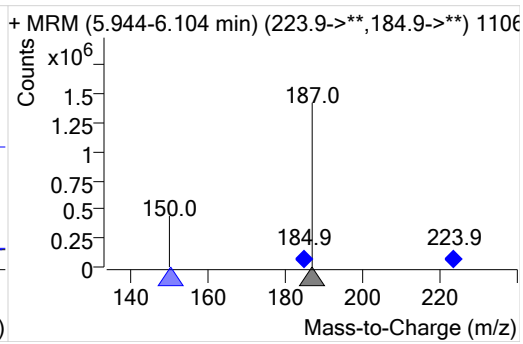




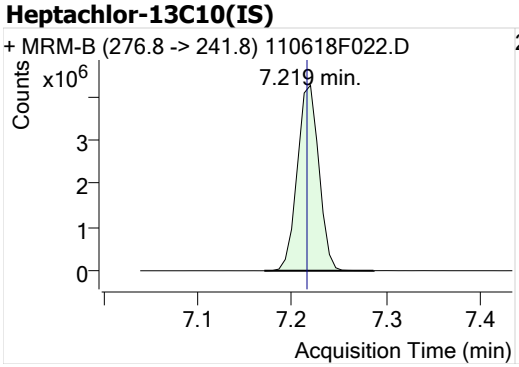
γ-BHC-d6(IS)

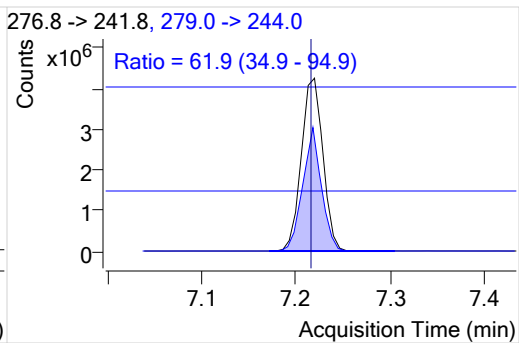


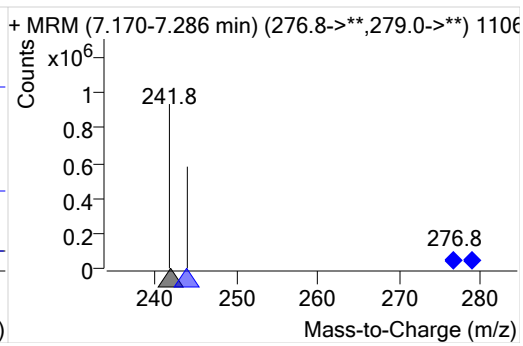




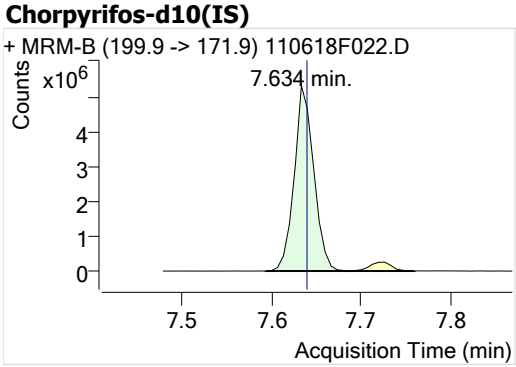
Heptachlor-13C10(IS)

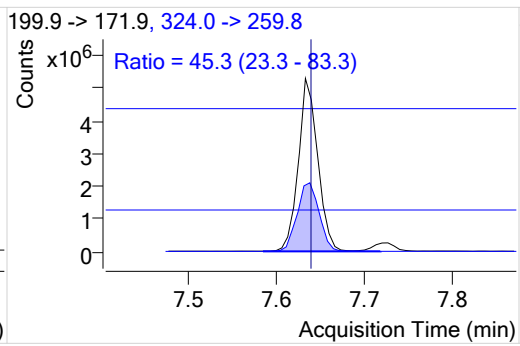


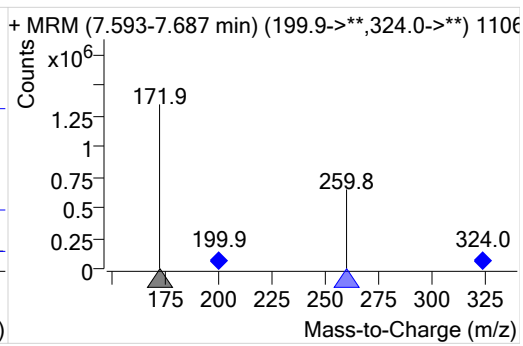




Chorpyrifos-d10(IS)

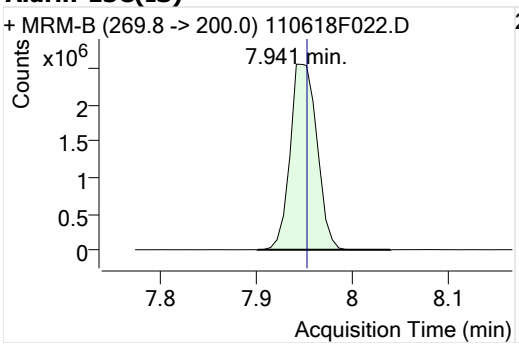


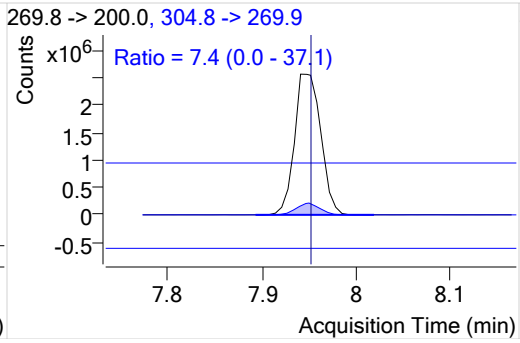


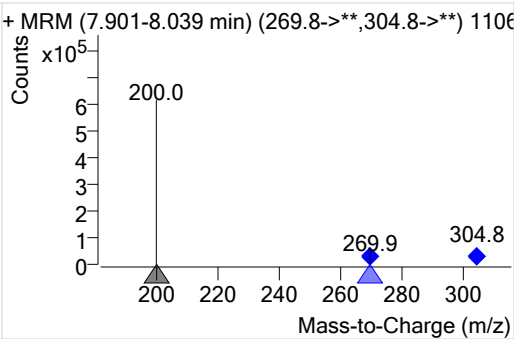


Quantitative Analysis Sample Report

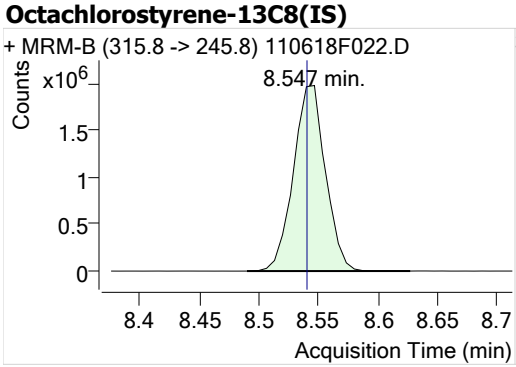
Aldrin-13C(IS)

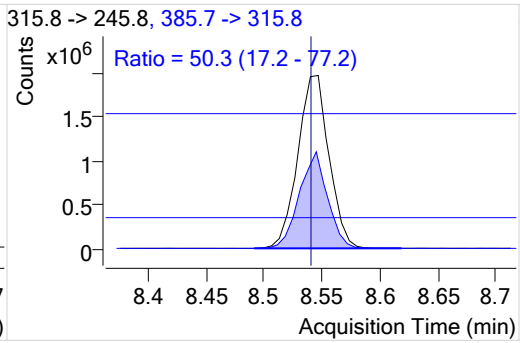


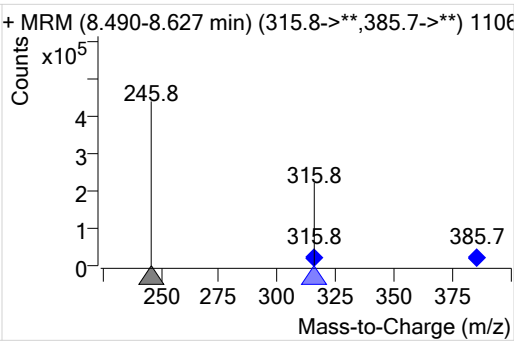




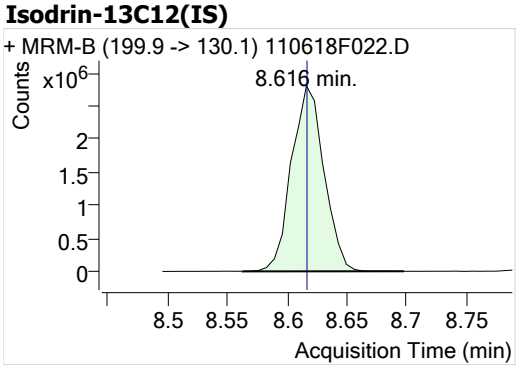
Octachlorostyrene-13C8(IS)

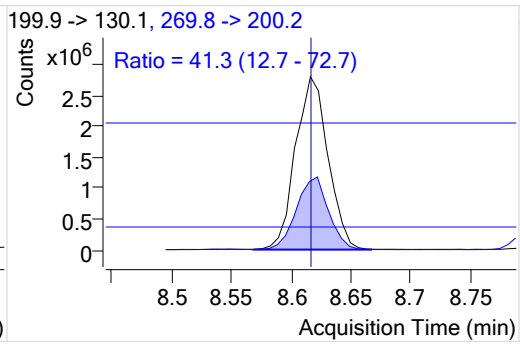


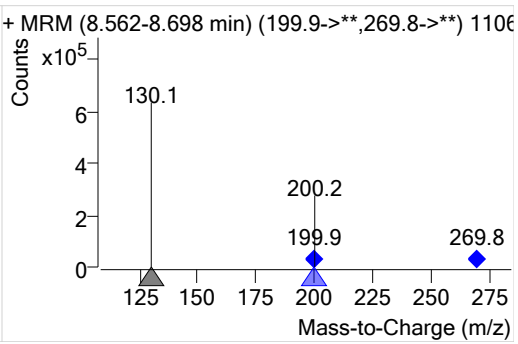




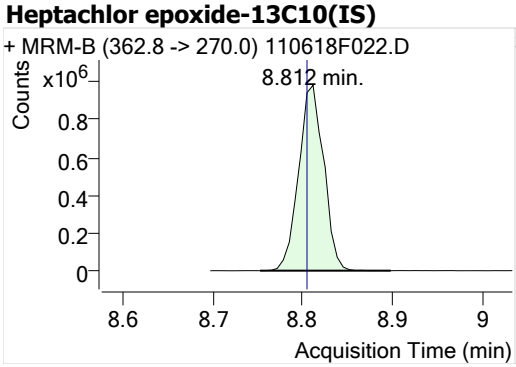
Isodrin-13C12(IS)

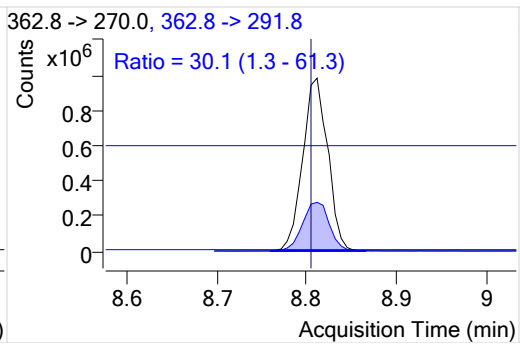


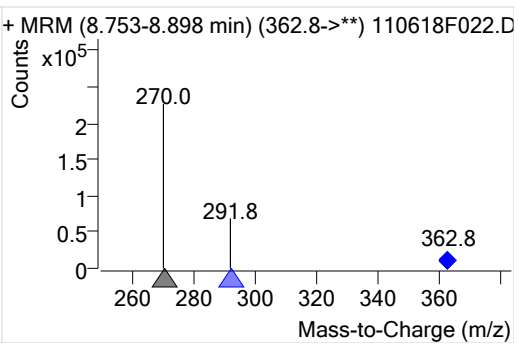




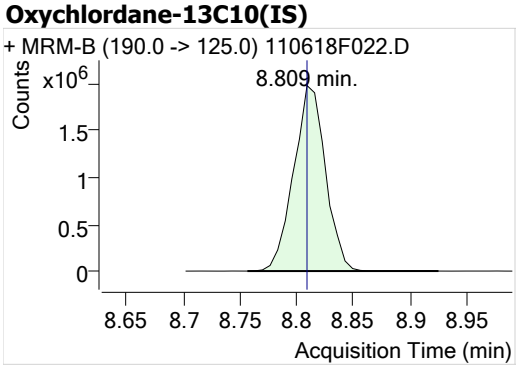
Heptachlor epoxide-13C10(IS)

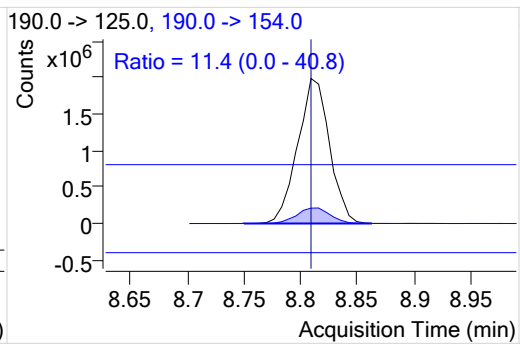


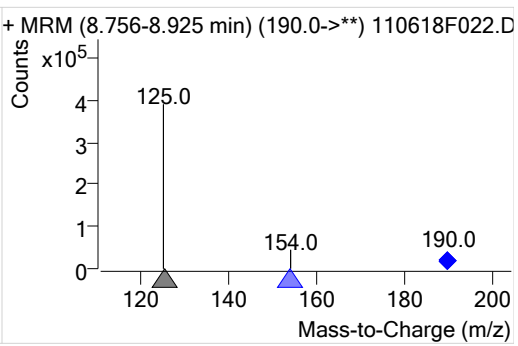




Oxychlordane-13C10(IS)

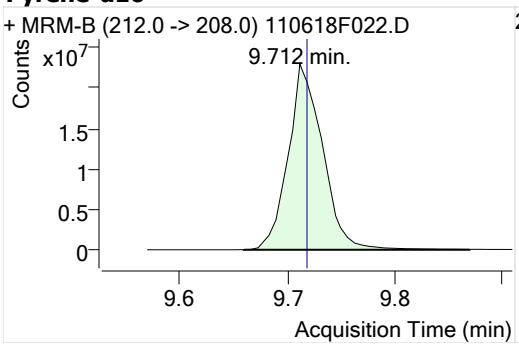


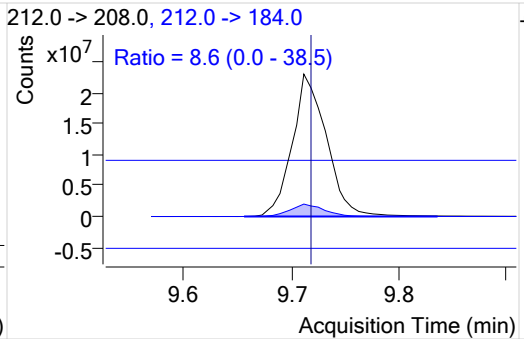


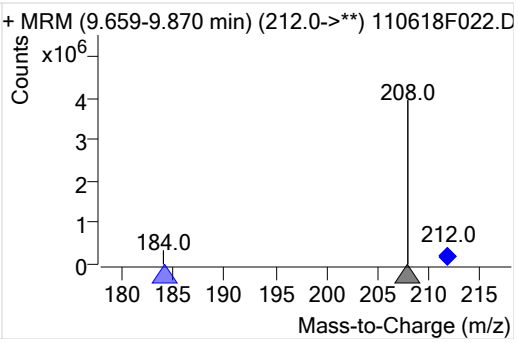


Quantitative Analysis Sample Report

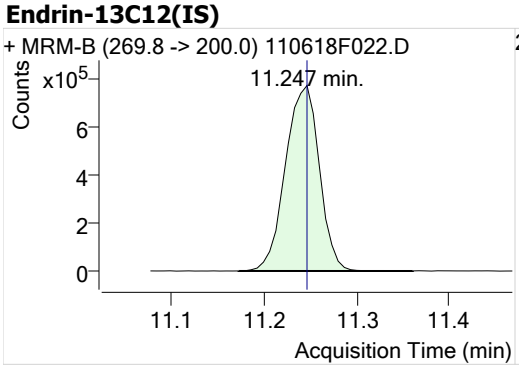
Pyrene-d10

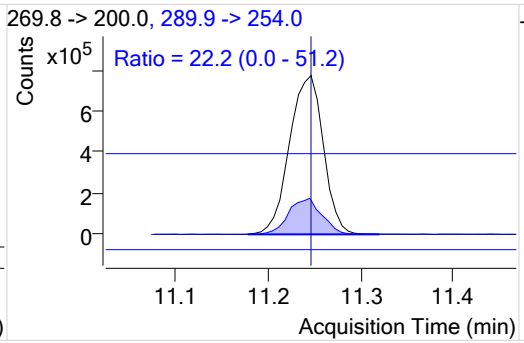


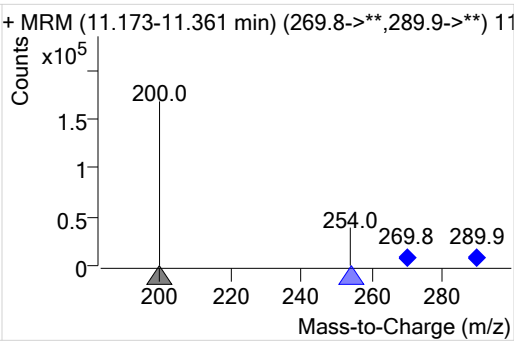




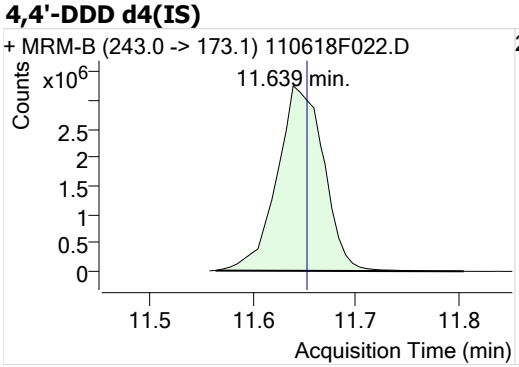
Endrin-13C12(IS)

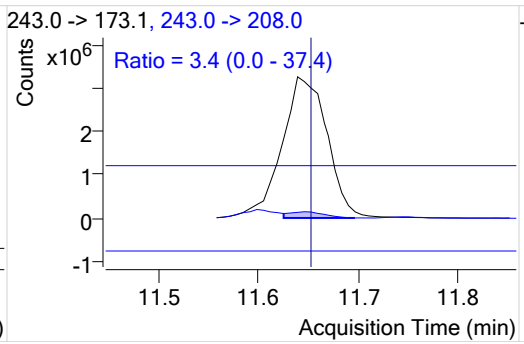


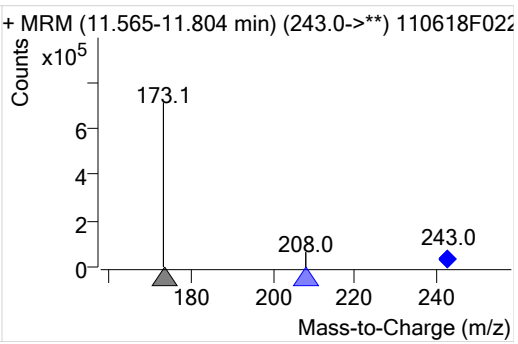




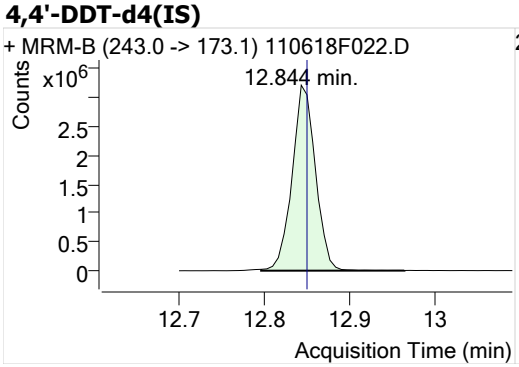
4,4'-DDD d4(IS)

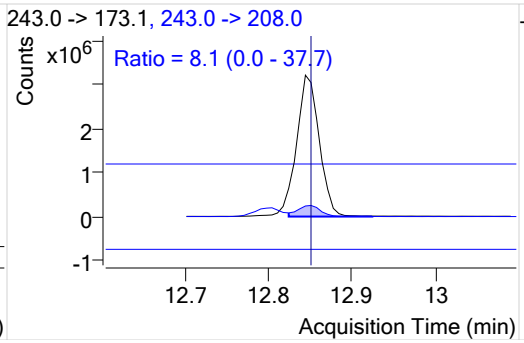


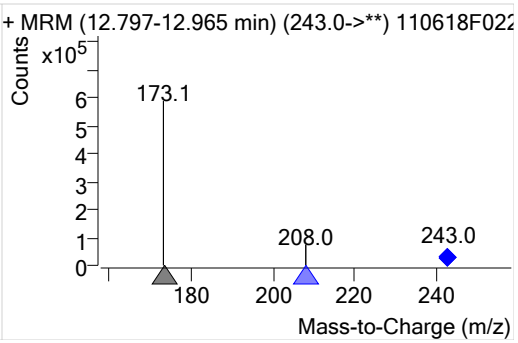




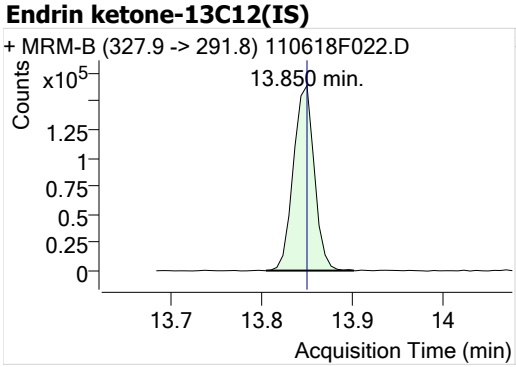
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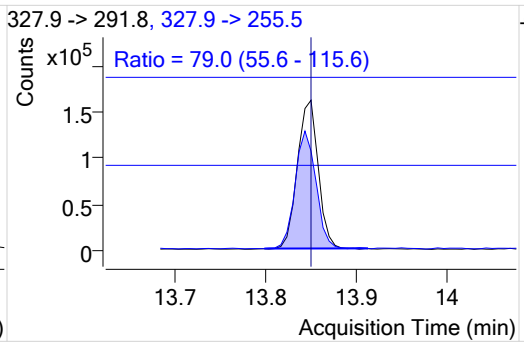


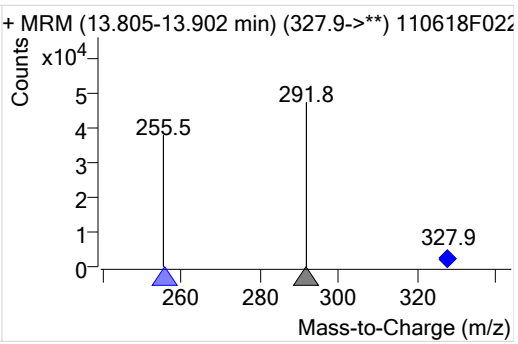




Endrin ketone-13C12(IS)

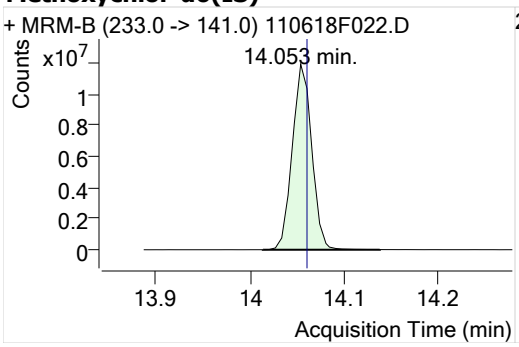


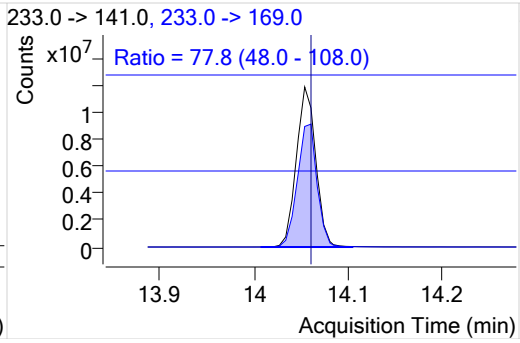


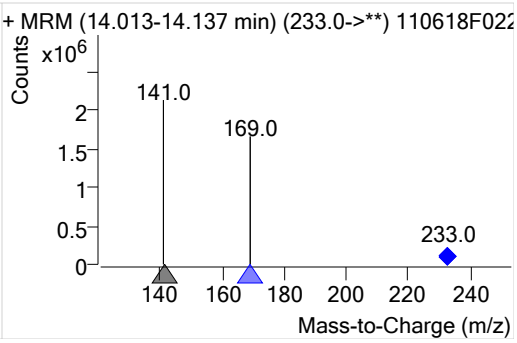


Quantitative Analysis Sample Report

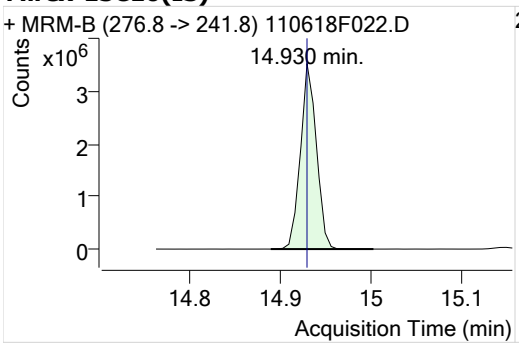
Methoxychlor-d6(IS)

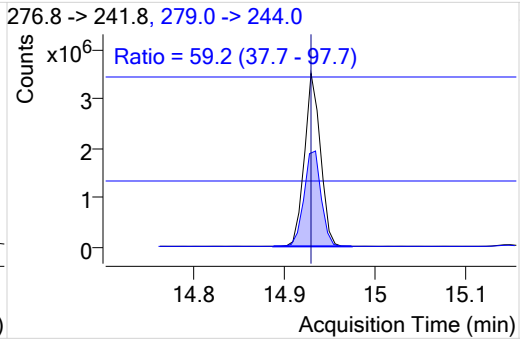


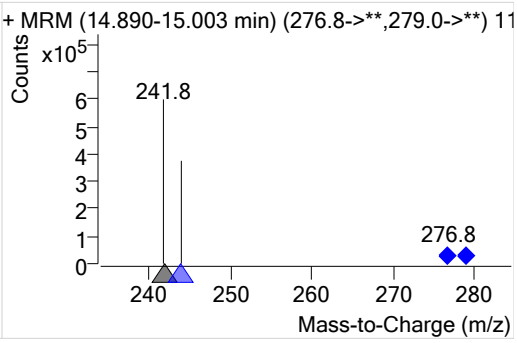




Mirex-13C10(IS)







Injection Log

Batch Data Path	J:\MS42\Data\112618\QuantResults\OC Pest 112618.batch.bin				
Analysis Time	12/4/2018 9:11:07 AM	**Analyst Name**	CORP\alkls.nouser	**Report Generator Name**	CORP\alkls.nouser
Calibration Last Update	11/20/2018 10:57:00 AM	**Analyze Quant Version**	B.09.00	**Report Quant Version**	B.09.00

Sequence Table

Data File	Name	Type	Vial	Vol.	Level	Acq. Method File	Acq. Date-Time
112618F003.D	OC PEST CCV 20ng/mL SVM59-96C	CC	1	1	20	OC Pest_dMRM	11/26/2018 11:48:03 AM
112618F004.D	KQ1815728-04MB	Sample	2	1		OC Pest_dMRM	11/26/2018 12:33:39 PM
112618F005.D	KQ1815728-03LCS	QC	3	1	20	OC Pest_dMRM	11/26/2018 12:51:14 PM
112618F006.D	KQ1815728_K1810417-023MS	QC	4	1	20	OC Pest_dMRM	11/26/2018 1:08:50 PM
112618F007.D	KQ1815728_K1810417-023DMS	QC	5	1	20	OC Pest_dMRM	11/26/2018 1:26:26 PM
112618F008.D	K1810417-022	Sample	6	1		OC Pest_dMRM	11/26/2018 1:44:06 PM
112618F009.D	K1810417-023	Sample	7	1		OC Pest_dMRM	11/26/2018 2:01:42 PM
112618F010.D	K1810417-024	Sample	8	1		OC Pest_dMRM	11/26/2018 2:19:18 PM
112618F011.D	K1810417-025	Sample	9	1		OC Pest_dMRM	11/26/2018 2:36:54 PM
112618F012.D	K1810417-026	Sample	10	1		OC Pest_dMRM	11/26/2018 2:54:34 PM
112618F013.D	KQ1816030-04MB	Sample	11	1		OC Pest_dMRM	11/26/2018 3:12:11 PM
112618F014.D	KQ1816030-03LCS	QC	12	1	20	OC Pest_dMRM	11/26/2018 3:29:47 PM
112618F015.D	KQ1816030_K1810683-002MS	QC	13	1	20	OC Pest_dMRM	11/26/2018 3:47:23 PM
112618F016.D	KQ1816030_K1810683-002DMS	QC	14	1	20	OC Pest_dMRM	11/26/2018 4:05:04 PM
112618F017.D	K1810683-001	Sample	15	1		OC Pest_dMRM	11/26/2018 4:22:40 PM
112618F018.D	K1810683-002	Sample	16	1		OC Pest_dMRM	11/26/2018 4:40:15 PM
112618F019.D	K1810683-003	Sample	17	1		OC Pest_dMRM	11/26/2018 4:57:53 PM
112618F020.D	K1810683-004	Sample	18	1		OC Pest_dMRM	11/26/2018 5:15:32 PM
112618F021.D	KQ1816831-4MB	Sample	19	1		OC Pest_dMRM	11/26/2018 5:33:08 PM
112618F022.D	KQ1816831-3LCS	QC	20	1	20	OC Pest_dMRM	11/26/2018 5:50:44 PM
112618F023.D	KQ1816831_K1810249-001MS	QC	21	1	20	OC Pest_dMRM	11/26/2018 6:08:19 PM
112618F024.D	KQ1816831_K1810249-001DMS	QC	22	1	20	OC Pest_dMRM	11/26/2018 6:25:59 PM
112618F025.D	K1810249-001	Sample	23	1		OC Pest_dMRM	11/26/2018 6:43:34 PM
112618F026.D	K1810249-002	Sample	24	1		OC Pest_dMRM	11/26/2018 7:01:10 PM
112618F027.D	K1810249-003	Sample	25	1		OC Pest_dMRM	11/26/2018 7:18:45 PM
112618F028.D	K1810249-004	Sample	26	1		OC Pest_dMRM	11/26/2018 7:36:27 PM
112618F029.D	K1810249-005	Sample	27	1		OC Pest_dMRM	11/26/2018 7:54:02 PM
112618F030.D	K1810249-006	Sample	28	1		OC Pest_dMRM	11/26/2018 8:11:38 PM
112618F031.D	KQ1816244-04 MB	Method Blank	29	1		OC Pest_dMRM	11/26/2018 8:29:15 PM
112618F032.D	KQ1816244-03 LCS	QC	30	1	20	OC Pest_dMRM	11/26/2018 8:46:58 PM
112618F033.D	KQ1816244_K1810302-016MS	QC	31	1	20	OC Pest_dMRM	11/26/2018 9:04:33 PM
112618F034.D	KQ1816244_K1810302-016MS	QC	32	1	20	OC Pest_dMRM	11/26/2018 9:22:10 PM
112618F035.D	K1810270-001	Sample	33	1		OC Pest_dMRM	11/26/2018 9:39:47 PM
112618F036.D	K1810302-016	Sample	34	1		OC Pest_dMRM	11/26/2018 9:57:27 PM
112618F037.D	K1810644-019 0.5g	Sample	35	1		OC Pest_dMRM	11/26/2018 10:15:12 PM
112618F039.D	K1810644-019 1.0g 10X	Sample	37	1		OC Pest_dMRM	11/26/2018 10:50:23 PM

Run#: 617361
CAL KC1800544

DEC 04 2018

DILUTION LOG MS 42

Date: 11-26-18 Prepared by: EBruno Solvent Lot #: 91323

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
K1810644-19 E 11-26-1806	~~100~~ 50uL	500uL	10X	

Injection Log

Batch Data Path	Y:\MS42\data\110718\QuantResults\110718 oc pest.batch.bin				
Analysis Time	3/14/2019 9:40:09 AM	**Analyst Name**	CORP\elissa.bruno	**Report Generator Name**	CORP\elissa.bruno
Calibration Last Update	3/13/2019 3:26:44 PM	**Analyze Quant Version**	B.09.00	**Report Quant Version**	B.09.00

Sequence Table

Data File	Name	Type	Vial	Vol.	Level	Acq. Method File	Acq. Date-Time
110718F002.D	OC PEST CCV 20ng/mL SVM59-85B	CC	1	1	20	OC Pest_dMRM	11/7/2018 1:23:21 PM
110718F003.D	KQ1815624-04MB	Method Blank	2	1		OC Pest_dMRM	11/7/2018 2:41:33 PM
110718F005.D	KQ1815624_K1810270-006 MS	QC	4	1	20	OC Pest_dMRM	11/7/2018 3:16:52 PM
110718F006.D	KQ1815624_K1810270-006 DMS	QC	5	1	20	OC Pest_dMRM	11/7/2018 3:34:29 PM
110718F007.D	K1810270-004	Sample	6	1		OC Pest_dMRM	11/7/2018 3:52:08 PM
110718F008.D	K1810270-006	Sample	7	1		OC Pest_dMRM	11/7/2018 4:09:51 PM
110718F009.D	K1810270-010	Sample	8	1		OC Pest_dMRM	11/7/2018 4:50:56 PM
110718F010.D	K1810270-011	Sample	9	1		OC Pest_dMRM	11/7/2018 5:08:31 PM
110718F011.D	K1810270-012	Sample	10	1		OC Pest_dMRM	11/7/2018 5:26:09 PM
110718F012.D	K1810270-013	Sample	11	1		OC Pest_dMRM	11/7/2018 5:43:45 PM
110718F013.D	K1810270-015	Sample	12	1		OC Pest_dMRM	11/7/2018 6:01:28 PM
110718F014.D	K1810270-016	Sample	13	1		OC Pest_dMRM	11/7/2018 6:19:04 PM
110718F015.D	K1810270-017	Sample	14	1		OC Pest_dMRM	11/7/2018 6:36:41 PM
110718F016.D	K1810270-018	Sample	15	1		OC Pest_dMRM	11/7/2018 6:54:16 PM
110718F017.D	K1810270-019	Sample	16	1		OC Pest_dMRM	11/7/2018 7:11:56 PM
110718F018.D	K1810270-020	Sample	17	1		OC Pest_dMRM	11/7/2018 7:29:33 PM
110718F019.D	K1810270-029	Sample	18	1		OC Pest_dMRM	11/7/2018 7:47:07 PM

Revision
Run # 614289
MAR 14 2019

Injection Log

Batch Data Path	Y:\MS42\data\112118\QuantResults\112118 OC PEST.batch.bin				
Analysis Time	3/15/2019 4:16:26 PM	**Analyst Name**	CORP\elissa.bruno	**Report Generator Name**	CORP\elissa.bruno
Calibration Last Update	3/14/2019 10:04:01 AM	**Analyze Quant Version**	B.09.00	**Report Quant Version**	B.09.00

Sequence Table

Data File	Name	Type	Vial	Vol.	Level	Acq. Method File	Acq. Date-Time
112118F001.D	OC PEST CCV 20ng/mL SVM59-96C	CC	1	1	20	OC Pest_dMRM	11/21/2018 12:19:25 PM
112118F002.D	KQ1816271-03 MB	Method Blank	2	1		OC Pest_dMRM	11/21/2018 12:40:41 PM
112118F003.D	KQ1816271-01 LCS	QC	3	1	20	OC Pest_dMRM	11/21/2018 12:58:23 PM
112118F004.D	KQ1816271-02 DLCS	QC	4	1	20	OC Pest_dMRM	11/21/2018 1:15:58 PM
112118F005.D	KQ1805624-03 LCS	QC	30	1	20	OC Pest_dMRM	11/21/2018 1:33:34 PM
112118F006.D	K1810683-005	Sample	5	1		OC Pest_dMRM	11/21/2018 1:51:11 PM
112118F007.D	KQ1815718-04 MB	Method Blank	6	1		OC Pest_dMRM	11/21/2018 2:08:52 PM
112118F008.D	KQ1815718-03 LCS	QC	7	1	20	OC Pest_dMRM	11/21/2018 2:26:28 PM
112118F009.D	KQ1815718_K1810417-006MS	QC	8	1	20	OC Pest_dMRM	11/21/2018 2:44:04 PM
112118F010.D	KQ1815718_K1810417-006DMS	QC	9	1	20	OC Pest_dMRM	11/21/2018 3:01:39 PM
112118F011.D	K1810417-001	Sample	10	1		OC Pest_dMRM	11/21/2018 3:19:19 PM
112118F012.D	K1810417-002	Sample	11	1		OC Pest_dMRM	11/21/2018 3:36:55 PM
112118F013.D	K1810417-003	Sample	12	1		OC Pest_dMRM	11/21/2018 3:54:31 PM
112118F014.D	K1810417-004	Sample	13	1		OC Pest_dMRM	11/21/2018 4:12:08 PM
112118F015.D	K1810417-005	Sample	14	1		OC Pest_dMRM	11/21/2018 4:29:49 PM
112118F016.D	K1810417-006	Sample	15	1		OC Pest_dMRM	11/21/2018 4:47:26 PM
112118F017.D	K1810417-007	Sample	16	1		OC Pest_dMRM	11/21/2018 5:05:02 PM
112118F018.D	K1810417-008	Sample	17	1		OC Pest_dMRM	11/21/2018 5:22:38 PM
112118F019.D	K1810417-009	Sample	18	1		OC Pest_dMRM	11/21/2018 5:40:18 PM
112118F020.D	K1810417-010	Sample	19	1		OC Pest_dMRM	11/21/2018 5:57:54 PM
112118F021.D	K1810417-011	Sample	20	1		OC Pest_dMRM	11/21/2018 6:15:31 PM
112118F022.D	K1810417-012	Sample	21	1		OC Pest_dMRM	11/21/2018 6:33:08 PM
112118F023.D	K1810417-013	Sample	22	1		OC Pest_dMRM	11/21/2018 6:50:47 PM
112118F024.D	K1810417-014	Sample	23	1		OC Pest_dMRM	11/21/2018 7:08:23 PM
112118F025.D	K1810417-016	Sample	24	1		OC Pest_dMRM	11/21/2018 7:26:00 PM
112118F026.D	K1810417-017	Sample	25	1		OC Pest_dMRM	11/21/2018 7:43:37 PM
112118F027.D	K1810417-018	Sample	26	1		OC Pest_dMRM	11/21/2018 8:01:17 PM
112118F028.D	K1810417-019	Sample	27	1		OC Pest_dMRM	11/21/2018 8:18:54 PM
112118F029.D	K1810417-020	Sample	28	1		OC Pest_dMRM	11/21/2018 8:36:30 PM
112118F030.D	K1810417-021	Sample	29	1		OC Pest_dMRM	11/21/2018 8:54:06 PM

Revision

Run #: 617359

ICAL: KC190905

MAR 15 2019

Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet 11/14 TBT only

Prep Run#: 325136 **Prep WorkFlow:** OrgExtTINS14 **Status:** Prepped
Team: Semivoa GC/TANDREWS **Prep Method:** Method **Prep Date/Time:** 10/29/18 07:51 PM
Number of Copies to make: 1

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810270-004	L1-0to30-101518	.01	ALS SOP/BUTYLTINS		Sediment	20.072g	4.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	KQ1815623-01	K1810270-004 MS	.01	ALS SOP/BUTYLTINS		Solid	20.322g	4.00mL	LAGUILAR K-Balance-47
3	KQ1815623-02	K1810270-004 DMS	.01	ALS SOP/BUTYLTINS		Solid	20.208g	4.00mL	LAGUILAR K-Balance-47
4	K1810270-006	N1-0to30-101518	.01	ALS SOP/BUTYLTINS		Sediment	20.111g	4.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 / Big
5	K1810270-010	T1-0to30-101518	.01	ALS SOP/BUTYLTINS		Sediment	20.306g	4.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47
6	K1810270-011	R1-0to30-101518	.01	ALS SOP/BUTYLTINS		Sediment	20.127g	4.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 / Big
7	K1810270-012	P1-0to30-101518	.01	ALS SOP/BUTYLTINS		Sediment	20.136g	4.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 / Big
8	K1810270-013	T3-0to28-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.204g	4.00mL	LAGUILAR K-Balance-47
9	K1810270-015	T7-0to31-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.152g	4.00mL	LAGUILAR K-Balance-47
10	K1810270-016	T5-0to26-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.299g	4.00mL	LAGUILAR K-Balance-47
11	K1810270-017	P3-0to29-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.238g	4.00mL	LAGUILAR K-Balance-47
12	K1810270-018	R5-0to25-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.256g	4.00mL	LAGUILAR K-Balance-47
13	K1810270-019	514-0to29-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.388g	4.00mL	LAGUILAR K-Balance-47
14	K1810270-020	P5-0to26-101618	.01	ALS SOP/BUTYLTINS		Sediment	20.451g	4.00mL	LAGUILAR K-Balance-47 / Homogenized sample is more
15	K1810270-029	R3-0to33-101718	.01	ALS SOP/BUTYLTINS		Sediment	20.249g	4.00mL	LAGUILAR K-Balance-47 / Homogenized sample is more
16	KQ1815623-03	LCS		ALS SOP/BUTYLTINS		Solid	20.00g	4.00mL	
17	KQ1815623-04	MB		ALS SOP/BUTYLTINS		Solid	20.4510g	4.00mL	

Spiking Solutions

Name: Butyltins Surrogate Inventory ID 192828 Logbook Ref: OT5-10M Expires On: 04/08/2019

K1810270-004	100.00µL	K1810270-006	100.00µL	K1810270-010	100.00µL	K1810270-011	100.00µL	K1810270-012	100.00µL	K1810270-013	100.00µL
K1810270-015	100.00µL	K1810270-016	100.00µL	K1810270-017	100.00µL	K1810270-018	100.00µL	K1810270-019	100.00µL	K1810270-020	100.00µL
K1810270-029	100.00µL	KQ1815623-01	100.00µL	KQ1815623-02	100.00µL	KQ1815623-03	100.00µL	KQ1815623-04	100.00µL		

Name: Butyltins Spike 5ppm Inventory ID 194362 Logbook Ref: OT5-010L Expires On: 04/08/2019

KQ1815623-01	100.00µL	KQ1815623-02	100.00µL	KQ1815623-03	100.00µL

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	10/29/18 19:51	Started:	10/29/18 19:51	Started:	11/20/18 16:00
Finished:	10/30/18 17:16	Finished:	10/30/18 12:33	Finished:	11/20/18 16:00
By:	~~TJONES~~	By:	TANDREWS	By:	CWILLIAMS
Comments:	DMADDEN SCW 11/21/18	Comments:		Comments:	

Preparation Information Benchsheet

Prep Run#: 325136
Team: Semivoa GC/TANDREWS

Prep WorkFlow: OrgExtTINS14
Prep Method: Method

Status: Prepped
Prep Date/Time: 10/29/18 07:51 PM

Comments:

Reviewed By: _____ Date: 11/21/18

Chain of Custody

Relinquished By:		Date:	11/20/18	Extracts Examined
Received By:		Date:		Yes No

Preparation Information Benchsheet

Due 11/16

Prep Run#: 325136 **Prep WorkFlow:** OrgExtTINS14 **Status:** Draft
Team: Semivoa GC/TANDREWS **Prep Method:** Method **Prep Date/Time:** 10/26/18 18:35 PM
Number of Copies to make: 1

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. g	pH	Int. Vol	Final Vol mL	Surr Amt	Spike Amt
1	**K1810270-004**	L1-0to30-101518	.01	/	ALS SOP / BUTYLTINS	Sediment	20.072	NA	NA	4	100	—
2	**KQ1815623-01**	K1810270-004 MS	.01	/	ALS SOP / BUTYLTINS	Solid	20.322			4		100
3	**KQ1815623-02**	K1810270-004 DMS	.01	/	ALS SOP / BUTYLTINS	Solid	20.208			4		1
4	**K1810270-006**	N1-0to30-101518	.01	/	ALS SOP / BUTYLTINS	Sediment	20.111			4		—
5	**K1810270-010**	T1-0to30-101518	.01	/	ALS SOP / BUTYLTINS	Sediment	20.306			4		—
6	**K1810270-011**	R1-0to30-101518	.01	/	ALS SOP / BUTYLTINS	Sediment	20.127			4		—
7	**K1810270-012**	P1-0to30-101518	.01	/	ALS SOP / BUTYLTINS	Sediment	20.136			4		—
8	**K1810270-013**	T3-0to28-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.204			4		—
9	**K1810270-015**	T7-0to31-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.152			4		—
10	**K1810270-016**	T5-0to26-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.299			4		—
11	**K1810270-017**	P3-0to29-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.238			4		—
12	**K1810270-018**	R5-0to25-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.256			4		—
13	**K1810270-019**	514-0to29-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.388			4		—
14	**K1810270-020**	P5-0to26-101618	.01	/	ALS SOP / BUTYLTINS	Sediment	20.451			4		—
15	**K1810270-029**	R3-0to33-101718	.01	/	ALS SOP / BUTYLTINS	Sediment	20.249			4		—
16	**KQ1815623-03**	LCS		—	ALS SOP / BUTYLTINS	Solid	20.000			4		100
17	**KQ1815623-04**	MB		—	ALS SOP / BUTYLTINS	Solid	20.451	—	—	4	—	—

* Samples put on tumbler for extraction without completely drying to meet hold times 10.29.18 TA

Comments: Samples 0270-4, 4ms, 4Dms, 6, 11, 12, 20, 29 had rocks in them 10.31.18 TA

Surrogate ID: 192,828-OT5-10M 192,828-OT5-10M 192,828-OT5-10M 192,828-OT5-10M 192,828-OT5-1

Spike ID: 192,828-OT5-10M 194,362-OT5-010L 192,828-OT5-10M 194,362-OT5-010L 192,828-OT5-10

Witnessed By: —

Analyst: TA

Assisted By: —

Additional Prep Information for Method
Organotins in Soil

Service Request # K1810270 **Work Group #** KQ1815623

Weighed (time/date/initial): 18:48 / 10.26.18 Balance ID: K-Bal-47 Calibration Verified ☐

Storage Location (if not extracted same day): Hood

DCM Lot # DU 301 Sulfate Lot # 178434 Glass Wool Lot # 21317999

0.1% Tropolone in DCM # Ext 002 13F Hydrochloric Acid Lot # 55315

Tumbler Start (time/date/initial): 1951 10-29-18 TT / 1705 10.30.18 TT

Tumbler Stop (time/date/initial): 1233 10.30.18 TT / 0935 · 10.31.18 TT

Solvent Exchange to Hexane (time/date/initial): 12:20 11/8/18 CW Hexane Lot# 195734

S-Evap (time/date/initial): 11:57 11/8/18 CW S-Evap Thermometer ID: X-SUM-011

Temp as measured: 72 °C Correction factor: 0.0 °C Adjusted temp: 72 °C

N-Evap (time/date/initial): 13:30 11/8/18 CW N-Evap Thermometer ID: X-SUM-004

Water Wash (time/date/initial): 08:20 11/9/18 CW

N-Evap (time/date/initial): 08:45 11/9/18 CW N-Evap Thermometer ID: X-SUM-004

Derivatization Start (time/date/initial): 10:37 11/9/18 CW Grignard Lot # SUOTIN01 74K

Derivatization Stop (time/date/initial): 14:05 11/9/18 CW

N-Evap (time/date/initial): 14:30 11/9/18 CW N-Evap Thermometer ID: SUM-001

Pipette (2 mL) Lot # 16418646

DMD Clean-up (time/date/initial): EECW 11/14/18 09 07:50 11/14/18 CW DMD Lot # DMD 287

N-Evap (time/date/initial): 13:33 11/19/18 CW N-Evap Thermometer ID: X-SUM-004

Alumina/Silica Gel Clean-up (3610/3630)(time/date/initial): 14:50 11/19/18 CW

Alumina Lot # 5313-0034 Silica Gel Lot # SUOTIN01 94E Pentane Lot # 58087

N-Evap (time/date/initial): 08:27 11/20/18 CW N-Evap Thermometer ID: X-SUM-004 EECW 11/19/19

Pipette (1 mL) Lot # 20717645

Vial: Blue Vial Storage: Tins G1-H7

Archive Storage: Mahjong

Bench Sheet Review Check List

- ☑ Hold times met (if no, reason: _____)
- ☑ Prep date, time, method, department, product code correct in stealth
- ☑ Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked - bottle numbers appended if required
- ☑ Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
- ☑ Extract storage recorded
- ☑ Additional prep sheet completely filled out (NA or line out blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☑ Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325136 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	BUTYLTINS	20.072g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-004 MS KQ1815623-01	.01	BUTYLTINS	20.322g		PrepComments:LAGUILAR K-Balance-47
3	K1810270-004 DMS KQ1815623-02	.01	BUTYLTINS	20.208g		PrepComments:LAGUILAR K-Balance-47
4	K1810270-006	.01	BUTYLTINS	20.111g	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
5	K1810270-010	.01	BUTYLTINS	20.306g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
6	K1810270-011	.01	BUTYLTINS	20.127g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
7	K1810270-012	.01	BUTYLTINS	20.136g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	BUTYLTINS	20.204g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	BUTYLTINS	20.152g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	BUTYLTINS	20.299g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	BUTYLTINS	20.238g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	BUTYLTINS	20.256g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	BUTYLTINS	20.388g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	BUTYLTINS	20.451g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	BUTYLTINS	20.249g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

Relinquished By:	Date/Time: 10/26/18 18:18	Received By:	Date/Time: 10:09/10.29.18

Preparation Information Benchsheet

Prep Run#: 325830 **Prep WorkFlow:** OrgExtTINS14 **Status:** Prepped
Team: Semivoa GC/TANDREWS **Prep Method:** Method **Prep Date/Time:** 11/19/18 06:38 PM
Number of Copies to make: 4

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810270-001	N3-0to26-101518	.02	ALS SOP/BUTYLTINS		Sediment	20.148g	4.00mL	APOSEY K-BALANCE-48 11062018 / Samples Previously
2	K1810946-001	FMA-NORTH-110518	.02	ALS SOP/BUTYLTINS		Soil	20.020g	4.00mL	APOSEY K-BALANCE-48 11092018APOSEY
3	K1810946-002	FMA-SOUTH-110518	.02	ALS SOP/BUTYLTINS		Soil	20.154g	4.00mL	APOSEY K-BALANCE-48 11092018 / Limited sample,
4	K1810565-001RE	102618-POS-PDS	.05	ALS SOP/BUTYLTINS		Sediment	20.321g	4.00mL	AJEFFRIES k-balance-47APOSEY K-Balance-48
5	KQ1816241-01	K1810270-001 MS	.02	ALS SOP/BUTYLTINS		Solid	20.096g	4.00mL	APOSEY K-BALANCE-48 11062018
6	KQ1816241-02	K1810270-001 DMS	.02	ALS SOP/BUTYLTINS		Solid	20.009g	4.00mL	APOSEY K-BALANCE-48 11062018
7	K1810302-016	A1-0to30-102018	.02	ALS SOP/BUTYLTINS		Sediment	20.007g	4.00mL	APOSEY K-BALANCE-48 11062018 / Samples Previously
8	KQ1816241-03	LCS		ALS SOP/BUTYLTINS		Solid	20.00g	4.00mL	
9	KQ1816241-04	MB		ALS SOP/BUTYLTINS		Solid	20.3210g	4.00mL	

Spiking Solutions

Name: Butyltins Surrogate Inventory ID 192828 Logbook Ref: OT5-10M Expires On: 04/08/2019

K1810270-001 100.00µL K1810302-016 100.00µL K1810565-001 100.00µL K1810946-001 100.00µL K1810946-002 100.00µL KQ1816241-01 100.00µL
KQ1816241-02 100.00µL KQ1816241-03 100.00µL KQ1816241-04 100.00µL

Name: Butyltins Spike 5ppm Inventory ID 194362 Logbook Ref: OT5-010L Expires On: 04/08/2019

KQ1816241-01 100.00µL KQ1816241-02 100.00µL KQ1816241-03 100.00µL KQ1816241-04 100.00µL

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	11/19/18 18:38	Started:	11/19/18 18:38	Started:	11/29/18 13:35
Finished:	11/19/18 18:50	Finished:	11/20/18 11:32	Finished:	11/29/18 13:35
By:	~~TPOTTSCHMIDT~~	By:	TANDREWS	By:	CWILLIAMS
Comments:	APOSEY JW 11/30/18	Comments:		Comments:	

Comments: 11/14

Reviewed By: [signature] Date: 11/30/18

Chain of Custody

Relinquished By: [signature] Date: 11/29/18
Received By: Date: 12/1/18

Extracts Examined
Yes No

Preparation Information Benchsheet

Due 11/14

Prep Run#: 325830
Team: Semivoa GC/TANDREWS
Number of Copies to make: 4

Prep WorkFlow: OrgExtTINS14
Prep Method: Method

Status: Draft
Prep Date/Time: 11/6/18 16:14 PM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. g	pH	Int. Vol	Final Vol mL	Surr Amt µL	Spike Amt µL
1	**K1810270-001**	N3-0to26-101518	.02	✓	ALS SOP / BUTYLTINS	Sediment	20.148	NA	NA	4	100	—
2	**K1810946-001**	FMA-NORTH-110518	.02	✓	ALS SOP / BUTYLTINS	Soil	20.020			4		—
3	**K1810946-002**	FMA-SOUTH-110518	.02	✓	ALS SOP / BUTYLTINS	Soil	20.154			4		—
4	**K1810565-001RE**	102618-POS-PDS	.05	✓	ALS SOP / BUTYLTINS	Sediment	20.321			4		—
5	**KQ1816241-01**	K1810270-001 MS	.02	✓	ALS SOP / BUTYLTINS	Solid	20.096			4		100
6	**KQ1816241-02**	K1810270-001 DMS	.02	✓	ALS SOP / BUTYLTINS	Solid	20.009			4		100
7	**K1810302-016**	A1-0to30-102018	.02	✓	ALS SOP / BUTYLTINS	Sediment	20.007			4		—
8	**KQ1816241-03**	LCS		—	ALS SOP / BUTYLTINS	Solid	20.000			4		100
9	**KQ1816241-04**	MB		—	ALS SOP / BUTYLTINS	Solid	20.321	—	—	4	—	—

Comments:

Surrogate ID: 192,828-OT5-10M 192,828-OT5-10M 192,828-OT5-10M 192,828-OT5-10M 192,828-OT5-1

Spike ID: 192,828-OT5-10M 194,362-OT5-010L 192,828-OT5-10M 194,362-OT5-010L 192,828-OT5-10

Witnessed By: DMadden

Analyst: TAndrews

Assisted By: DMadden

Additional Prep Information for Method
Organotins in Soil

Service Request # K1810270/0946/0565/0302 **Work Group #** KQ18/6241

Weighed (time/date/initial): 16:26 / 11.6.18 Balance ID: K-Bal-48 Calibration Verified ☐

Storage Location (if not extracted same day): Hood

DCM Lot # D4514 Sulfate Lot # 178434 Glass Wool Lot # 21317999

0.1% Tropolone in DCM # Ext 002 13G Hydrochloric Acid Lot # 55315

Tumbler Start (time/date/initial): 1835 - 11.19.18 TJ

Tumbler Stop (time/date/initial): 11:32 11.20.18 TJ

Solvent Exchange to Hexane (time/date/initial): 14:55 11/26/18 CW Hexane Lot# 195734

S-Evap (time/date/initial): 1431 11/26/18 KRP S-Evap Thermometer ID: X-SVM-06

Temp as measured: 72 °C Correction factor: 0.0 °C Adjusted temp: 72 °C

N-Evap (time/date/initial): 15:30 11/26/18 CW N-Evap Thermometer ID: X-SVM-004

Water Wash (time/date/initial): 13:30 11/27/18 CW

N-Evap (time/date/initial): 13:42 11/27/18 CW N-Evap Thermometer ID: X-SVM-004

Derivatization Start (time/date/initial): 15:55 11/27/18 CW Grignard Lot # Suotin01 74K

Derivatization Stop (time/date/initial): 12:10 11/28/18 CW

N-Evap (time/date/initial): 12:20 11/28/18 CW N-Evap Thermometer ID: X-SVM-004

Pipette (2 mL) Lot # 16418646

DMD Clean-up (time/date/initial): 15:42 11/28/18 CW DMD Lot # DMD-28AA

N-Evap (time/date/initial): 09:25 11/29/18 CW N-Evap Thermometer ID: X-SVM-004

Alumina/Silica Gel Clean-up (3610/3630)(time/date/initial): 10:00 11/29/18 CW

Alumina Lot # 5313-0034 Silica Gel Lot # Suotin01 94E Pentane Lot # 58087

N-Evap (time/date/initial): 10:25 11/29/18 CW N-Evap Thermometer ID: X-SVM-004

Pipette (1 mL) Lot # 20717645

Vial: Blue Vial Storage: TMS A1-A9

Archive Storage: Soil

Bench Sheet Review Check List	
☐	Hold times met (if no, reason: 10270 ~~rec past hold~~ frozen 10565 RE past hold 10302 frozen
☐	Prep date, time, method, department, product code correct in stealth
☐	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☐	Weights/Volumes and units correct on raw and final bench sheets
☐	Sample IDs have been checked - bottle numbers appended if required
☐	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☐	Extract storage recorded
☐	Additional prep sheet completely filled out (NA or line out blanks)
☐	All clean-ups have been noted on additional prep sheet
☐	Signed service request with Form V, if applicable, has been attached

325830

Pre-Prep Information Benchsheet

Prep Run #: ~~326545~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1TW **Prep Due Date:** Nov-13-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810565-001	.05	BUTYLTINS	20.321g	Frozen pulled on 11/12/2018	PrepComments:AJEFFRIES k-balance-47APOSEY K-Balance-48 11132018
2	K1810565-001 MS KQ1816799-01	.05	BUTYLTINS	20.268g		PrepComments:AJEFFRIES k-balance-47APOSEY K-Balance-48 11132018
3	K1810565-001 DMS KQ1816799-02	.05	BUTYLTINS	20.376g		PrepComments:AJEFFRIES k-balance-47APOSEY K-Balance-48 11132018

QC not need, sample moved to another batch 11-20-18 TF

Relinquished By:	Date/Time: 11-15-18 9:43	Received By:	Date/Time:

325830

Pre-Prep Information Benchsheet

Prep Run #: ~~326109~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1TW **Prep Due Date:** Nov-19-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810946-001	.02	BUTYLTINS	20.020g	Limited sample. No QC	PrepComments:APOSEY K-BALANCE-48 11092018
2	K1810946-002	.02	BUTYLTINS	20.154g	Limited sample, lots of rocks	PrepComments:APOSEY K-BALANCE-48 11092018

Relinquished By:	Date/Time: 11-9-2018 12:06	Received By:	Date/Time:

Pre-Prep Information Benchsheet

Prep Run #: 325830 **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	BUTYLTINS	20.148g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810270-001 MS KQ1816241-01	.02	BUTYLTINS	20.096g		PrepComments:APOSEY K-BALANCE-48 11062018
3	K1810270-001 DMS KQ1816241-02	.02	BUTYLTINS	20.009g		PrepComments:APOSEY K-BALANCE-48 11062018
4	K1810302-016	.02	BUTYLTINS	20.007g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Relinquished By:	Date/Time:	Received By:	Date/Time:
APy	11.6.18 16:26		

Data File : J:\GC26\DATA\120218\1202F007.D Vial: 11
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 02 Dec 2018 12:28 pm Operator: SMURRAY
Sample : K1810270-001 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 13:02:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

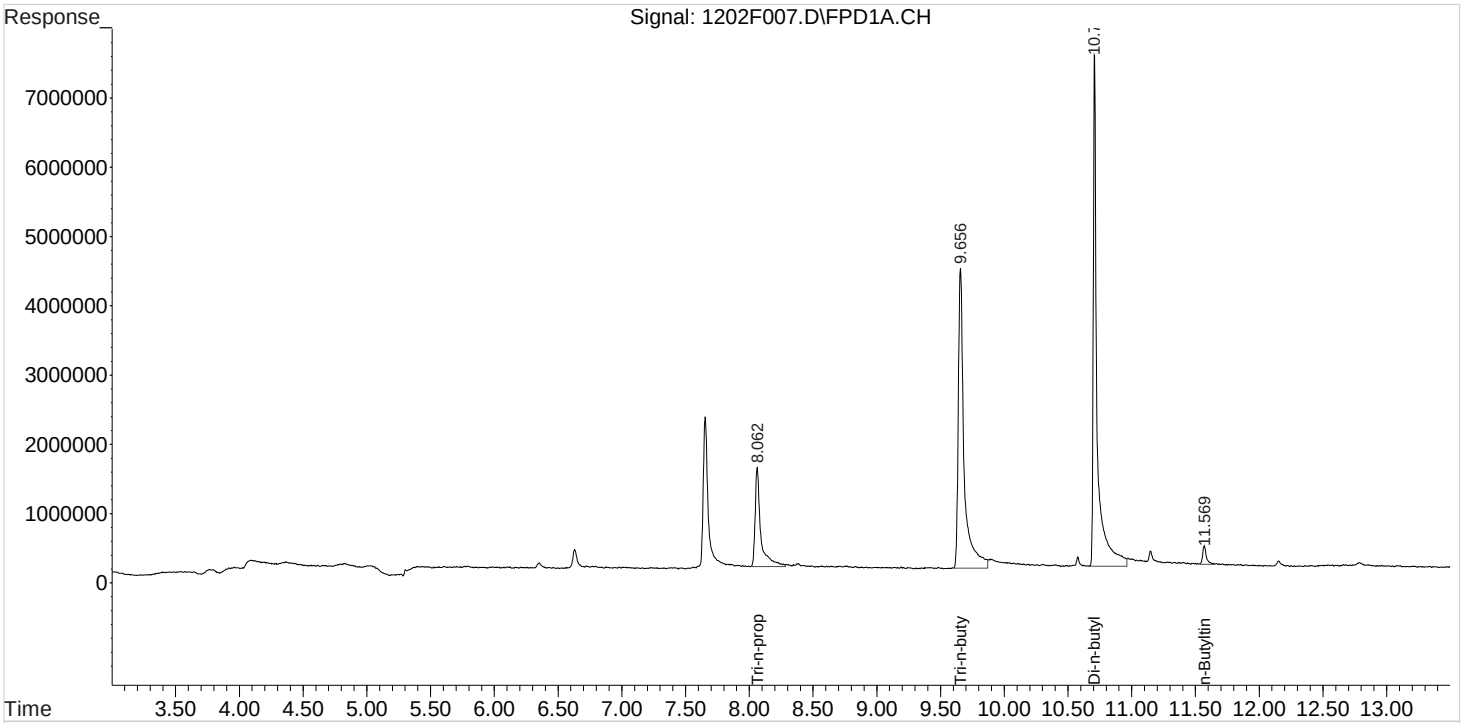
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.062	7.667	4447436	5864803	81.320	74.962
	Target Compounds						
3)	Tri-n-but...	9.656	9.144	13731410	20576244	197.548	197.494
4)	Di-n-buty...	10.706	10.380	15948527	22828398	138.740	131.081
5)	n-Butyltin	11.569	11.137	544900	828511	5.272	5.179

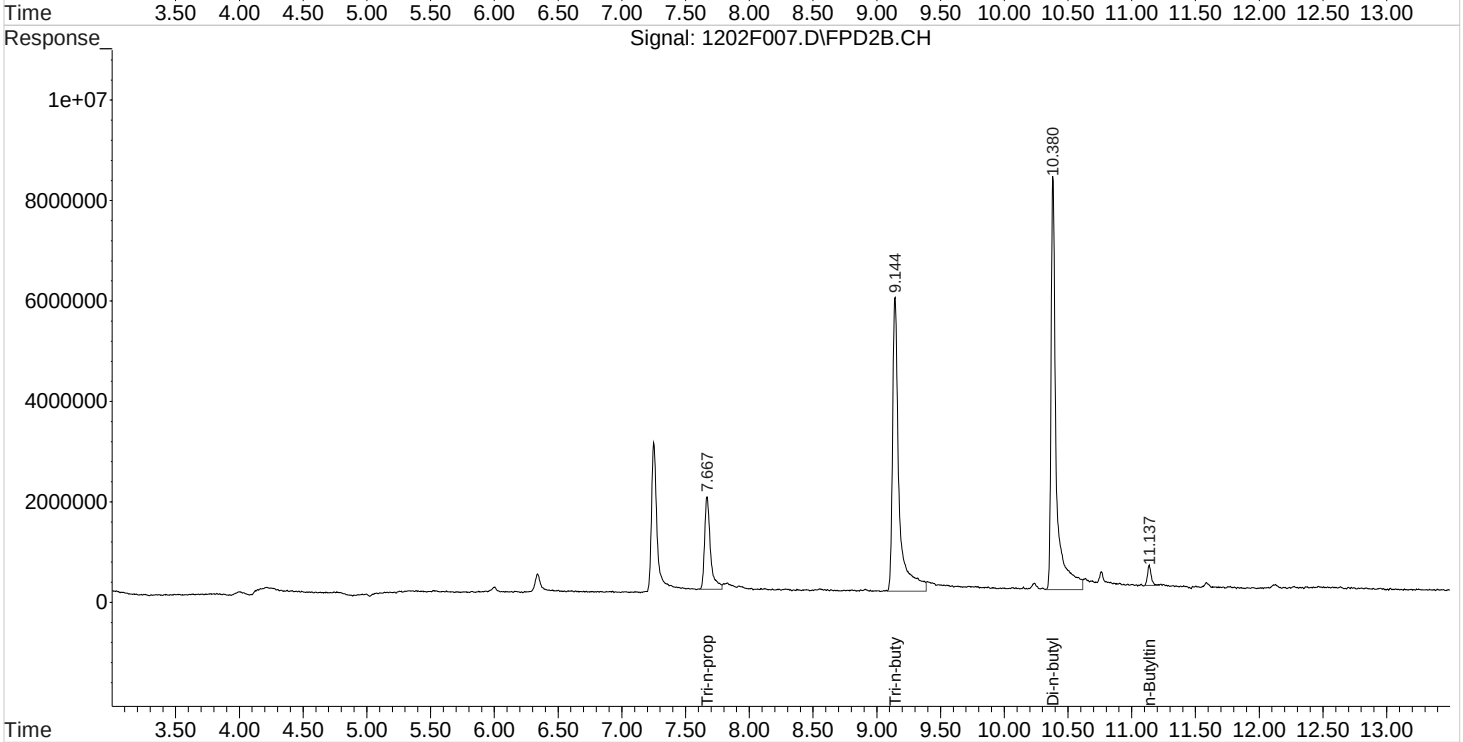
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\120218\1202F007.D Vial: 11
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 02 Dec 2018 12:28 pm Operator: SMURRAY
Sample : K1810270-001 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 13:02:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\120218\1202F007.D\
Lab ID: K1810270-001
RunType: N/A
Matrix: Sediment

Date Acquired: 12/2/18 12:28:00
Batch ID: 617148
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time		X
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Sample Exceptions

Exception Categories	Result	Corrective Action
Preparation Hold Time	Prep Date/Time: 11/19/2018 1838 Hold Date/Time: 10/29/2018 2359	Sample frozen, hold time NA

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\120218\1202F007.D\	**Instrument:**	K-GC-26
Acqu Date:	12/2/18 12:28:00	**Vial:**	7
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-001	**Raw Units:**	ng/mL

Bottle ID:	K1810270-001.02	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	617148	**Prep Lot:**	325830	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/19/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.06 +0.02	7.67 +0.02	4447436	5864803	81.320	74.962	65	60	60	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.66 +0.02	9.14 +0.02	13731410	20576244	197.548	197.494	53	53	**53**	Y

Prep Amount:	20.148 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	74.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18

Data File : J:\GC26\DATA\112318\1123F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 5:20 pm Operator: SMURRAY
Sample : K1810270-004 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:14 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

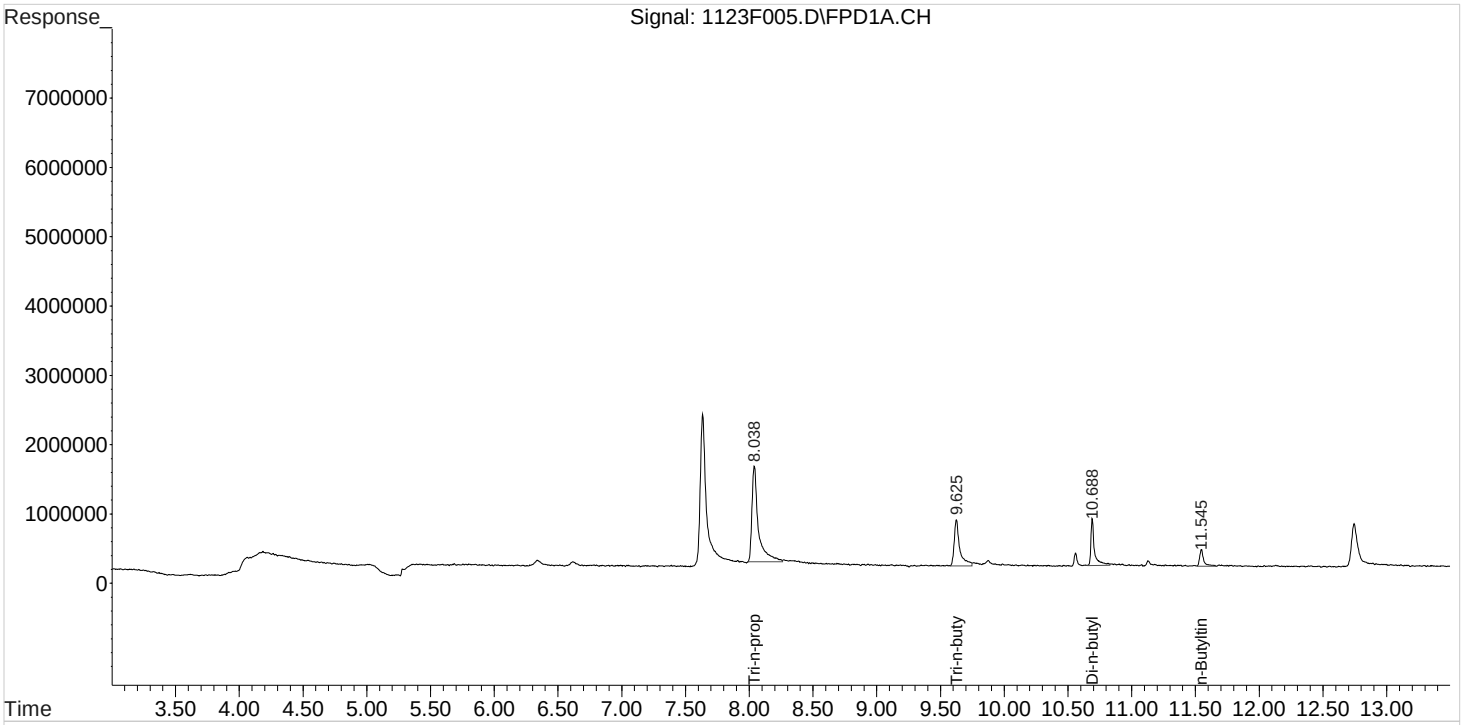
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.038	7.649	4855273	6786084	88.778	86.737
	Target Compounds						
3)	Tri-n-but...	9.625	9.112	2045704	3084156	29.431	29.602
4)	Di-n-buty...	10.688	10.359	1342397	1826430	11.678	10.487
5)	n-Butyltin	11.545	11.116	548243	832875	5.304	5.207

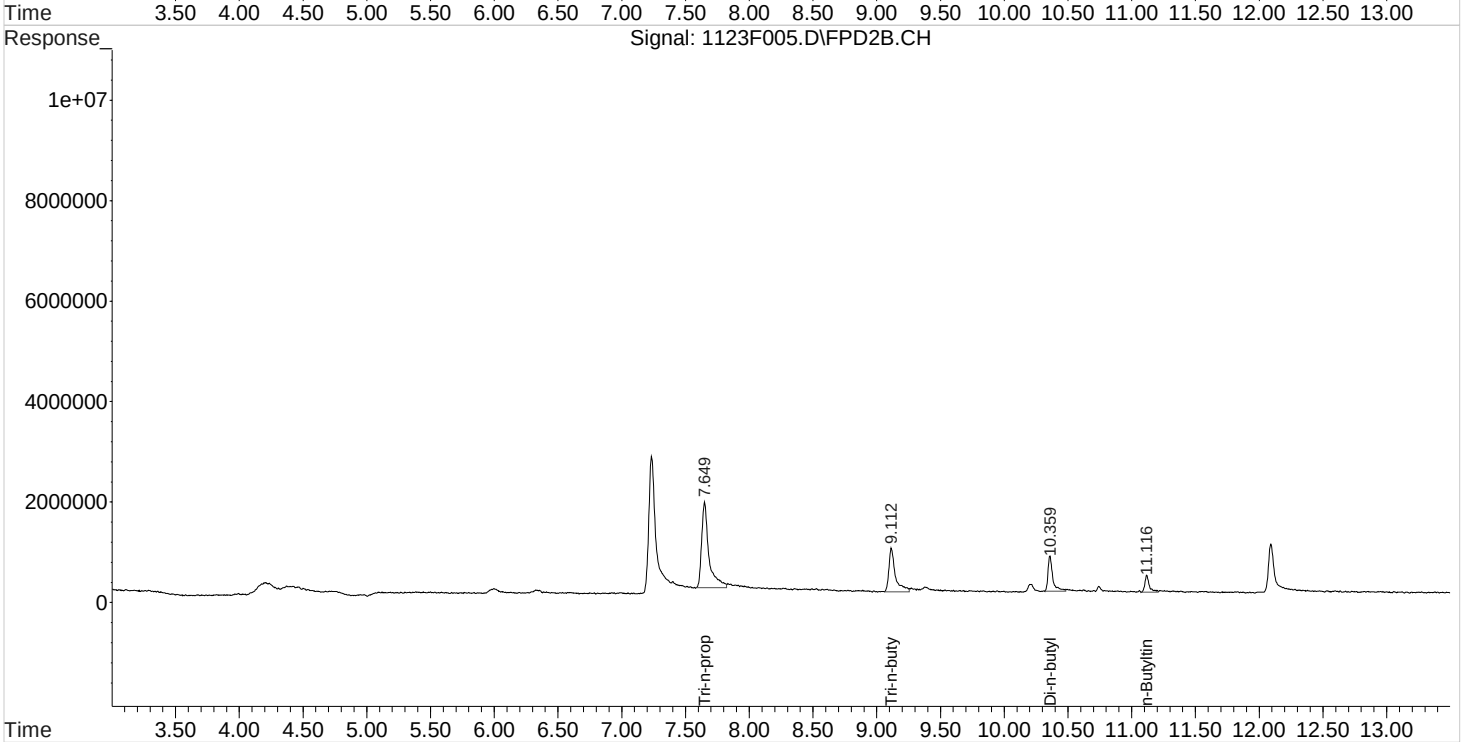
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 5:20 pm Operator: SMURRAY
Sample : K1810270-004 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:14 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F005.D\
Lab ID: K1810270-004
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 17:20:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F005.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 17:20:00	**Vial:**	1
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-004	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.65 +0.01	4855273	6786084	88.778	86.737 CCV	71	69	69	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.62 +0.01	9.11 +0.01	2045704	3084156	29.431	29.602	6.5	6.5	**6.5**	Y

Prep Amount:	20.072 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 5:44 pm Operator: SMURRAY
Sample : K1810270-006 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.038	7.649	3948863	6347715	72.204	81.134	
	Target Compounds							
3)	Tri-n-but...	9.621	9.116	102756	253615	1.478	2.434	#
4)	Di-n-buty...	10.691	10.359	175329	282713	1.525	1.623	
5)	n-Butyltin	11.548	11.119	172271	181040	1.667	1.132	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

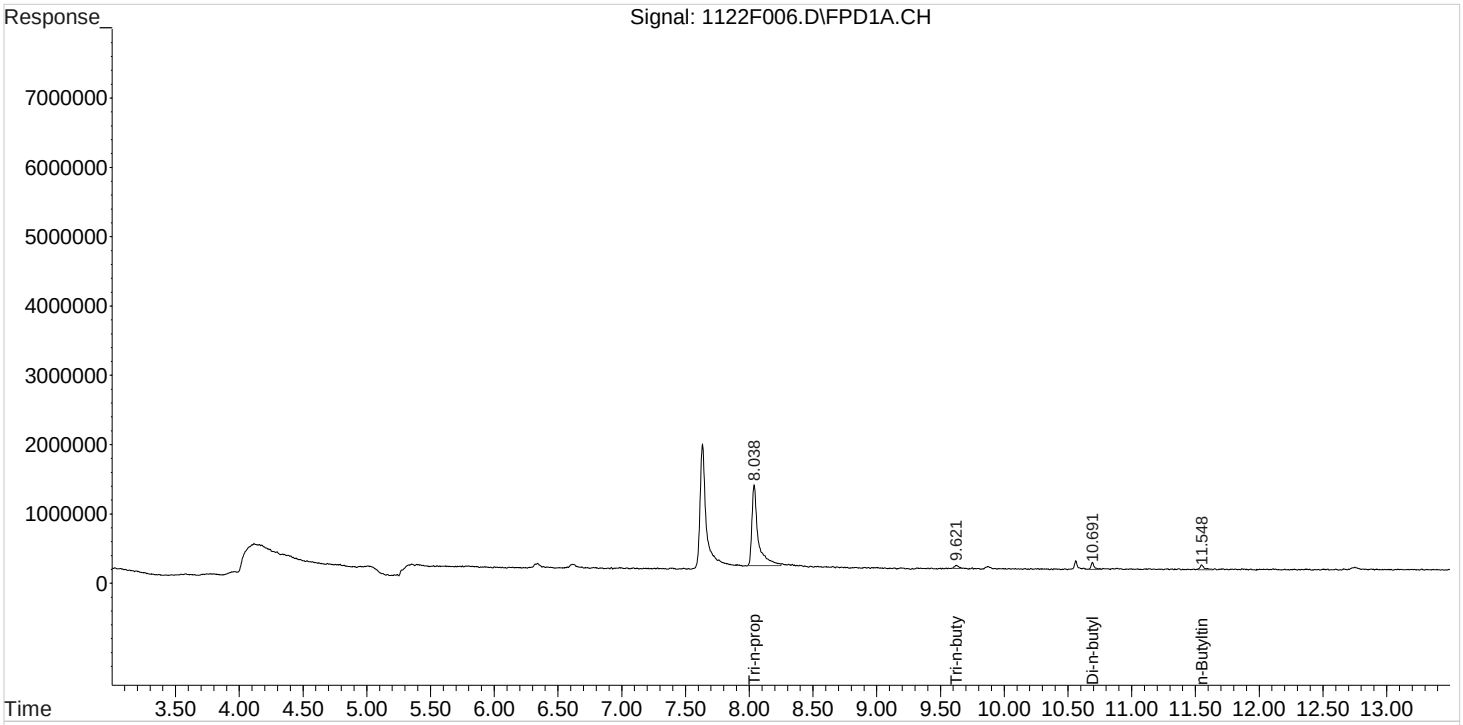
Quantitation Report (Not Reviewed)

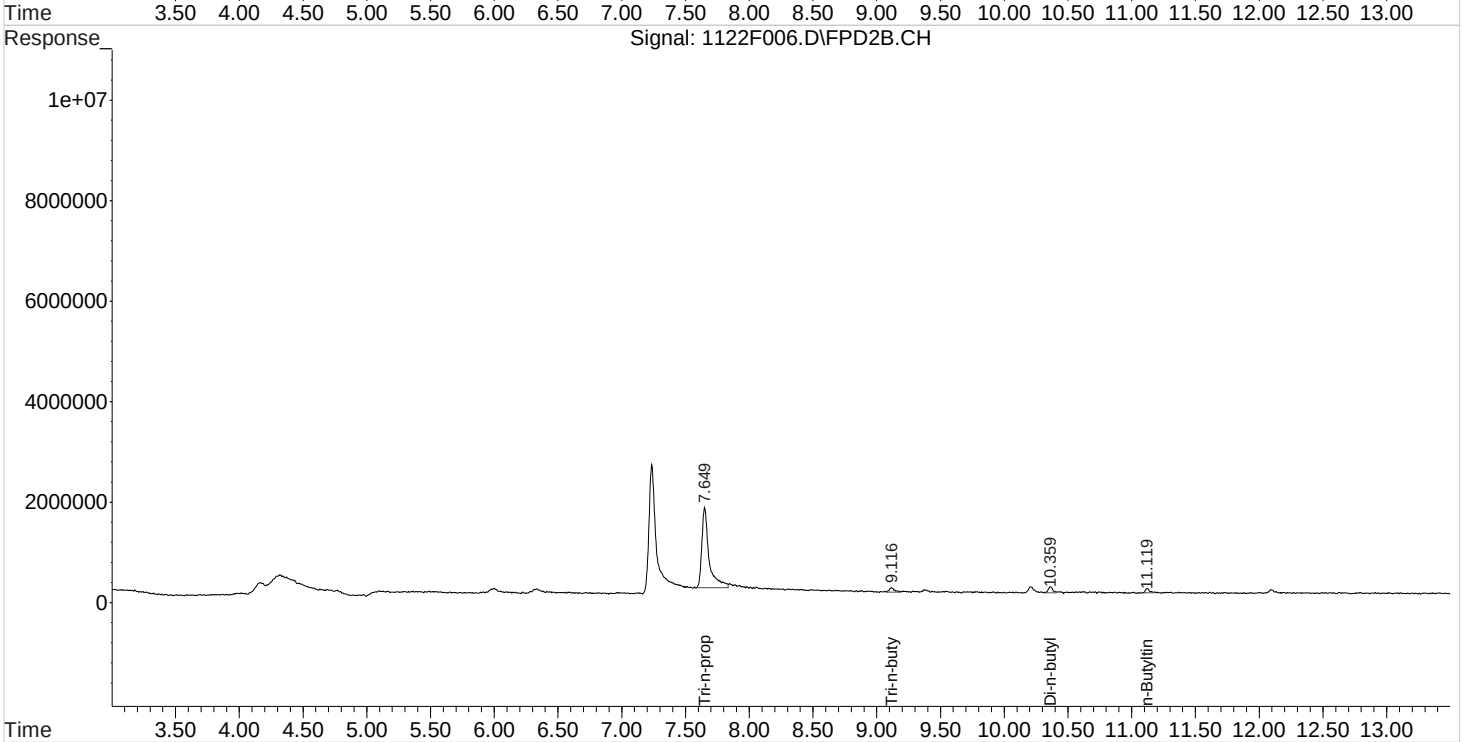
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 5:44 pm Operator: SMURRAY
Sample : K1810270-006 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F006.D\
Lab ID: K1810270-006
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 17:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tri-n-butyltin Cation	-31		25	RO

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F006.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 17:44:00	**Vial:**	4
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-006	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04	7.65	3948863	6347715	72.204	81.134	58	65	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.62	9.12 +0.01	102756	253615	1.478 CCV	2.434	0.39U	0.64J <MRL	0.57 U	Y

Prep Amount:	20.111 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 6:02 pm Operator: SMURRAY
Sample : K1810270-010 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:11 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.039	7.650	3980491	6044220	72.782	77.255	
	Target Compounds							
5)	n-Butyltin	0.000	11.123	0	95331	N.D.	0.596	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

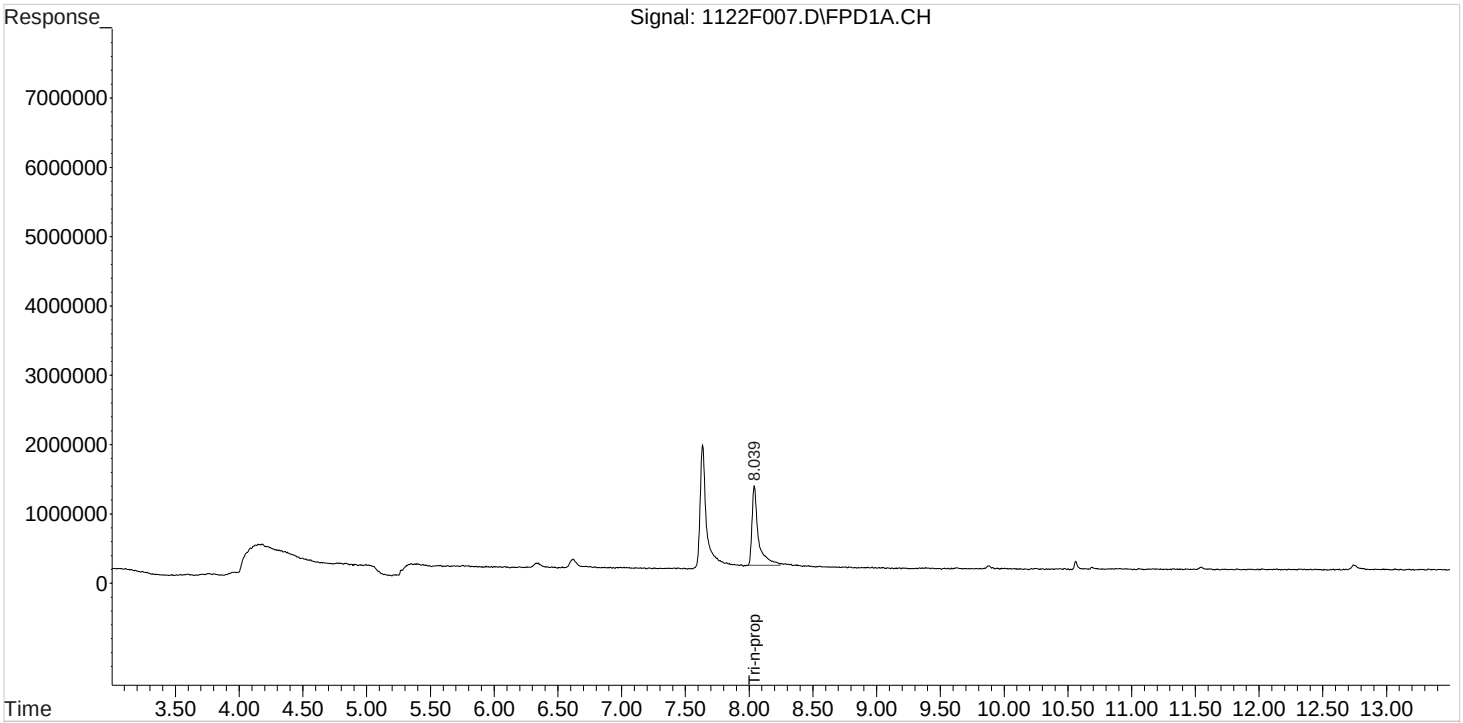
Quantitation Report (Not Reviewed)

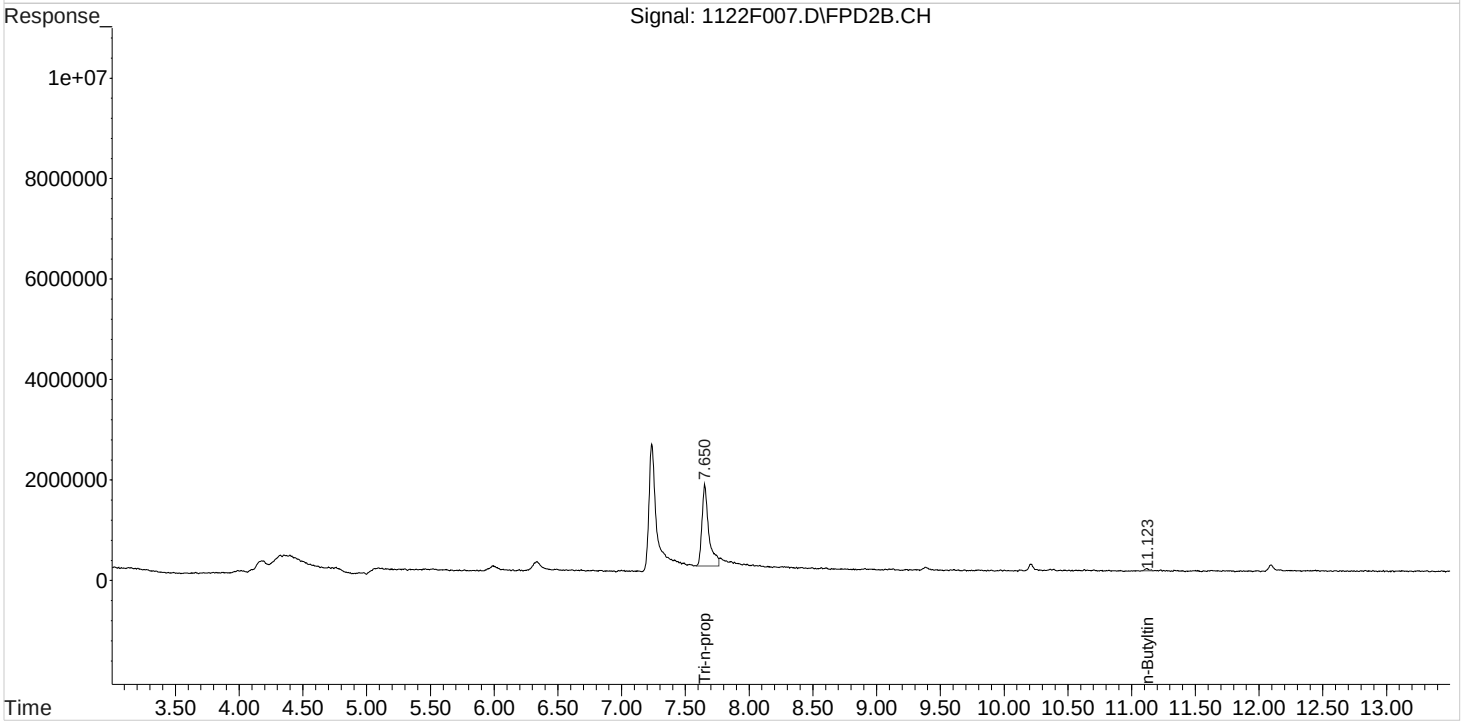
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 6:02 pm Operator: SMURRAY
Sample : K1810270-010 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:11 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F007.D\
Lab ID: K1810270-010
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 18:02:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tri-n-butyltin Cation	-31		25	RO

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F007.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 18:02:00	**Vial:**	17
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-010	**Raw Units:**	ng/mL

Bottle ID:	K1810270-010.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04	7.65	3980491	6044220	72.782	77.255	58	62	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000^{CCV}	0.000	0U	0U	0.68 U	Y

Prep Amount:	20.306 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	63.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F006.D Vial: 6
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 5:39 pm Operator: SMURRAY
Sample : K1810270-011 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:16 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

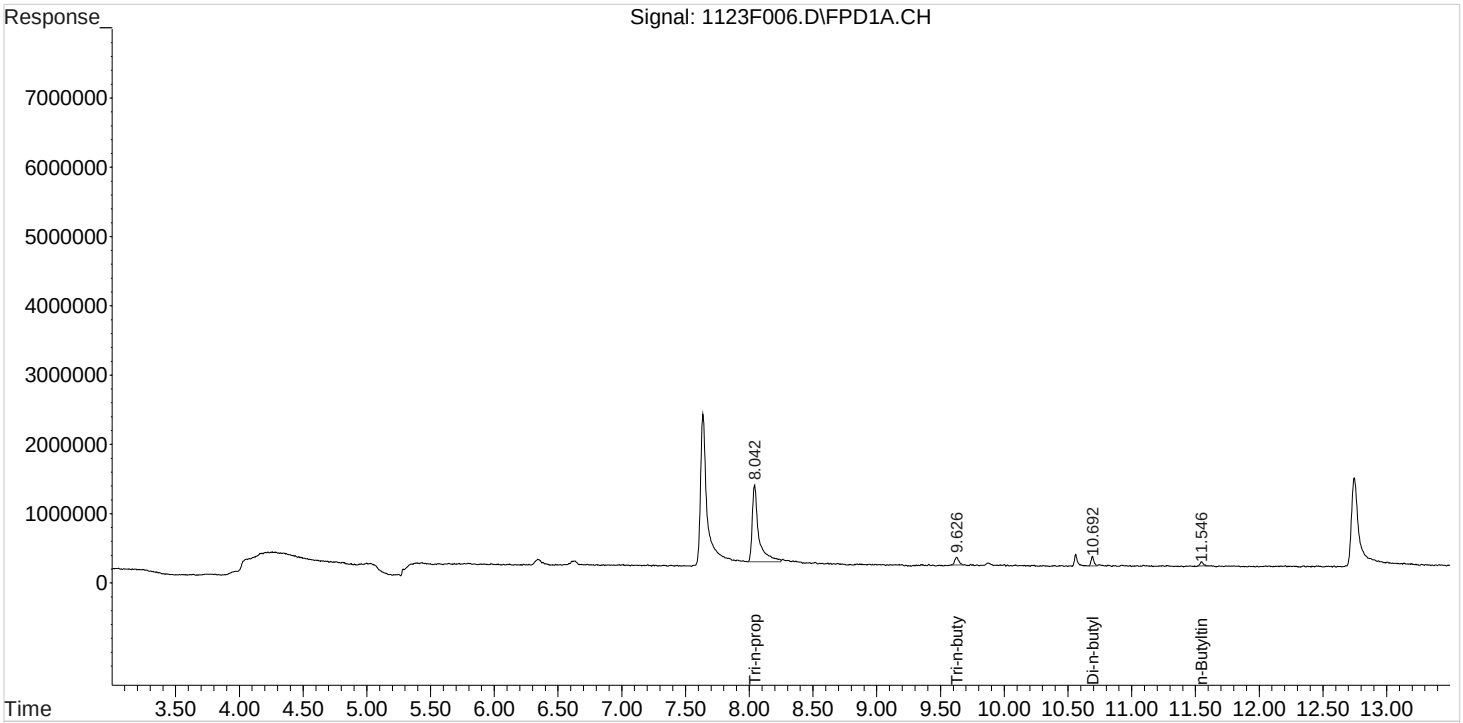
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.042	7.650	3933960	5573273	71.932	71.235	
	Target Compounds							
3)	Tri-n-but...	9.626	9.117	240192	462803	3.456	4.442	#
4)	Di-n-buty...	10.692	10.360	214702	488364	1.868	2.804	#
5)	n-Butyltin	11.546	11.120	111137	196767	1.075	1.230	

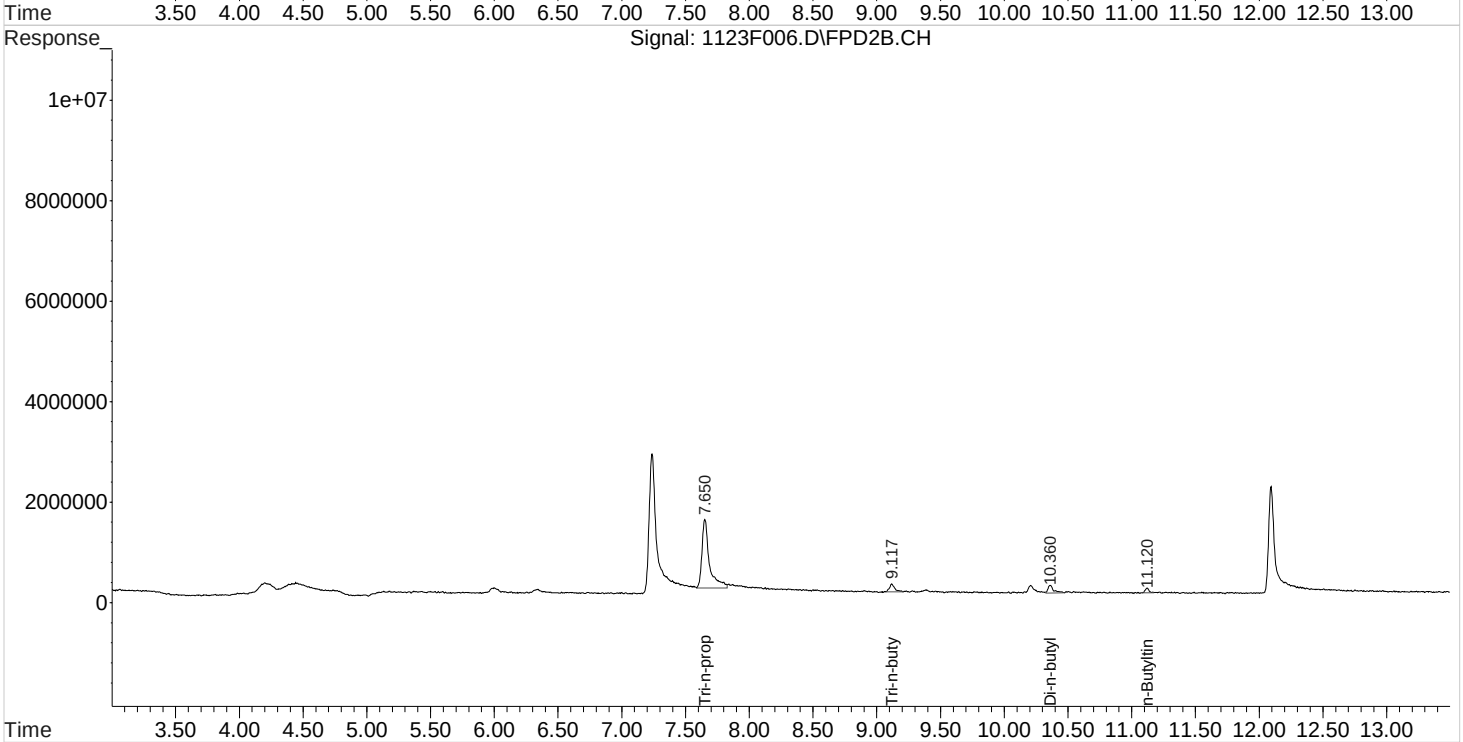
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F006.D Vial: 6
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 5:39 pm Operator: SMURRAY
Sample : K1810270-011 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:16 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F006.D\
Lab ID: K1810270-011
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 17:39:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F006.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 17:39:00	**Vial:**	8
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-011	**Raw Units:**	ng/mL

Bottle ID:	K1810270-011.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.65 +0.01	3933960	5573273	71.932	71.235 CCV	58	57	57	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	240192	462803	3.456	4.442	0.82J	1.1J	**0.82** J	Y

Prep Amount:	20.127 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	83.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F007.D Vial: 7
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 5:57 pm Operator: SMURRAY
Sample : K1810270-012 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:18 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

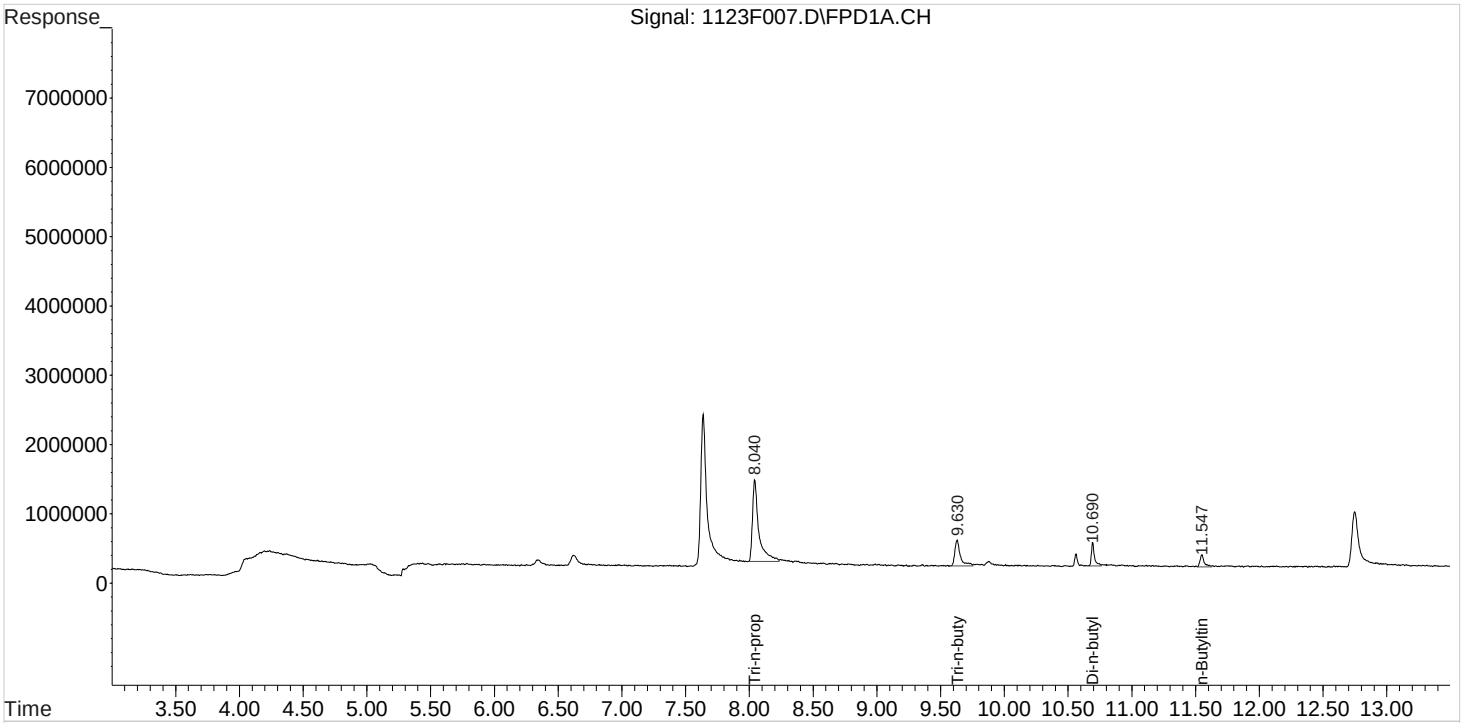
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.040	7.651	4054228	5812876	74.131	74.298
	Target Compounds						
3)	Tri-n-but...	9.630	9.121	1143445	1787356	16.450	17.155
4)	Di-n-buty...	10.690	10.361	570574	887668	4.964	5.097
5)	n-Butyltin	11.547	11.118	404620	539741	3.914	3.374

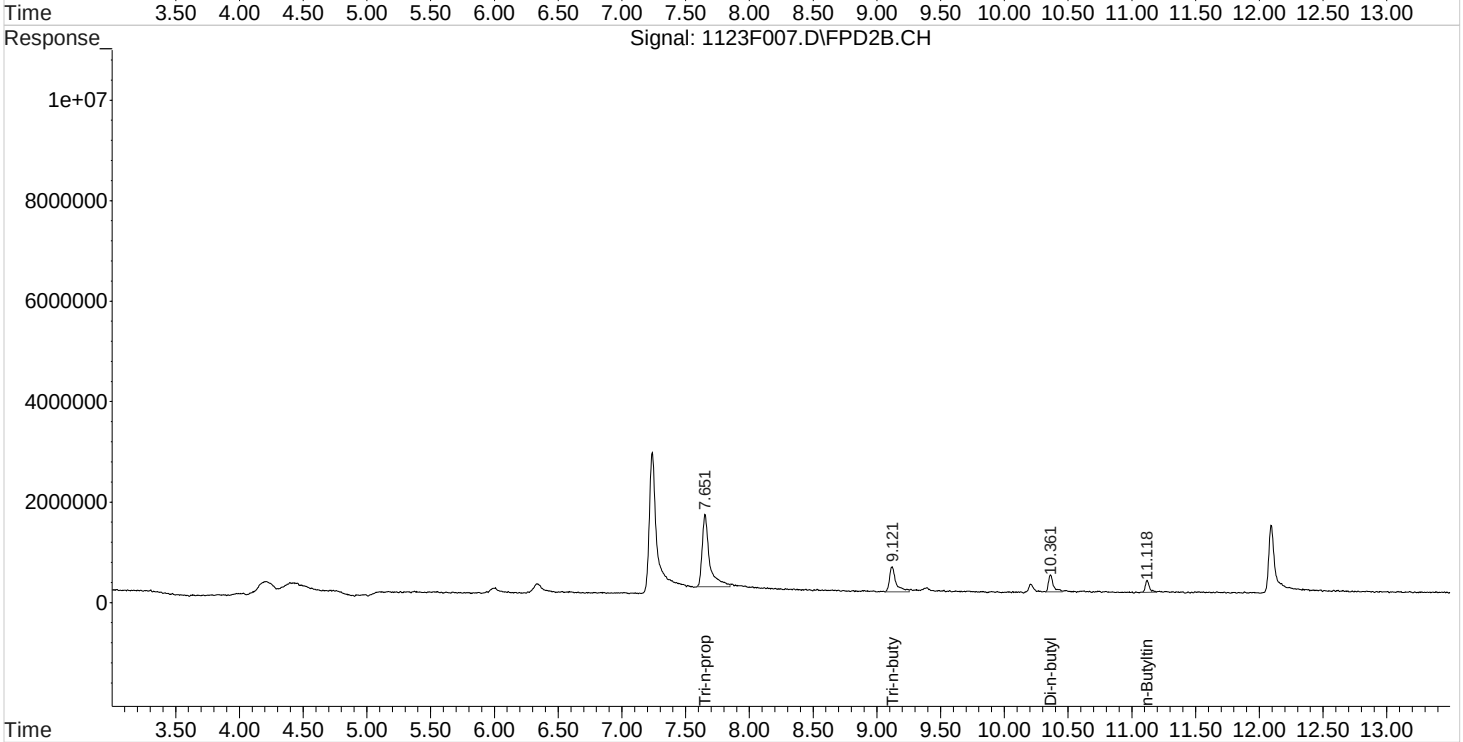
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F007.D Vial: 7
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 5:57 pm Operator: SMURRAY
Sample : K1810270-012 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:18 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F007.D\
Lab ID: K1810270-012
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 17:57:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F007.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 17:57:00	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-012	**Raw Units:**	ng/mL

Bottle ID:	K1810270-012.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.65 +0.01	4054228	5812876	74.131	74.298 CCV	59	59	59	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	1143445	1787356	16.450	17.155	4.3	4.4	**4.3**	Y

Prep Amount:	20.136 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	76.70

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F008.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 6:16 pm Operator: SMURRAY
Sample : K1810270-013 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:20 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

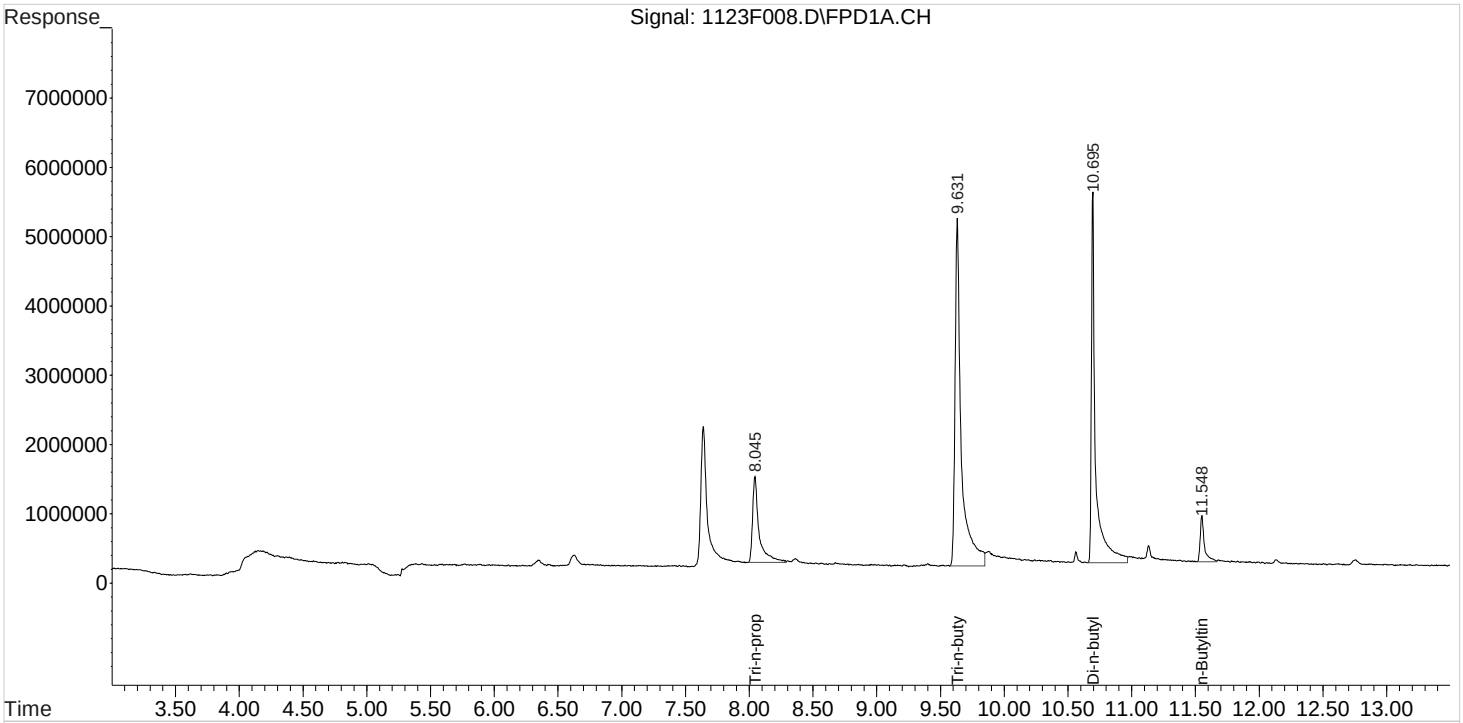
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.045	7.656	4387339	5797276	80.222	74.099
	Target Compounds						
3)	Tri-n-but...	9.631	9.119	17202568	24051026	247.486	230.846
4)	Di-n-buty...	10.695	10.362	12338400	17338519	107.334	99.558
5)	n-Butyltin	11.548	11.122	1546045	2035663	14.957	12.726

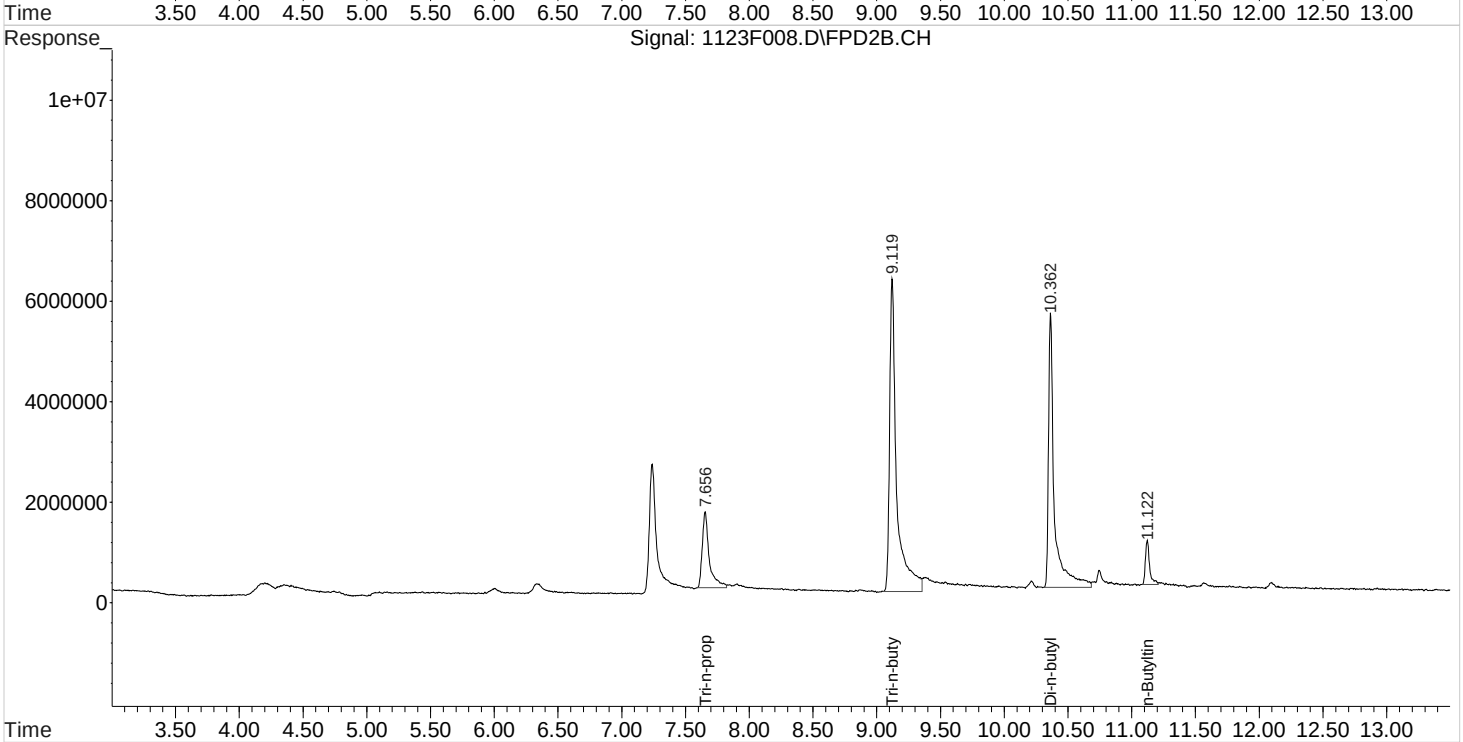
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F008.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 6:16 pm Operator: SMURRAY
Sample : K1810270-013 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:20 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F008.D\
Lab ID: K1810270-013
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 18:16:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F008.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 18:16:00	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-013	**Raw Units:**	ng/mL

Bottle ID:	K1810270-013.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.66 +0.02	4387339	5797276	80.222	74.099CCV	64	59	59	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	17202568	24051026	247.486	230.846	110	100	**100**	Y

Prep Amount:	20.204 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	43.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F009.D Vial: 9
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 6:35 pm Operator: SMURRAY
Sample : K1810270-015 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:22 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

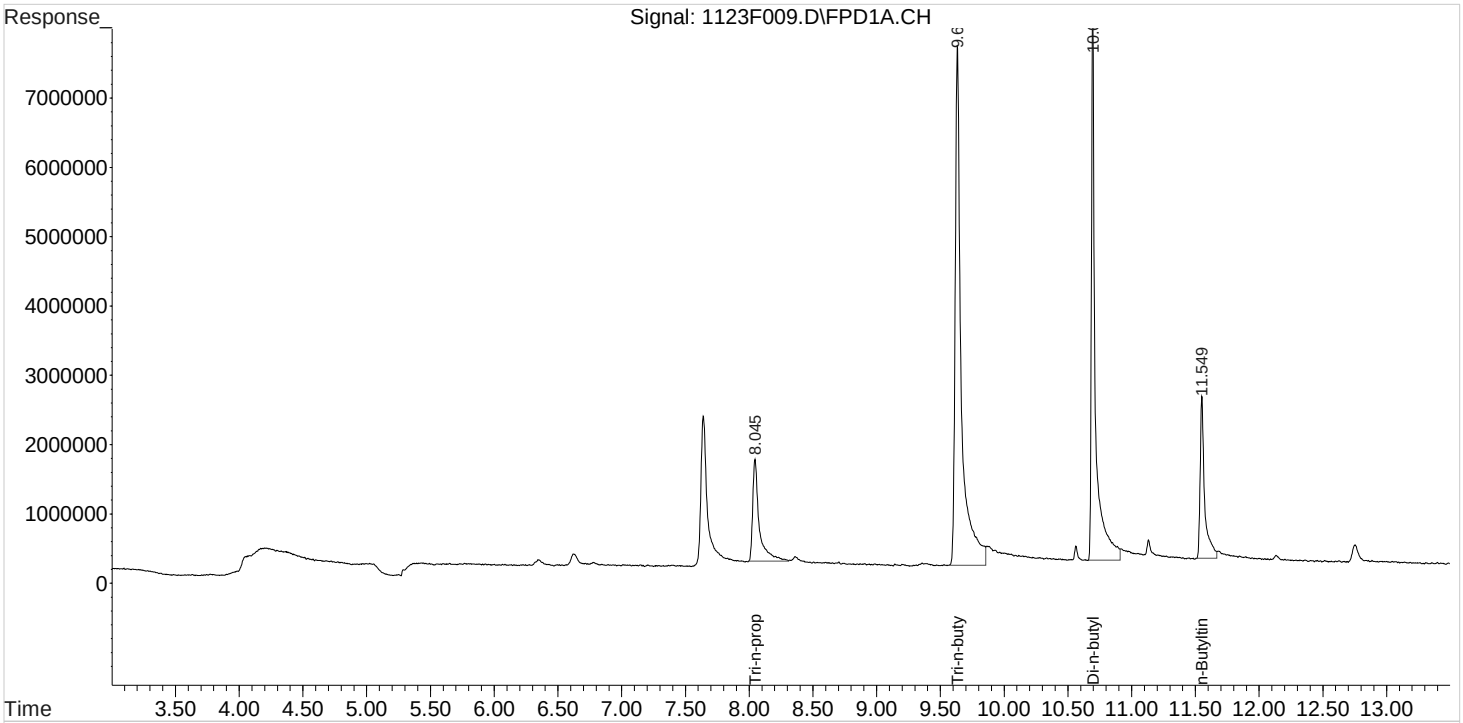
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.045	7.653	5273634	7369317	96.427	94.192
	Target Compounds						
3)	Tri-n-but...	9.632	9.123	25424664	35179195	365.774	337.656
4)	Di-n-buty...	10.695	10.363	17709013	25083393	154.054	144.030
5)	n-Butyltin	11.549	11.120	5806863	8852373	56.178	55.339

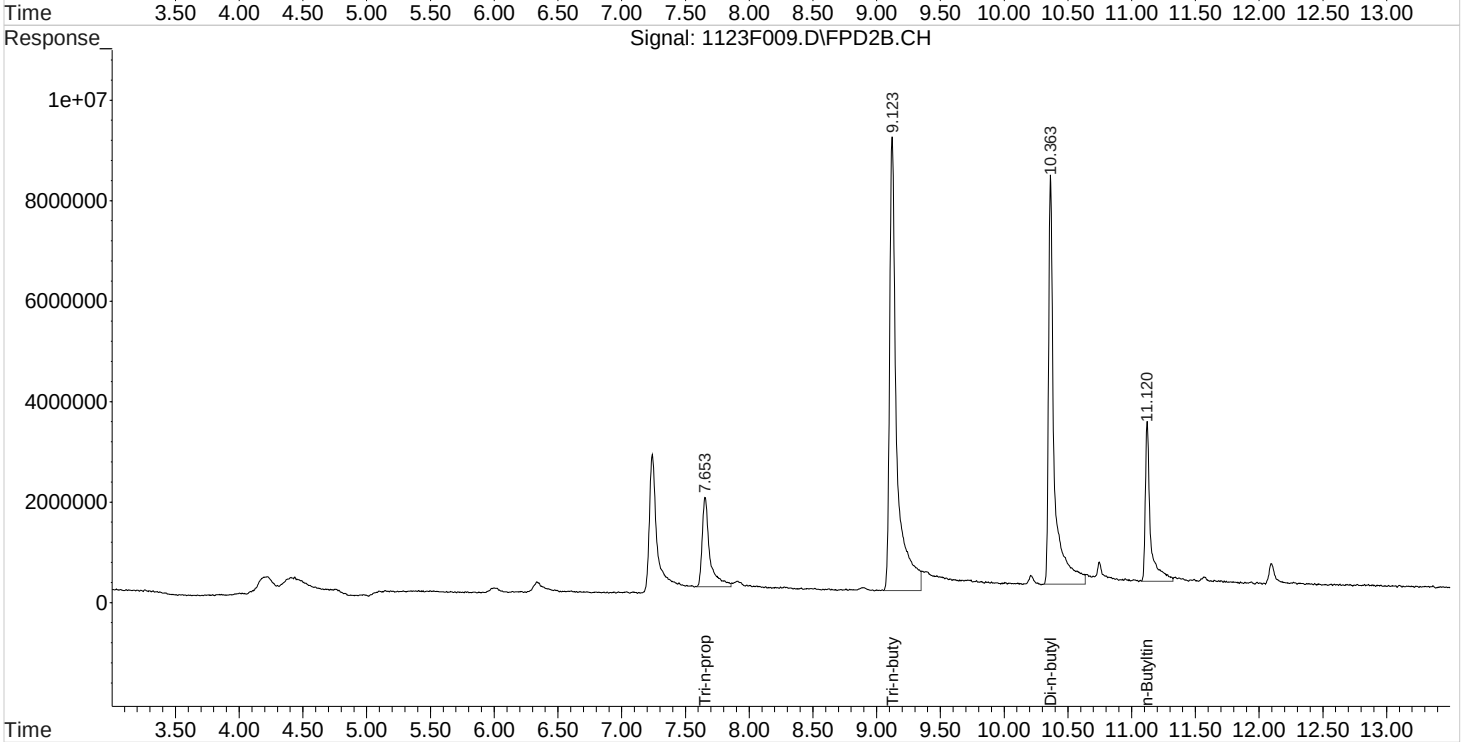
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F009.D Vial: 9
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 6:35 pm Operator: SMURRAY
Sample : K1810270-015 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:22 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F009.D\
Lab ID: K1810270-015
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 18:35:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F009.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 18:35:00	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-015	**Raw Units:**	ng/mL

Bottle ID:	K1810270-015.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.02	7.65 +0.01	5273634	7369317	96.427	94.192 CCV	77	75	75	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	25424664	35179195	365.774	337.656	180	170	**170**	Y

Prep Amount:	20.152 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	39.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F010.D Vial: 10
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 6:53 pm Operator: SMURRAY
Sample : K1810270-016@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:24 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

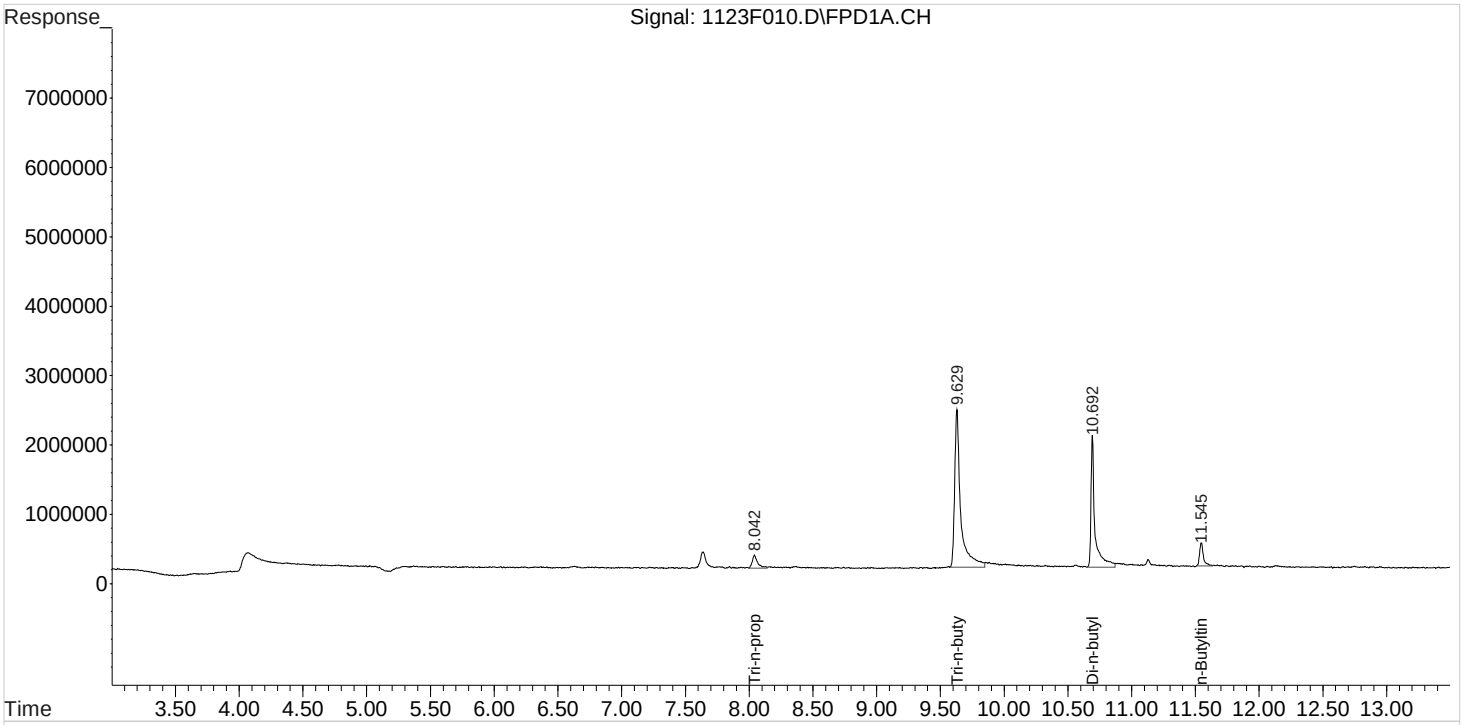
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.042	7.653	560060	719438	10.241	9.196
	Target Compounds						
3)	Tri-n-but...	9.629	9.116	7542446	11326584	108.510	108.714
4)	Di-n-buty...	10.692	10.360	4159144	5870947	36.181	33.711
5)	n-Butyltin	11.545	11.120	721555	1069890	6.981	6.688

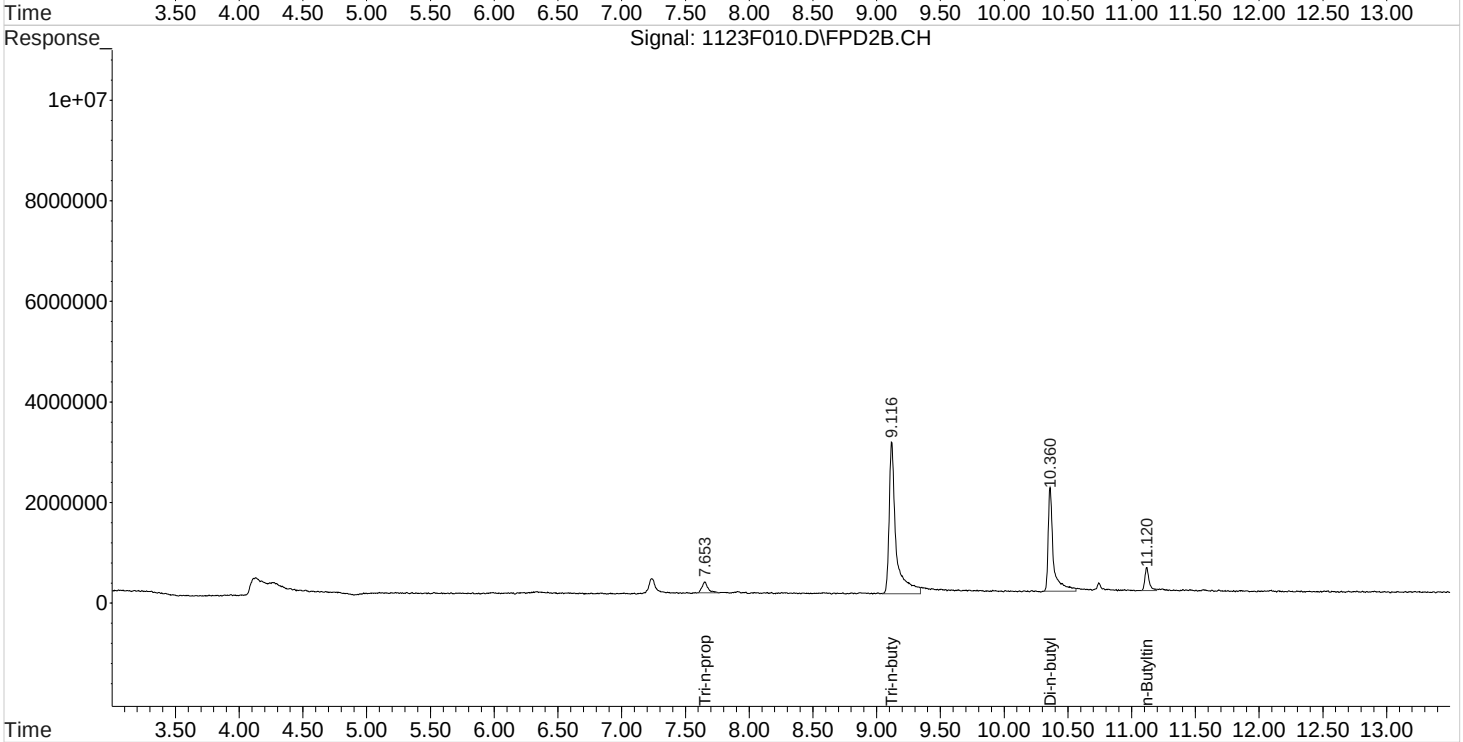
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F010.D Vial: 10
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 6:53 pm Operator: SMURRAY
Sample : K1810270-016@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:24 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F010.D\
Lab ID: K1810270-016
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 18:53:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F010.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 18:53:00	**Vial:**	12
Run Type:	N/A	**Dilution:**	10
Lab ID:	K1810270-016	**Raw Units:**	ng/mL

Bottle ID:	K1810270-016.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.65 +0.01	560060	719438	10.241	9.196 CCV	82	74	82	10 - 120	N

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	7542446	11326584	108.510	108.714	450	450	**450**	N

Prep Amount:	20.299 g	**Dilution:**	10
Prep Final Amount:	4.00 mL	**Basis Factor:**	47.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File : J:\GC26\DATA\112318\1123F011.D Vial: 11
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 7:11 pm Operator: SMURRAY
Sample : K1810270-017 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:26 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

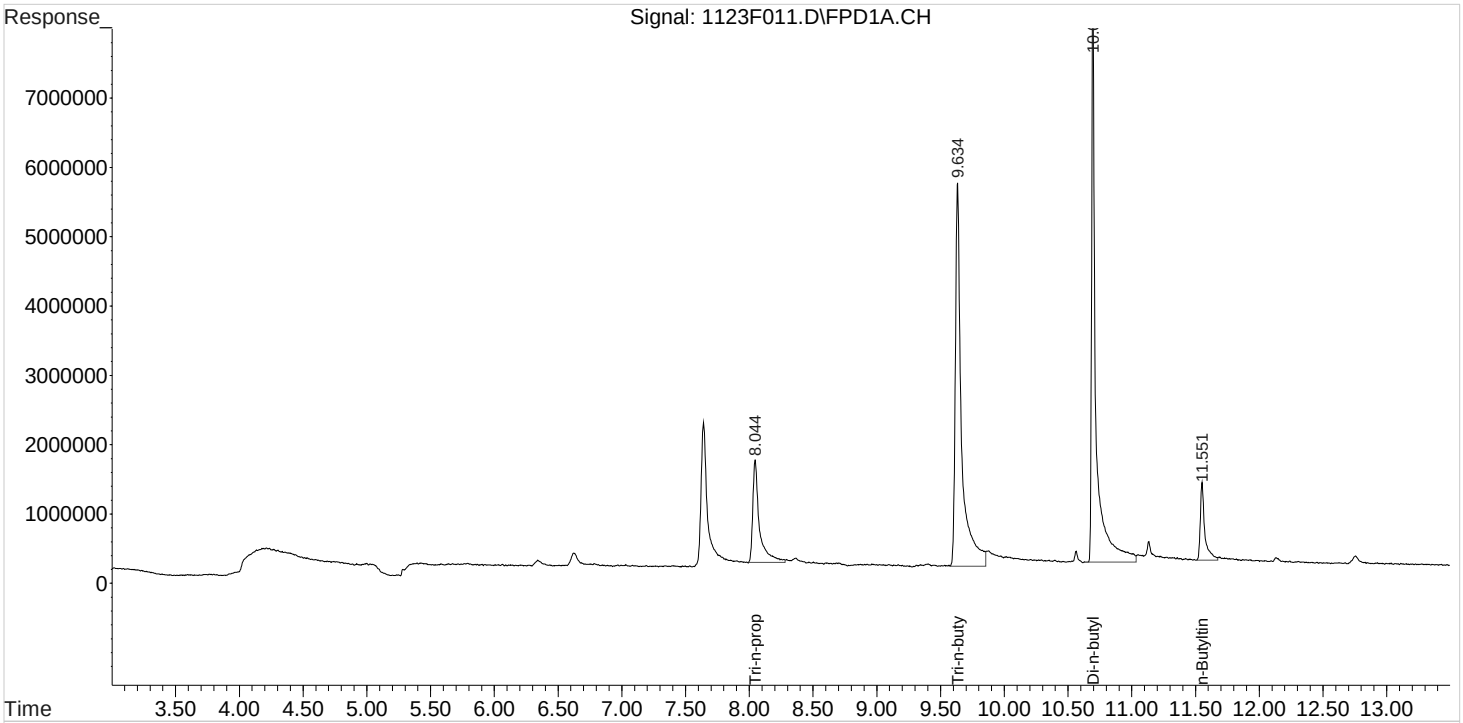
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.044	7.655	5332051	7090189	97.495	90.624
	Target Compounds						
3)	Tri-n-but...	9.634	9.122	18973005	26605338	272.957	255.362
4)	Di-n-buty...	10.694	10.365	19416231	27131690	168.906	155.791
5)	n-Butyltin	11.551	11.122	2757930	4264025	26.681	26.656

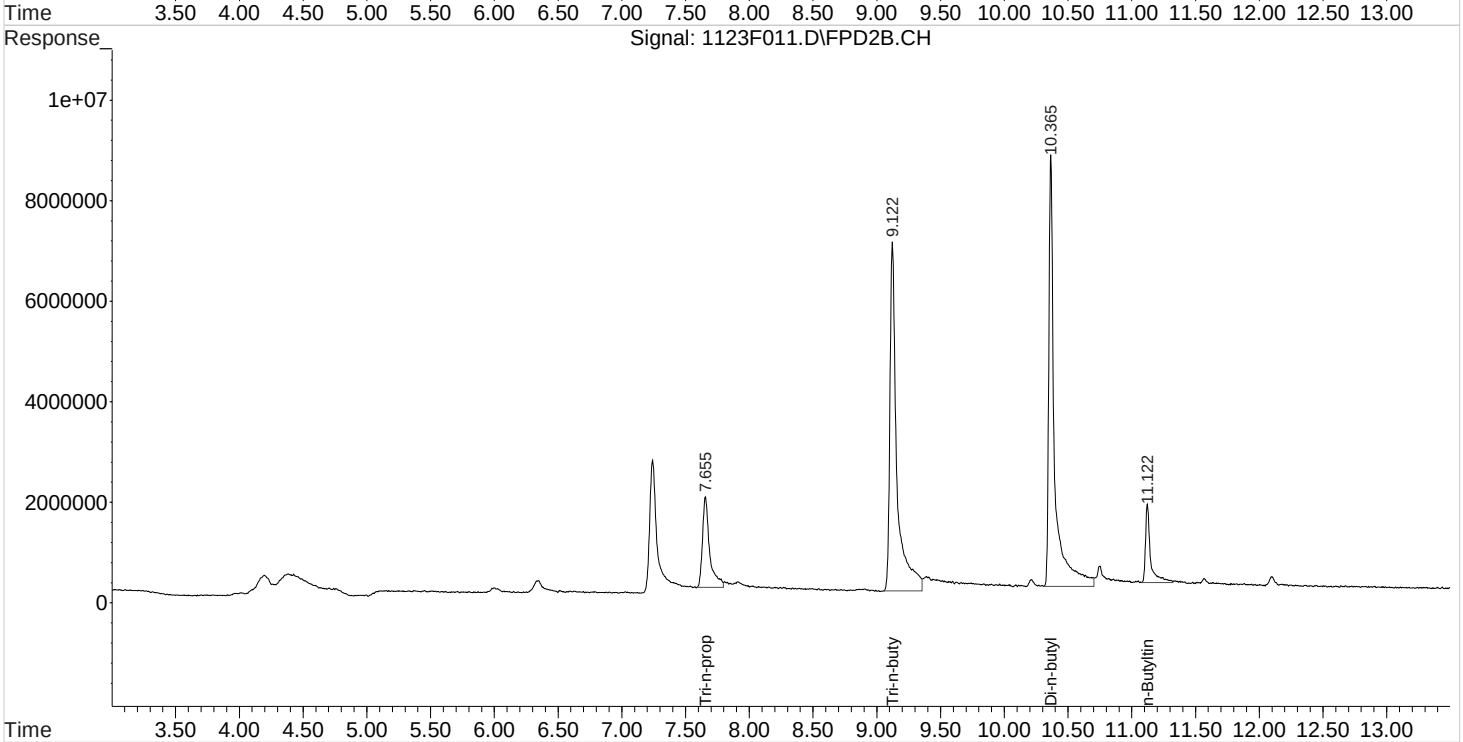
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F011.D Vial: 11
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 7:11 pm Operator: SMURRAY
Sample : K1810270-017 RR Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:26 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F011.D\
Lab ID: K1810270-017
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 19:11:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F011.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 19:11:00	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-017	**Raw Units:**	ng/mL

Bottle ID:	K1810270-017.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.66 +0.02	5332051	7090189	97.495	90.624 CCV	78	72	78	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	18973005	26605338	272.957	255.362	110	100	**100**	Y

Prep Amount:	20.238 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	48.70

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Data File : J:\GC26\DATA\112318\1123F012.D Vial: 12
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 7:30 pm Operator: SMURRAY
Sample : K1810270-018@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:28 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.040	7.648	449276	735778	8.215	9.404	
	Target Compounds							
2)	Tetrabuty...	0.000	7.898	0	46632	N.D.	0.498	#
3)	Tri-n-but...	9.627	9.118	11489596	16940069	165.296	162.594	
4)	Di-n-buty...	10.690	10.361	3405791	4739877	29.628	27.217	
5)	n-Butyltin	11.547	11.118	193645	285849	1.873	1.787	

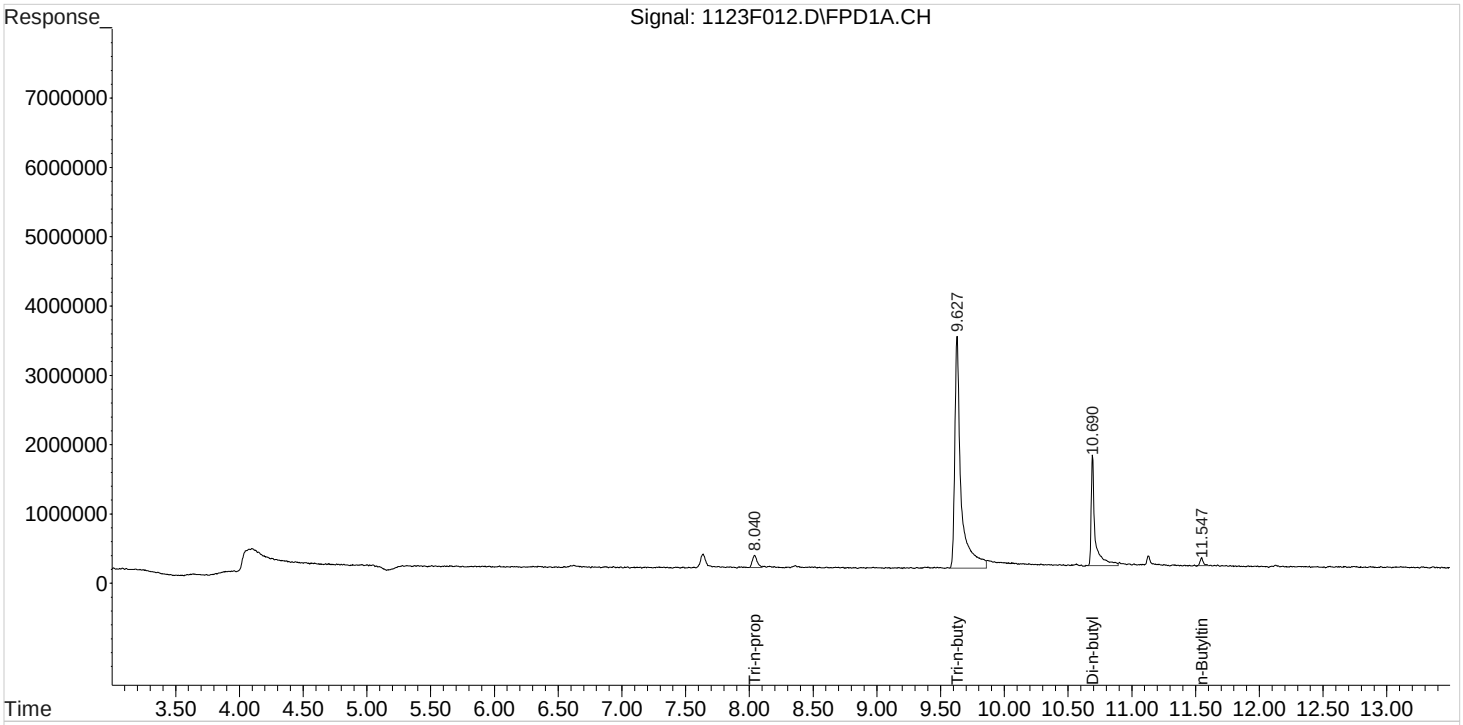
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

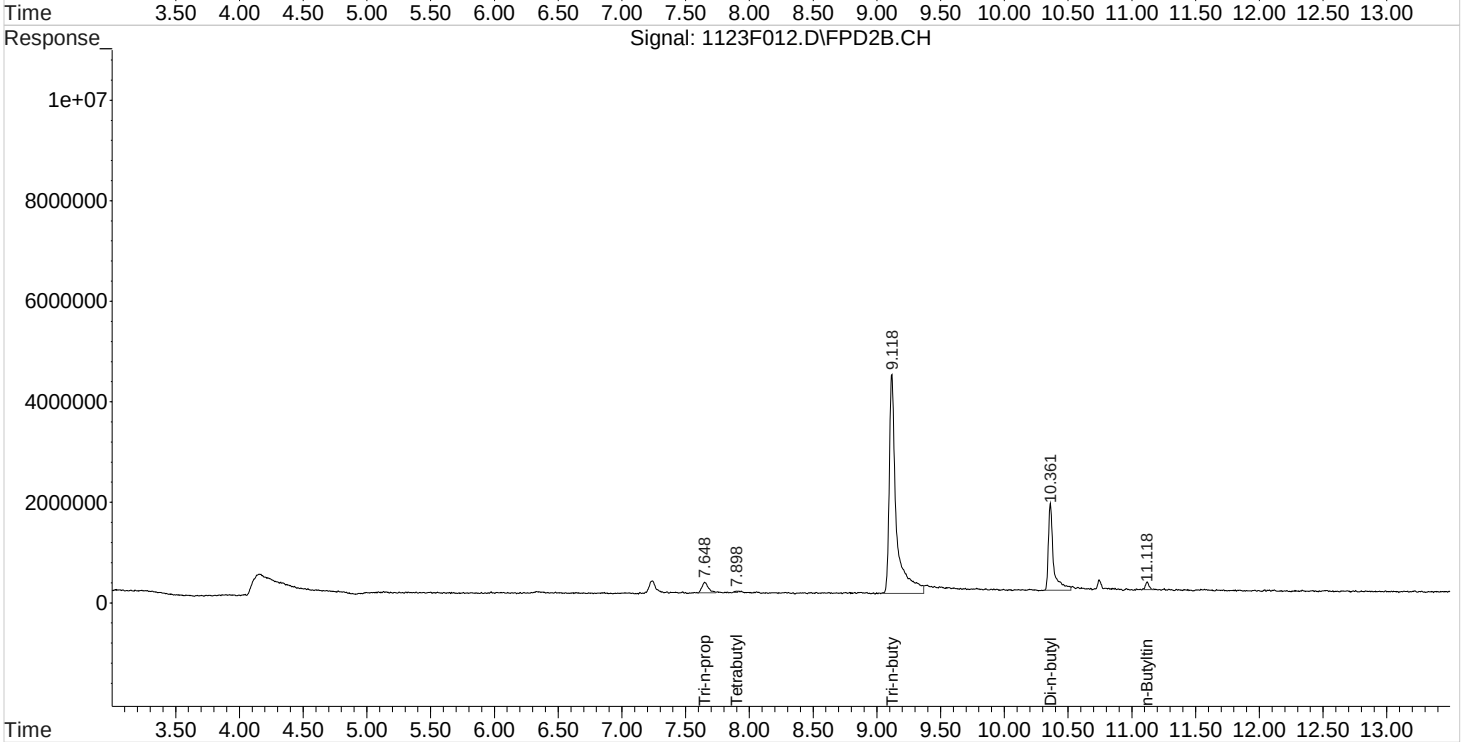
1st 11/25/18

Data File : J:\GC26\DATA\112318\1123F012.D Vial: 12
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 7:30 pm Operator: SMURRAY
Sample : K1810270-018@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:28 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F012.D\
Lab ID: K1810270-018
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 19:30:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)		X
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery (Closing) - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F012.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 19:30:00	**Vial:**	14
Run Type:	N/A	**Dilution:**	10
Lab ID:	K1810270-018	**Raw Units:**	ng/mL

Bottle ID:	K1810270-018.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 +0.01	7.65 +0.01	449276	735778	8.215	9.404 CCV	66	75	66	10 - 120	N

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63 +0.02	9.12 +0.02	11489596	16940069	165.296	162.594	710	700	**700**	N

Prep Amount:	20.256 g	**Dilution:**	10
Prep Final Amount:	4.00 mL	**Basis Factor:**	45.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F017.D Vial: 13
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 9:06 pm Operator: SMURRAY
Sample : K1810270-019 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.044	7.655	4343718	6598702	79.424	84.342
	Target Compounds						
3)	Tri-n-but...	9.631	9.122	27617940	38948611	397.328	373.835
4)	Di-n-buty...	10.694	10.365	17794331	26735409	154.797	153.516
5)	n-Butyltin	11.551	11.122	2745889	4255797	26.565	26.604

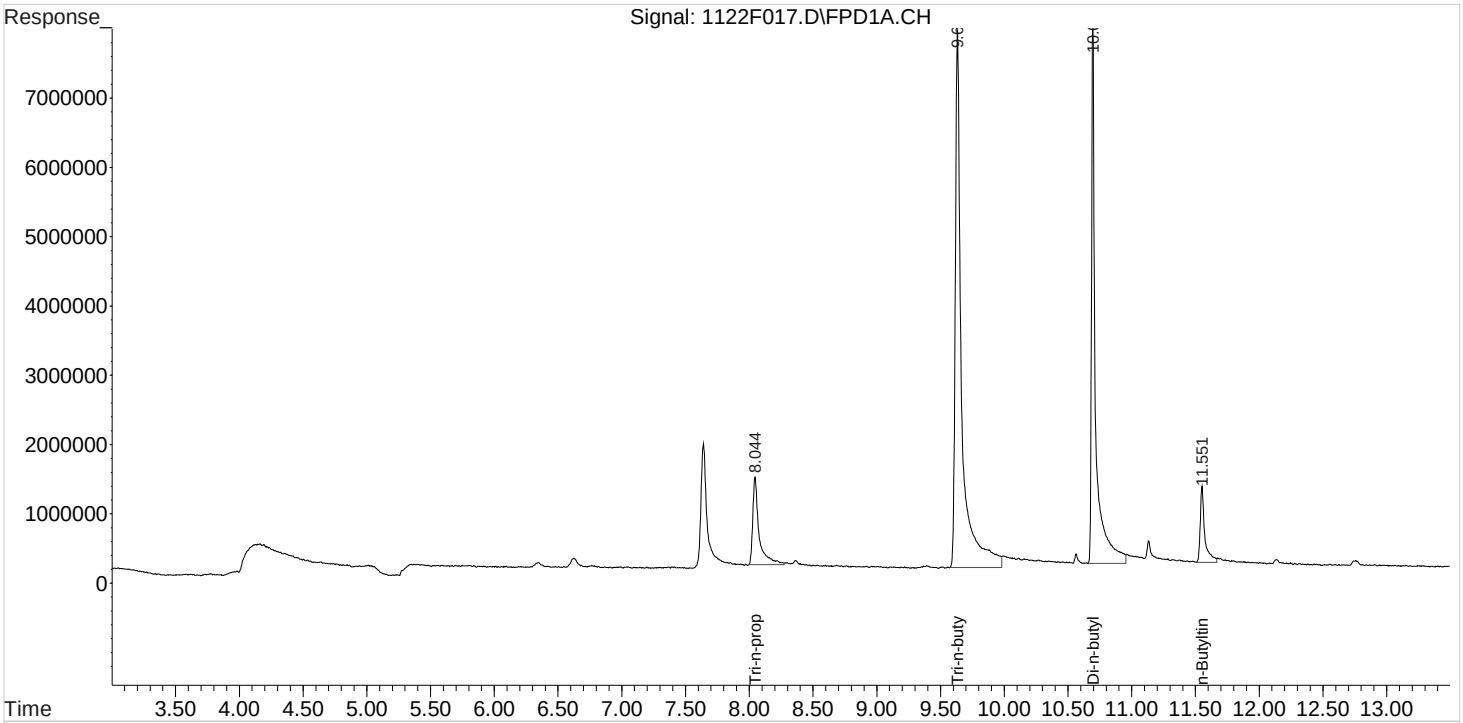
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

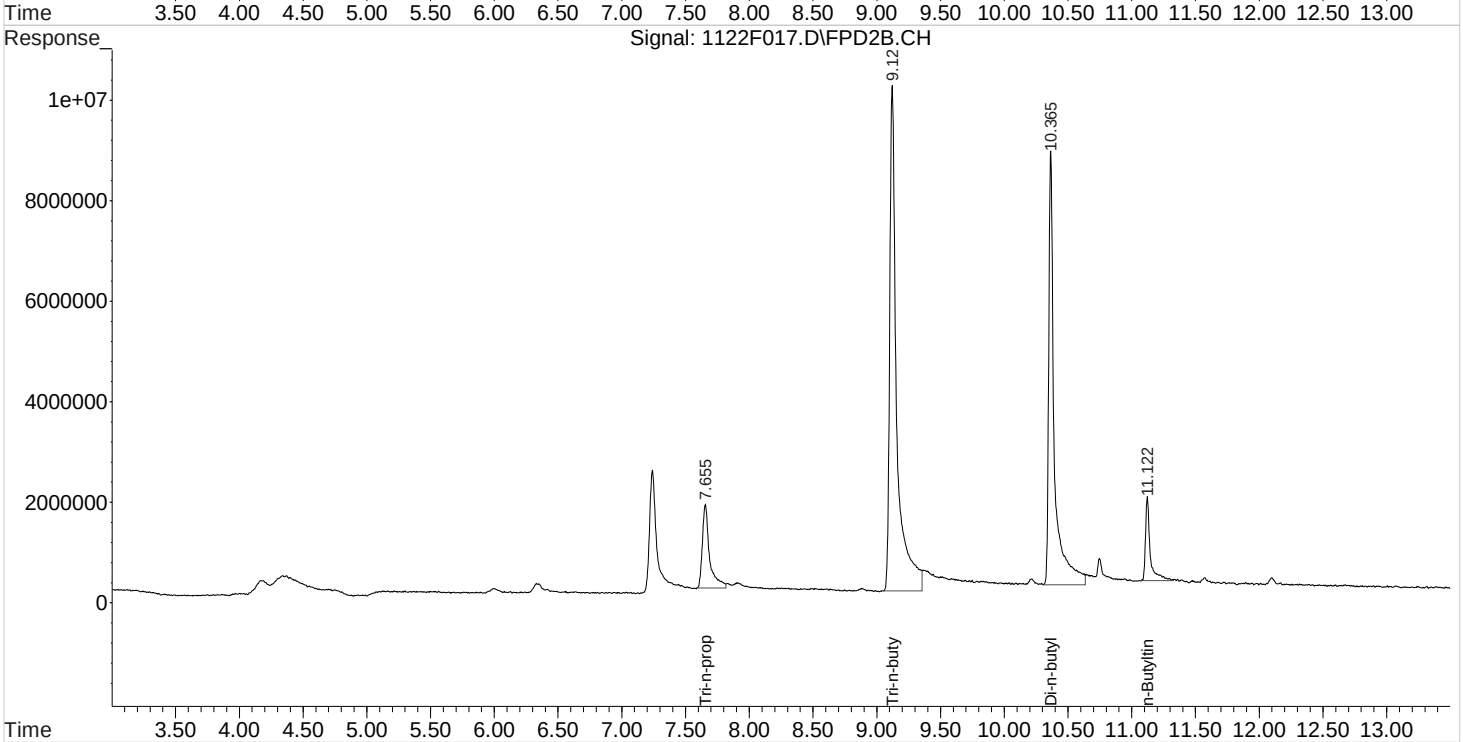
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F017.D Vial: 13
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 9:06 pm Operator: SMURRAY
Sample : K1810270-019 Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F017.D\
Lab ID: K1810270-019
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 21:06:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F017.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 21:06:00	**Vial:**	19
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-019	**Raw Units:**	ng/mL

Bottle ID:	K1810270-019.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.66	4343718	6598702	79.424	84.342	64	67	64	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	27617940	38948611	397.328	373.835	190	180	**180**	Y

Prep Amount:	20.388 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	40.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F015.D Vial: 14
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 8:26 pm Operator: SMURRAY
Sample : K1810270-020@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:34 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

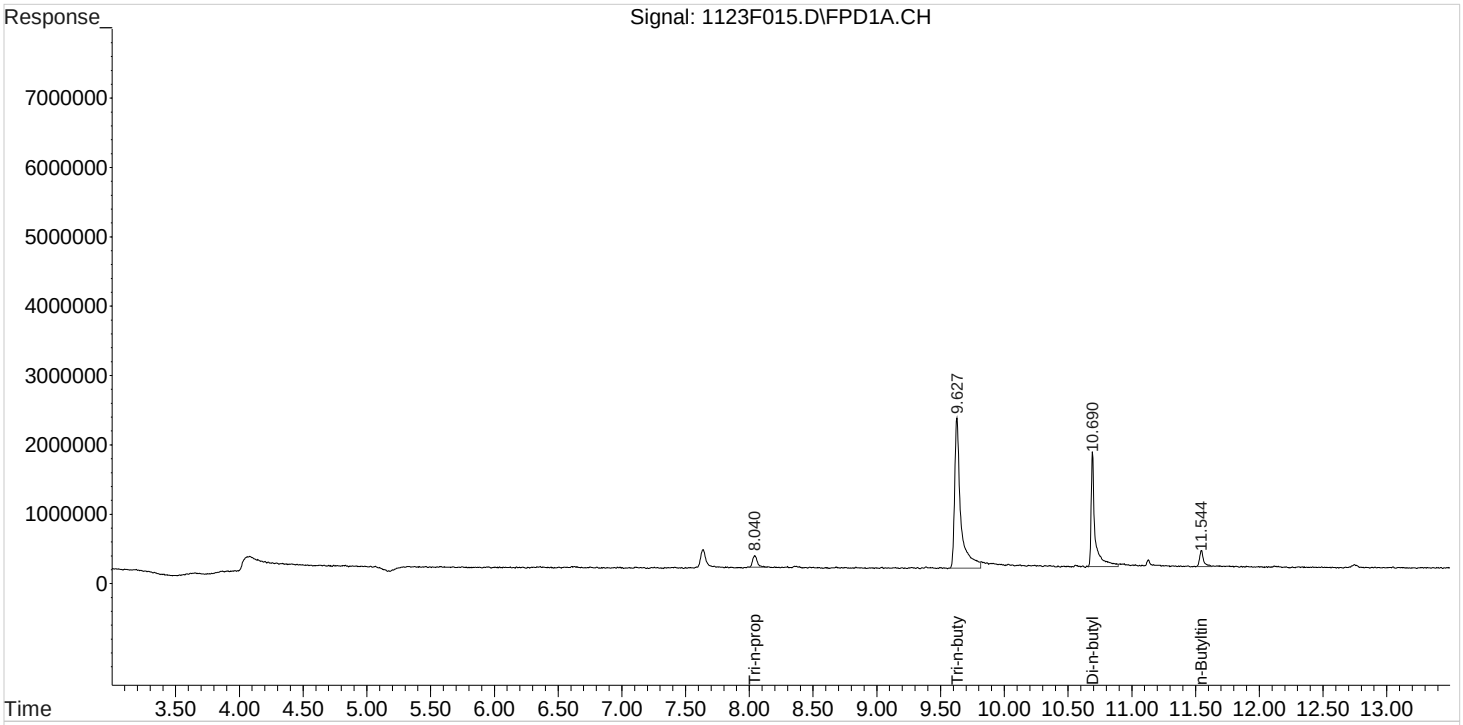
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.040	7.652	438725	753269	8.022	9.628	
	Target Compounds							
2)	Tetrabuty...	0.000	7.905	0	106406	N.D.	1.136	#
3)	Tri-n-but...	9.627	9.118	7237852	11038271	104.128	105.947	
4)	Di-n-buty...	10.690	10.358	3540933	5039945	30.803	28.940	
5)	n-Butyltin	11.544	11.118	515702	665576	4.989	4.161	

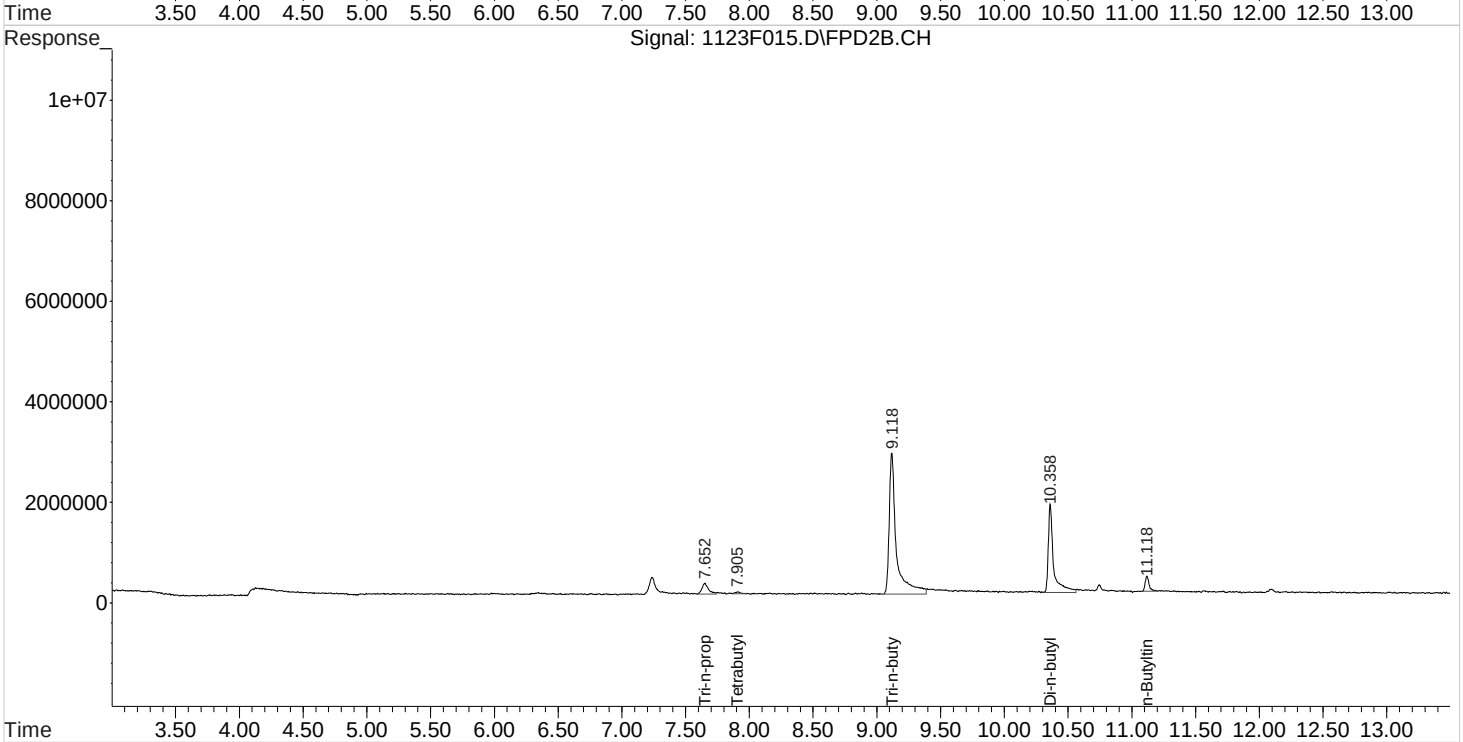
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F015.D Vial: 14
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 8:26 pm Operator: SMURRAY
Sample : K1810270-020@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:34 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F015.D\
Lab ID: K1810270-020
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 20:26:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-35	Tri-n-propyltin	33		25	RO

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F015.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 20:26:00	**Vial:**	15
Run Type:	N/A	**Dilution:**	10
Lab ID:	K1810270-020	**Raw Units:**	ng/mL

Bottle ID:	K1810270-020.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.65 -0.01	438725	753269	8.022	9.628 CCV	64	77	64	10 - 120	N

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	7237852	11038271	104.128	105.947	580	590	**580**	N

Prep Amount:	20.451 g	**Dilution:**	10
Prep Final Amount:	4.00 mL	**Basis Factor:**	35.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F016.D Vial: 15
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 8:44 pm Operator: SMURRAY
Sample : K1810270-029@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

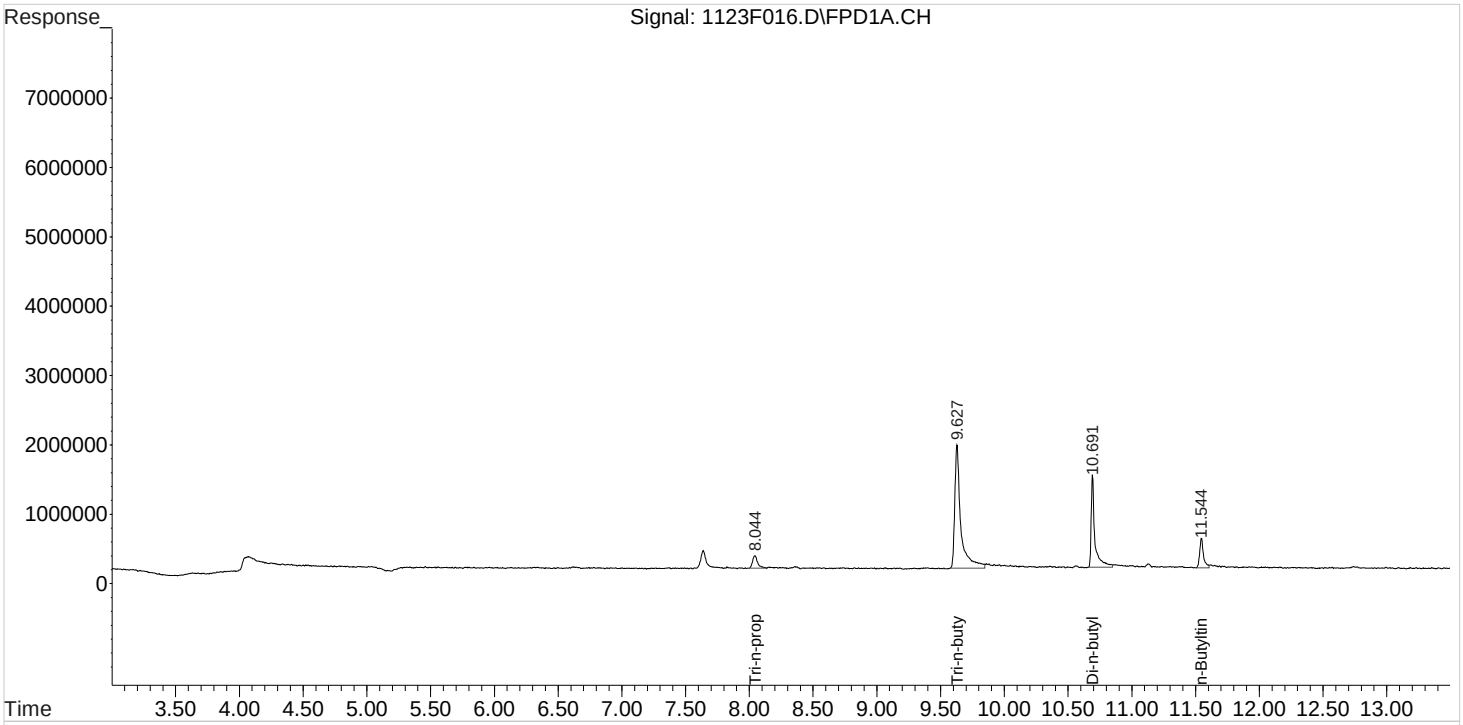
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.044	7.648	499006	748672	9.124	9.569	
	Target Compounds							
2)	Tetrabuty...	0.000	7.885	0	66002	N.D.	0.704	#
3)	Tri-n-but...	9.627	9.118	5915218	8631186	85.100	82.844	
4)	Di-n-buty...	10.691	10.362	2708243	3892159	23.560	22.349	
5)	n-Butyltin	11.544	11.118	911458	1235531	8.818	7.724	

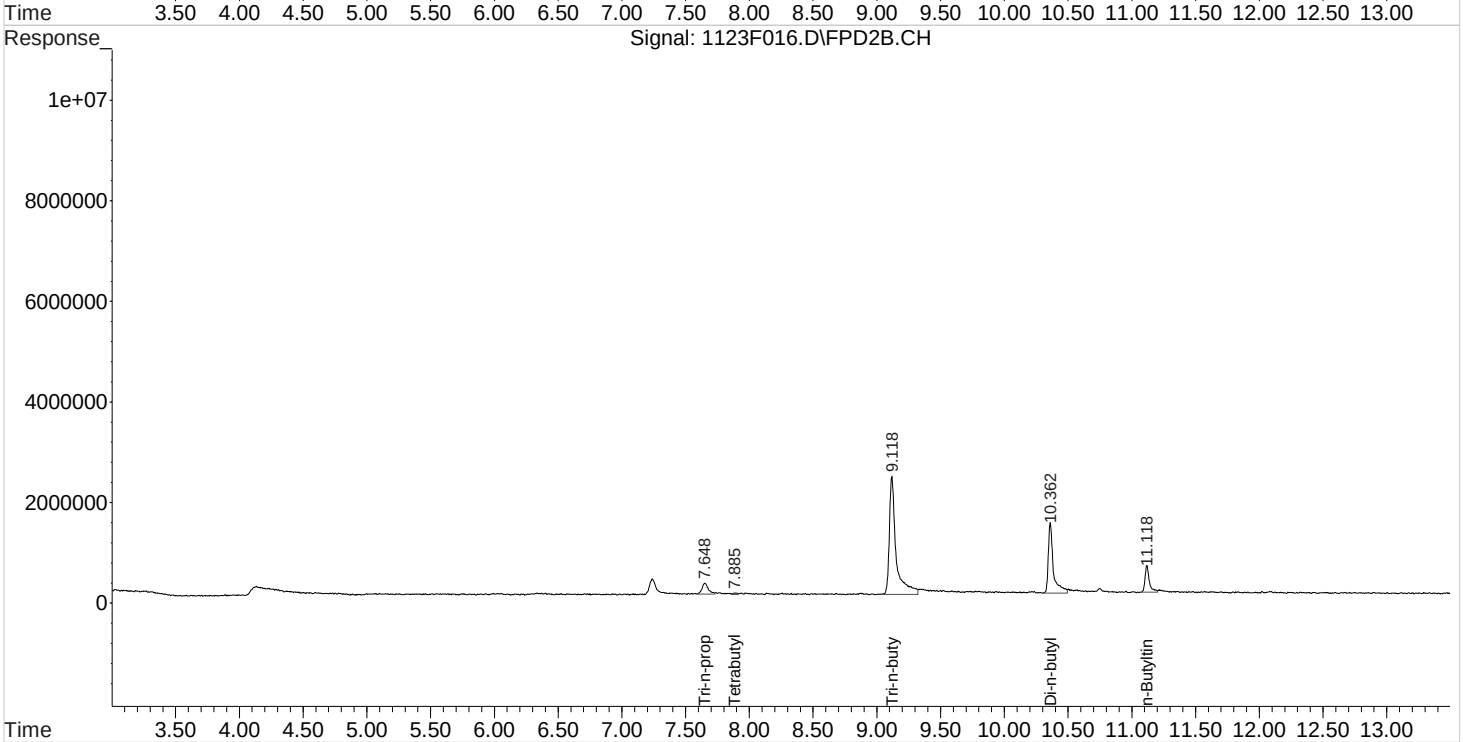
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F016.D Vial: 15
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 8:44 pm Operator: SMURRAY
Sample : K1810270-029@10X Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F016.D\
Lab ID: K1810270-029
RunType: N/A
Matrix: Sediment

Date Acquired: 11/23/18 20:44:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-35	Tri-n-propyltin	33		25	RQ

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F016.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 20:44:00	**Vial:**	16
Run Type:	N/A	**Dilution:**	10
Lab ID:	K1810270-029	**Raw Units:**	ng/mL

Bottle ID:	K1810270-029.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.65 -0.01	499006	748672	9.124	9.569 CCV	73	77	73	10 - 120	N

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	5915218	8631186	85.100	82.844	470	450	**450**	N

Prep Amount:	20.249 g	**Dilution:**	10
Prep Final Amount:	4.00 mL	**Basis Factor:**	36.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F023.D Vial: 19
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:57 pm Operator: SMURRAY
Sample : KQ1805623-04MB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:48 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.044	7.652	3669577	5570730	67.097	71.203
	Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

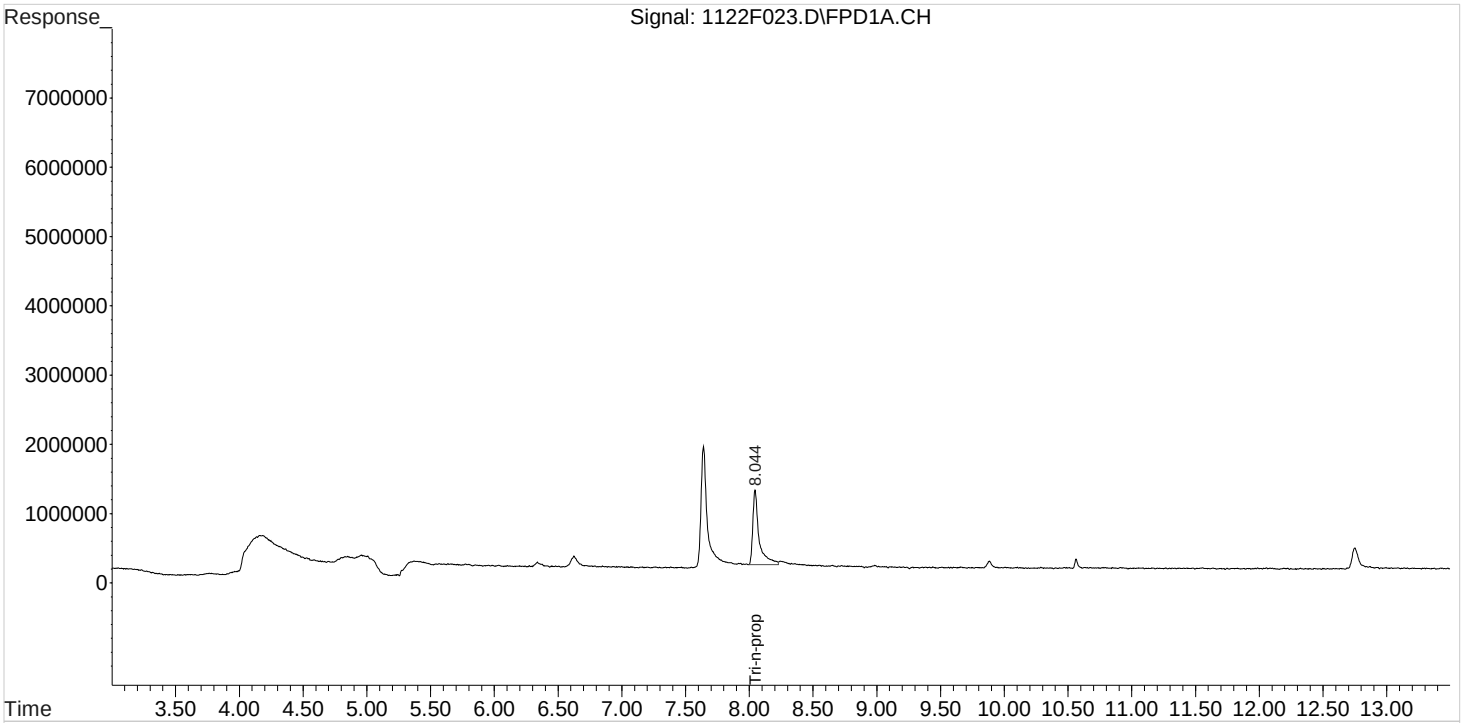
Quantitation Report (Not Reviewed)

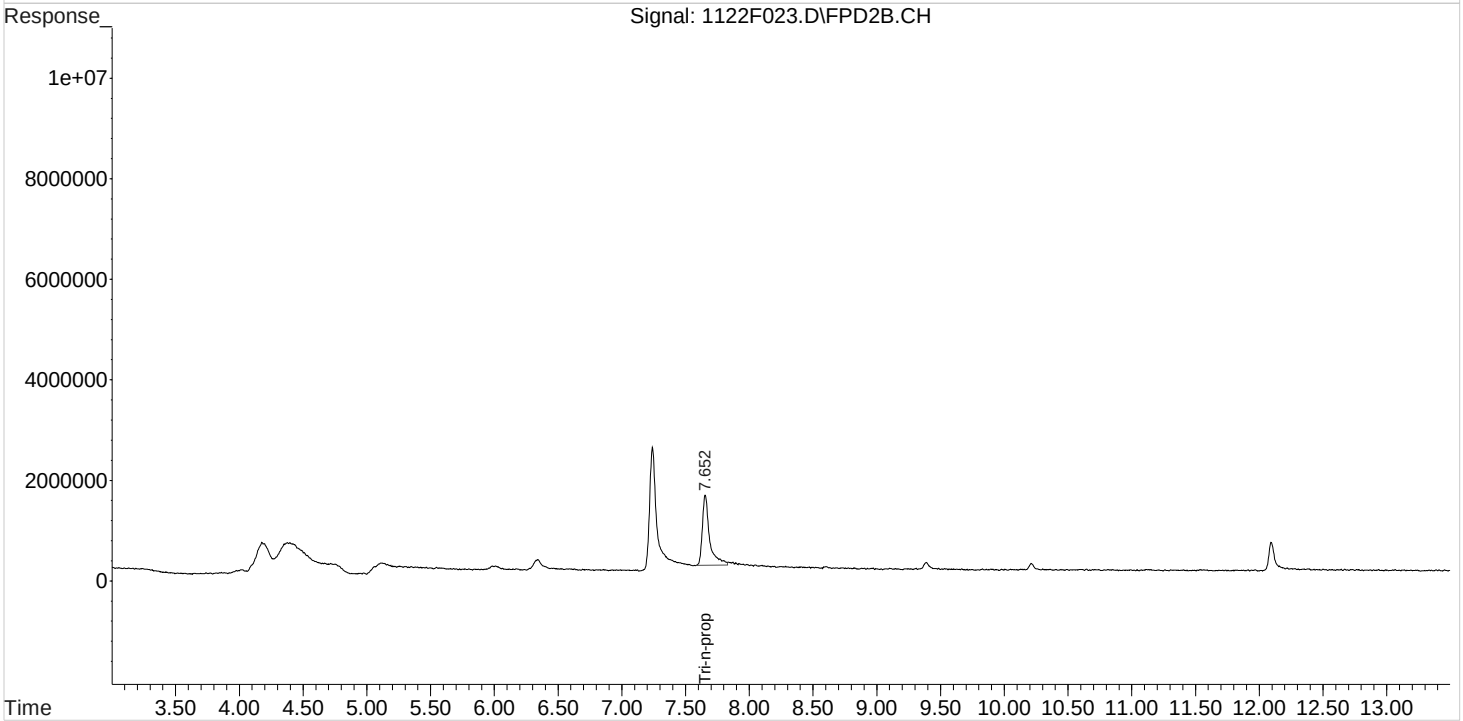
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F023.D Vial: 19
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:57 pm Operator: SMURRAY
Sample : KQ1805623-04MB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:48 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F023.D\
Lab ID: KQ1815623-04
RunType: MB
Matrix: Sediment

Date Acquired: 11/22/18 22:57:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F023.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:57:00	**Vial:**	23
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815623-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.65 -0.01	3669577	5570730	67.097	71.203	54	57	54	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y

Prep Amount:	20.4510 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F023.D Vial: 19
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 5:34 pm Operator: SMURRAY
Sample : KQ1816241-04 MB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.058	7.666	5212790	7418824	95.315	94.825
	Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

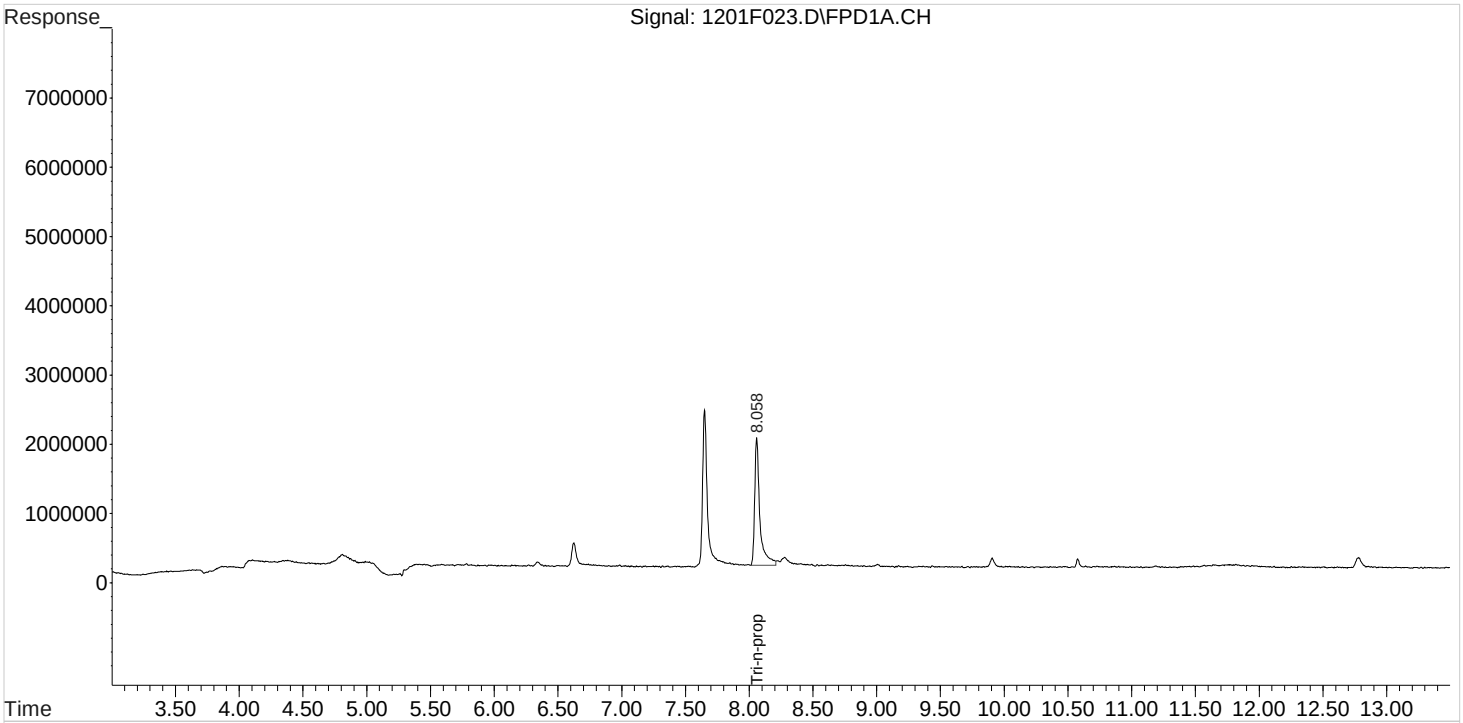
Quantitation Report (Not Reviewed)

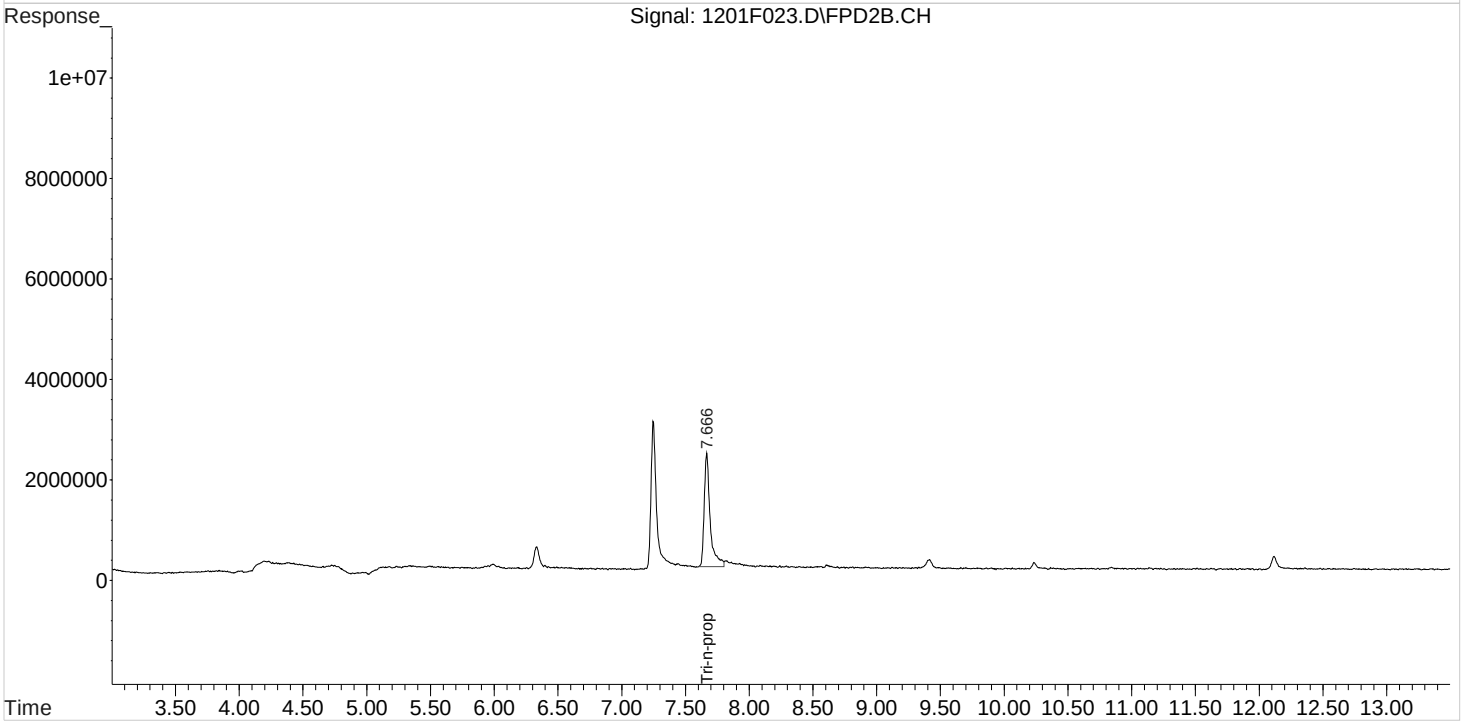
1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F023.D Vial: 19
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 5:34 pm Operator: SMURRAY
Sample : KQ1816241-04 MB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st 12/02/18
2nd 12/06/18

Validation Report

Data File: J:\GC26\DATA\120118\1201F023.D\
Lab ID: KQ1816241-04
RunType: MB
Matrix: Sediment

Date Acquired: 12/1/18 17:34:00
Batch ID: 617147
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-35	Tri-n-butyltin Cation	-26		25	RO

Primary Review: _____

Secondary Review: _____

1st 12/02/18
2nd 12/06/18

Quantitation Report

Data File:	J:\GC26\DATA\120118\1201F023.D\	**Instrument:**	K-GC-26
Acqu Date:	12/1/18 17:34:00	**Vial:**	22
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1816241-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/20/18	**Receive Date:**	10/22/18

Analysis Lot:	617147	**Prep Lot:**	325830	**Report Group:**	KQ1816241
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/19/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.06 +0.01	7.67 +0.01	5212790	7418824	95.315	94.825	76	76	76	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2		Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	0.00	0	0	0.000	0.000		0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000		0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000 CCV	RO	0U	0U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000		0U	0U	0.44 U	Y

Prep Amount:	20.3210 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F022.D Vial: 18
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:38 pm Operator: SMURRAY
Sample : KQ1805623-03LCS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:46 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.045	7.656	4657565	7322125	85.163	93.589
	Target Compounds						
2)	Tetrabuty...	8.365	7.910	5738665	9173398	94.134	97.906
3)	Tri-n-but...	9.632	9.120	6130217	9058608	88.193	86.946
4)	Di-n-buty...	10.695	10.363	8882224	12328217	77.268	70.789
5)	n-Butyltin	11.549	11.120	6891639	10593941	66.672	66.226

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

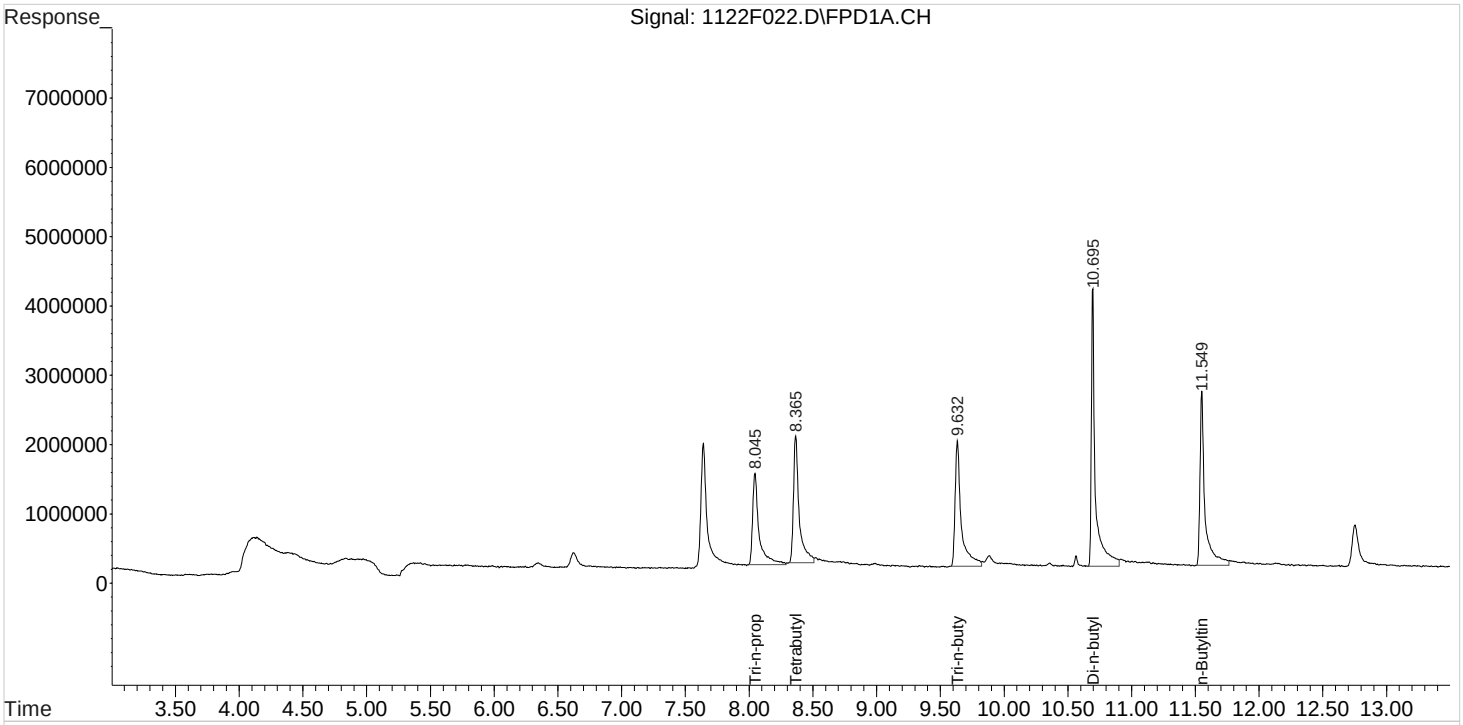
Quantitation Report (Not Reviewed)

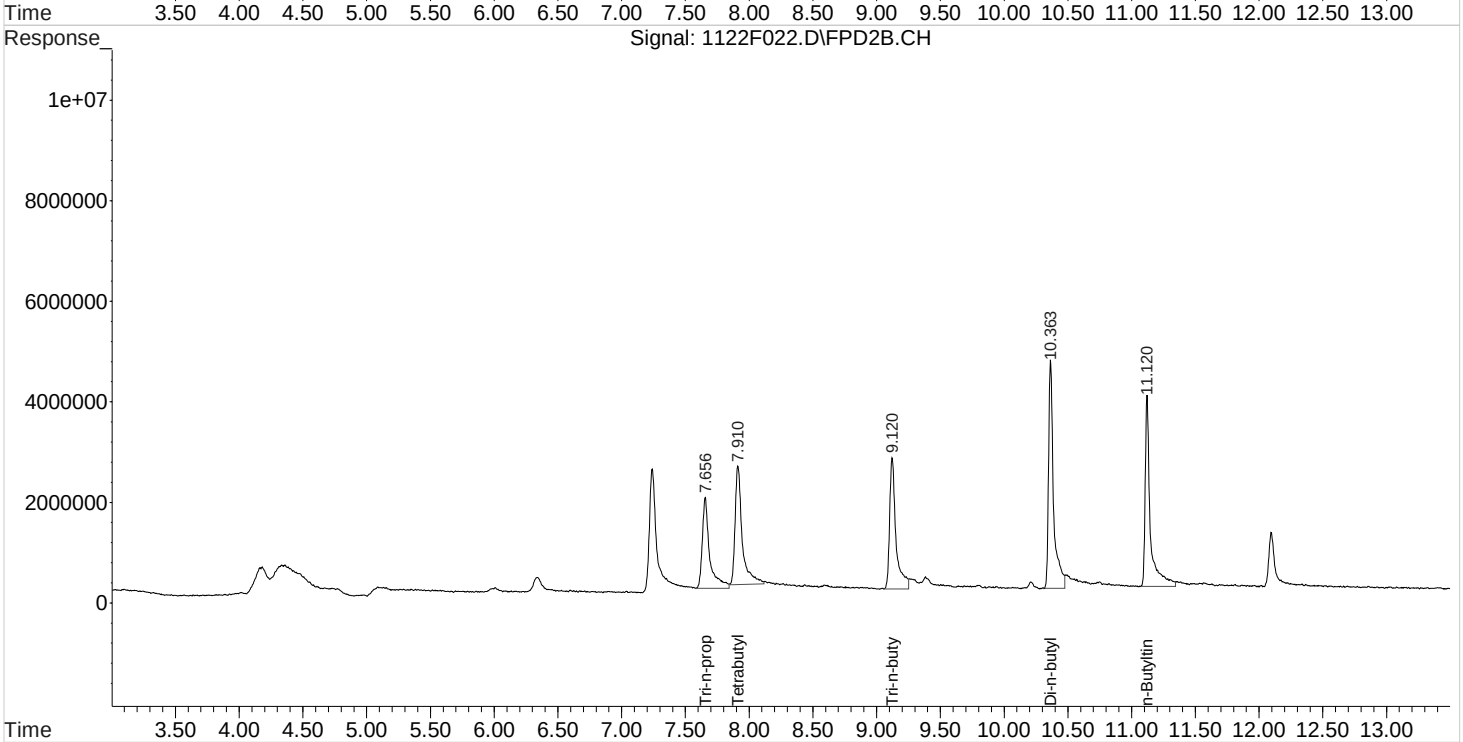
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F022.D Vial: 18
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:38 pm Operator: SMURRAY
Sample : KQ1805623-03LCS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:46 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F022.D\
Lab ID: KQ1815623-03
RunType: LCS
Matrix: Sediment

Date Acquired: 11/22/18 22:38:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F022.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:38:00	**Vial:**	22
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815623-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4657565	7322125	85.163	93.589	68	75	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	6130217	9058608	88.193	86.946	17.6	17.4	**17.4**	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Lab Control Spike Information

Data File:	J:\GC26\DATA\112218\1122F022.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815623-03	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/22/18 22:38:00
Matrix:	Sediment		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
Tri-n-butyltin Cation	17.4	22.3	78	10 - 122
Tri-n-propyltin			68	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Quantitation Report (Not Reviewed)

1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F022.D Vial: 18
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 5:16 pm Operator: SMURRAY
Sample : KQ1816241-03 LCS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:05 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.056	7.664	5125720	6777533	93.723	86.628
	Target Compounds						
2)	Tetrabuty...	8.379	7.924	5578806	8158816	91.511	87.077
3)	Tri-n-but...	9.656	9.141	5411286	7806793	77.850	74.931
4)	Di-n-buty...	10.709	10.381	7579118	10577744	65.932	60.738
5)	n-Butyltin	11.566	11.137	7819691	11048648	75.651	69.069

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

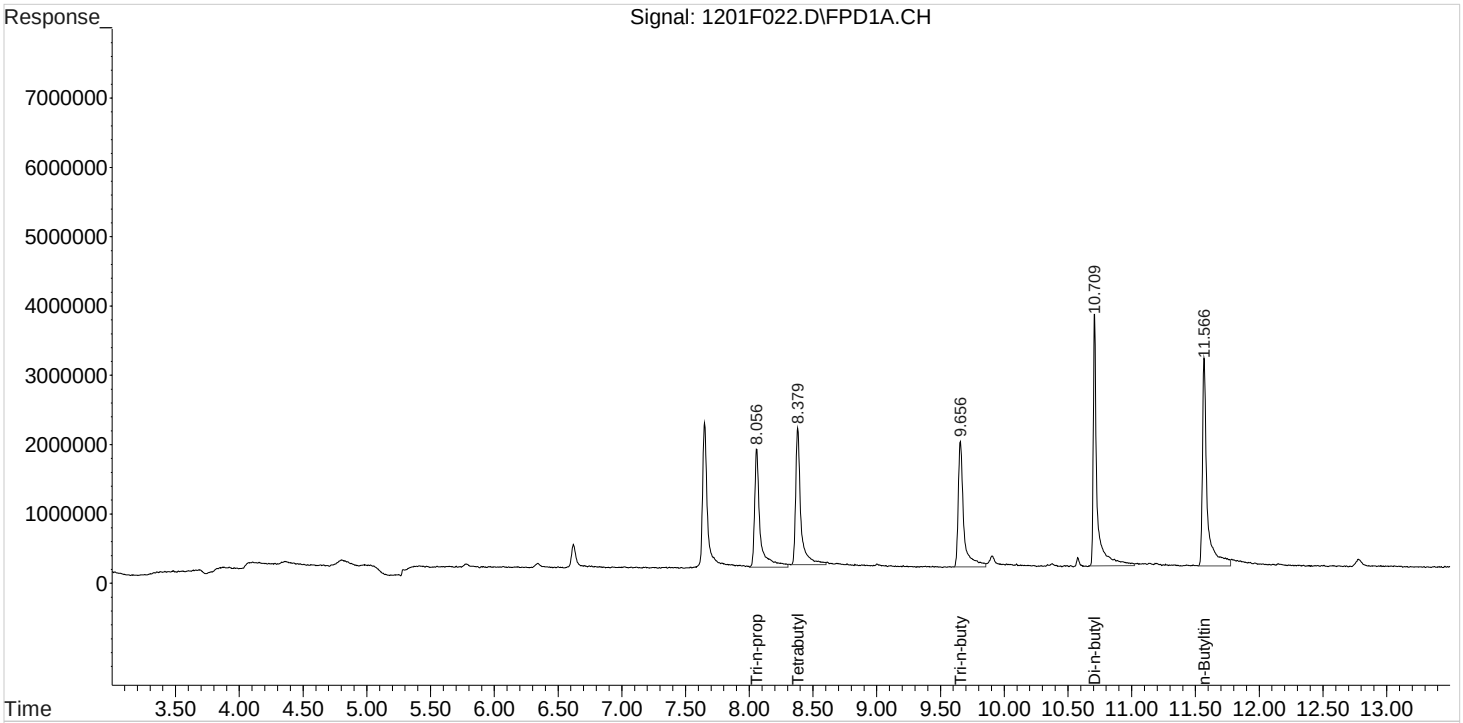
Quantitation Report (Not Reviewed)

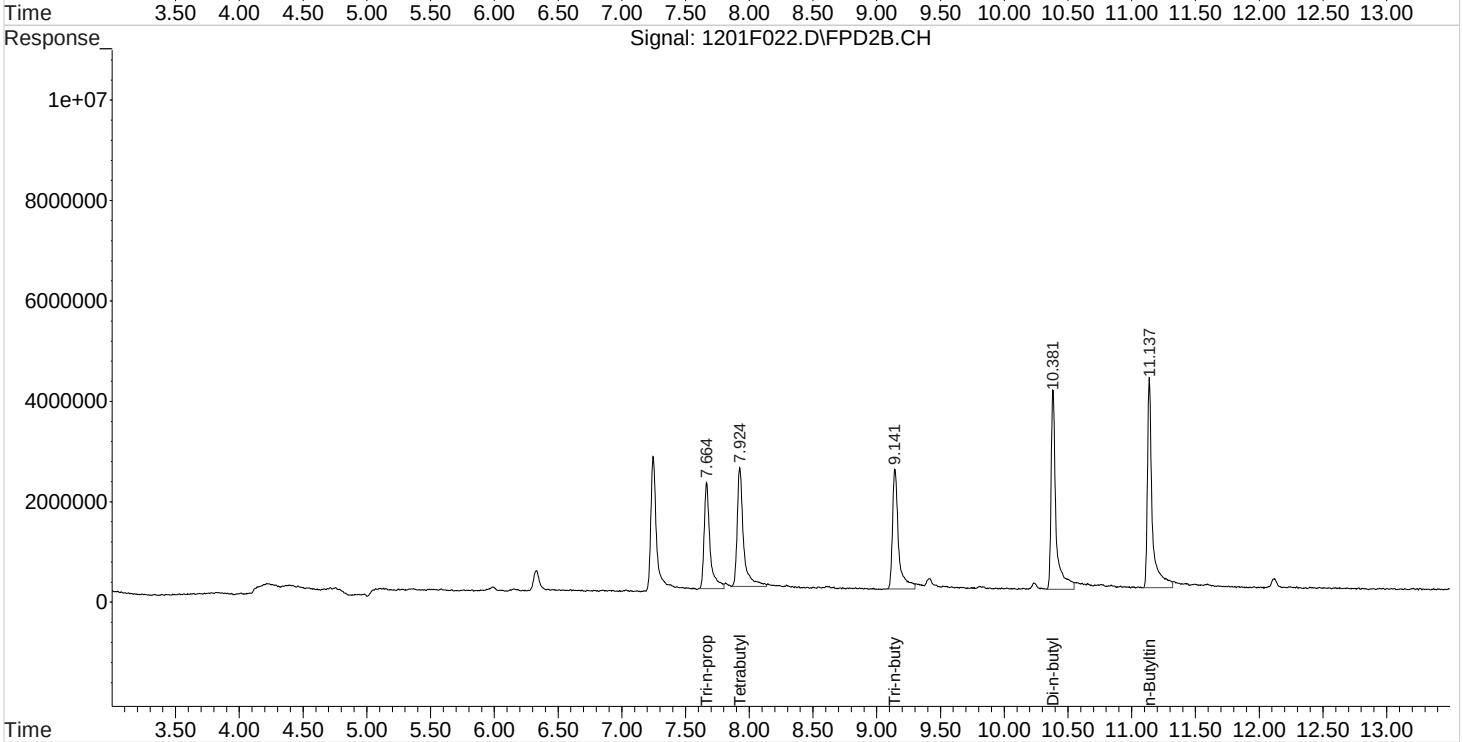
1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F022.D Vial: 18
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 5:16 pm Operator: SMURRAY
Sample : KQ1816241-03 LCS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:05 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st 12/02/18
2nd 12/06/18

Validation Report

Data File: J:\GC26\DATA\120118\1201F022.D\
Lab ID: KQ1816241-03
RunType: LCS
Matrix: Sediment

Date Acquired: 12/1/18 17:16:00
Batch ID: 617147
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-35	Tri-n-butyltin Cation	-26		25	RO

Primary Review: _____

Secondary Review: _____

1st 12/02/18
2nd 12/06/18

Quantitation Report

Data File:	J:\GC26\DATA\120118\1201F022.D\	**Instrument:**	K-GC-26
Acqu Date:	12/1/18 17:16:00	**Vial:**	21
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1816241-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/20/18	**Receive Date:**	10/22/18

Analysis Lot:	617147	**Prep Lot:**	325830	**Report Group:**	KQ1816241
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/19/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.06 +0.01	7.66	5125720	6777533	93.723	86.628	75	69	69	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2		Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	11.57 +0.01	11.14	7819691	11048648	75.651	69.069		15.1	13.8	**13.8**	Y
Di-n-butyltin Cation	10.71 +0.01	10.38	7579118	10577744	65.932	60.738		13.2	12.1	**12.1**	Y
Tri-n-butyltin Cation	9.66 +0.01	9.14	5411286	7806793	77.850	74.931 CCV	RO	15.6	15.0	**15.0**	Y
Tetra-n-butyltin	8.38 +0.01	7.92	5578806	8158816	91.511	87.077		18.3	17.4	**17.4**	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/2/18 13:57
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1st 12/02/18
2nd 12/06/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 4-1095-01
Spec Set: #926 v. 1
List ID: #17560

Lab Control Spike Information

Data File:	J:\GC26\DATA\120118\1201F022.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1816241-03	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	12/1/18 17:16:00
Matrix:	Sediment		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
n-Butyltin Cation	13.8	15.6	89	10 - 150
Di-n-butyltin Cation	12.1	19.2	63	12 - 136
Tri-n-butyltin Cation	15.0	22.3	67	10 - 122
Tetra-n-butyltin	17.4	25.0	70	19 - 130
Tri-n-propyltin			69	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st 12/02/18
2nd 12/06/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Lab Control Spike Information

Data File:	J:\GC26\DATA\120118\1201F022.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1816241-03	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	12/1/18 17:16:00
Matrix:	Sediment		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
Tri-n-butyltin Cation	15.0	22.3	67	10 - 122
Tri-n-propyltin			69	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F020.D\
Lab ID: KQ1815623-01
RunType: MS
Matrix: Sediment

Date Acquired: 11/22/18 22:01:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F020.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:01:00	**Vial:**	2
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815623-01	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.65 -0.01	3663437	5673562	66.985	72.517	54	58	54	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	6465485	9472517	93.016	90.919	20.3	19.8	**19.8**	Y

Prep Amount:	20.322 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Replicate Spike Summary Report

QAP Name: **Spec Set:** # v.
List Name: **List ID:** #

Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F020.D\	**Instrument:**	
Lab ID:		**Dilution:**	
Client ID:		**Units:**	
Test:	/	**Acqu Date:**	
Matrix:			

Sample Reference Information

Data File:		**Instrument:**	
Lab ID:		**Dilution:**	
Client ID:		**Units:**	
Test:	/	**Acqu Date:**	
Matrix:			

Parameter Name	Sample Result	Matrix Spike			% Rec Limits
		Result	Expected	% Rec	

Parameter Name	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD
						-	

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F021.D\
Lab ID: KQ1815623-02
RunType: DMS
Matrix: Sediment

Date Acquired: 11/22/18 22:20:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F021.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:20:00	**Vial:**	3
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815623-02	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.65 -0.01	4076799	6385955	74.543	81.623	60	65	60	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	5963992	9351832	85.801	89.760	18.8	19.7	**18.8**	Y

Prep Amount:	20.208 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F006.D\
Lab ID: K1810270-006
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 17:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tri-n-butyltin Cation	-31		25	

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1st SM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F006.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 17:44:00	**Vial:**	4
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-006	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04	7.65	3948863	6347715	72.204	81.134	58	65	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.62	9.12 $^{+0.01}$	102756	253615	1.478^{CCV}	2.434	0.39U	0.64J	0.57 U	Y

Prep Amount:	20.111 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F056.D\
Lab ID: KQ1817164-12
RunType: CCB
Matrix: Sediment

Date Acquired: 11/23/18 08:50:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F056.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 08:50:00	**Vial:**	5
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-12	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	0.00	7.63 $^{-0.03}$	0	24902	0.000	0.318				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
n-Butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.14 $^{+0.02}$	0	35686	0.000	0.343	0U	0.069U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F049.D\
Lab ID: KQ1817164-11
RunType: CCB
Matrix: Sediment

Date Acquired: 11/23/18 06:40:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F049.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:40:00	**Vial:**	6
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-11	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	0.00	7.64 -0.02	0	21451	0.000	0.274				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
n-Butyltin Cation	0.00	11.07 -0.05	0	23490	0.000	0.147	0U	0.029U	0.26 U	Y
Di-n-butyltin Cation	0.00	10.31 -0.05	0	21100	0.000	0.121	0U	0.024U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.07 -0.05	0	22216	0.000	0.213	0U	0.043U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F037.D\
Lab ID: KQ1817164-10
RunType: CCB
Matrix: Sediment

Date Acquired: 11/23/18 03:16:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F037.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 03:16:00	**Vial:**	7
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-10	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	0.00	0.00	0	0	0.000	0.000				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
n-Butyltin Cation	0.00	11.12	0	26831	0.000	0.168	0U	0.034U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.12	0	20478	0.000	0.197	0U	0.039U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F025.D\
Lab ID: KQ1817164-09
RunType: CCB
Matrix: Sediment

Date Acquired: 11/22/18 23:34:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tetra-n-butyltin	-27		25	
Continuing Calibration Recovery - RTX-35	Tetra-n-butyltin	-27		25	

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F025.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:34:00	**Vial:**	8
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-09	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	0.00	7.56 $^{-0.10}$	0	45868	0.000	0.586				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
n-Butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	10.36	0	25361	0.000	0.146	0U	0.029U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.14 $^{+0.02}$	0	16916	0.000	0.162	0U	0.032U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000^{CCV}	0.000^{CCV}	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F016.D\
Lab ID: KQ1817164-08
RunType: CCB
Matrix: Sediment

Date Acquired: 11/22/18 20:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)		X
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tetra-n-butyltin	-34		25	
Continuing Calibration Recovery (Closing) - RTX-1	Tetra-n-butyltin	-27		25	
Continuing Calibration Recovery (Closing) - RTX-35	Tetra-n-butyltin	-27		25	

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Secondary Review: _____

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2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F016.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 20:48:00	**Vial:**	9
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-08	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	0.00	7.59 -0.07	0	16825	0.000	0.215				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
n-Butyltin Cation	0.00	11.06 -0.06	0	30386	0.000	0.190	0U	0.038U	0.26 U	Y
Di-n-butyltin Cation	0.00	10.33 -0.03	0	38325	0.000	0.220	0U	0.044U	0.19 U	Y
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000 CCV	0.000 CCV	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F004.D\
Lab ID: KQ1817164-07
RunType: CCB
Matrix: Sediment

Date Acquired: 11/22/18 17:06:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)		X
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	n-Butyltin Cation	-26		25	
	Tri-n-butyltin Cation	-31		25	
	Tetra-n-butyltin	-40		25	
Continuing Calibration Recovery (Closing) - RTX-1	Tetra-n-butyltin	-34		25	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F004.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 17:06:00	**Vial:**	10
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-07	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	0.00	0.00	0	0	0.000	0.000				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
n-Butyltin Cation	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F055.D\
Lab ID: KQ1817164-06
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 08:31:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F055.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 08:31:00	**Vial:**	11
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt
Tri-n-propyltin	8.05	7.66	2515345	3463760	45.993	44.272			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt
n-Butyltin Cation	11.55	11.12	2882396	4136514	27.885	25.859	27.9	25.9	Y
Di-n-butyltin Cation	10.69	10.36	4206168	6050575	36.590	34.743	36.6	34.7	Y
Tri-n-butyltin Cation	9.63	9.12	2853572	4339055	41.053	41.647	41.1	41.6	Y
Tetra-n-butyltin	8.37	7.92	2309232	5108374	37.879	54.521	37.9	54.5	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F055.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	41.1	6.951E4	6.405E4	-8		± 25%	Average RF
Tri-n-propyltin	50.0	46.0	5.469E4	5.031E4	-8		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F055.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	41.6	1.042E5	9.740E4	-7		± 25%	Average RF
Tri-n-propyltin	50.0	44.3	7.824E4	6.928E4	-11		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F048.D\
Lab ID: KQ1817164-05
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 06:21:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F048.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:21:00	**Vial:**	12
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt
Tri-n-propyltin	8.05	7.66	2284311	3093041	41.768	39.534			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt
n-Butyltin Cation	11.55	11.12	2644401	4585261	25.583	28.664	25.6	28.7	Y
Di-n-butyltin Cation	10.69	10.36	4236619	5941185	36.855	34.114	36.9	34.1	Y
Tri-n-butyltin Cation	9.63	9.12	2638965	4007470	37.966	38.464	38.0	38.5	Y
Tetra-n-butyltin	8.37	7.91	2273607	3708775	37.295	39.583	37.3	39.6	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F048.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.0	6.951E4	5.924E4	-15		± 25%	Average RF
Tri-n-propyltin	50.0	41.8	5.469E4	4.569E4	-16		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F048.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.5	1.042E5	8.995E4	-14		± 25%	Average RF
Tri-n-propyltin	50.0	39.5	7.824E4	6.186E4	-21		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F036.D\
Lab ID: KQ1817164-04
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 02:58:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F036.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:58:00	**Vial:**	13
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt
Tri-n-propyltin	8.05	7.66	2682105	3312241	49.042	42.336			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt
n-Butyltin Cation	11.55	11.12	2587104	4192897	25.029	26.211	25.0	26.2	Y
Di-n-butyltin Cation	10.69	10.36	3920015	5856534	34.101	33.628	34.1	33.6	Y
Tri-n-butyltin Cation	9.63	9.12	2496144	3931199	35.911	37.732	35.9	37.7	Y
Tetra-n-butyltin	8.36	7.92	2351899	3597743	38.579	38.398	38.6	38.4	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F036.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.9	6.951E4	5.603E4	-19		± 25%	Average RF
Tri-n-propyltin	50.0	49.0	5.469E4	5.364E4	-2		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F036.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.7	1.042E5	8.824E4	-15		± 25%	Average RF
Tri-n-propyltin	50.0	42.3	7.824E4	6.624E4	-15		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F024.D\
Lab ID: KQ1817164-03
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 23:16:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F024.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:16:00	**Vial:**	14
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt
Tri-n-propyltin	8.04	7.66	2047701	3055841	37.442	39.059			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt
n-Butyltin Cation	11.55	11.12	2701941	4600220	26.140	28.758	26.1	28.8	Y
Di-n-butyltin Cation	10.69	10.36	3670621	5780826	31.931	33.194	31.9	33.2	Y
Tri-n-butyltin Cation	9.63	9.12	2538784	4042140	36.524	38.797	36.5	38.8	Y
Tetra-n-butyltin	8.36	7.92	2229613	3440625	36.573	36.721	36.6	36.7	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.5	6.951E4	5.699E4	-18		± 25%	Average RF
Tri-n-propyltin	50.0	37.4	5.469E4	4.095E4	-25		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.8	1.042E5	9.073E4	-13		± 25%	Average RF
Tri-n-propyltin	50.0	39.1	7.824E4	6.112E4	-22		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F015.D\
Lab ID: KQ1817164-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 20:29:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F015.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 20:29:00	**Vial:**	15
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt
Tri-n-propyltin	8.05	7.66	2319832	3396305	42.418	43.410			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt
n-Butyltin Cation	11.55	11.12	2658153	4209353	25.716	26.314	25.7	26.3	Y
Di-n-butyltin Cation	10.69	10.36	3652305	5726535	31.772	32.882	31.8	32.9	Y
Tri-n-butyltin Cation	9.63	9.12	2361367	3777675	33.972	36.259	34.0	36.3	Y
Tetra-n-butyltin	8.36	7.91	2005274	4491808	32.893	47.940	32.9	47.9	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F015.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.0	6.951E4	5.300E4	-24		± 25%	Average RF
Tri-n-propyltin	50.0	42.4	5.469E4	4.640E4	-15		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F015.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	1.042E5	8.480E4	-19		± 25%	Average RF
Tri-n-propyltin	50.0	43.4	7.824E4	6.793E4	-13		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F003.D\
Lab ID: KQ1817164-01
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 16:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F003.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 16:48:00	**Vial:**	16
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis Method:	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt
Tri-n-propyltin	8.04	7.65	2074299	3561382	37.928	45.520			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt
n-Butyltin Cation	11.54	11.11	2369189	4372518	22.920	27.334	22.9	27.3	Y
Di-n-butyltin Cation	10.69	10.36	3398698	5904410	29.566	33.903	29.6	33.9	Y
Tri-n-butyltin Cation	9.62	9.11	2134746	3838131	30.712	36.839	30.7	36.8	Y
Tetra-n-butyltin	8.36	7.91	1843007	3738717	30.232	39.903	30.2	39.9	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	30.7	6.951E4	4.792E4	-31 *		± 25%	Average RF
Tri-n-propyltin	50.0	37.9	5.469E4	4.149E4	-24		± 25%	Average RF

1 Compounds Failed CCV Criteria (50.00 Percent)

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.8	1.042E5	8.615E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	45.5	7.824E4	7.123E4	-9		± 25%	Average RF

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F007.D\
Lab ID: K1810270-010
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 18:02:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tri-n-butyltin Cation	-31		25	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F007.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 18:02:00	**Vial:**	17
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-010	**Raw Units:**	ng/mL

Bottle ID:	K1810270-010.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04	7.65	3980491	6044220	72.782	77.255	58	62	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.68 U	Y

Prep Amount:	20.306 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	63.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F017.D\
Lab ID: K1810270-019
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 21:06:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F017.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 21:06:00	**Vial:**	19
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-019	**Raw Units:**	ng/mL

Bottle ID:	K1810270-019.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04 -0.01	7.66	4343718	6598702	79.424	84.342	64	67	64	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	27617940	38948611	397.328	373.835	190	180	**180**	Y

Prep Amount:	20.388 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	40.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

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2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F022.D\
Lab ID: KQ1815623-03
RunType: LCS
Matrix: Sediment

Date Acquired: 11/22/18 22:38:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F022.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:38:00	**Vial:**	22
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815623-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	4657565	7322125	85.163	93.589	68	75	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	6130217	9058608	88.193	86.946	17.6	17.4	**17.4**	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Lab Control Spike Information

Data File:	J:\GC26\DATA\112218\1122F022.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815623-03	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/22/18 22:38:00
Matrix:	Sediment		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
Tri-n-butyltin Cation	17.4	22.3	78	10 - 122
Tri-n-propyltin			68	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F023.D\
Lab ID: KQ1815623-04
RunType: MB
Matrix: Sediment

Date Acquired: 11/22/18 22:57:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F023.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:57:00	**Vial:**	23
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815623-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04 -0.01	7.65 -0.01	3669577	5570730	67.097	71.203	54	57	54	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y

Prep Amount:	20.4510 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F026.D\
Lab ID: K1810417-001
RunType: N/A
Matrix: Soil

Date Acquired: 11/22/18 23:53:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F026.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:53:00	**Vial:**	24
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-001	**Raw Units:**	ng/mL

Bottle ID:	K1810417-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04	7.65 -0.01	3552472	4745439	64.956	60.654	52	49	49	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.51 U	Y

Prep Amount:	20.008 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	84.60

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F028.D\
Lab ID: K1810417-003
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 00:30:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F028.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 00:30:00	**Vial:**	26
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-003	**Raw Units:**	ng/mL

Bottle ID:	K1810417-003.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 +0.01	7.66	5429513	7922541	99.277	101.263	79	81	79	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	171260	242458	2.464	2.327	0.70J	0.66J	**0.66** J	Y

Prep Amount:	20.073 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	69.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F029.D\
Lab ID: K1810417-004
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 00:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F029.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 00:48:00	**Vial:**	27
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-004	**Raw Units:**	ng/mL

Bottle ID:	K1810417-004.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 +0.01	7.66	5223234	8028788	95.506	102.621	76	82	76	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	172827	335268	2.486	3.218	0.90J	1.2J	**0.90** J	Y

Prep Amount:	20.017 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	55.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: J:\GC26\DATA\112218\1122F030.D\
Lab ID: K1810417-005
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 01:07:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st SM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F030.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 01:07:00	**Vial:**	28
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-005	**Raw Units:**	ng/mL

Bottle ID:	K1810417-005.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 $^{+0.01}$	7.66	4911000	7593796	89.797	97.061	72	78	72	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.59 U	Y

Prep Amount:	20.014 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F031.D\
Lab ID: K1810417-006
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 01:25:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F031.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 01:25:00	**Vial:**	29
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-006	**Raw Units:**	ng/mL

Bottle ID:	K1810417-006.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 +0.01	7.66	5527418	8595125	101.068	109.860	81	88	81	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	585479	925041	8.423	8.879	3.1	3.2	**3.1**	Y

Prep Amount:	20.092 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	54.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F032.D\
Lab ID: K1810417-007
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 01:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st SM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F032.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 01:44:00	**Vial:**	30
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-007	**Raw Units:**	ng/mL

Bottle ID:	K1810417-007.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 +0.01	7.65 -0.01	3399190	4997307	62.153	63.874	50	51	50	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	4708694	8049783	67.742	77.263	29	33	**29**	Y

Prep Amount:	20.058 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	47.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: J:\GC26\DATA\112218\1122F033.D\
Lab ID: K1810417-008
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 02:02:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st STM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F033.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:02:00	**Vial:**	31
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-008	**Raw Units:**	ng/mL

Bottle ID:	K1810417-008.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 +0.01	7.66	4901170	6508816	89.617	83.193	72	67	67	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.64 +0.01	9.12	15498704	21765613	222.973	208.910	94	88	**88**	Y

Prep Amount:	20.065 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	47.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: J:\GC26\DATA\112218\1122F034.D\
Lab ID: K1810417-009
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 02:21:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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1st SM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F034.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:21:00	**Vial:**	32
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-009	**Raw Units:**	ng/mL

Bottle ID:	K1810417-009.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 $^{+0.01}$	7.66	5437918	8286385	99.431	105.913	80	85	80	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	3660355	6332614	52.660	60.781	15	17	**15**	Y

Prep Amount:	20.089 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	70.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F035.D\
Lab ID: K1810417-010
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 02:39:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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Secondary Review: _____

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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F035.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:39:00	**Vial:**	33
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-010	**Raw Units:**	ng/mL

Bottle ID:	K1810417-010.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05 +0.01	7.65 -0.01	5671862	7412701	103.709	94.746	83	76	76	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	6446464	9110532	92.743	87.444	28	26	**26**	Y

Prep Amount:	19.977 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	66.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Validation Report

Data File: J:\GC26\DATA\112218\1122F038.D\
Lab ID: K1810417-011
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 03:35:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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Secondary Review: _____

1st SM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F038.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 03:35:00	**Vial:**	34
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-011	**Raw Units:**	ng/mL

Bottle ID:	K1810417-011.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	5155419	7455144	94.266	95.289	75	76	75	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	13404135	19610993	192.840	188.230	75	73	**73**	Y

Prep Amount:	20.088 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	51.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F039.D\
Lab ID: K1810417-012
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 03:54:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F039.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 03:54:00	**Vial:**	35
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-012	**Raw Units:**	ng/mL

Bottle ID:	K1810417-012.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04 -0.01	7.66	5373449	8173212	98.252	104.467	79	84	79	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	9.12	0	129858	0.000	1.246	0U	0.36U	0.63 U	Y

Prep Amount:	20.057 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	68.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F041.D\
Lab ID: K1810417-014
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 04:31:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F041.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 04:31:00	**Vial:**	37
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-014	**Raw Units:**	ng/mL

Bottle ID:	K1810417-014.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	3983687	5659691	72.841	72.340	58	58	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	409439	685990	5.890	6.584	1.6	1.8	**1.6**	Y

Prep Amount:	20.035 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F043.D\
Lab ID: K1810417-016
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 04:49:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F043.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 04:49:00	**Vial:**	38
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-016	**Raw Units:**	ng/mL

Bottle ID:	K1810417-016.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.65 -0.01	3927060	6149289	71.805	78.598	57	63	57	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	1136178	1565148	16.346	15.023	5.3	4.9	**4.9**	Y

Prep Amount:	20.049 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	61.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F044.D\
Lab ID: K1810417-017
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 05:07:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F044.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 05:07:00	**Vial:**	39
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-017	**Raw Units:**	ng/mL

Bottle ID:	K1810417-017.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04 -0.01	7.66	3780077	5584634	69.118	71.381	55	57	55	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	3957491	5668794	56.935	54.410	15	14	**14**	Y

Prep Amount:	20.066 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	78.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F045.D\
Lab ID: K1810417-018
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 05:26:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F045.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 05:26:00	**Vial:**	40
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-018	**Raw Units:**	ng/mL

Bottle ID:	K1810417-018.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	4791611	6367693	87.614	81.389	70	65	65	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	984786	1655584	14.168	15.891	3.5	3.9	**3.5**	Y

Prep Amount:	20.093 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	80.60

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F046.D\
Lab ID: K1810417-019
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 05:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F046.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 05:44:00	**Vial:**	41
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-019	**Raw Units:**	ng/mL

Bottle ID:	K1810417-019.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	4599127	6334119	84.094	80.960	67	65	65	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	355813	612158	5.119	5.876	1.3J	1.5	**1.3** J	Y

Prep Amount:	20.089 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	78.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F047.D\
Lab ID: K1810417-020
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 06:03:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F047.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:03:00	**Vial:**	42
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-020	**Raw Units:**	ng/mL

Bottle ID:	K1810417-020.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	5277933	7331944	96.506	93.714	77	75	75	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	9.12	0	32888	0.000	0.316	0U	0.091U	0.63 U	Y

Prep Amount:	20.011 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	69.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F050.D\
Lab ID: K1810417-021
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 06:58:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F050.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:58:00	**Vial:**	43
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-021	**Raw Units:**	ng/mL

Bottle ID:	K1810417-021.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	4832976	7140766	88.370	91.271	71	73	71	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	644702	833086	9.275	7.996	3.3	2.8	**2.8**	Y

Prep Amount:	20.025 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	57.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F051.D\
Lab ID: KQ1815717-01
RunType: MS
Matrix: Soil

Date Acquired: 11/23/18 07:17:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F051.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 07:17:00	**Vial:**	44
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815717-01	**Raw Units:**	ng/mL

Bottle ID:	K1810417-005.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	4825137	6950256	88.227	88.836	71	71	71	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	4800021	7088027	69.056	68.032	18.8	18.5	**18.5**	Y

Prep Amount:	20.073 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Matrix Spike Summary Report

QAP Name: LAB QAP **Spec Set:** #926 v. 1
List Name: 1-1095-01 TBT ONLY **List ID:** #18688

Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F051.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815717-01	**Dilution:**	1
Client ID:	Matrix Spike	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 07:17:00
Matrix:	Soil		

Duplicate Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F052.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815717-02	**Dilution:**	1
Client ID:	Duplicate Matrix Spike	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 07:35:00
Matrix:	Soil		

Sample Reference Information

Data File:	J:\GC26\DATA\112218\1122F030.D\	**Instrument:**	K-GC-26
Lab ID:	K1810417-005	**Dilution:**	1
Client ID:	J3-SC-76to98-102218	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 01:07:00
Matrix:	Soil		

Parameter Name	Sample Result	Matrix Spike			Duplicate Matrix Spike			% Rec Limits	RPD	RPD Limit
		Result	Expected	% Rec	Result	Expected	% Rec			
Tri-n-butyltin Cation	ND	18.5	30.3	61	19.7	30.4	65	10 - 115	6	40
Tri-n-propyltin				71			68	10 - 120		

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F052.D\
Lab ID: KQ1815717-02
RunType: DMS
Matrix: Soil

Date Acquired: 11/23/18 07:35:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F052.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 07:35:00	**Vial:**	45
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815717-02	**Raw Units:**	ng/mL

Bottle ID:	K1810417-005.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.66	4920020	6628842	89.962	84.727	72	68	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	5267951	7520851	75.788	72.186	20.7	19.7	**19.7**	Y

Prep Amount:	20.023 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F053.D\
Lab ID: KQ1815717-05
RunType: LCS
Matrix: Soil

Date Acquired: 11/23/18 07:54:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F053.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 07:54:00	**Vial:**	46
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815717-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.05	7.65 -0.01	3121123	4476755	57.069	57.220	46	46	46	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	9.63	9.12	4588274	6767303	66.010	64.954	13.2	13.0	**13.0**	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Lab Control Spike Information

Data File:	J:\GC26\DATA\112218\1122F053.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815717-05	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 07:54:00
Matrix:	Soil		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
Tri-n-butyltin Cation	13.0	22.3	58	10 - 122
Tri-n-propyltin			46	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F054.D\
Lab ID: KQ1815717-06
RunType: MB
Matrix: Soil

Date Acquired: 11/23/18 08:13:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F054.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 08:13:00	**Vial:**	47
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815717-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis Method:	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt
Tri-n-propyltin	8.04 -0.01	7.66	4809605	6665855	87.943	85.200	70	68	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y

Prep Amount:	20.0930 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F020.D Vial: 16
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:01 pm Operator: SMURRAY
Sample : K1810270-004 MS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:42 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.047	7.655	3663437	5673562	66.985	72.517
	Target Compounds						
2)	Tetrabuty...	8.364	7.915	5257904	7897257	86.247	84.286
3)	Tri-n-but...	9.634	9.122	6465485	9472517	93.016	90.919
4)	Di-n-buty...	10.694	10.365	6672921	9698523	58.049	55.689
5)	n-Butyltin	11.550	11.122	857444	1355273	8.295	8.472

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

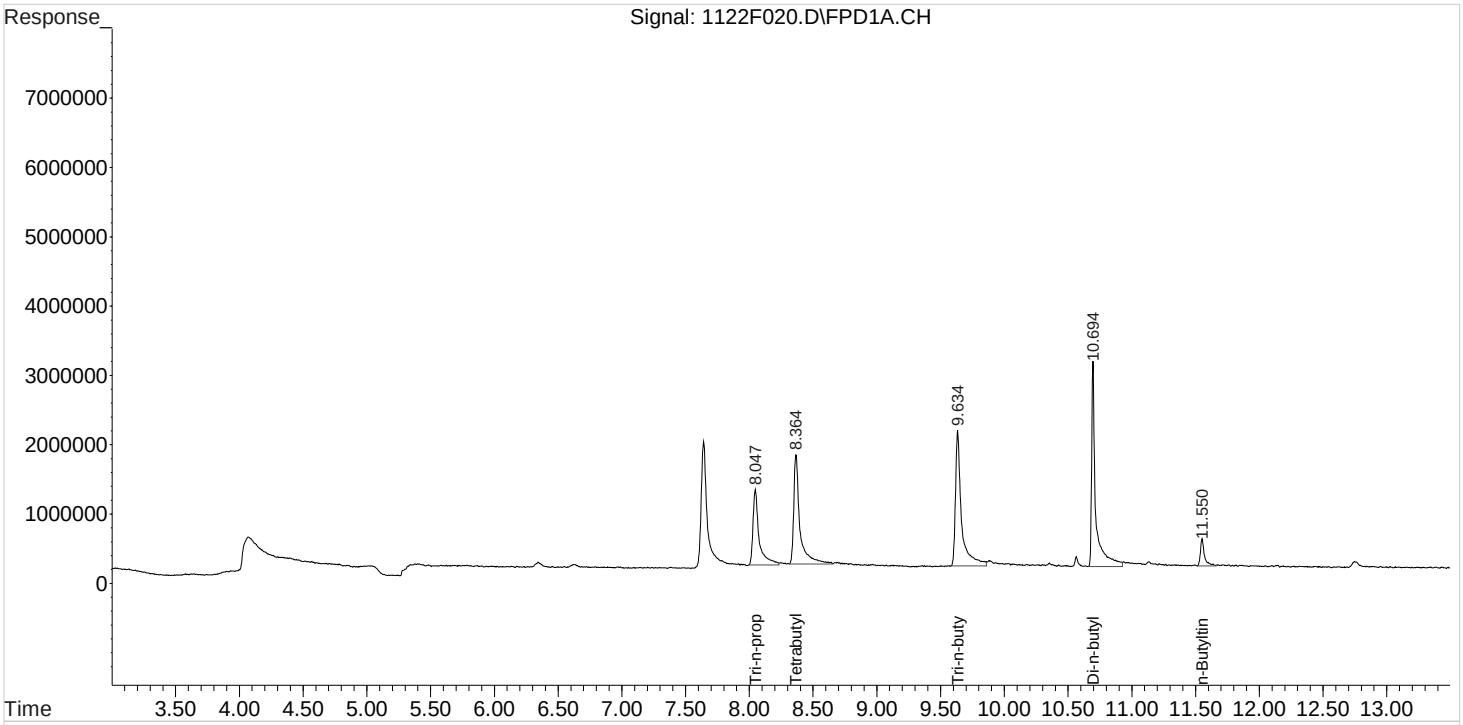
Quantitation Report (Not Reviewed)

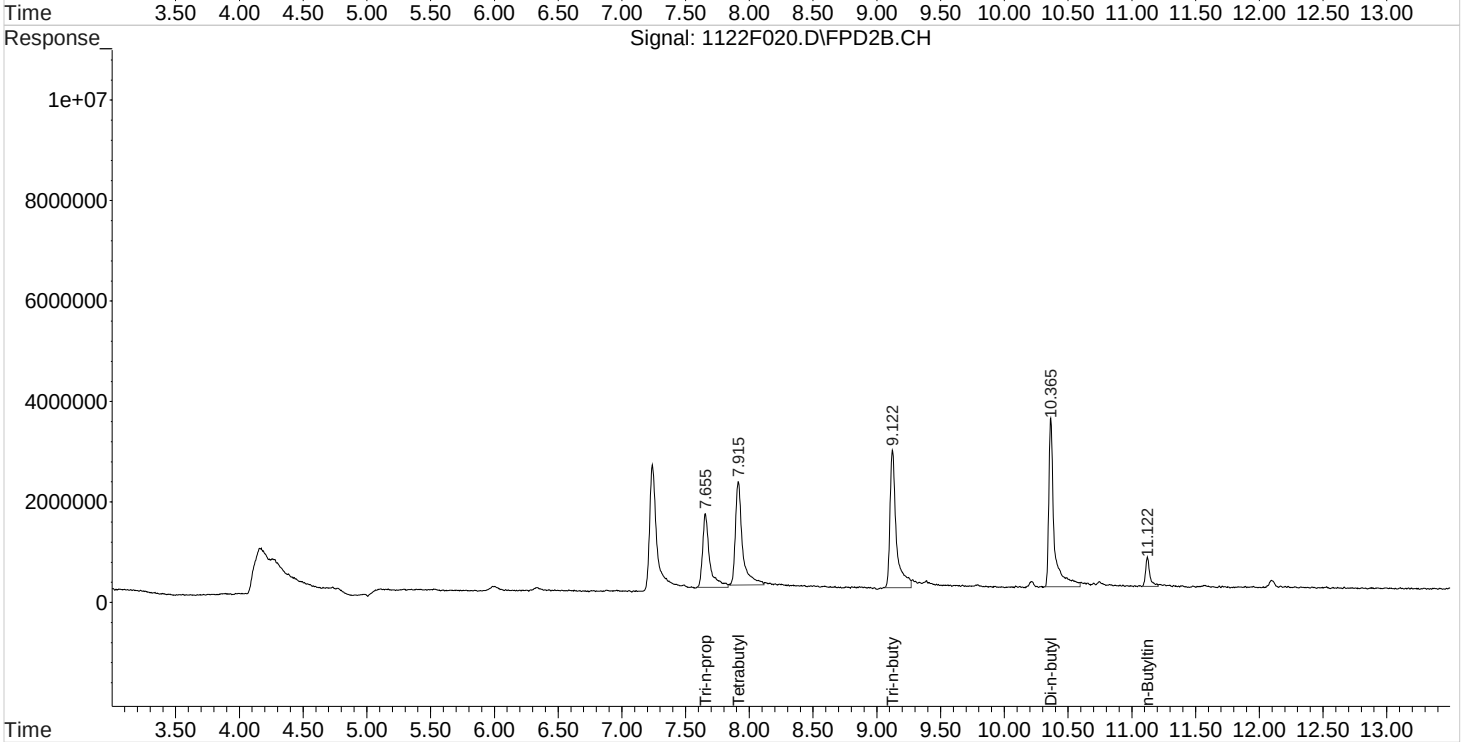
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F020.D Vial: 16
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:01 pm Operator: SMURRAY
Sample : K1810270-004 MS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:42 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F020.D\
Lab ID: KQ1815623-01
RunType: MS
Matrix: Sediment

Date Acquired: 11/22/18 22:01:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F020.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:01:00	**Vial:**	2
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815623-01	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.65 -0.01	3663437	5673562	66.985	72.517	54	58	54	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	6465485	9472517	93.016	90.919	20.3	19.8	**19.8**	Y

Prep Amount:	20.322 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Replicate Spike Summary Report

QAP Name: **Spec Set:** # v.
List Name: **List ID:** #

Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F020.D\	**Instrument:**	
Lab ID:		**Dilution:**	
Client ID:		**Units:**	
Test:	/	**Acqu Date:**	
Matrix:			

Sample Reference Information

Data File:		**Instrument:**	
Lab ID:		**Dilution:**	
Client ID:		**Units:**	
Test:	/	**Acqu Date:**	
Matrix:			

Parameter Name	Sample Result	Matrix Spike Result	Matrix Spike Expected	Matrix Spike % Rec	% Rec Limits

Parameter Name	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD
						-	

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F021.D\
Lab ID: KQ1815623-02
RunType: DMS
Matrix: Sediment

Date Acquired: 11/22/18 22:20:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Printed: 11/25/18 9:41
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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F021.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:20:00	**Vial:**	3
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815623-02	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.65 -0.01	4076799	6385955	74.543	81.623	60	65	60	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	5963992	9351832	85.801	89.760	18.8	19.7	**18.8**	Y

Prep Amount:	20.208 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F006.D\
Lab ID: K1810270-006
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 17:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tri-n-butyltin Cation	-31		25	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F006.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 17:44:00	**Vial:**	4
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-006	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04	7.65	3948863	6347715	72.204	81.134	58	65	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.62	9.12 +0.01	102756	253615	1.478 CCV	2.434	0.39U	0.64J	0.57 U	Y

Prep Amount:	20.111 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F056.D\
Lab ID: KQ1817164-12
RunType: CCB
Matrix: Sediment

Date Acquired: 11/23/18 08:50:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F056.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 08:50:00	**Vial:**	5
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-12	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	0.00	7.63 -0.03	0	24902	0.000	0.318				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.14 +0.02	0	35686	0.000	0.343	0U	0.069U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F049.D\
Lab ID: KQ1817164-11
RunType: CCB
Matrix: Sediment

Date Acquired: 11/23/18 06:40:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F049.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:40:00	**Vial:**	6
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-11	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	0.00	7.64 -0.02	0	21451	0.000	0.274				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	11.07 -0.05	0	23490	0.000	0.147	0U	0.029U	0.26 U	Y
Di-n-butyltin Cation	0.00	10.31 -0.05	0	21100	0.000	0.121	0U	0.024U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.07 -0.05	0	22216	0.000	0.213	0U	0.043U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F037.D\
Lab ID: KQ1817164-10
RunType: CCB
Matrix: Sediment

Date Acquired: 11/23/18 03:16:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F037.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 03:16:00	**Vial:**	7
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-10	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	0.00	0.00	0	0	0.000	0.000				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	11.12	0	26831	0.000	0.168	0U	0.034U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.12	0	20478	0.000	0.197	0U	0.039U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F025.D\
Lab ID: KQ1817164-09
RunType: CCB
Matrix: Sediment

Date Acquired: 11/22/18 23:34:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tetra-n-butyltin	-27		25	
Continuing Calibration Recovery - RTX-35	Tetra-n-butyltin	-27		25	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F025.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:34:00	**Vial:**	8
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-09	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	0.00	7.56 $^{-0.10}$	0	45868	0.000	0.586				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	10.36	0	25361	0.000	0.146	0U	0.029U	0.19 U	Y
Tri-n-butyltin Cation	0.00	9.14 $^{+0.02}$	0	16916	0.000	0.162	0U	0.032U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000^{CCV}	0.000^{CCV}	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F016.D\
Lab ID: KQ1817164-08
RunType: CCB
Matrix: Sediment

Date Acquired: 11/22/18 20:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)		X
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tetra-n-butyltin	-34		25	
Continuing Calibration Recovery (Closing) - RTX-1	Tetra-n-butyltin	-27		25	
Continuing Calibration Recovery (Closing) - RTX-35	Tetra-n-butyltin	-27		25	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F016.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 20:48:00	**Vial:**	9
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-08	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	0.00	7.59 -0.07	0	16825	0.000	0.215				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	11.06 -0.06	0	30386	0.000	0.190	0U	0.038U	0.26 U	Y
Di-n-butyltin Cation	0.00	10.33 -0.03	0	38325	0.000	0.220	0U	0.044U	0.19 U	Y
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000 CCV	0.000 CCV	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F004.D\
Lab ID: KQ1817164-07
RunType: CCB
Matrix: Sediment

Date Acquired: 11/22/18 17:06:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)		X
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	n-Butyltin Cation	-26		25	
	Tri-n-butyltin Cation	-31		25	
	Tetra-n-butyltin	-40		25	
Continuing Calibration Recovery (Closing) - RTX-1	Tetra-n-butyltin	-34		25	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F004.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 17:06:00	**Vial:**	10
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817164-07	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	0.00	0.00	0	0	0.000	0.000				-	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
n-Butyltin Cation	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.26 U	Y
Di-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.19 U	Y
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.43 U	Y
Tetra-n-butyltin	0.00	0.00	0	0	0.000[CCV]	0.000	0U	0U	0.44 U	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F055.D\
Lab ID: KQ1817164-06
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 08:31:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F055.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 08:31:00	**Vial:**	11
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2515345	3463760	45.993	44.272			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2882396	4136514	27.885	25.859	27.9	25.9	Y
Di-n-butyltin Cation	10.69	10.36	4206168	6050575	36.590	34.743	36.6	34.7	Y
Tri-n-butyltin Cation	9.63	9.12	2853572	4339055	41.053	41.647	41.1	41.6	Y
Tetra-n-butyltin	8.37	7.92	2309232	5108374	37.879	54.521	37.9	54.5	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F055.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	41.1	6.951E4	6.405E4	-8		± 25%	Average RF
Tri-n-propyltin	50.0	46.0	5.469E4	5.031E4	-8		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F055.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	41.6	1.042E5	9.740E4	-7		± 25%	Average RF
Tri-n-propyltin	50.0	44.3	7.824E4	6.928E4	-11		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F048.D\
Lab ID: KQ1817164-05
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 06:21:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F048.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:21:00	**Vial:**	12
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2284311	3093041	41.768	39.534			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2644401	4585261	25.583	28.664	25.6	28.7	Y
Di-n-butyltin Cation	10.69	10.36	4236619	5941185	36.855	34.114	36.9	34.1	Y
Tri-n-butyltin Cation	9.63	9.12	2638965	4007470	37.966	38.464	38.0	38.5	Y
Tetra-n-butyltin	8.37	7.91	2273607	3708775	37.295	39.583	37.3	39.6	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F048.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.0	6.951E4	5.924E4	-15		± 25%	Average RF
Tri-n-propyltin	50.0	41.8	5.469E4	4.569E4	-16		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F048.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.5	1.042E5	8.995E4	-14		± 25%	Average RF
Tri-n-propyltin	50.0	39.5	7.824E4	6.186E4	-21		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F036.D\
Lab ID: KQ1817164-04
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 02:58:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F036.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:58:00	**Vial:**	13
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2682105	3312241	49.042	42.336			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2587104	4192897	25.029	26.211	25.0	26.2	Y
Di-n-butyltin Cation	10.69	10.36	3920015	5856534	34.101	33.628	34.1	33.6	Y
Tri-n-butyltin Cation	9.63	9.12	2496144	3931199	35.911	37.732	35.9	37.7	Y
Tetra-n-butyltin	8.36	7.92	2351899	3597743	38.579	38.398	38.6	38.4	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F036.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.9	6.951E4	5.603E4	-19		± 25%	Average RF
Tri-n-propyltin	50.0	49.0	5.469E4	5.364E4	-2		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F036.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.7	1.042E5	8.824E4	-15		± 25%	Average RF
Tri-n-propyltin	50.0	42.3	7.824E4	6.624E4	-15		± 25%	Average RF

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F024.D\
Lab ID: KQ1817164-03
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 23:16:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F024.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:16:00	**Vial:**	14
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.04	7.66	2047701	3055841	37.442	39.059			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2701941	4600220	26.140	28.758	26.1	28.8	Y
Di-n-butyltin Cation	10.69	10.36	3670621	5780826	31.931	33.194	31.9	33.2	Y
Tri-n-butyltin Cation	9.63	9.12	2538784	4042140	36.524	38.797	36.5	38.8	Y
Tetra-n-butyltin	8.36	7.92	2229613	3440625	36.573	36.721	36.6	36.7	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.5	6.951E4	5.699E4	-18		± 25%	Average RF
Tri-n-propyltin	50.0	37.4	5.469E4	4.095E4	-25		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.8	1.042E5	9.073E4	-13		± 25%	Average RF
Tri-n-propyltin	50.0	39.1	7.824E4	6.112E4	-22		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F015.D\
Lab ID: KQ1817164-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 20:29:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F015.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 20:29:00	**Vial:**	15
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2319832	3396305	42.418	43.410			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2658153	4209353	25.716	26.314	25.7	26.3	Y
Di-n-butyltin Cation	10.69	10.36	3652305	5726535	31.772	32.882	31.8	32.9	Y
Tri-n-butyltin Cation	9.63	9.12	2361367	3777675	33.972	36.259	34.0	36.3	Y
Tetra-n-butyltin	8.36	7.91	2005274	4491808	32.893	47.940	32.9	47.9	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F015.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.0	6.951E4	5.300E4	-24		± 25%	Average RF
Tri-n-propyltin	50.0	42.4	5.469E4	4.640E4	-15		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F015.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	1.042E5	8.480E4	-19		± 25%	Average RF
Tri-n-propyltin	50.0	43.4	7.824E4	6.793E4	-13		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F003.D\
Lab ID: KQ1817164-01
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 16:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F003.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 16:48:00	**Vial:**	16
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.04	7.65	2074299	3561382	37.928	45.520			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.54	11.11	2369189	4372518	22.920	27.334	22.9	27.3	Y
Di-n-butyltin Cation	10.69	10.36	3398698	5904410	29.566	33.903	29.6	33.9	Y
Tri-n-butyltin Cation	9.62	9.11	2134746	3838131	30.712	36.839	30.7	36.8	Y
Tetra-n-butyltin	8.36	7.91	1843007	3738717	30.232	39.903	30.2	39.9	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	30.7	6.951E4	4.792E4	-31 *		± 25%	Average RF
Tri-n-propyltin	50.0	37.9	5.469E4	4.149E4	-24		± 25%	Average RF

1 Compounds Failed CCV Criteria (50.00 Percent)

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.8	1.042E5	8.615E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	45.5	7.824E4	7.123E4	-9		± 25%	Average RF

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F007.D\
Lab ID: K1810270-010
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 18:02:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-1	Tri-n-butyltin Cation	-31		25	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F007.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 18:02:00	**Vial:**	17
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-010	**Raw Units:**	ng/mL

Bottle ID:	K1810270-010.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04	7.65	3980491	6044220	72.782	77.255	58	62	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000^{CCV}	0.000	0U	0U	0.68 U	Y

Prep Amount:	20.306 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	63.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F017.D\
Lab ID: K1810270-019
RunType: N/A
Matrix: Sediment

Date Acquired: 11/22/18 21:06:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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1st STM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F017.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 21:06:00	**Vial:**	19
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-019	**Raw Units:**	ng/mL

Bottle ID:	K1810270-019.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	K1810270
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.66	4343718	6598702	79.424	84.342	64	67	64	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	27617940	38948611	397.328	373.835	190	180	**180**	Y

Prep Amount:	20.388 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	40.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F022.D\
Lab ID: KQ1815623-03
RunType: LCS
Matrix: Sediment

Date Acquired: 11/22/18 22:38:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F022.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:38:00	**Vial:**	22
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815623-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4657565	7322125	85.163	93.589	68	75	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	6130217	9058608	88.193	86.946	17.6	17.4	**17.4**	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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2nd TP 11/27/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Lab Control Spike Information

Data File:	J:\GC26\DATA\112218\1122F022.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815623-03	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/22/18 22:38:00
Matrix:	Sediment		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
Tri-n-butyltin Cation	17.4	22.3	78	10 - 122
Tri-n-propyltin			68	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F023.D\
Lab ID: KQ1815623-04
RunType: MB
Matrix: Sediment

Date Acquired: 11/22/18 22:57:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F023.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:57:00	**Vial:**	23
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815623-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.65 -0.01	3669577	5570730	67.097	71.203	54	57	54	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y

Prep Amount:	20.4510 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
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Validation Report

Data File: J:\GC26\DATA\112218\1122F026.D\
Lab ID: K1810417-001
RunType: N/A
Matrix: Soil

Date Acquired: 11/22/18 23:53:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F026.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:53:00	**Vial:**	24
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-001	**Raw Units:**	ng/mL

Bottle ID:	K1810417-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04	7.65 -0.01	3552472	4745439	64.956	60.654	52	49	49	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.51 U	Y

Prep Amount:	20.008 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	84.60

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F028.D\
Lab ID: K1810417-003
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 00:30:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
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Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F028.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 00:30:00	**Vial:**	26
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-003	**Raw Units:**	ng/mL

Bottle ID:	K1810417-003.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.66	5429513	7922541	99.277	101.263	79	81	79	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	171260	242458	2.464	2.327	0.70J	0.66J	**0.66** J	Y

Prep Amount:	20.073 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	69.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F029.D\
Lab ID: K1810417-004
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 00:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F029.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 00:48:00	**Vial:**	27
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-004	**Raw Units:**	ng/mL

Bottle ID:	K1810417-004.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.66	5223234	8028788	95.506	102.621	76	82	76	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	172827	335268	2.486	3.218	0.90J	1.2J	**0.90** J	Y

Prep Amount:	20.017 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	55.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F030.D\
Lab ID: K1810417-005
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 01:07:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F030.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 01:07:00	**Vial:**	28
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-005	**Raw Units:**	ng/mL

Bottle ID:	K1810417-005.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.66	4911000	7593796	89.797	97.061	72	78	72	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.59 U	Y

Prep Amount:	20.014 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F031.D\
Lab ID: K1810417-006
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 01:25:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F031.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 01:25:00	**Vial:**	29
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-006	**Raw Units:**	ng/mL

Bottle ID:	K1810417-006.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.66	5527418	8595125	101.068	109.860	81	88	81	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	585479	925041	8.423	8.879	3.1	3.2	**3.1**	Y

Prep Amount:	20.092 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	54.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F032.D\
Lab ID: K1810417-007
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 01:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F032.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 01:44:00	**Vial:**	30
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-007	**Raw Units:**	ng/mL

Bottle ID:	K1810417-007.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.65 -0.01	3399190	4997307	62.153	63.874	50	51	50	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	4708694	8049783	67.742	77.263	29	33	**29**	Y

Prep Amount:	20.058 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	47.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F033.D\
Lab ID: K1810417-008
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 02:02:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F033.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:02:00	**Vial:**	31
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-008	**Raw Units:**	ng/mL

Bottle ID:	K1810417-008.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.66	4901170	6508816	89.617	83.193	72	67	67	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.64 +0.01	9.12	15498704	21765613	222.973	208.910	94	88	**88**	Y

Prep Amount:	20.065 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	47.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F034.D\
Lab ID: K1810417-009
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 02:21:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F034.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:21:00	**Vial:**	32
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-009	**Raw Units:**	ng/mL

Bottle ID:	K1810417-009.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.66	5437918	8286385	99.431	105.913	80	85	80	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	3660355	6332614	52.660	60.781	15	17	**15**	Y

Prep Amount:	20.089 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	70.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F035.D\
Lab ID: K1810417-010
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 02:39:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F035.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 02:39:00	**Vial:**	33
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-010	**Raw Units:**	ng/mL

Bottle ID:	K1810417-010.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05 +0.01	7.65 -0.01	5671862	7412701	103.709	94.746	83	76	76	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	6446464	9110532	92.743	87.444	28	26	**26**	Y

Prep Amount:	19.977 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	66.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F038.D\
Lab ID: K1810417-011
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 03:35:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F038.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 03:35:00	**Vial:**	34
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-011	**Raw Units:**	ng/mL

Bottle ID:	K1810417-011.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	5155419	7455144	94.266	95.289	75	76	75	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	13404135	19610993	192.840	188.230	75	73	**73**	Y

Prep Amount:	20.088 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	51.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F039.D\
Lab ID: K1810417-012
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 03:54:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F039.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 03:54:00	**Vial:**	35
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-012	**Raw Units:**	ng/mL

Bottle ID:	K1810417-012.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.66	5373449	8173212	98.252	104.467	79	84	79	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	9.12	0	129858	0.000	1.246	0U	0.36U	0.63 U	Y

Prep Amount:	20.057 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	68.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F041.D\
Lab ID: K1810417-014
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 04:31:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F041.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 04:31:00	**Vial:**	37
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-014	**Raw Units:**	ng/mL

Bottle ID:	K1810417-014.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	3983687	5659691	72.841	72.340	58	58	58	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	409439	685990	5.890	6.584	1.6	1.8	**1.6**	Y

Prep Amount:	20.035 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F043.D\
Lab ID: K1810417-016
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 04:49:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F043.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 04:49:00	**Vial:**	38
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-016	**Raw Units:**	ng/mL

Bottle ID:	K1810417-016.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.65 -0.01	3927060	6149289	71.805	78.598	57	63	57	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	1136178	1565148	16.346	15.023	5.3	4.9	**4.9**	Y

Prep Amount:	20.049 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	61.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F044.D\
Lab ID: K1810417-017
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 05:07:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F044.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 05:07:00	**Vial:**	39
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-017	**Raw Units:**	ng/mL

Bottle ID:	K1810417-017.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.66	3780077	5584634	69.118	71.381	55	57	55	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	3957491	5668794	56.935	54.410	15	14	**14**	Y

Prep Amount:	20.066 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	78.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F045.D\
Lab ID: K1810417-018
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 05:26:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F045.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 05:26:00	**Vial:**	40
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-018	**Raw Units:**	ng/mL

Bottle ID:	K1810417-018.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4791611	6367693	87.614	81.389	70	65	65	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	984786	1655584	14.168	15.891	3.5	3.9	**3.5**	Y

Prep Amount:	20.093 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	80.60

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F046.D\
Lab ID: K1810417-019
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 05:44:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F046.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 05:44:00	**Vial:**	41
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-019	**Raw Units:**	ng/mL

Bottle ID:	K1810417-019.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4599127	6334119	84.094	80.960	67	65	65	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	355813	612158	5.119	5.876	1.3J	1.5	**1.3** J	Y

Prep Amount:	20.089 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	78.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F047.D\
Lab ID: K1810417-020
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 06:03:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F047.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:03:00	**Vial:**	42
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-020	**Raw Units:**	ng/mL

Bottle ID:	K1810417-020.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	5277933	7331944	96.506	93.714	77	75	75	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	9.12	0	32888	0.000	0.316	0U	0.091U	0.63 U	Y

Prep Amount:	20.011 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	69.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F050.D\
Lab ID: K1810417-021
RunType: N/A
Matrix: Soil

Date Acquired: 11/23/18 06:58:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F050.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 06:58:00	**Vial:**	43
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810417-021	**Raw Units:**	ng/mL

Bottle ID:	K1810417-021.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	K1810417
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4832976	7140766	88.370	91.271	71	73	71	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.64 +0.01	9.13 +0.01	644702	833086	9.275	7.996	3.3	2.8	**2.8**	Y

Prep Amount:	20.025 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	57.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F051.D\
Lab ID: KQ1815717-01
RunType: MS
Matrix: Soil

Date Acquired: 11/23/18 07:17:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st SM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F051.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 07:17:00	**Vial:**	44
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815717-01	**Raw Units:**	ng/mL

Bottle ID:	K1810417-005.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4825137	6950256	88.227	88.836	71	71	71	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	4800021	7088027	69.056	68.032	18.8	18.5	**18.5**	Y

Prep Amount:	20.073 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Matrix Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F051.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815717-01	**Dilution:**	1
Client ID:	Matrix Spike	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 07:17:00
Matrix:	Soil		

Duplicate Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F052.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815717-02	**Dilution:**	1
Client ID:	Duplicate Matrix Spike	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 07:35:00
Matrix:	Soil		

Sample Reference Information

Data File:	J:\GC26\DATA\112218\1122F030.D\	**Instrument:**	K-GC-26
Lab ID:	K1810417-005	**Dilution:**	1
Client ID:	J3-SC-76to98-102218	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 01:07:00
Matrix:	Soil		

		Matrix Spike			Duplicate Matrix Spike					
Parameter Name	**Sample Result**	**Result**	**Expected**	**% Rec**	**Result**	**Expected**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	ND	18.5	30.3	61	19.7	30.4	65	10 - 115	6	40
Tri-n-propyltin				71			68	10 - 120		

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F052.D\
Lab ID: KQ1815717-02
RunType: DMS
Matrix: Soil

Date Acquired: 11/23/18 07:35:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F052.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 07:35:00	**Vial:**	45
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815717-02	**Raw Units:**	ng/mL

Bottle ID:	K1810417-005.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.66	4920020	6628842	89.962	84.727	72	68	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	5267951	7520851	75.788	72.186	20.7	19.7	**19.7**	Y

Prep Amount:	20.023 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	73.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F053.D\
Lab ID: KQ1815717-05
RunType: LCS
Matrix: Soil

Date Acquired: 11/23/18 07:54:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F053.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 07:54:00	**Vial:**	46
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815717-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.65 -0.01	3121123	4476755	57.069	57.220	46	46	46	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	4588274	6767303	66.010	64.954	13.2	13.0	**13.0**	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Lab Control Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Lab Control Spike Information

Data File:	J:\GC26\DATA\112218\1122F053.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815717-05	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 07:54:00
Matrix:	Soil		

	LCS			% Rec
Parameter Name	**Result**	**Expected**	**% Rec**	**Limits**
Tri-n-butyltin Cation	13.0	22.3	58	10 - 122
Tri-n-propyltin			46	10 - 120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F054.D\
Lab ID: KQ1815717-06
RunType: MB
Matrix: Soil

Date Acquired: 11/23/18 08:13:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F054.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 08:13:00	**Vial:**	47
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815717-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	BUTYLTINS	**Collect Date:**	10/22/18	**Receive Date:**	10/24/18

Analysis Lot:	616177	**Prep Lot:**	325240	**Report Group:**	KQ1815717
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/5/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.04 -0.01	7.66	4809605	6665855	87.943	85.200	70	68	68	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	0.00	0.00	0	0	0.000	0.000	0U	0U	0.43 U	Y

Prep Amount:	20.0930 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F020.D\
Lab ID: KQ1815623-01
RunType: MS
Matrix: Sediment

Date Acquired: 11/22/18 22:01:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F020.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:01:00	**Vial:**	2
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815623-01	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.65 -0.01	3663437	5673562	66.985	72.517	54	58	54	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	6465485	9472517	93.016	90.919	20.3	19.8	**19.8**	Y

Prep Amount:	20.322 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Matrix Spike Summary Report

QAP Name: LAB QAP
List Name: 1-1095-01 TBT ONLY
Spec Set: #926 v. 1
List ID: #18688

Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F020.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815623-01	**Dilution:**	1
Client ID:	Matrix Spike	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/22/18 22:01:00
Matrix:	Sediment		

Duplicate Matrix Spike Information

Data File:	J:\GC26\DATA\112218\1122F021.D\	**Instrument:**	K-GC-26
Lab ID:	KQ1815623-02	**Dilution:**	1
Client ID:	Duplicate Matrix Spike	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/22/18 22:20:00
Matrix:	Sediment		

Sample Reference Information

Data File:	J:\GC26\DATA\112318\1123F005.D\	**Instrument:**	K-GC-26
Lab ID:	K1810270-004	**Dilution:**	1
Client ID:	L1-0to30-101518	**Units:**	ug/Kg
Test:	ALS SOP/BUTYLTINS	**Acqu Date:**	11/23/18 17:20:00
Matrix:	Sediment		

	Sample	Matrix Spike			Duplicate Matrix Spike			% Rec		RPD
Parameter Name	**Result**	**Result**	**Expected**	**% Rec**	**Result**	**Expected**	**% Rec**	**Limits**	**RPD**	**Limit**
Tri-n-butyltin Cation	6.5	19.8	24.3	82	18.8	24.4	77	10 - 115	5	40
Tri-n-propyltin				54			60	10 - 120		

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Quantitation Report (Not Reviewed)

1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F020.D Vial: 16
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 4:38 pm Operator: SMURRAY
Sample : K1810270-001MS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:56:59 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.057	7.665	4533515	6050213	82.894	77.331
	Target Compounds						
2)	Tetrabuty...	8.381	7.925	4912282	6557428	80.578	69.986
3)	Tri-n-but...	9.657	9.142	22137395	28872434	318.481	277.122
4)	Di-n-buty...	10.707	10.382	14401653	19608439	125.283	112.592
5)	n-Butyltin	11.567	11.139	1264325	1485439	12.232	9.286

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

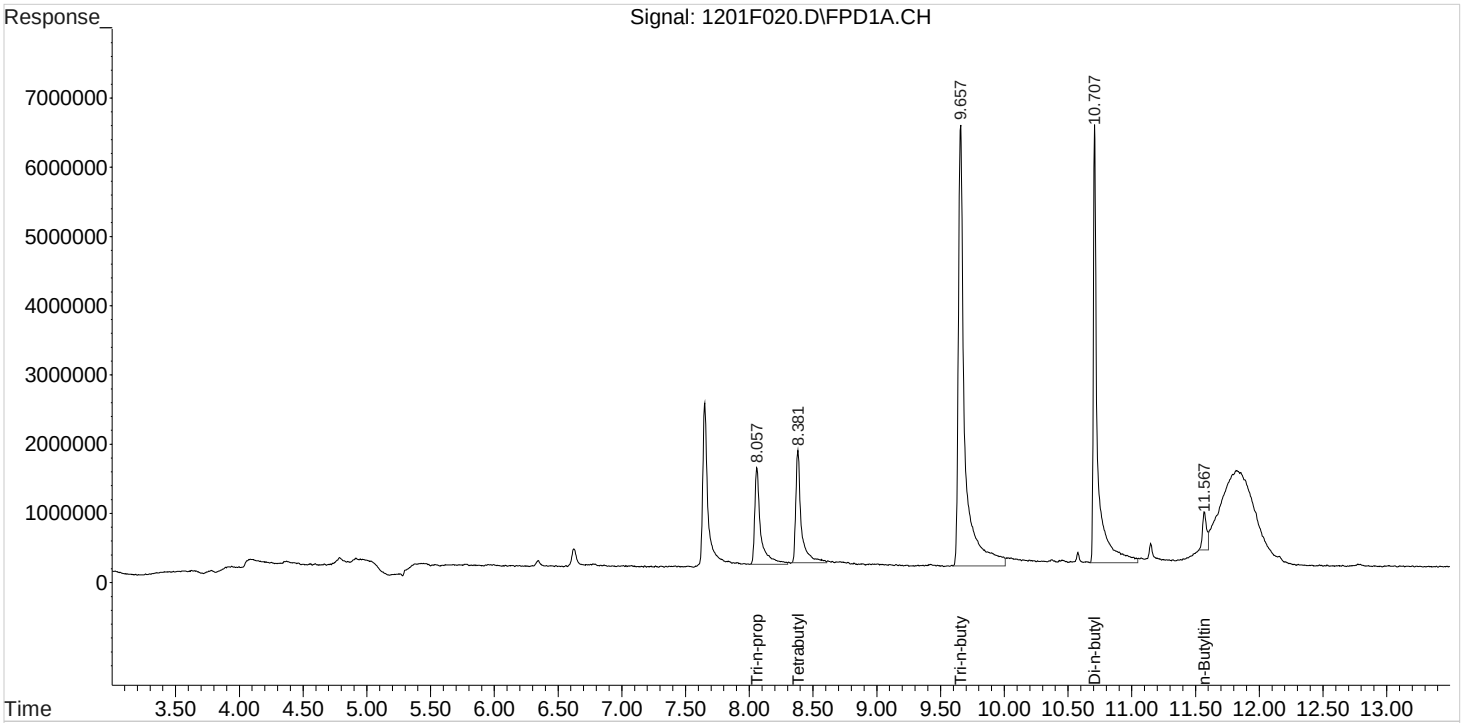
Quantitation Report (Not Reviewed)

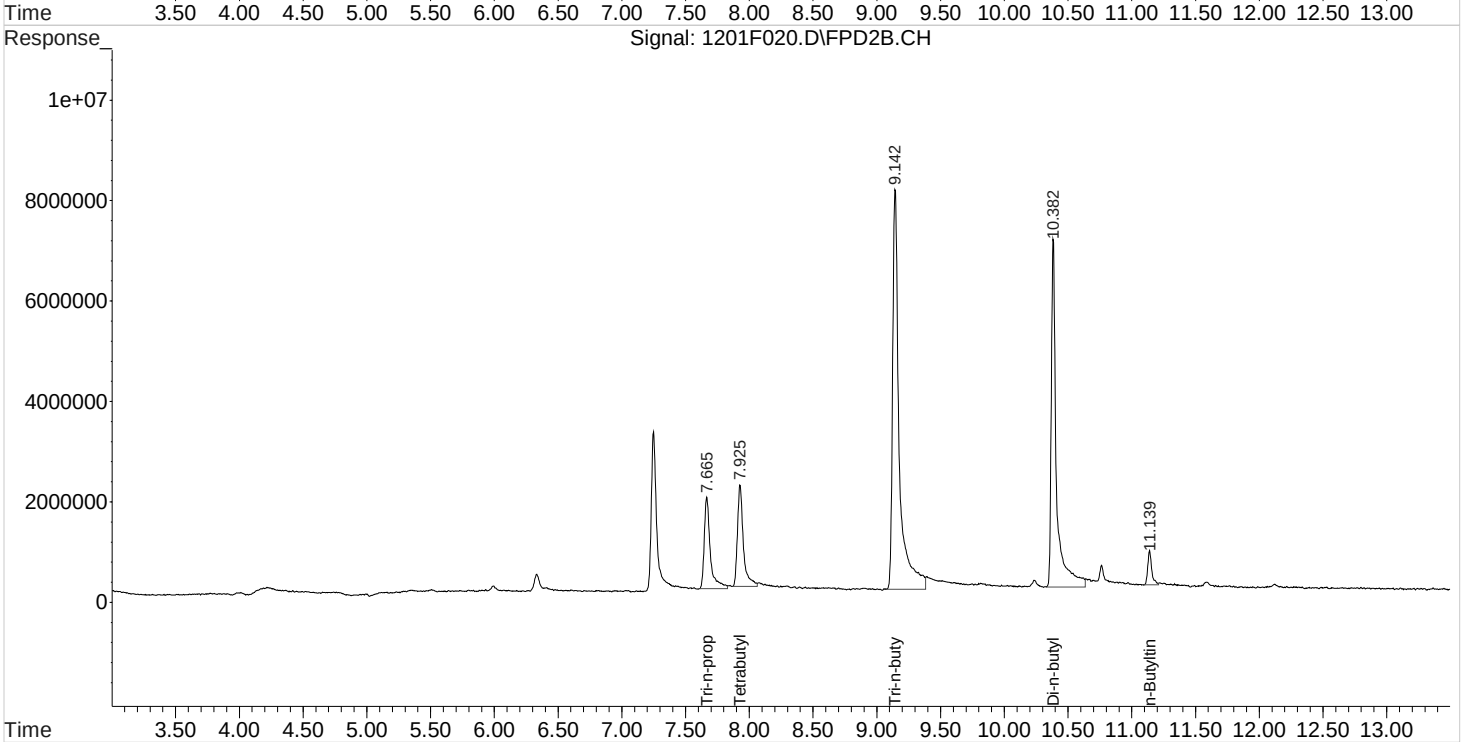
1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F020.D Vial: 16
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 4:38 pm Operator: SMURRAY
Sample : K1810270-001MS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:56:59 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st 12/02/18
2nd 12/06/18

Validation Report

Data File: J:\GC26\DATA\120118\1201F020.D\
Lab ID: KQ1816241-01
RunType: MS
Matrix: Sediment

Date Acquired: 12/1/18 16:38:00
Batch ID: 617147
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-35	Tri-n-butyltin Cation	-26		25	RO

Primary Review: _____

Secondary Review: _____

1st 12/02/18
2nd 12/06/18

Quantitation Report

Data File:	J:\GC26\DATA\120118\1201F020.D\	**Instrument:**	K-GC-26
Acqu Date:	12/1/18 16:38:00	**Vial:**	18
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1816241-01	**Raw Units:**	ng/mL

Bottle ID:	K1810270-001.02	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	617147	**Prep Lot:**	325830	**Report Group:**	KQ1816241
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/19/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.06 +0.01	7.67 +0.01	4533515	6050213	82.894	77.331	66	62	62	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.66 +0.01	9.14	22137395	28872434	318.481	277.122 CCV RO	85.3	74.2	**74.2**	Y

Prep Amount:	20.096 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	74.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 12/02/18
2nd 12/06/18

Replicate Spike Summary Report

QAP Name: **Spec Set:** # v.
List Name: **List ID:** #

Matrix Spike Information

Data File:	J:\GC26\DATA\120118\1201F020.D\	**Instrument:**	
Lab ID:		**Dilution:**	
Client ID:		**Units:**	
Test:	/	**Acqu Date:**	
Matrix:			

Sample Reference Information

Data File:		**Instrument:**	
Lab ID:		**Dilution:**	
Client ID:		**Units:**	
Test:	/	**Acqu Date:**	
Matrix:			

	Sample	Matrix Spike				% Rec
Parameter Name	**Result**	**Result**	**Expected**	**% Rec**		**Limits**

			Sample	Duplicate			RPD
Parameter Name	**MRL**	**MDL**	**Result**	**Result**	**Average**	**RPD**	
						-	

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F021.D Vial: 17
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:20 pm Operator: SMURRAY
Sample : K1810270-004 DMS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.045	7.653	4076799	6385955	74.543	81.623
	Target Compounds						
2)	Tetrabuty...	8.365	7.913	5370164	7856793	88.089	83.854
3)	Tri-n-but...	9.632	9.123	5963992	9351832	85.801	89.760
4)	Di-n-buty...	10.695	10.363	7307640	11176024	63.571	64.173
5)	n-Butyltin	11.549	11.120	1080089	1572064	10.449	9.828

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

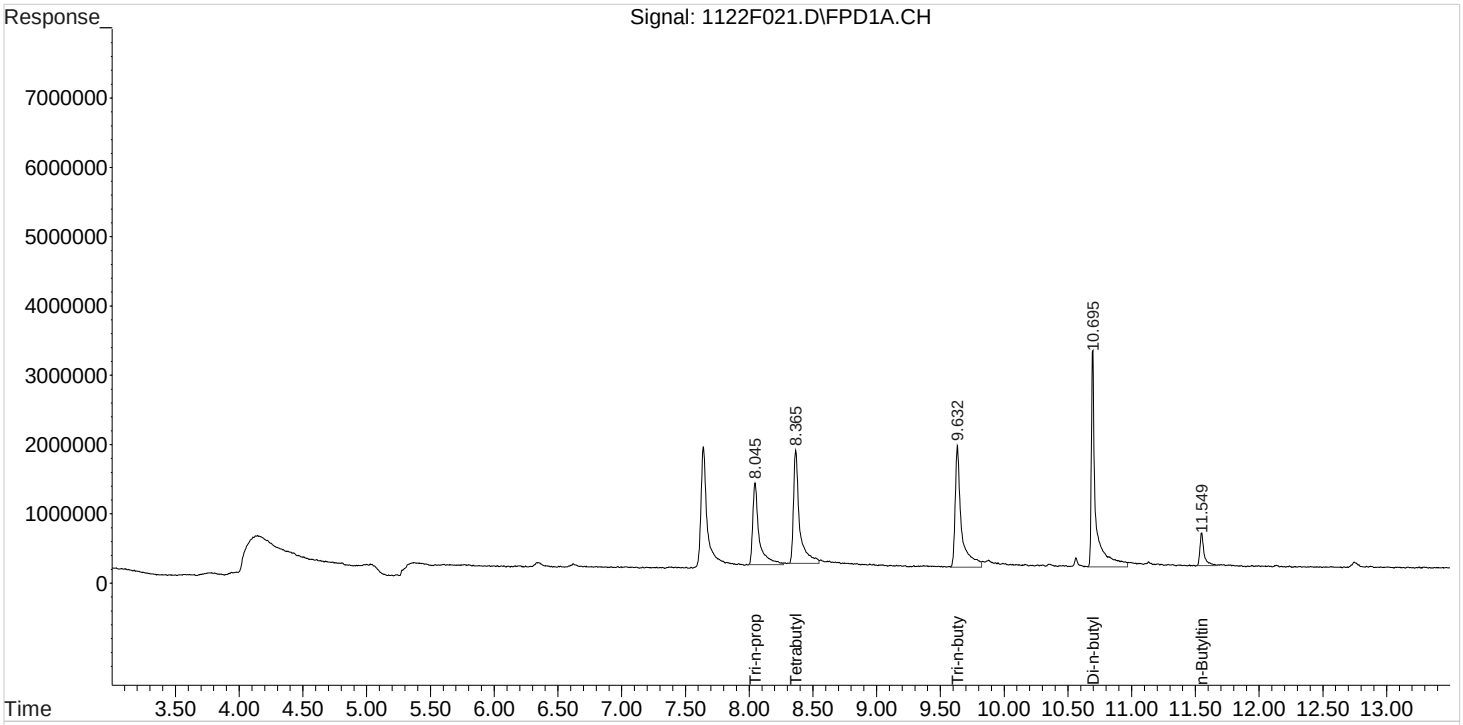
Quantitation Report (Not Reviewed)

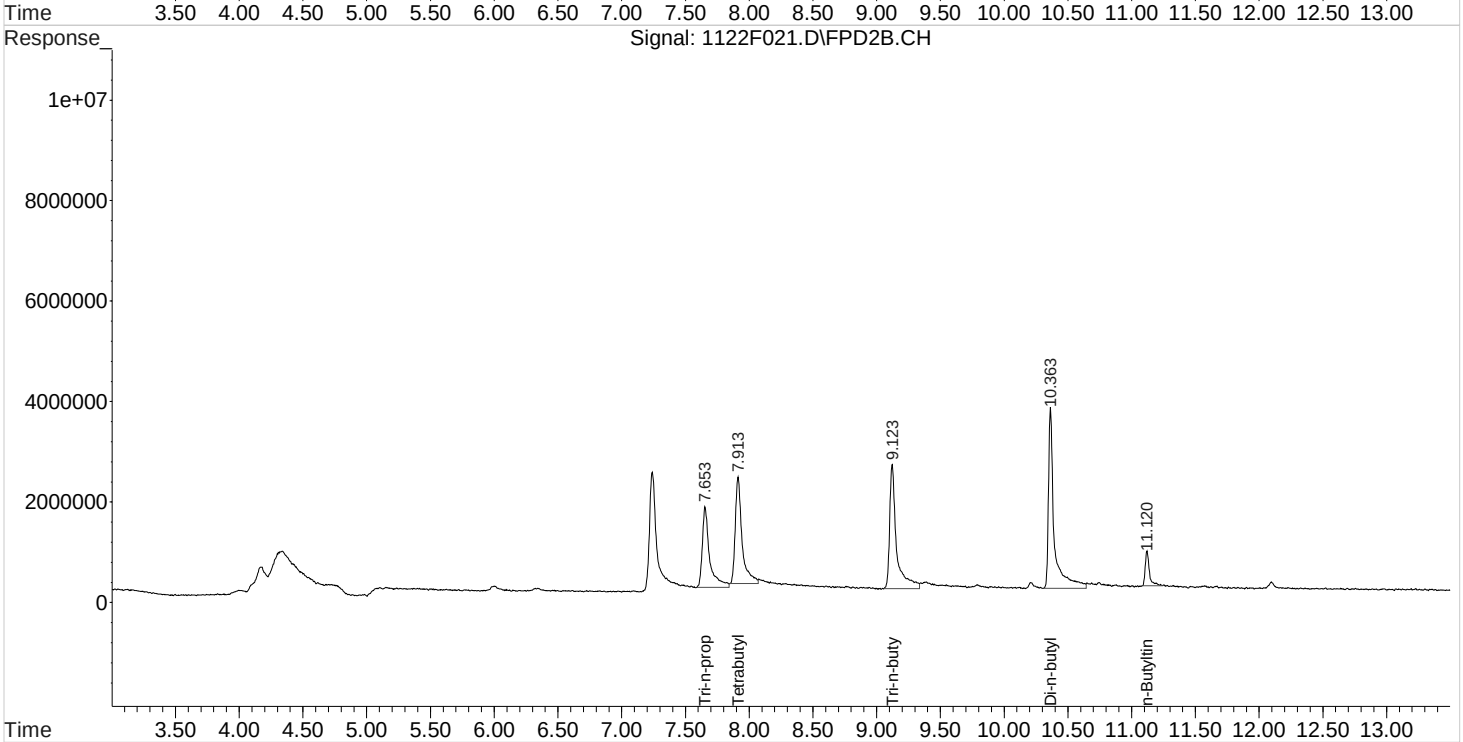
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F021.D Vial: 17
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 10:20 pm Operator: SMURRAY
Sample : K1810270-004 DMS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F021.D\
Lab ID: KQ1815623-02
RunType: DMS
Matrix: Sediment

Date Acquired: 11/22/18 22:20:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F021.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 22:20:00	**Vial:**	3
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815623-02	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**	325136	**Report Group:**	KQ1815623
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	10/29/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.05	7.65 -0.01	4076799	6385955	74.543	81.623	60	65	60	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.63	9.12	5963992	9351832	85.801	89.760	18.8	19.7	**18.8**	Y

Prep Amount:	20.208 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (Not Reviewed)

1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F021.D Vial: 17
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 4:57 pm Operator: SMURRAY
Sample : K1810270-001DMS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:02 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.059	7.663	3738195	5142775	68.352	65.733
	Target Compounds						
2)	Tetrabuty...	8.382	7.926	4173428	5541757	68.458	59.146
3)	Tri-n-but...	9.655	9.143	16508482	23590190	237.500	226.423
4)	Di-n-buty...	10.709	10.383	16355703	23714700	142.282	136.171
5)	n-Butyltin	11.569	11.140	1224405	1541559	11.845	9.637

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

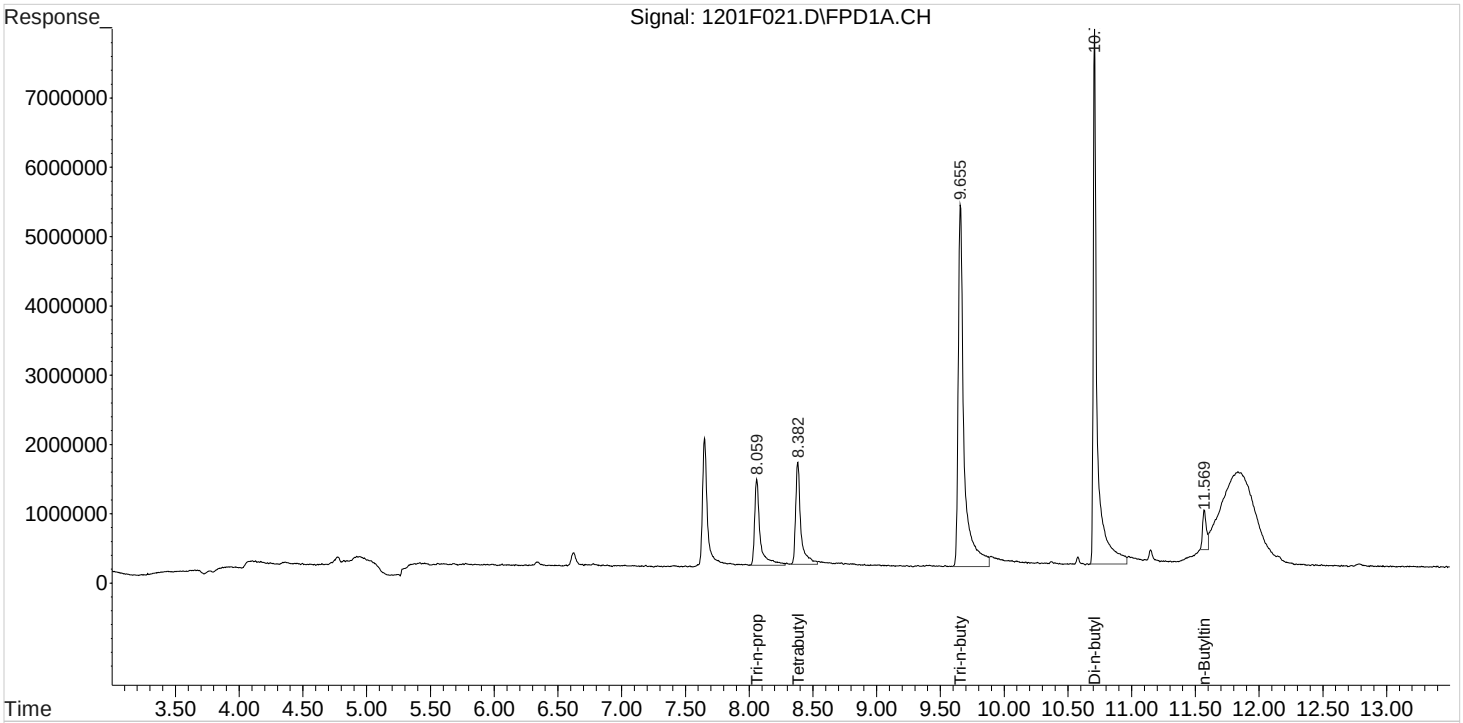
Quantitation Report (Not Reviewed)

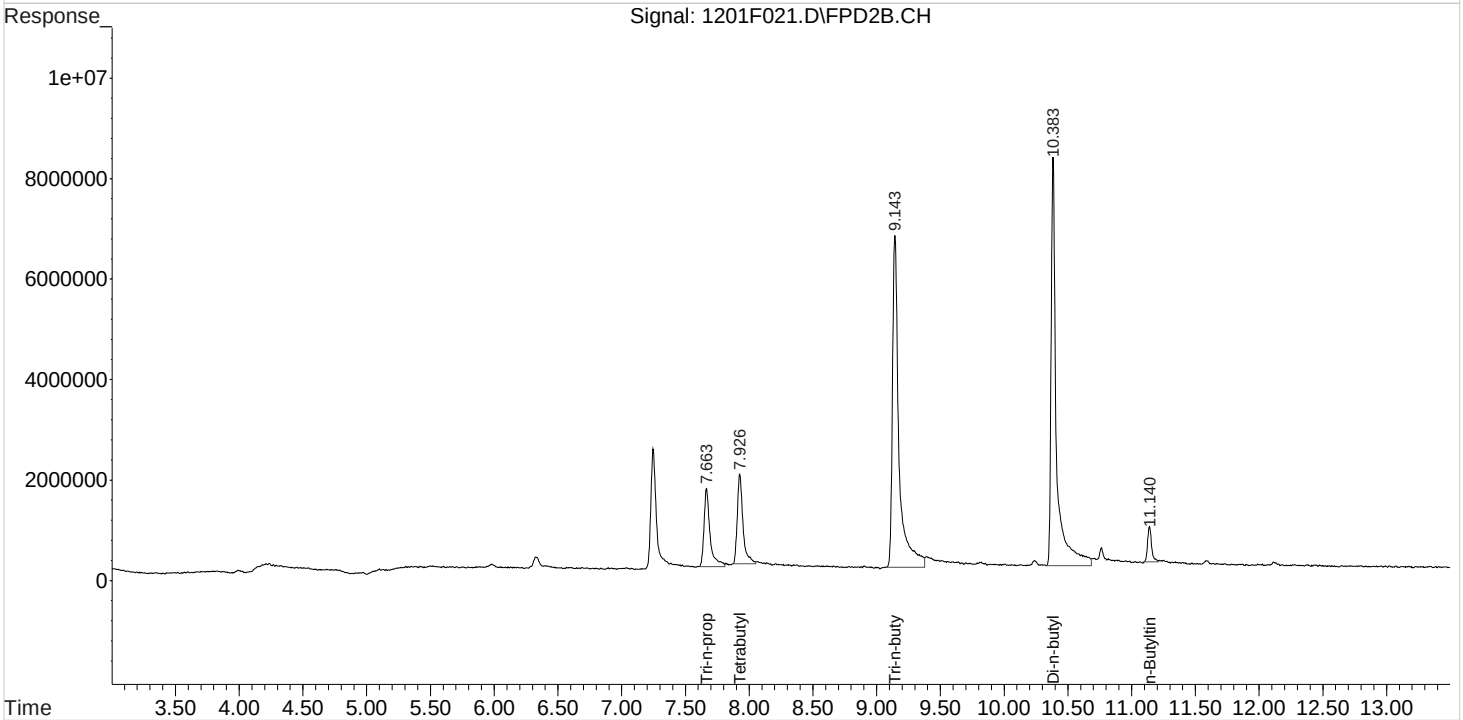
1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F021.D Vial: 17
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 4:57 pm Operator: SMURRAY
Sample : K1810270-001DMS Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:02 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st 12/02/18
2nd 12/06/18

Validation Report

Data File: J:\GC26\DATA\120118\1201F021.D\
Lab ID: KQ1816241-02
RunType: DMS
Matrix: Sediment

Date Acquired: 12/1/18 16:57:00
Batch ID: 617147
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery - RTX-35	Tri-n-butyltin Cation	-26		25	RO

Primary Review: _____

Secondary Review: _____

1st 12/02/18
2nd 12/06/18

Quantitation Report

Data File:	J:\GC26\DATA\120118\1201F021.D\	**Instrument:**	K-GC-26
Acqu Date:	12/1/18 16:57:00	**Vial:**	19
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1816241-02	**Raw Units:**	ng/mL

Bottle ID:	K1810270-001.02	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	617147	**Prep Lot:**	325830	**Report Group:**	KQ1816241
Analysis	ALS SOP	**Prep Method:**	Method		
		Prep Date:	11/19/18		

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	18688

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
Tri-n-propyltin	8.06 +0.01	7.66	3738195	5142775	68.352	65.733	55	53	53	10 - 120	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
Tri-n-butyltin Cation	9.66 +0.01	9.14	16508482	23590190	237.500	226.423 CCV RO	63.9	60.9	**60.9**	Y

Prep Amount:	20.009 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	74.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/2/18 13:57
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Quantitation Report (QT Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F003.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 4:48 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 25 09:06:21 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.036	7.650	2074299	3561382	37.928	45.520m
	Target Compounds						
2)	Tetrabuty...	8.356	7.907	1843007	3738717	30.232	39.903 #
3)	Tri-n-but...	9.622	9.114	2134746	3838131	30.712	36.839
4)	Di-n-buty...	10.689	10.357	3398698	5904410	29.566	33.903
5)	n-Butyltin	11.542	11.114	2369189	4372518	22.920	27.334

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

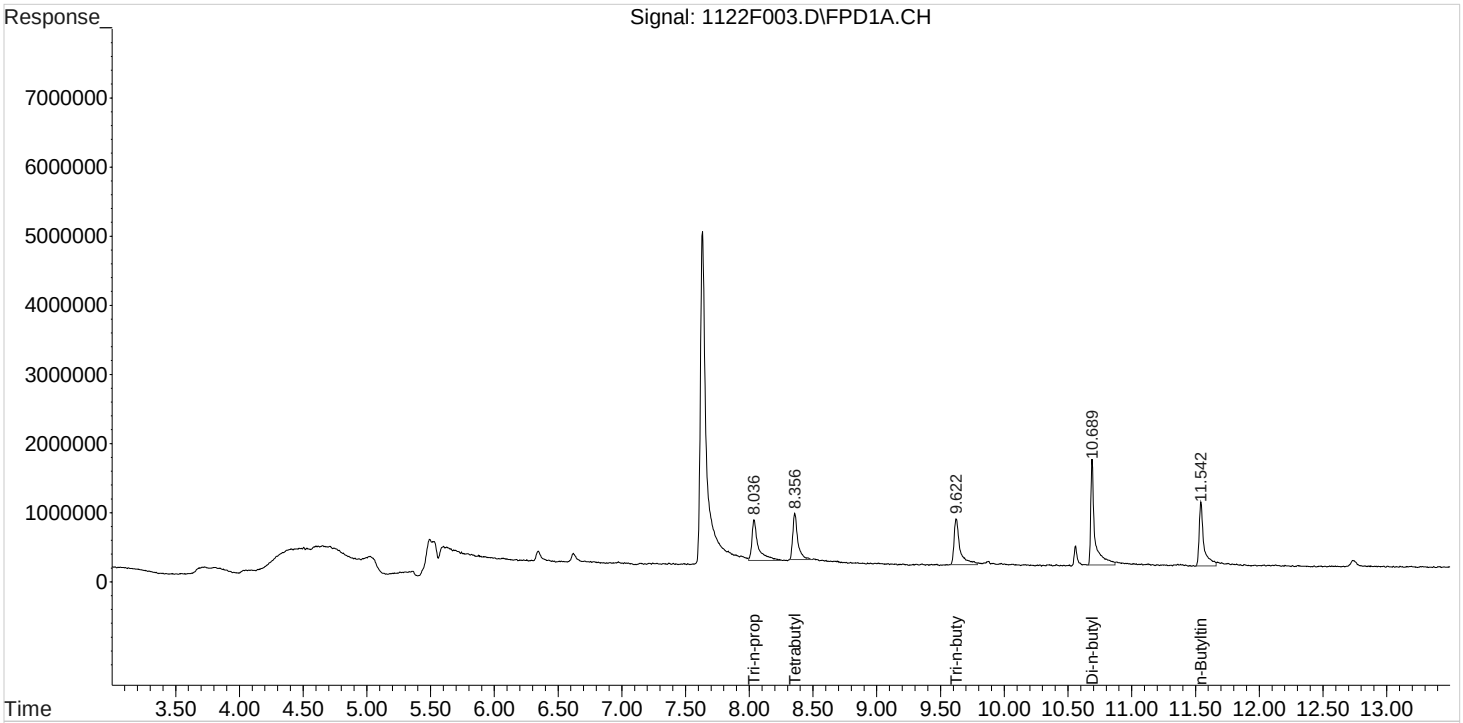
Quantitation Report (QT Reviewed)

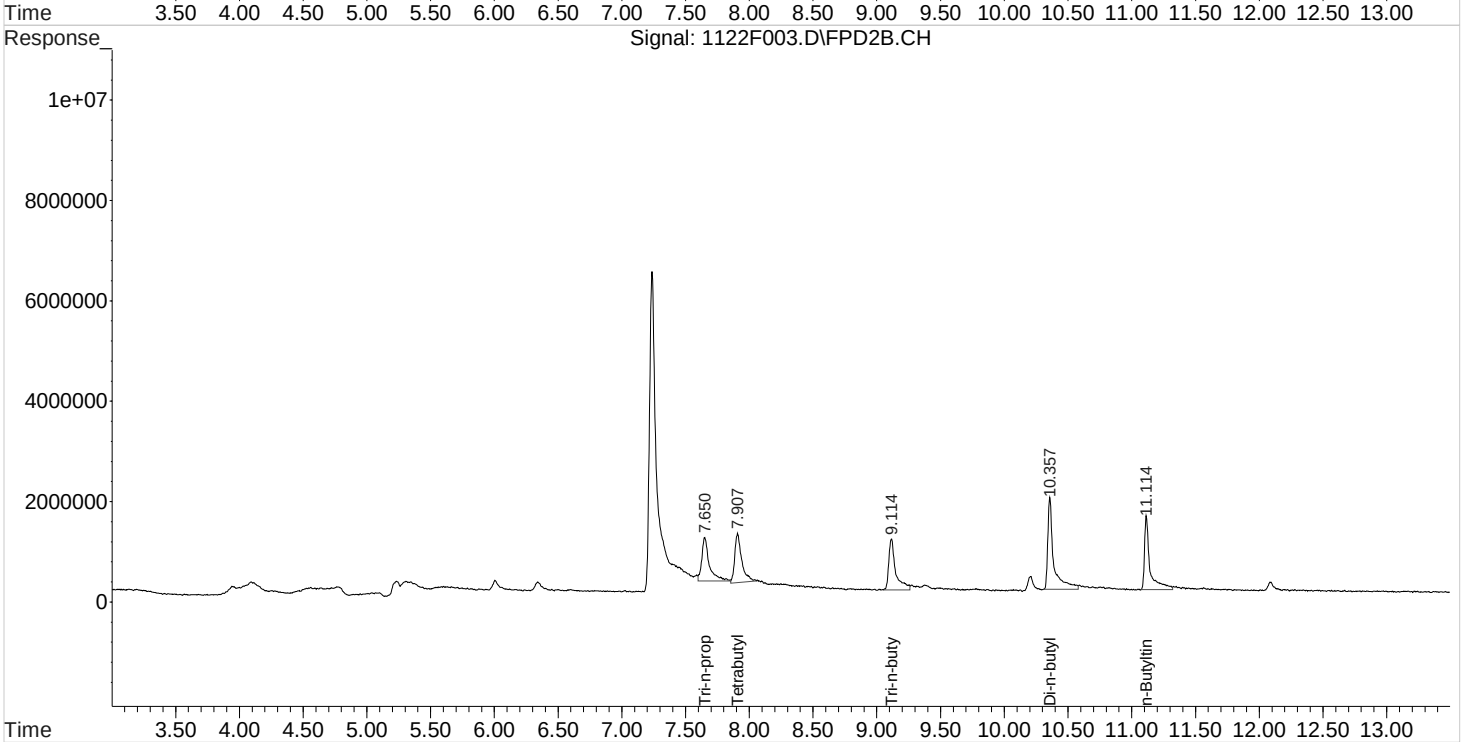
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F003.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 4:48 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 25 09:06:21 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





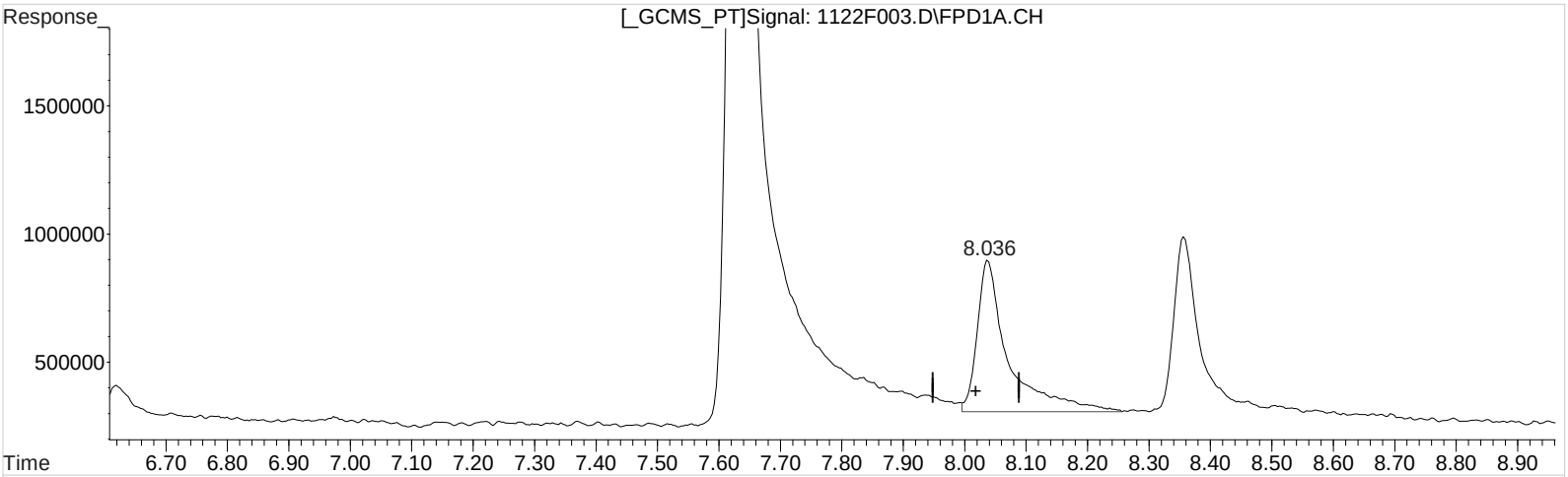
Quantitation Report (Qedit)

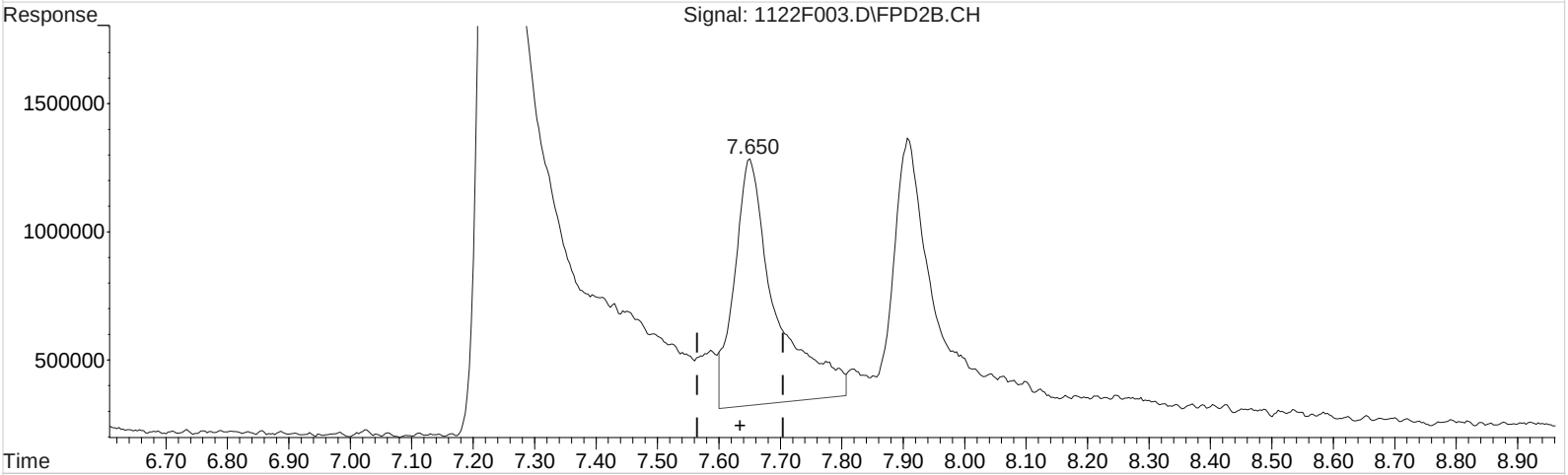
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F003.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 4:48 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:38:18 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

8.036min 37.928 ng/mL

response 2074299

Manual Integration:

Before

11/25/18

(1) Tri-n-propyltin #2 (S)

7.650min 57.465 ng/mL

response 4495915

(+) = Expected Retention Time

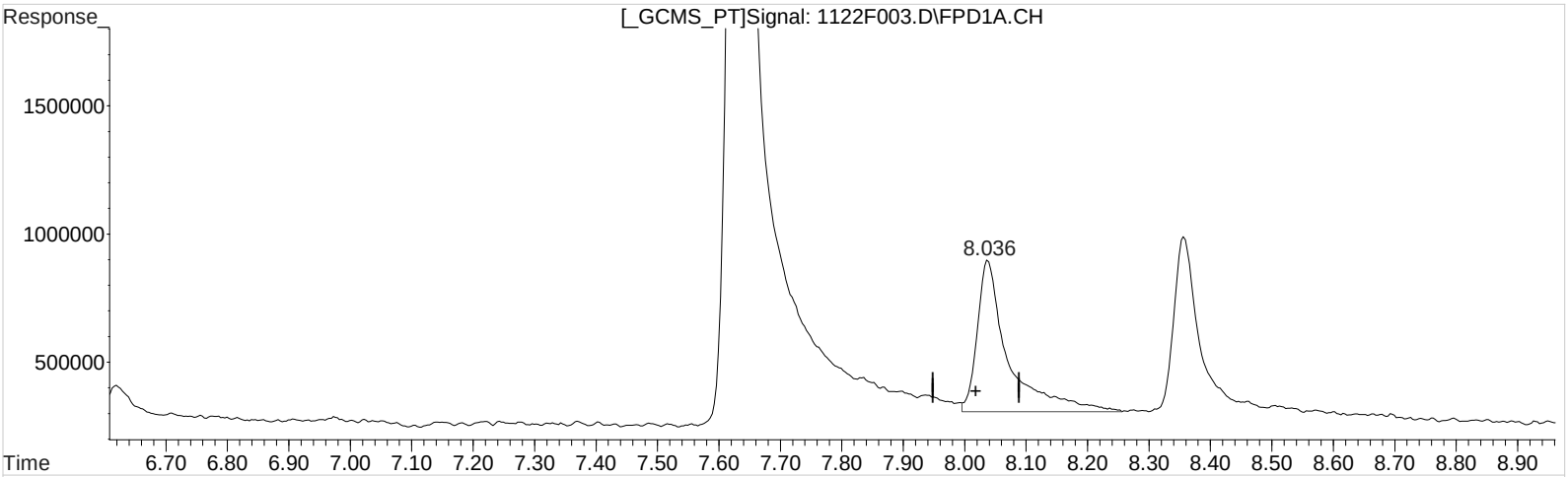
Quantitation Report (Qedit)

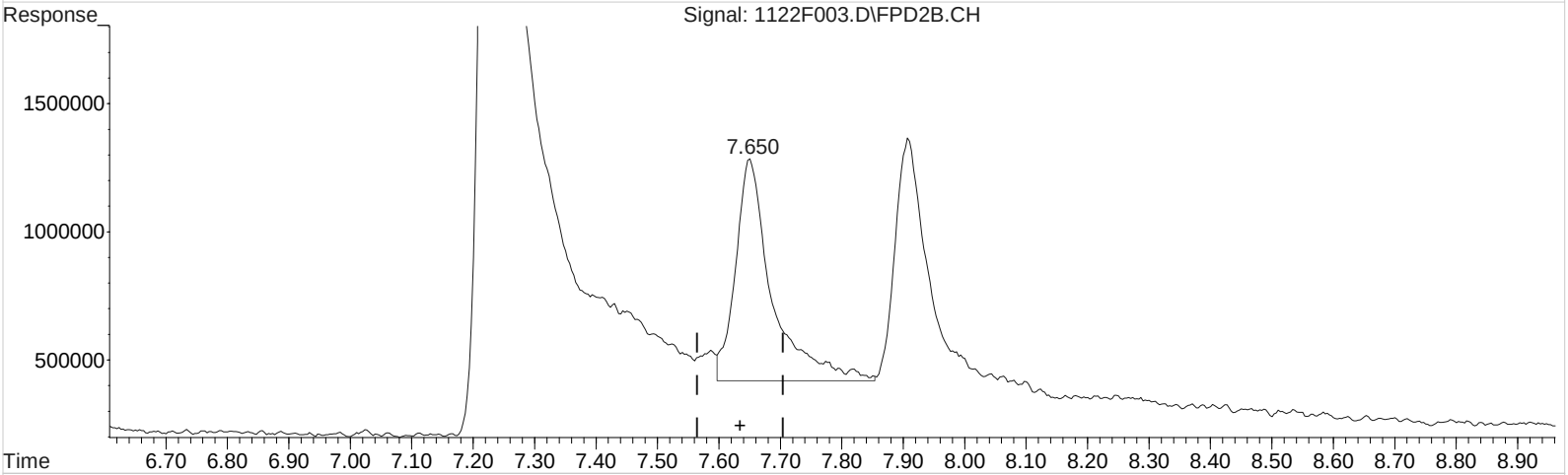
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F003.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 4:48 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:38:18 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

8.036min 37.928 ng/mL

response 2074299

Manual Integration:

After

Baseline/Shoulder

11/25/18

(1) Tri-n-propyltin #2 (S)

7.650min 45.520 ng/mL m

response 3561382

(+) = Expected Retention Time

1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F003.D\
Lab ID: KQ1817164-01
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 16:48:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F003.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 16:48:00	**Vial:**	16
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.04	7.65	2074299	3561382	37.928	45.520			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.54	11.11	2369189	4372518	22.920	27.334	22.9	27.3	Y
Di-n-butyltin Cation	10.69	10.36	3398698	5904410	29.566	33.903	29.6	33.9	Y
Tri-n-butyltin Cation	9.62	9.11	2134746	3838131	30.712	36.839	30.7	36.8	Y
Tetra-n-butyltin	8.36	7.91	1843007	3738717	30.232	39.903	30.2	39.9	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	30.7	6.951E4	4.792E4	-31 *		± 25%	Average RF
Tri-n-propyltin	50.0	37.9	5.469E4	4.149E4	-24		± 25%	Average RF

1 Compounds Failed CCV Criteria (50.00 Percent)

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.8	1.042E5	8.615E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	45.5	7.824E4	7.123E4	-9		± 25%	Average RF

Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F015.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 8:29 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:32 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1) S	Tri-n-pro...	8.046	7.657	2319832	3396305	42.418	43.410	
	Target Compounds							
2)	Tetrabuty...	8.362	7.913	2005274	4491808	32.893	47.940	#
3)	Tri-n-but...	9.629	9.120	2361367	3777675	33.972	36.259	
4)	Di-n-buty...	10.692	10.363	3652305	5726535	31.772	32.882	
5)	n-Butyltin	11.546	11.117	2658153	4209353	25.716	26.314	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

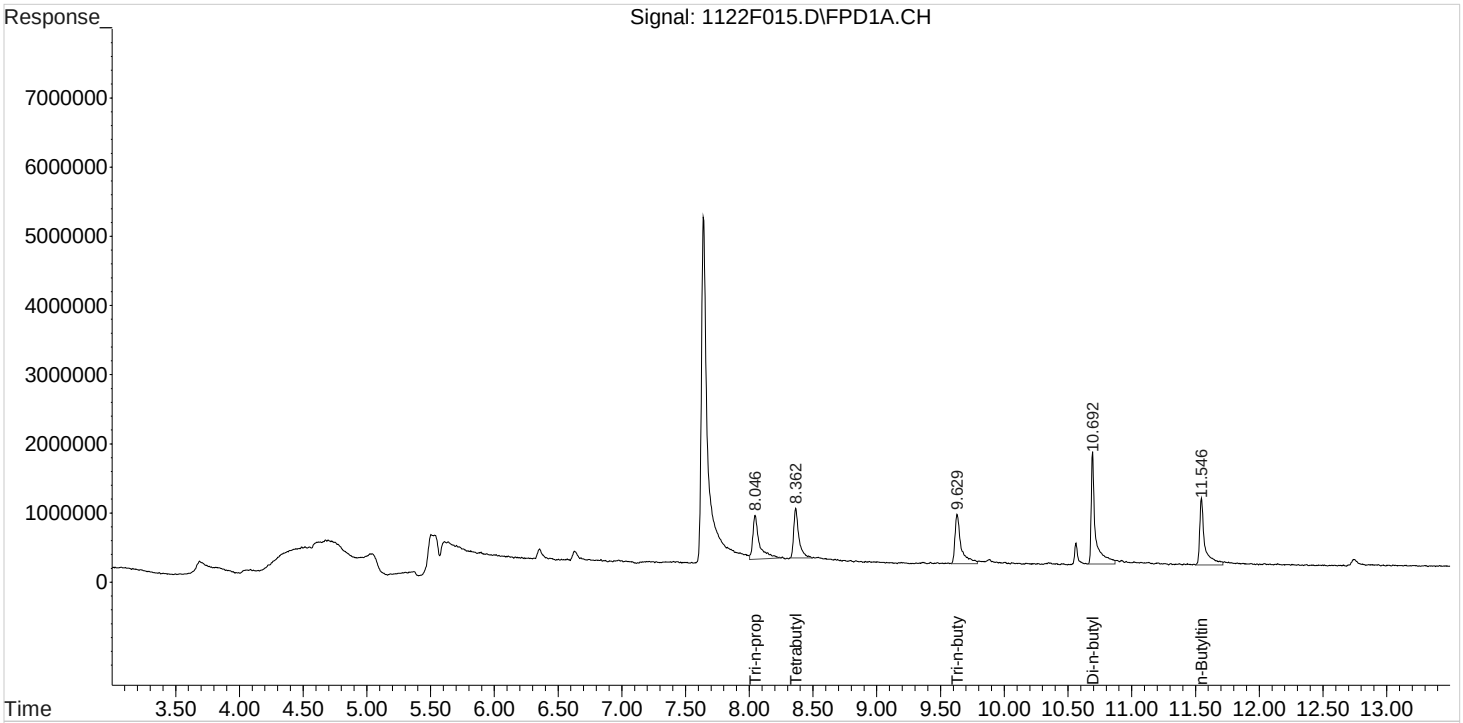
Quantitation Report (Not Reviewed)

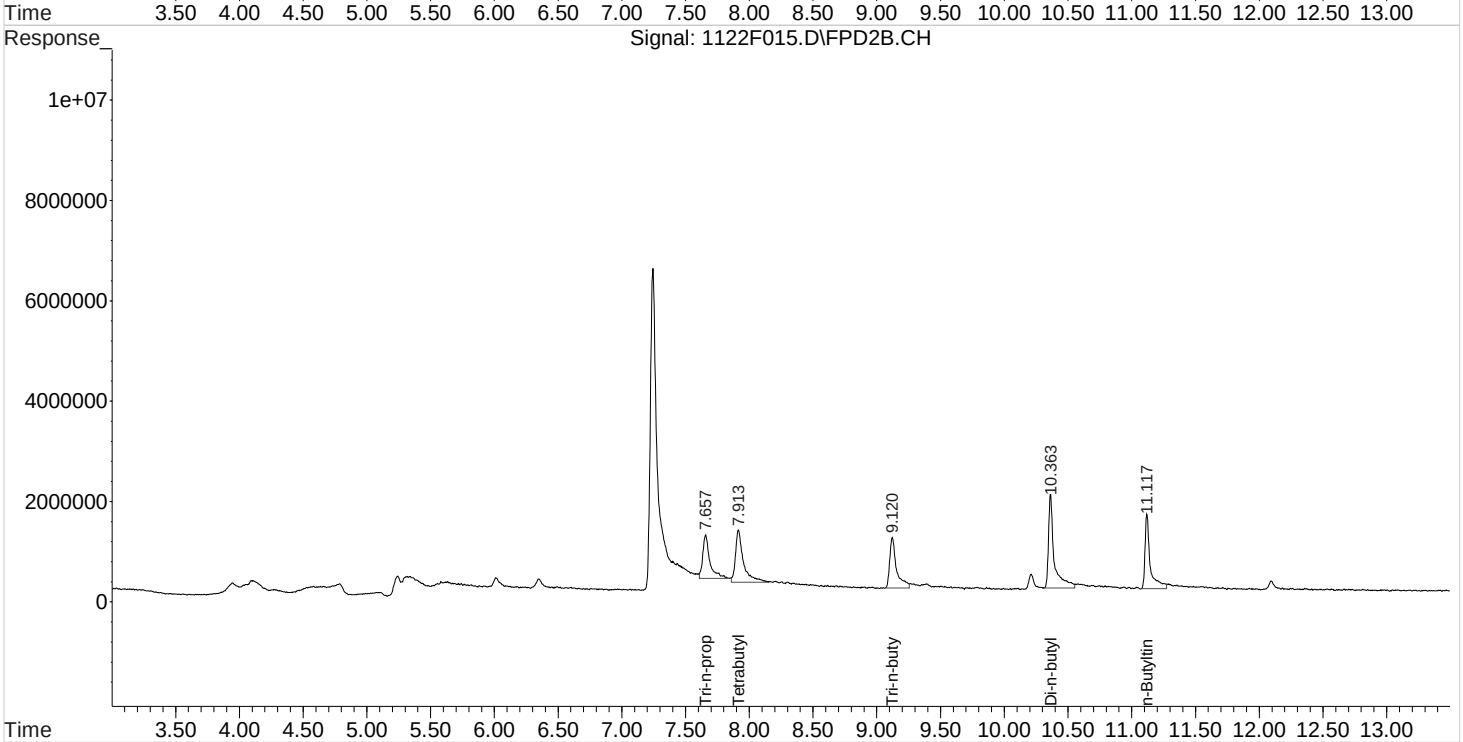
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F015.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 8:29 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:32 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st SM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F015.D\
Lab ID: KQ1817164-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 20:29:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F015.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 20:29:00	**Vial:**	15
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2319832	3396305	42.418	43.410			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2658153	4209353	25.716	26.314	25.7	26.3	Y
Di-n-butyltin Cation	10.69	10.36	3652305	5726535	31.772	32.882	31.8	32.9	Y
Tri-n-butyltin Cation	9.63	9.12	2361367	3777675	33.972	36.259	34.0	36.3	Y
Tetra-n-butyltin	8.36	7.91	2005274	4491808	32.893	47.940	32.9	47.9	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F015.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.0	6.951E4	5.300E4	-24		± 25%	Average RF
Tri-n-propyltin	50.0	42.4	5.469E4	4.640E4	-15		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F015.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	1.042E5	8.480E4	-19		± 25%	Average RF
Tri-n-propyltin	50.0	43.4	7.824E4	6.793E4	-13		± 25%	Average RF

Quantitation Report (Not Reviewed)

1st SM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F024.D Vial: 45
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 11:16 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:50 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.045	7.659	2047701	3055841	37.442	39.059
	Target Compounds						
2)	Tetrabuty...	8.365	7.916	2229613	3440625	36.573	36.721
3)	Tri-n-but...	9.632	9.123	2538784	4042140	36.524	38.797
4)	Di-n-buty...	10.692	10.363	3670621	5780826	31.931	33.194
5)	n-Butyltin	11.548	11.119	2701941	4600220	26.140	28.758

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

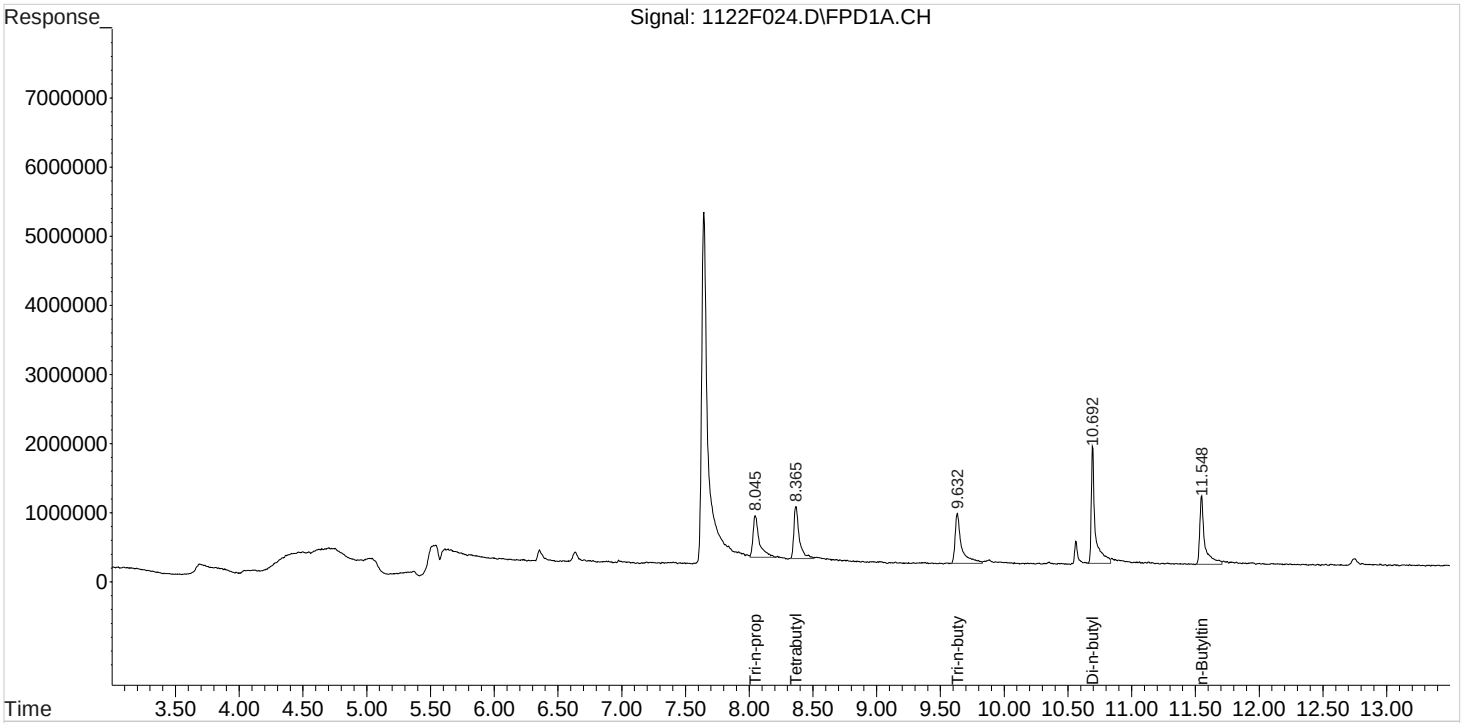
Quantitation Report (Not Reviewed)

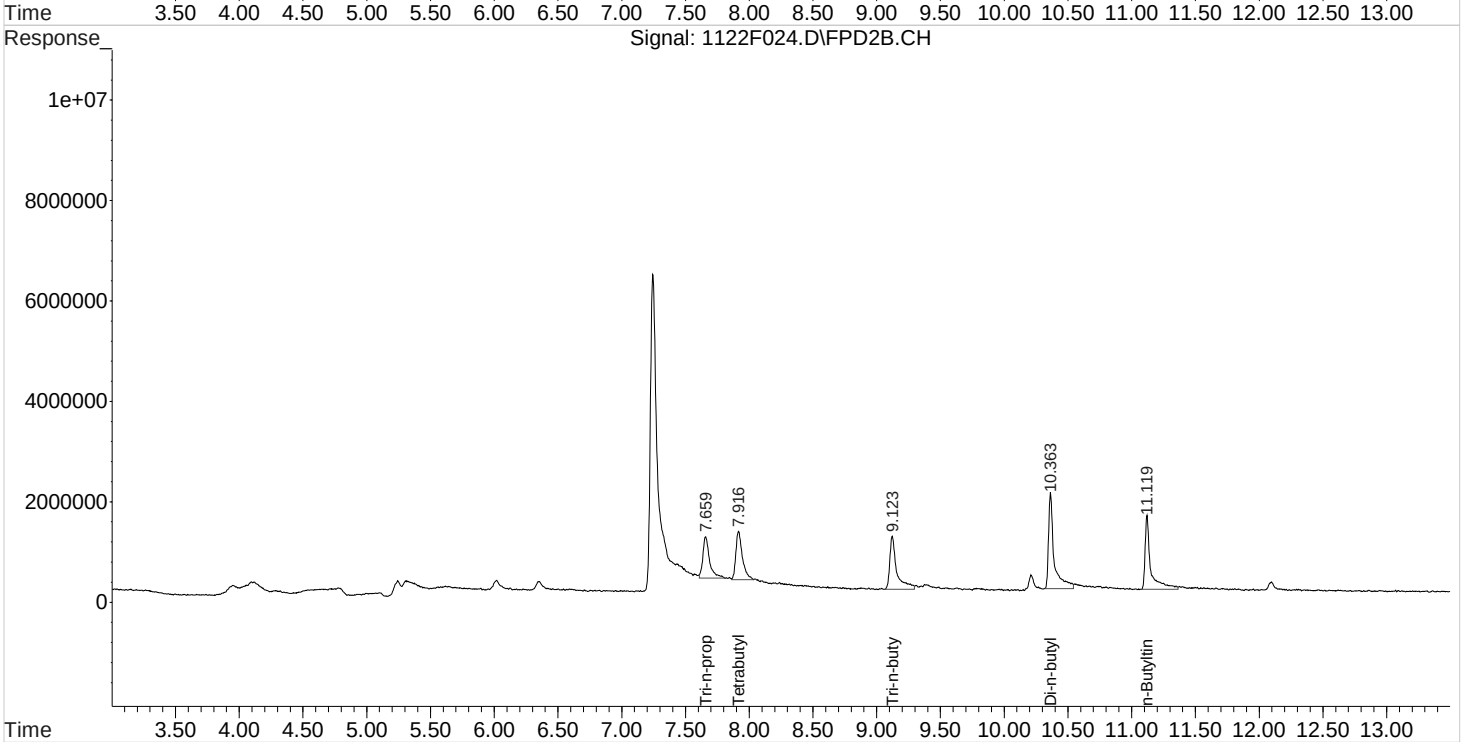
1st STM 11/25/18
2nd TP 11/27/18

Data File : J:\GC26\DATA\112218\1122F024.D Vial: 45
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 22 Nov 2018 11:16 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 23 15:39:50 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st STM 11/25/18
2nd TP 11/27/18

Validation Report

Data File: J:\GC26\DATA\112218\1122F024.D\
Lab ID: KQ1817164-03
RunType: CCV
Matrix: Sediment

Date Acquired: 11/22/18 23:16:00
Batch ID: 616177
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st STM 11/25/18
2nd TP 11/27/18

Quantitation Report

Data File:	J:\GC26\DATA\112218\1122F024.D\	**Instrument:**	K-GC-26
Acqu Date:	11/22/18 23:16:00	**Vial:**	14
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817164-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616177	**Prep Lot:**		**Report Group:**	KQ1817164
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.04	7.66	2047701	3055841	37.442	39.059			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2701941	4600220	26.140	28.758	26.1	28.8	Y
Di-n-butyltin Cation	10.69	10.36	3670621	5780826	31.931	33.194	31.9	33.2	Y
Tri-n-butyltin Cation	9.63	9.12	2538784	4042140	36.524	38.797	36.5	38.8	Y
Tetra-n-butyltin	8.36	7.92	2229613	3440625	36.573	36.721	36.6	36.7	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st STM 11/25/18
2nd TP 11/27/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112218\1122F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.5	6.951E4	5.699E4	-18		± 25%	Average RF
Tri-n-propyltin	50.0	37.4	5.469E4	4.095E4	-25		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112218\1122F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.8	1.042E5	9.073E4	-13		± 25%	Average RF
Tri-n-propyltin	50.0	39.1	7.824E4	6.112E4	-22		± 25%	Average RF

1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F003.D Vial: 45
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 4:42 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:10 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:07:12 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

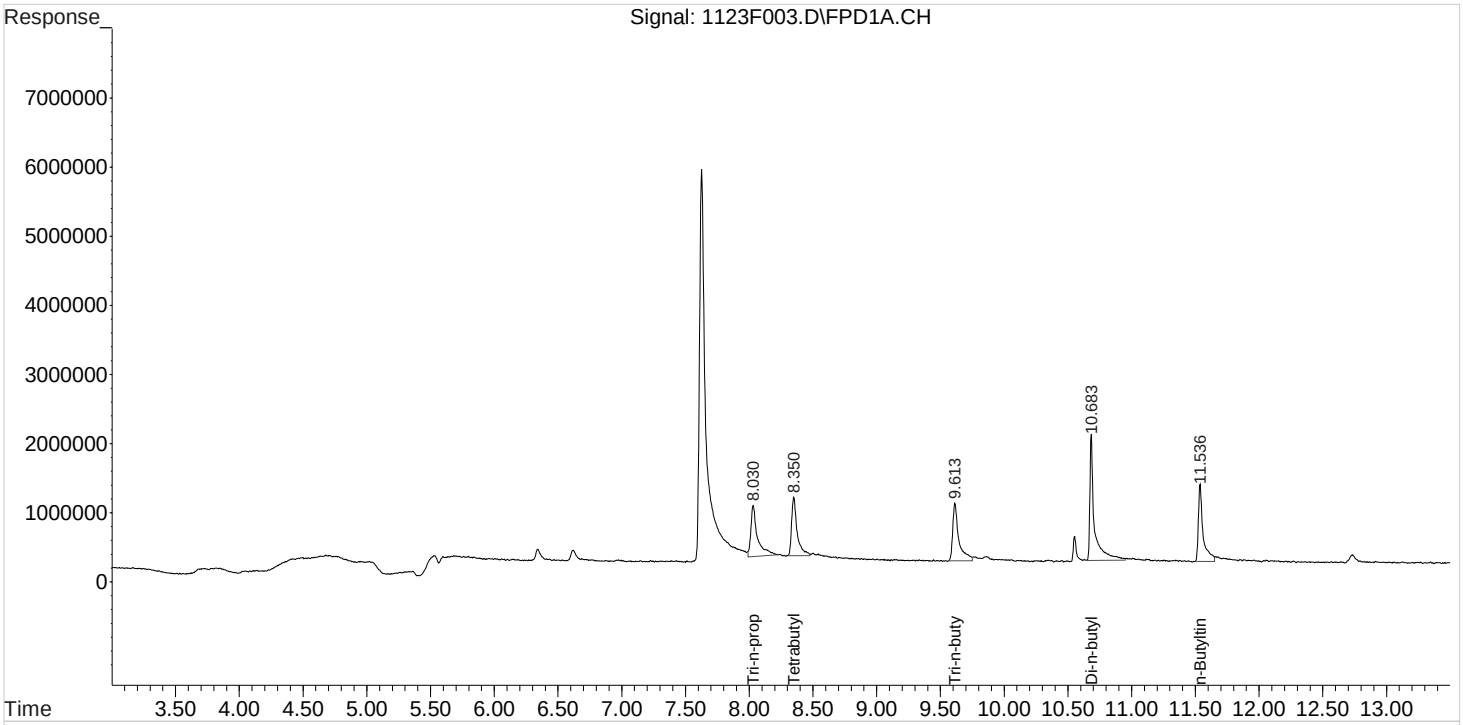
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.030	7.644	2698580	3532680	49.343	45.153
	Target Compounds						
2)	Tetrabuty...	8.350	7.901	2578555	3913532	42.297	41.768
3)	Tri-n-but...	9.613	9.104	2778577	4375848	39.974	42.000
4)	Di-n-buty...	10.683	10.348	4482897	6100522	38.998	35.029
5)	n-Butyltin	11.536	11.108	2895091	4522782	28.008	28.273

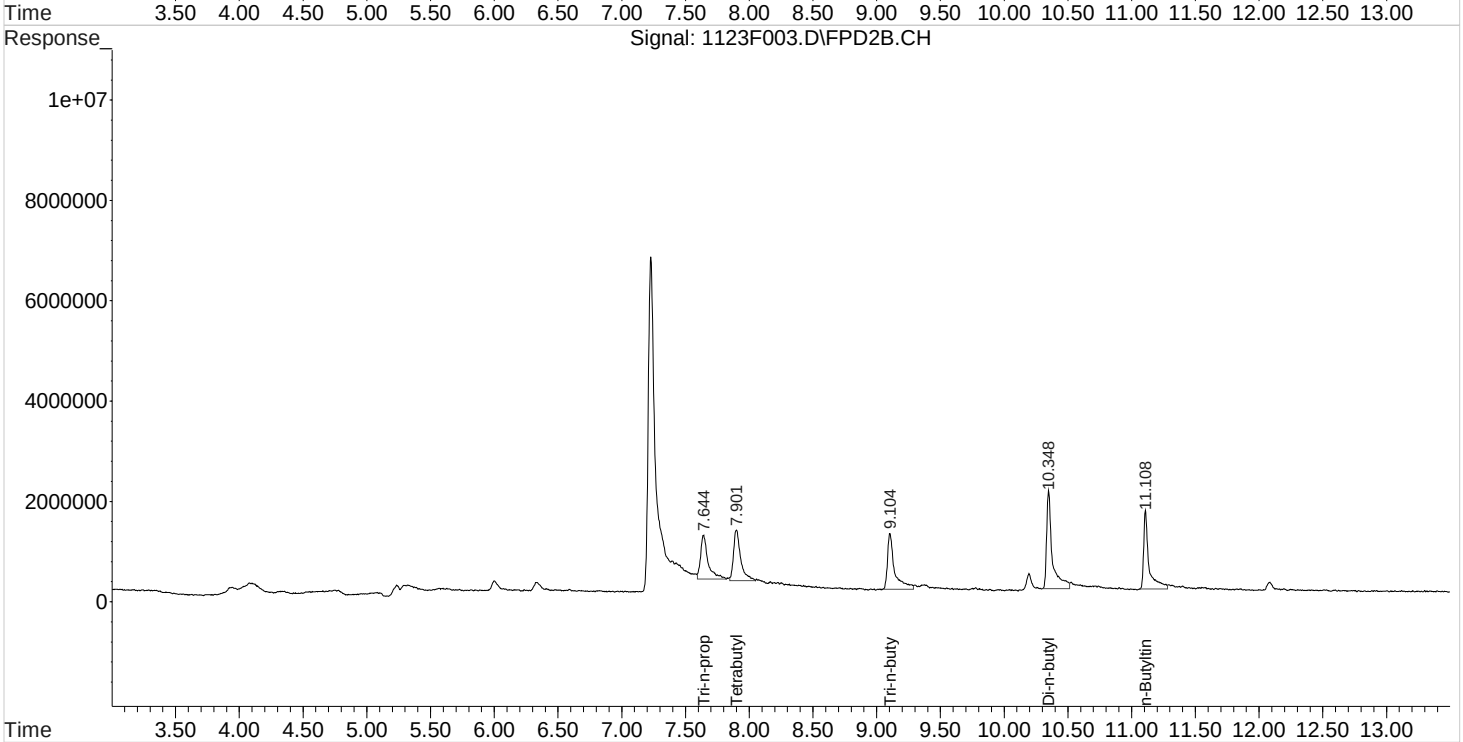
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\112318\1123F003.D Vial: 45
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 4:42 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:10 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:07:12 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F003.D\
Lab ID: KQ1817165-01
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 16:42:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F003.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 16:42:00	**Vial:**	7
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817165-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**		**Report Group:**	KQ1817165
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.03	7.64	2698580	3532680	49.343	45.153			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.54	11.11	2895091	4522782	28.008	28.273	28.0	28.3	Y
Di-n-butyltin Cation	10.68	10.35	4482897	6100522	38.998	35.029	39.0	35.0	Y
Tri-n-butyltin Cation	9.61	9.10	2778577	4375848	39.974	42.000	40.0	42.0	Y
Tetra-n-butyltin	8.35	7.90	2578555	3913532	42.297	41.768	42.3	41.8	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112318\1123F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.0	6.951E4	6.237E4	-10		± 25%	Average RF
Tri-n-propyltin	50.0	49.3	5.469E4	5.397E4	-1		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112318\1123F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	42.0	1.042E5	9.822E4	-6		± 25%	Average RF
Tri-n-propyltin	50.0	45.2	7.824E4	7.065E4	-10		± 25%	Average RF

1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F013.D Vial: 47
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 7:48 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:30 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.047	7.658	2694726	5190813	49.272	66.347 #
	Target Compounds						
2)	Tetrabuty...	8.367	7.918	2465732	4142670	40.446	44.214
3)	Tri-n-but...	9.633	9.121	2829559	4168508	40.708	40.010
4)	Di-n-buty...	10.693	10.361	4371279	6058327	38.027	34.787
5)	n-Butyltin	11.547	11.118	3019055	4592823	29.208	28.711

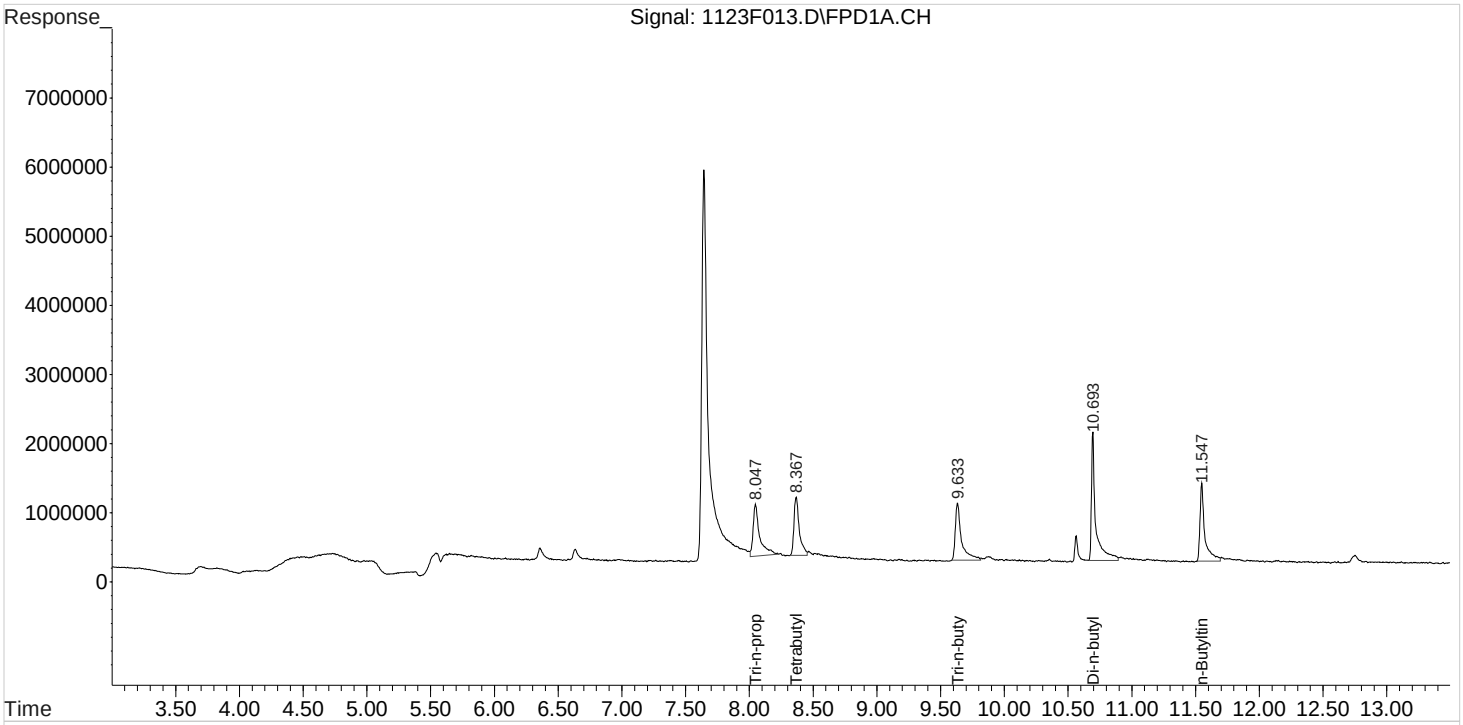
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

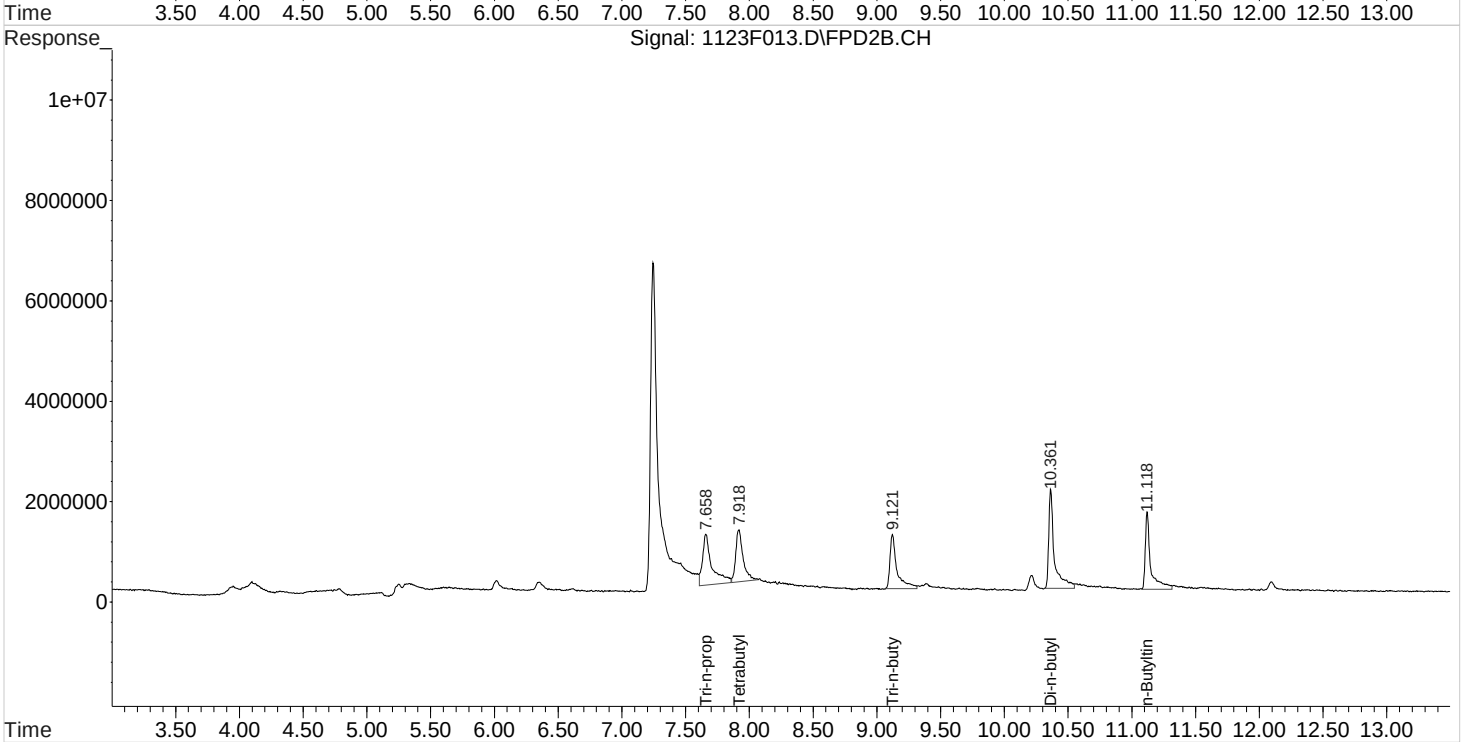
1st 11/25/18

Data File : J:\GC26\DATA\112318\1123F013.D Vial: 47
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 7:48 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:30 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\112318\1123F013.D\
Lab ID: KQ1817165-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 19:48:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F013.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 19:48:00	**Vial:**	6
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817165-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**		**Report Group:**	KQ1817165
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2694726	5190813	49.272	66.347			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	3019055	4592823	29.208	28.711	29.2	28.7	Y
Di-n-butyltin Cation	10.69	10.36	4371279	6058327	38.027	34.787	38.0	34.8	Y
Tri-n-butyltin Cation	9.63	9.12	2829559	4168508	40.708	40.010	40.7	40.0	Y
Tetra-n-butyltin	8.37	7.92	2465732	4142670	40.446	44.214	40.4	44.2	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112318\1123F013.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.7	6.951E4	6.351E4	-9		± 25%	Average RF
Tri-n-propyltin	50.0	49.3	5.469E4	5.389E4	-1		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112318\1123F013.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.0	1.042E5	9.357E4	-10			± 25%	Average RF
Tri-n-propyltin	50.0	66.3	7.824E4	1.038E5	33	*		± 25%	Average RF

1 Compounds Failed CCV Criteria (50.00 Percent)

1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F019.D Vial: 47
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 9:40 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:43 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.049	7.660	3106177	3635890	56.796	46.473
	Target Compounds						
2)	Tetrabuty...	8.365	7.917	2596926	3799224	42.598	40.548
3)	Tri-n-but...	9.632	9.127	2917611	3918820	41.974	37.613
4)	Di-n-buty...	10.692	10.363	4422121	6830135	38.469	39.219
5)	n-Butyltin	11.549	11.120	3100813	4465479	29.998	27.915

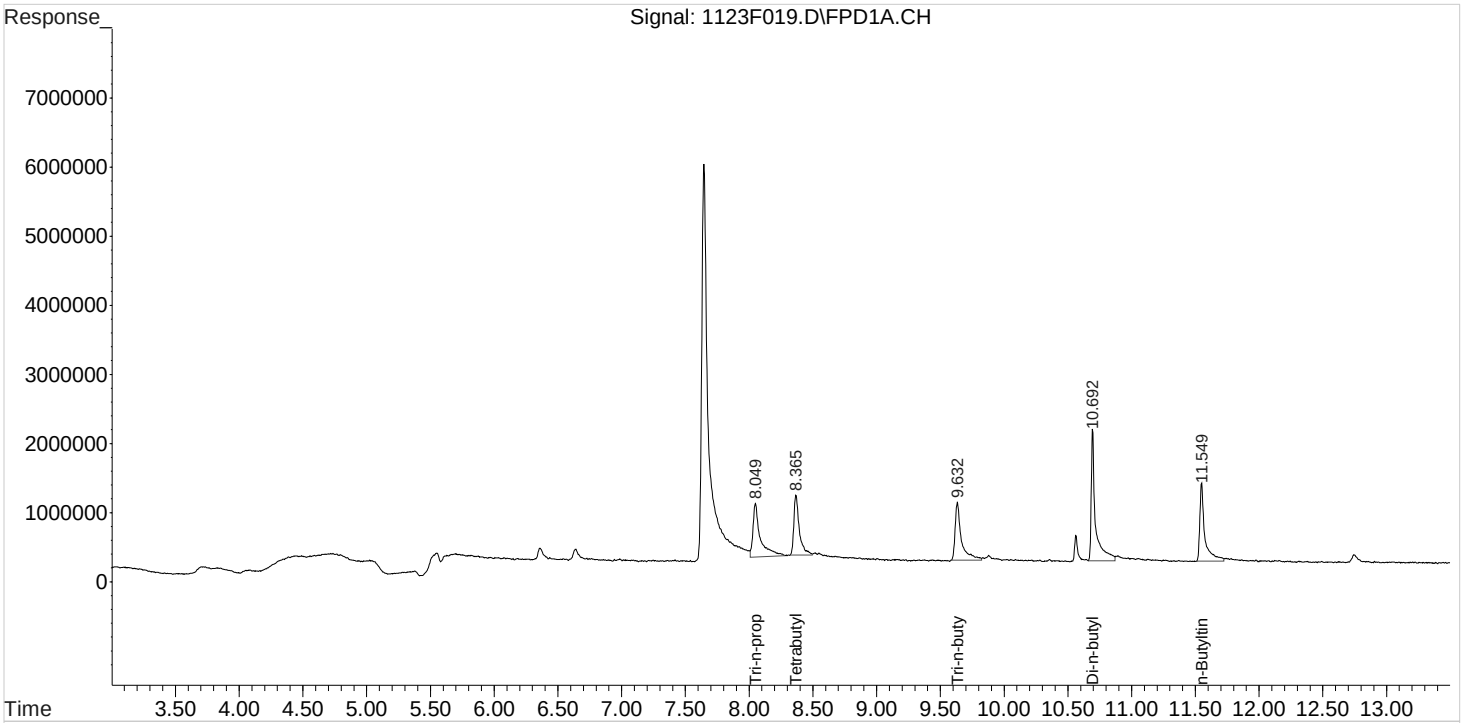
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

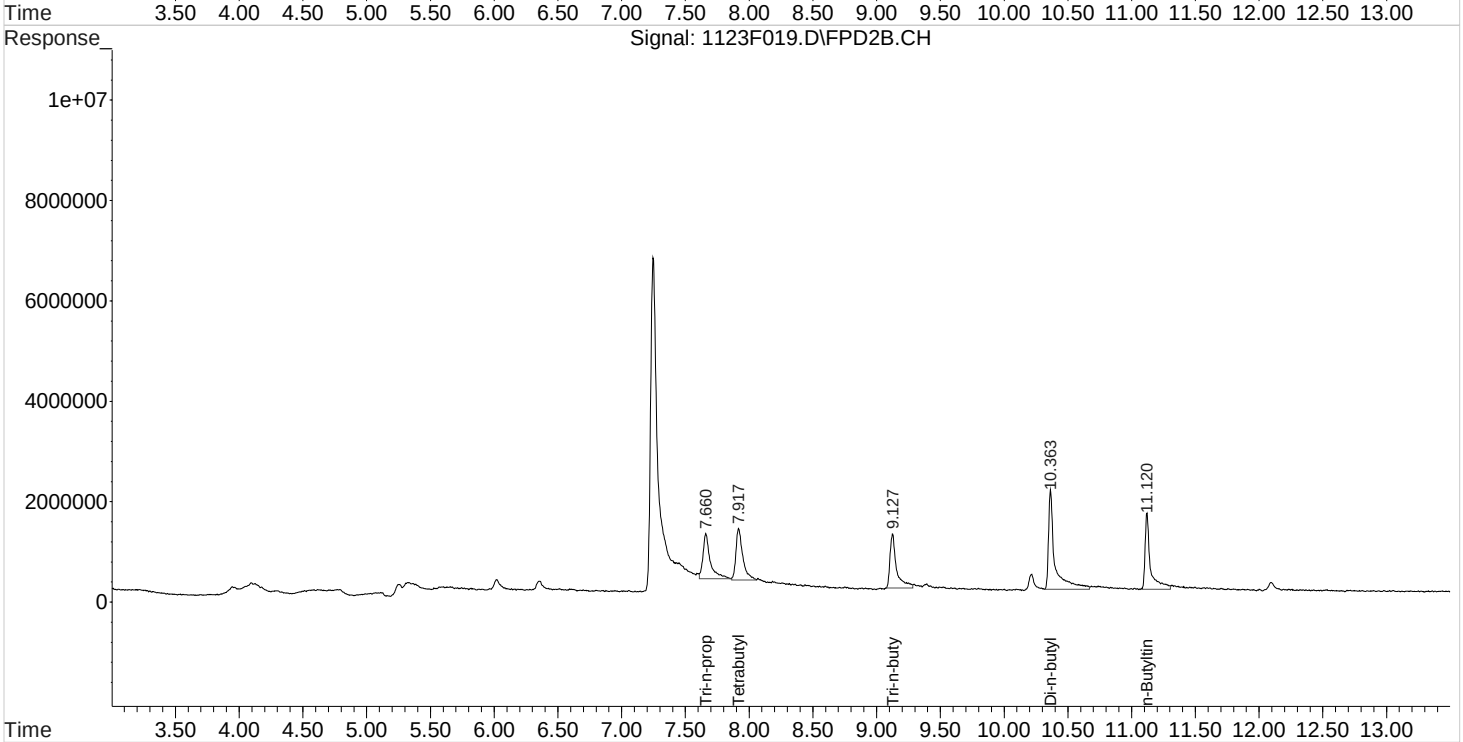
1st SM 11/25/18

Data File : J:\GC26\DATA\112318\1123F019.D Vial: 47
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 23 Nov 2018 9:40 pm Operator: SMURRAY
Sample : OT5-010K @ 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Nov 24 07:48:43 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Fri Sep 21 09:40:15 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Quantitation Report

Data File:	J:\GC26\DATA\112318\1123F019.D\	**Instrument:**	K-GC-26
Acqu Date:	11/23/18 21:40:00	**Vial:**	5
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817165-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	616178	**Prep Lot:**		**Report Group:**	KQ1817165
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	3106177	3635890	56.796	46.473			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	3100813	4465479	29.998	27.915	30.0	27.9	Y
Di-n-butyltin Cation	10.69	10.36	4422121	6830135	38.469	39.219	38.5	39.2	Y
Tri-n-butyltin Cation	9.63	9.13	2917611	3918820	41.974	37.613	42.0	37.6	Y
Tetra-n-butyltin	8.37	7.92	2596926	3799224	42.598	40.548	42.6	40.5	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\112318\1123F019.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	42.0	6.951E4	6.549E4	-6		± 25%	Average RF
Tri-n-propyltin	50.0	56.8	5.469E4	6.212E4	14		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\112318\1123F019.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.6	1.042E5	8.796E4	-16		± 25%	Average RF
Tri-n-propyltin	50.0	46.5	7.824E4	7.272E4	-7		± 25%	Average RF

Validation Report

Data File: J:\GC26\DATA\112318\1123F019.D\
Lab ID: KQ1817165-03
RunType: CCV
Matrix: Sediment

Date Acquired: 11/23/18 21:40:00
Batch ID: 616178
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report (Not Reviewed)

1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F013.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 2:29 pm Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:56:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.051	7.659	2168335	3211267	39.648	41.045
	Target Compounds						
2)	Tetrabuty...	8.374	7.919	2621070	3910923	42.994	41.741
3)	Tri-n-but...	9.654	9.139	2404334	3442272	34.590	33.039
4)	Di-n-buty...	10.704	10.379	3751644	5642039	32.636	32.397
5)	n-Butyltin	11.564	11.135	3126163	4187645	30.244	26.178

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

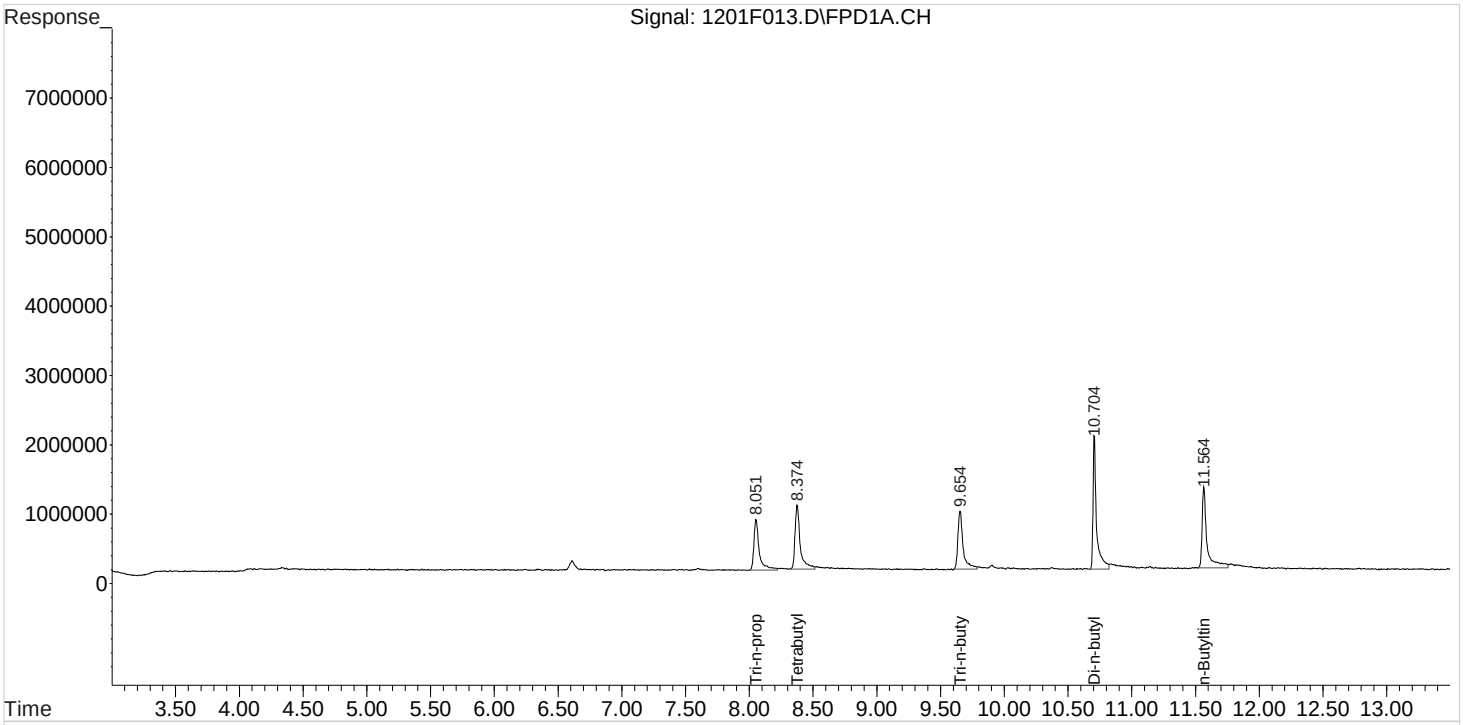
Quantitation Report (Not Reviewed)

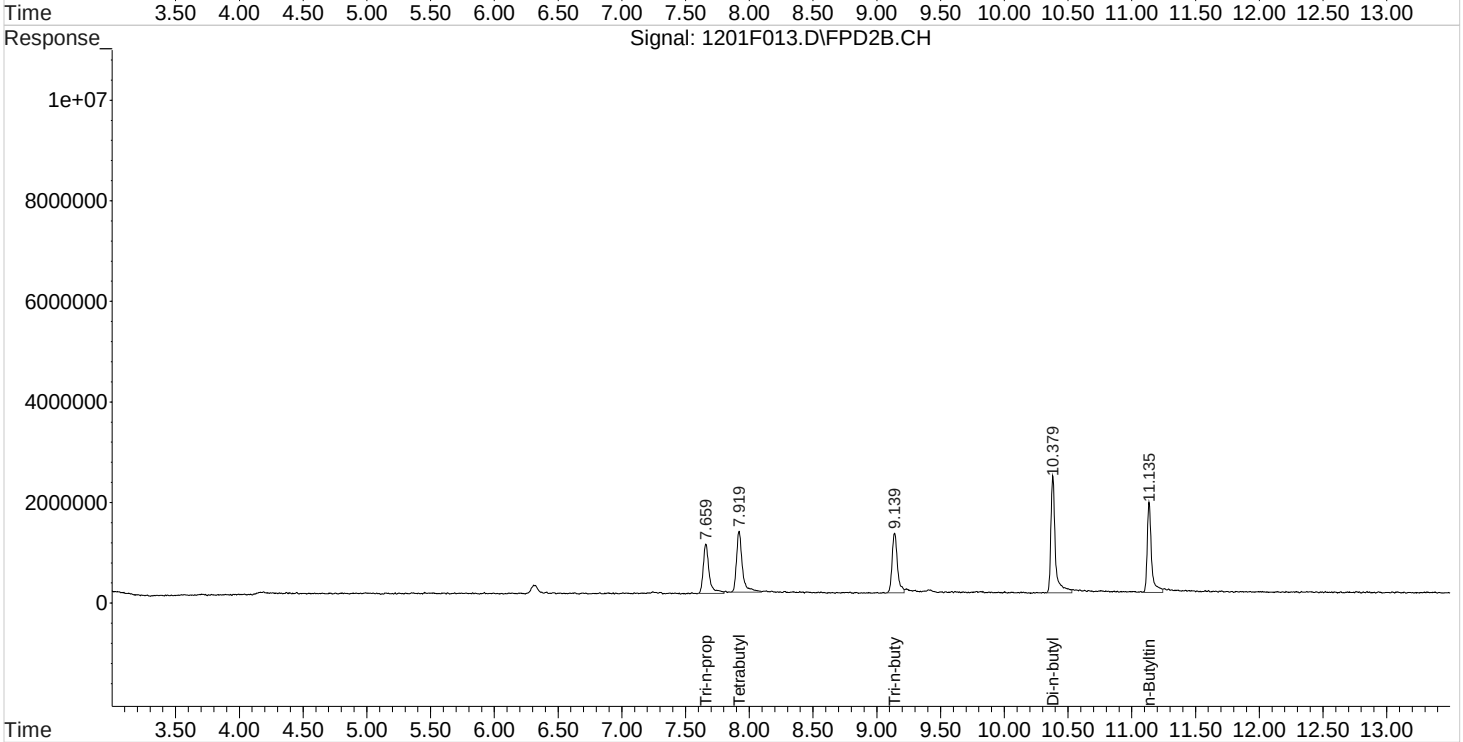
1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F013.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 2:29 pm Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:56:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st 12/02/18
2nd 12/06/18

Validation Report

Data File: J:\GC26\DATA\120118\1201F013.D\
Lab ID: KQ1817582-02
RunType: CCV
Matrix: Sediment

Date Acquired: 12/1/18 14:29:00
Batch ID: 617147
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/02/18
2nd 12/06/18

Quantitation Report

Data File:	J:\GC26\DATA\120118\1201F013.D\	**Instrument:**	K-GC-26
Acqu Date:	12/1/18 14:29:00	**Vial:**	8
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817582-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/5/18	**Receive Date:**	10/23/18

Analysis Lot:	617147	**Prep Lot:**		**Report Group:**	KQ1817582
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2168335	3211267	39.648	41.045			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.56	11.14	3126163	4187645	30.244	26.178	30.2	26.2	Y
Di-n-butyltin Cation	10.70	10.38	3751644	5642039	32.636	32.397	32.6	32.4	Y
Tri-n-butyltin Cation	9.65	9.14	2404334	3442272	34.590	33.039	34.6	33.0	Y
Tetra-n-butyltin	8.37	7.92	2621070	3910923	42.994	41.741	43.0	41.7	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 12/02/18
2nd 12/06/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #17560

List Name: 4-1095-01 **Signal ID:** RTX-1

Data File: J:\GC26\DATA\120118\1201F013.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
n-Butyltin Cation	31.2	30.2	1.034E5	1.004E5	-3		± 25%	Average RF
Di-n-butyltin Cation	38.3	32.6	1.150E5	9.789E4	-15		± 25%	Average RF
Tri-n-butyltin Cation	44.6	34.6	6.951E4	5.397E4	-22		± 25%	Average RF
Tetra-n-butyltin	50.0	43.0	6.096E4	5.242E4	-14		± 25%	Average RF
Tri-n-propyltin	50.0	39.6	5.469E4	4.337E4	-21		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #17560

List Name: 4-1095-01 **Signal ID:** RTX-35

Data File: J:\GC26\DATA\120118\1201F013.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
n-Butyltin Cation	31.2	26.2	1.600E5	1.344E5	-16		± 25%	Average RF
Di-n-butyltin Cation	38.3	32.4	1.742E5	1.472E5	-15		± 25%	Average RF
Tri-n-butyltin Cation	44.6	33.0	1.042E5	7.727E4	-26	*	± 25%	Average RF
Tetra-n-butyltin	50.0	41.7	9.370E4	7.822E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	41.0	7.824E4	6.423E4	-18		± 25%	Average RF

1 Compounds Failed CCV Criteria (20.00 Percent)

1st 12/02/18
2nd 12/06/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\120118\1201F013.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.6	6.951E4	5.397E4	-22		± 25%	Average RF
Tri-n-propyltin	50.0	39.6	5.469E4	4.337E4	-21		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\120118\1201F013.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	33.0	1.042E5	7.727E4	-26 *		± 25%	Average RF
Tri-n-propyltin	50.0	41.0	7.824E4	6.423E4	-18		± 25%	Average RF

1 Compounds Failed CCV Criteria (50.00 Percent)

Quantitation Report (Not Reviewed)

1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F024.D Vial: 34
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 5:53 pm Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:10 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.053	7.661	2077859	3169734	37.993	40.514
	Target Compounds						
2)	Tetrabuty...	8.377	7.921	2523803	3729847	41.399	39.808
3)	Tri-n-but...	9.653	9.138	2442412	3719019	35.138	35.696
4)	Di-n-buty...	10.707	10.378	3772919	5829365	32.821	33.472
5)	n-Butyltin	11.563	11.135	2772442	4243070	26.822	26.525

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

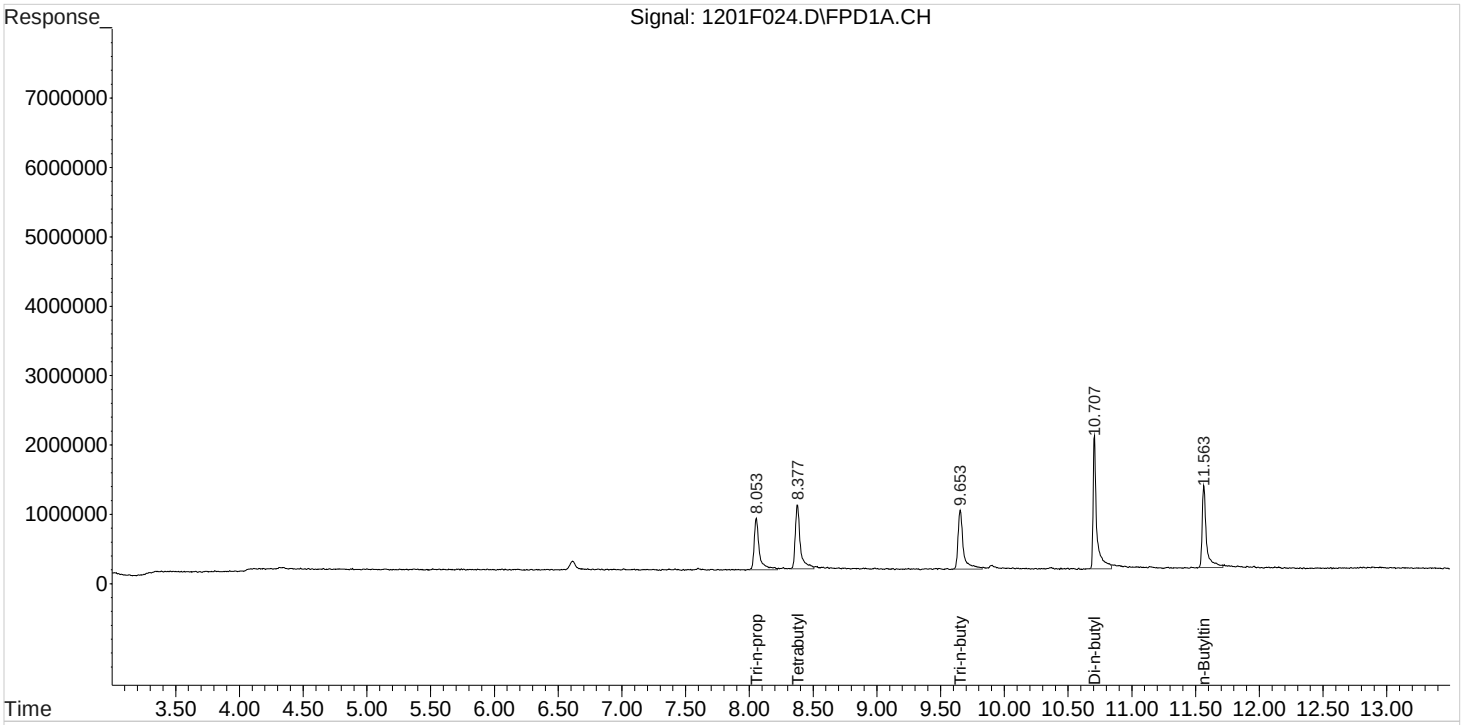
Quantitation Report (Not Reviewed)

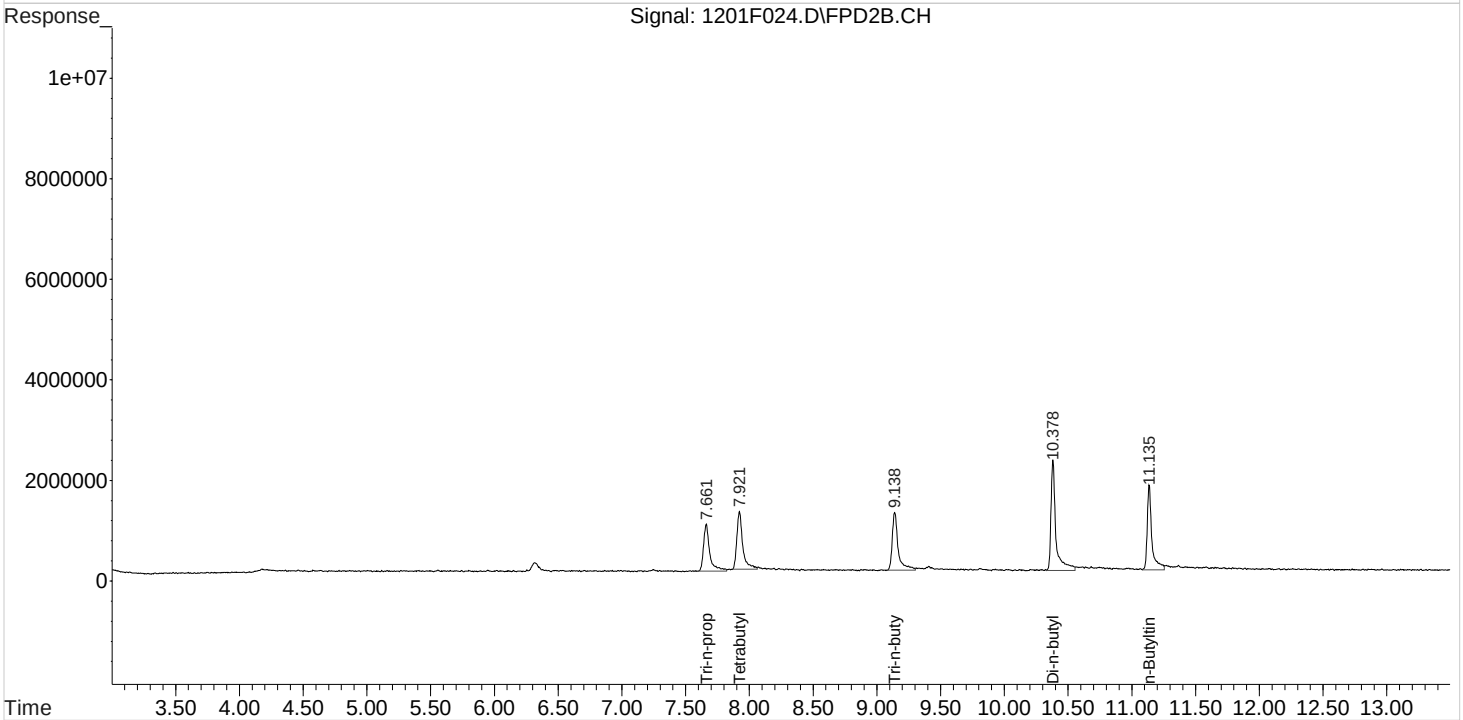
1st 12/02/18
2nd 12/06/18

Data File : J:\GC26\DATA\120118\1201F024.D Vial: 34
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 01 Dec 2018 5:53 pm Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 09:57:10 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





1st 12/02/18
2nd 12/06/18

Validation Report

Data File: J:\GC26\DATA\120118\1201F024.D\
Lab ID: KQ1817582-03
RunType: CCV
Matrix: Sediment

Date Acquired: 12/1/18 17:53:00
Batch ID: 617147
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/02/18
2nd 12/06/18

Quantitation Report

Data File:	J:\GC26\DATA\120118\1201F024.D\	**Instrument:**	K-GC-26
Acqu Date:	12/1/18 17:53:00	**Vial:**	7
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817582-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/5/18	**Receive Date:**	10/23/18

Analysis Lot:	617147	**Prep Lot:**		**Report Group:**	KQ1817582
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.05	7.66	2077859	3169734	37.993	40.514			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.56	11.13	2772442	4243070	26.822	26.525	26.8	26.5	Y
Di-n-butyltin Cation	10.71	10.38	3772919	5829365	32.821	33.472	32.8	33.5	Y
Tri-n-butyltin Cation	9.65	9.14	2442412	3719019	35.138	35.696	35.1	35.7	Y
Tetra-n-butyltin	8.38	7.92	2523803	3729847	41.399	39.808	41.4	39.8	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 12/02/18
2nd 12/06/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #17560

List Name: 4-1095-01 **Signal ID:** RTX-1

Data File: J:\GC26\DATA\120118\1201F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
n-Butyltin Cation	31.2	26.8	1.034E5	8.900E4	-14		± 25%	Average RF
Di-n-butyltin Cation	38.3	32.8	1.150E5	9.845E4	-14		± 25%	Average RF
Tri-n-butyltin Cation	44.6	35.1	6.951E4	5.482E4	-21		± 25%	Average RF
Tetra-n-butyltin	50.0	41.4	6.096E4	5.048E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	38.0	5.469E4	4.156E4	-24		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #17560

List Name: 4-1095-01 **Signal ID:** RTX-35

Data File: J:\GC26\DATA\120118\1201F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
n-Butyltin Cation	31.2	26.5	1.600E5	1.362E5	-15		± 25%	Average RF
Di-n-butyltin Cation	38.3	33.5	1.742E5	1.521E5	-13		± 25%	Average RF
Tri-n-butyltin Cation	44.6	35.7	1.042E5	8.348E4	-20		± 25%	Average RF
Tetra-n-butyltin	50.0	39.8	9.370E4	7.460E4	-20		± 25%	Average RF
Tri-n-propyltin	50.0	40.5	7.824E4	6.339E4	-19		± 25%	Average RF

1st 12/02/18
2nd 12/06/18

Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\120118\1201F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.1	6.951E4	5.482E4	-21		± 25%	Average RF
Tri-n-propyltin	50.0	38.0	5.469E4	4.156E4	-24		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\120118\1201F024.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.7	1.042E5	8.348E4	-20		± 25%	Average RF
Tri-n-propyltin	50.0	40.5	7.824E4	6.339E4	-19		± 25%	Average RF

Data File : J:\GC26\DATA\120218\1202F003.D Vial: 34
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 02 Dec 2018 11:09 am Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 13:02:34 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:07:12 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

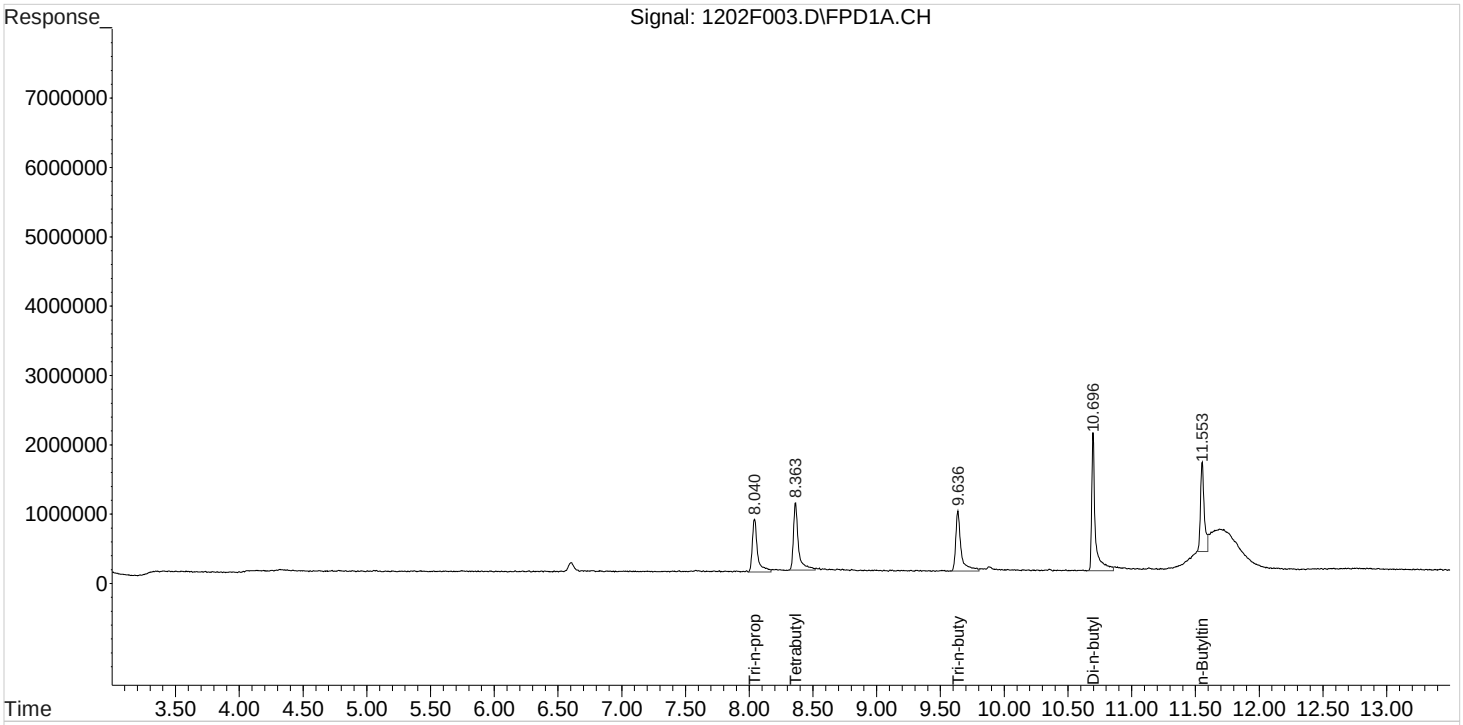
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.040	7.648	2143501	3466459	39.193	44.307
	Target Compounds						
2)	Tetrabuty...	8.363	7.908	2648807	4290572	43.449	45.792
3)	Tri-n-but...	9.636	9.124	2524982	4107053	36.326	39.420
4)	Di-n-buty...	10.696	10.368	3864393	6022642	33.617	34.582
5)	n-Butyltin	11.553	11.124	2659888	4542855	25.733	28.399

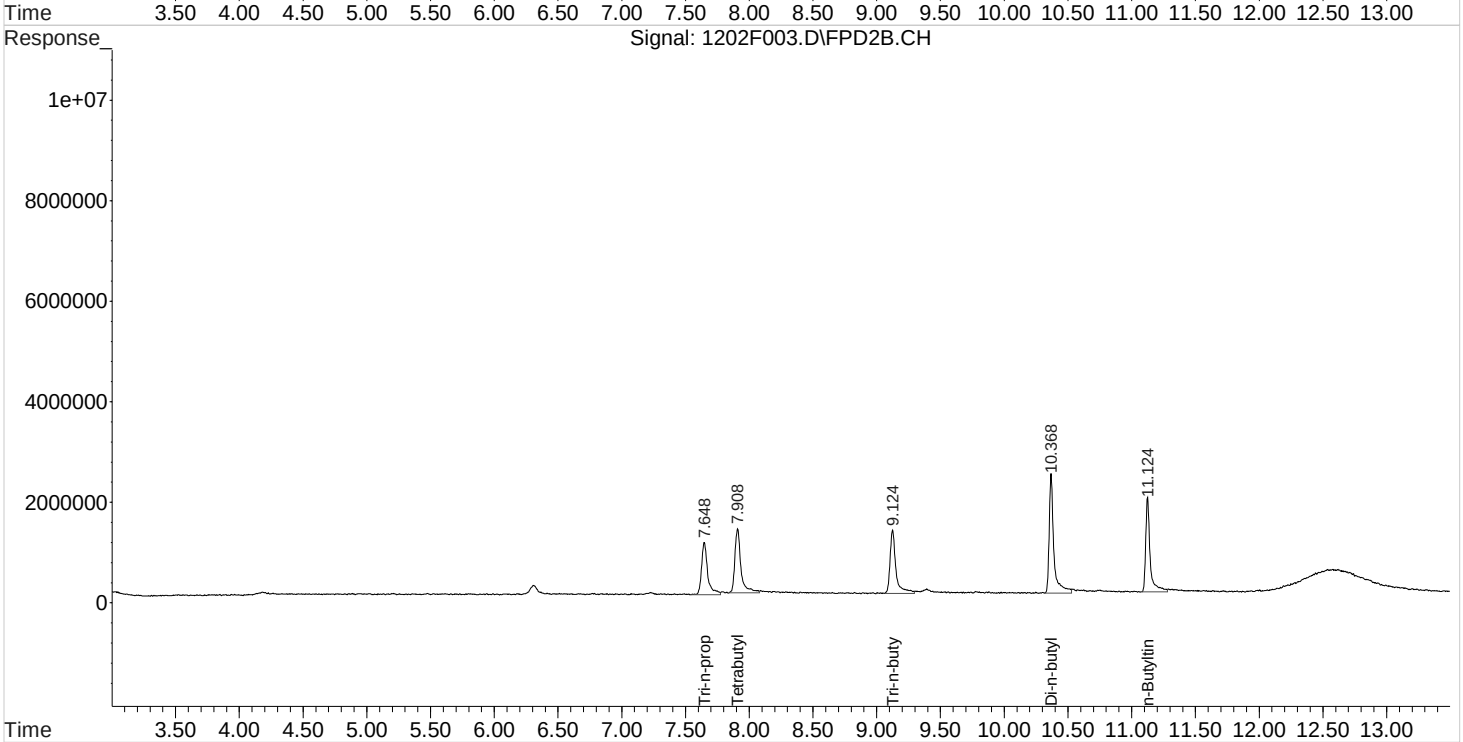
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\120218\1202F003.D Vial: 34
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 02 Dec 2018 11:09 am Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 13:02:34 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:07:12 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\120218\1202F003.D\
Lab ID: KQ1817583-01
RunType: CCV
Matrix: Sediment

Date Acquired: 12/2/18 11:09:00
Batch ID: 617148
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\120218\1202F003.D\	**Instrument:**	K-GC-26
Acqu Date:	12/2/18 11:09:00	**Vial:**	5
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817583-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/5/18	**Receive Date:**	10/23/18

Analysis Lot:	617148	**Prep Lot:**		**Report Group:**	KQ1817583
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.04	7.65	2143501	3466459	39.193	44.307			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.55	11.12	2659888	4542855	25.733	28.399	25.7	28.4	Y
Di-n-butyltin Cation	10.70	10.37	3864393	6022642	33.617	34.582	33.6	34.6	Y
Tri-n-butyltin Cation	9.64	9.12	2524982	4107053	36.326	39.420	36.3	39.4	Y
Tetra-n-butyltin	8.36	7.91	2648807	4290572	43.449	45.792	43.4	45.8	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\120218\1202F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	6.951E4	5.668E4	-18		± 25%	Average RF
Tri-n-propyltin	50.0	39.2	5.469E4	4.287E4	-22		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\120218\1202F003.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	39.4	1.042E5	9.219E4	-12		± 25%	Average RF
Tri-n-propyltin	50.0	44.3	7.824E4	6.933E4	-11		± 25%	Average RF

1st 12/02/18

Data File : J:\GC26\DATA\120218\1202F009.D Vial: 34
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 02 Dec 2018 1:08 pm Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 13:27:57 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

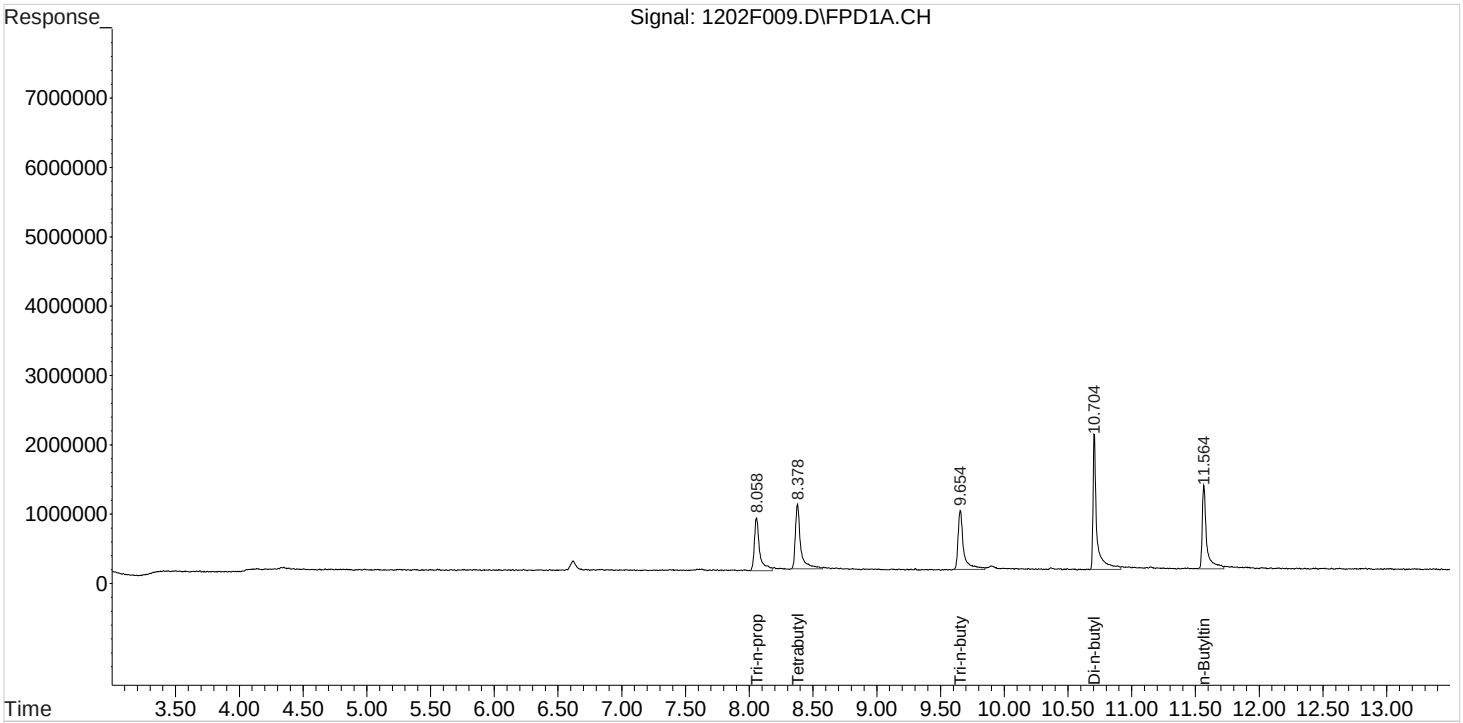
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.058	7.662	2214743	3274010	40.496	41.847
	Target Compounds						
2)	Tetrabuty...	8.378	7.926	2717154	3970566	44.571	42.377
3)	Tri-n-but...	9.654	9.139	2575475	3862739	37.052	37.075
4)	Di-n-buty...	10.704	10.379	4055301	5978375	35.278	34.328
5)	n-Butyltin	11.564	11.136	2904656	4486865	28.101	28.049

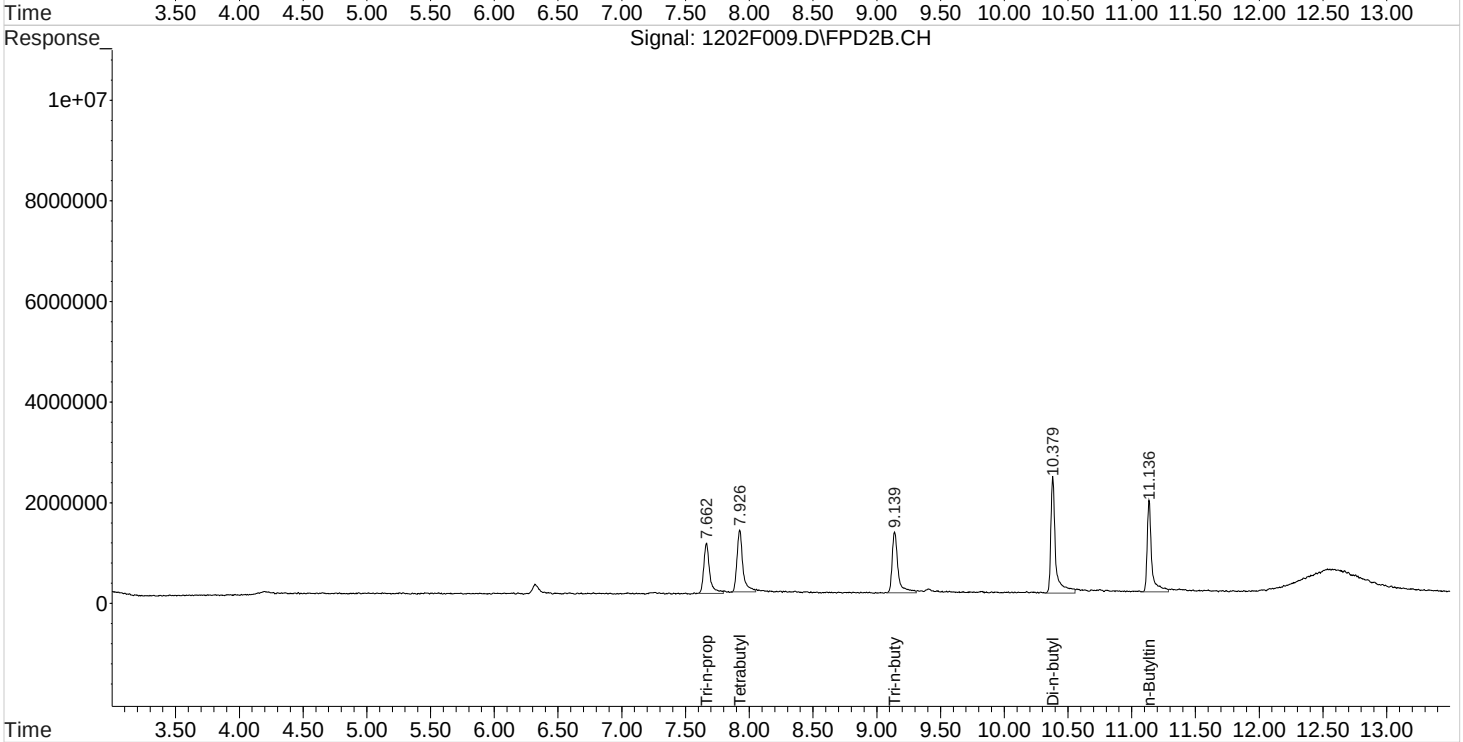
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC26\DATA\120218\1202F009.D Vial: 34
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 02 Dec 2018 1:08 pm Operator: SMURRAY
Sample : OT5-011B 50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 13:27:57 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Sat Dec 01 10:21:19 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Validation Report

Data File: J:\GC26\DATA\120218\1202F009.D\
Lab ID: KQ1817583-02
RunType: CCV
Matrix: Sediment

Date Acquired: 12/2/18 13:08:00
Batch ID: 617148
Analysis Method: ALS SOP/BUTYLTINS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

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Secondary Review: _____

Quantitation Report

Data File:	J:\GC26\DATA\120218\1202F009.D\	**Instrument:**	K-GC-26
Acqu Date:	12/2/18 13:08:00	**Vial:**	4
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1817583-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Sediment
Prod Code:	BUTYLTINS	**Collect Date:**	10/5/18	**Receive Date:**	10/23/18

Analysis Lot:	617148	**Prep Lot:**		**Report Group:**	KQ1817583
Analysis	ALS SOP	**Prep Method:**			
		Prep Date:			

Title:	Butyltins	**Calibration ID:**	KC1800436
		Report List ID:	17560

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	Rpt?
Tri-n-propyltin	8.06	7.66	2214743	3274010	40.496	41.847			Y

Target Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Rpt?
n-Butyltin Cation	11.56	11.14	2904656	4486865	28.101	28.049	28.1	28.0	Y
Di-n-butyltin Cation	10.70	10.38	4055301	5978375	35.278	34.328	35.3	34.3	Y
Tri-n-butyltin Cation	9.65	9.14	2575475	3862739	37.052	37.075	37.1	37.1	Y
Tetra-n-butyltin	8.38	7.93	2717154	3970566	44.571	42.377	44.6	42.4	Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	4.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Continuing Calibration Verification Summary

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-1

Data File: J:\GC26\DATA\120218\1202F009.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.1	6.951E4	5.781E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	40.5	5.469E4	4.429E4	-19		± 25%	Average RF

Calibration ID: KC1800436 **Spec Set:** #926 v. 1

QAP Name: LAB QAP **List ID:** #18688

List Name: 1-1095-01 TBT ONLY **Signal ID:** RTX-35

Data File: J:\GC26\DATA\120218\1202F009.D\

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.1	1.042E5	8.671E4	-17		± 25%	Average RF
Tri-n-propyltin	50.0	41.8	7.824E4	6.548E4	-16		± 25%	Average RF

Comment: Butyltins by Krone
Operator: SAA
Data Path: C:\GC26\DATA\091718\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	SOLN	100	0917F001	OTIN1	PRIMER
2	SOLN	100	0917F002	OTIN1	PRIMER
3	IB	1	0917F003	OTIN1	IB
4	ICAL	2	0917F004	OTIN1	OT5-010A @ 2PPB
5	ICAL	3	0917F005	OTIN1	OT5-010B @ 5PPB
6	ICAL	4	0917F006	OTIN1	OT5-010C @ 10PPB
7	ICAL	5	0917F007	OTIN1	OT5-010D @ 20PPB
8	ICAL	6	0917F008	OTIN1	OT5-010K@50 PPB
9	ICAL	7	0917F009	OTIN1	OT5-010E @ 200 PPB
10	ICAL	8	0917F010	OTIN1	OT5-010F @ 500 PPB
11	IB	1	0917F011	OTIN1	IB
12	ICAL	9	0917F012	OTIN1	OT5-09P @ 50PPB ICV
13					

Cal: KC1800436

09/18/18 SA

Last Modified: Mon Sep 17 13:56:13 2018 Page: 1

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F003.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:36 pm Operator: SAA
Sample : IB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 10:11:19 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:00:45 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
		System Monitoring Compounds							
1)	S	Tri-n-pro...	0.000	7.646f	0	18190	N.D.	0.232	#
		Target Compounds							
2)		Tetrabuty...	0.000	7.926f	0	29918	N.D.	0.319	#
3)		Tri-n-but...	0.000	9.110	0	18005	N.D.	0.173	#
5)		n-Butyltin	11.526	0.000	35324	0	0.342	N.D.	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

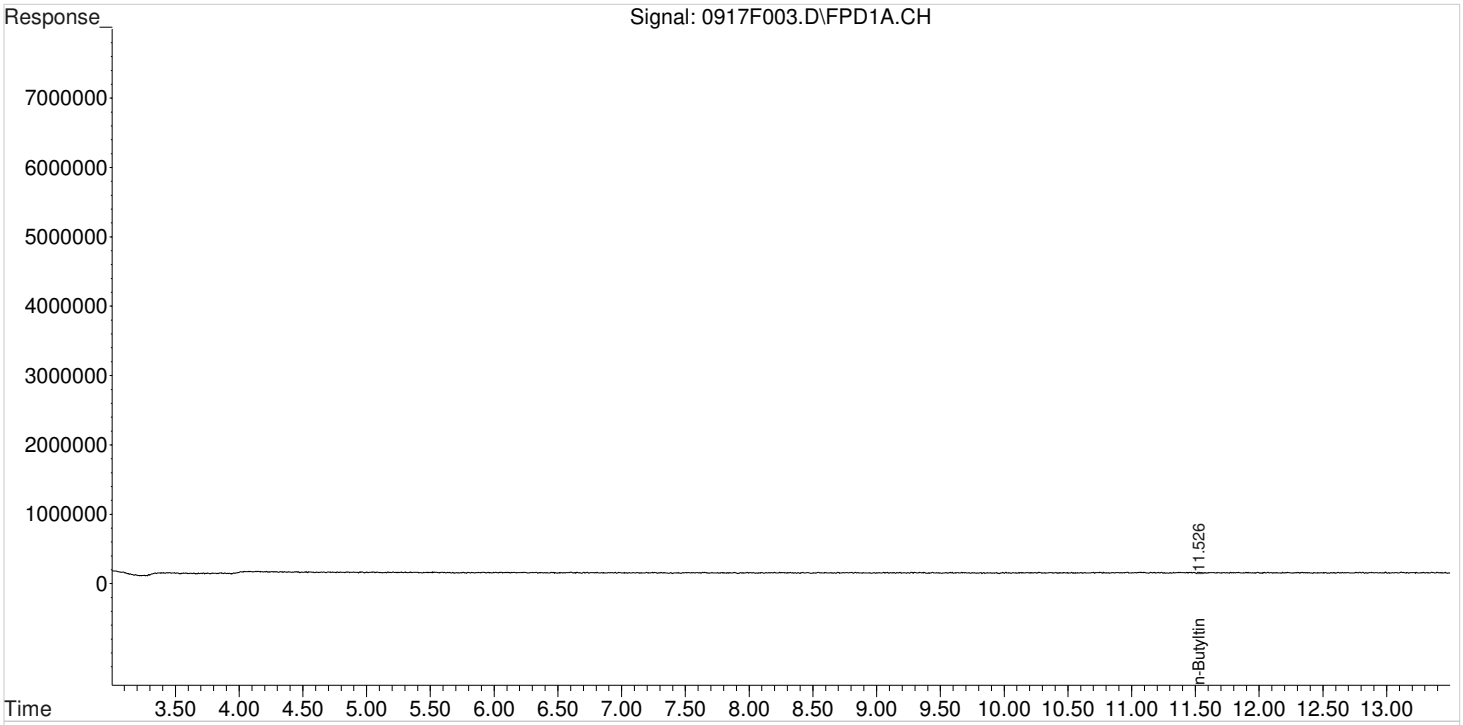
Quantitation Report (QT Reviewed)

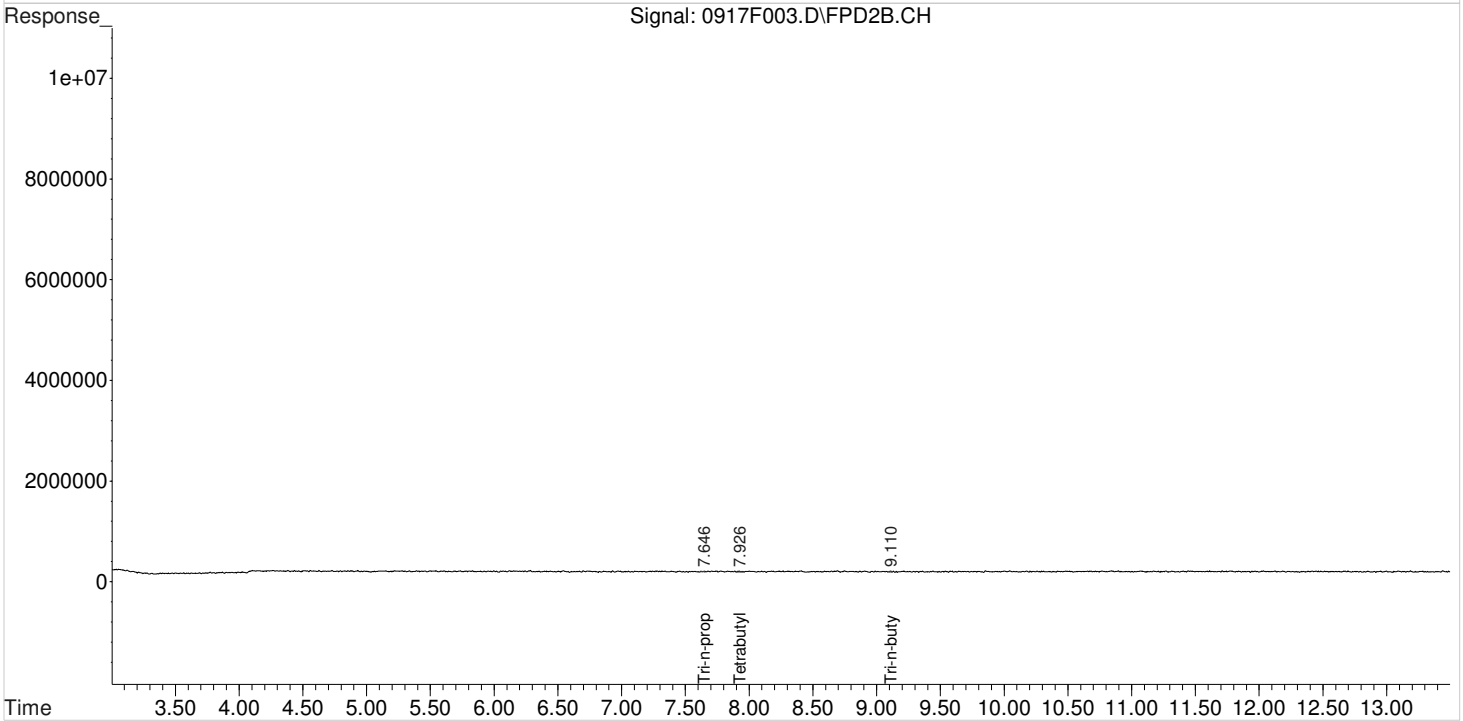
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F003.D Vial: 1
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:36 pm Operator: SAA
Sample : IB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 10:11:19 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:00:45 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:13 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	7.994	7.614	136780	149407	3.141	1.503m#
	Target Compounds						
2)	Tetrabuty...	8.317	7.871	109766	194011	2.111	1.764m
3)	Tri-n-but...	9.594	9.097	135520	222119	2.484	1.910m
4)	Di-n-buty...	10.677	10.347	188324	292846	1.951	1.425 #
5)	n-Butyltin	11.534	11.111	115125	239789	1.255	1.306

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

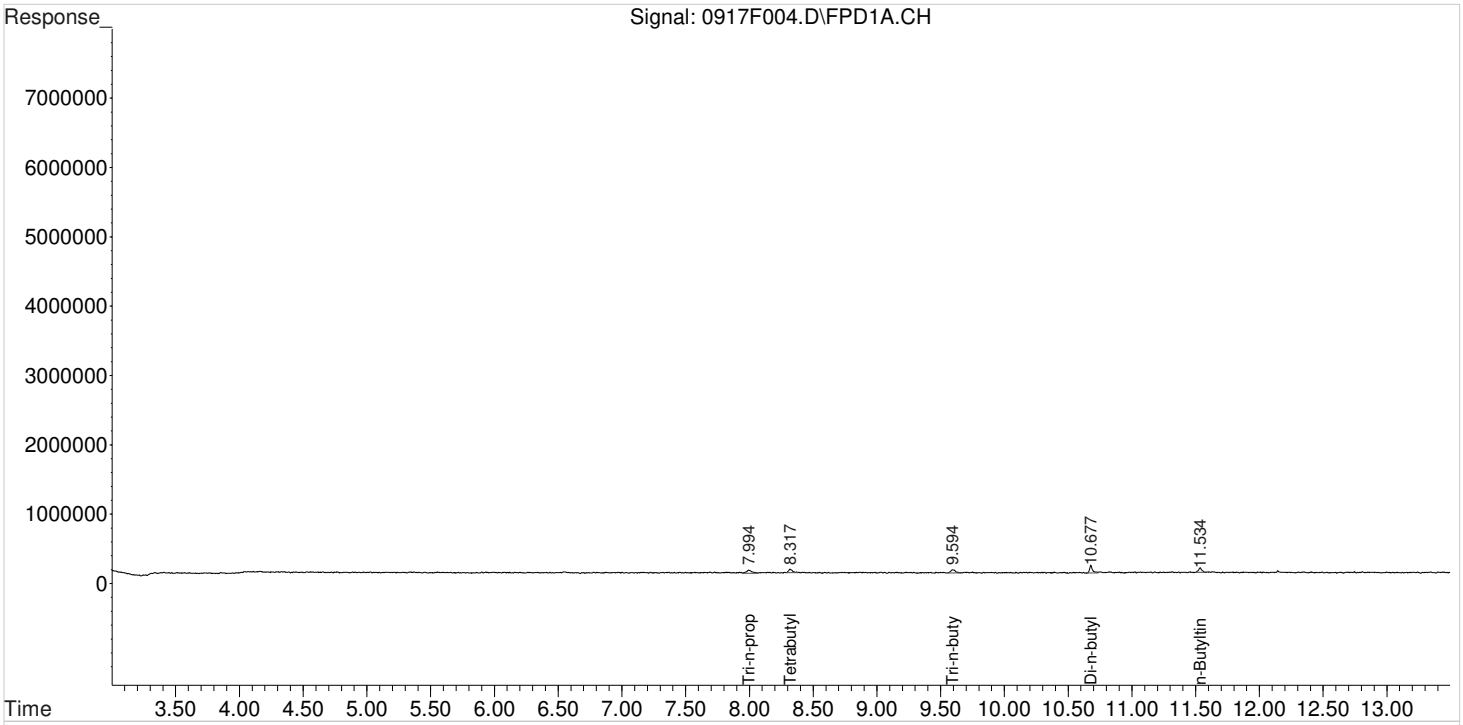
Quantitation Report (QT Reviewed)

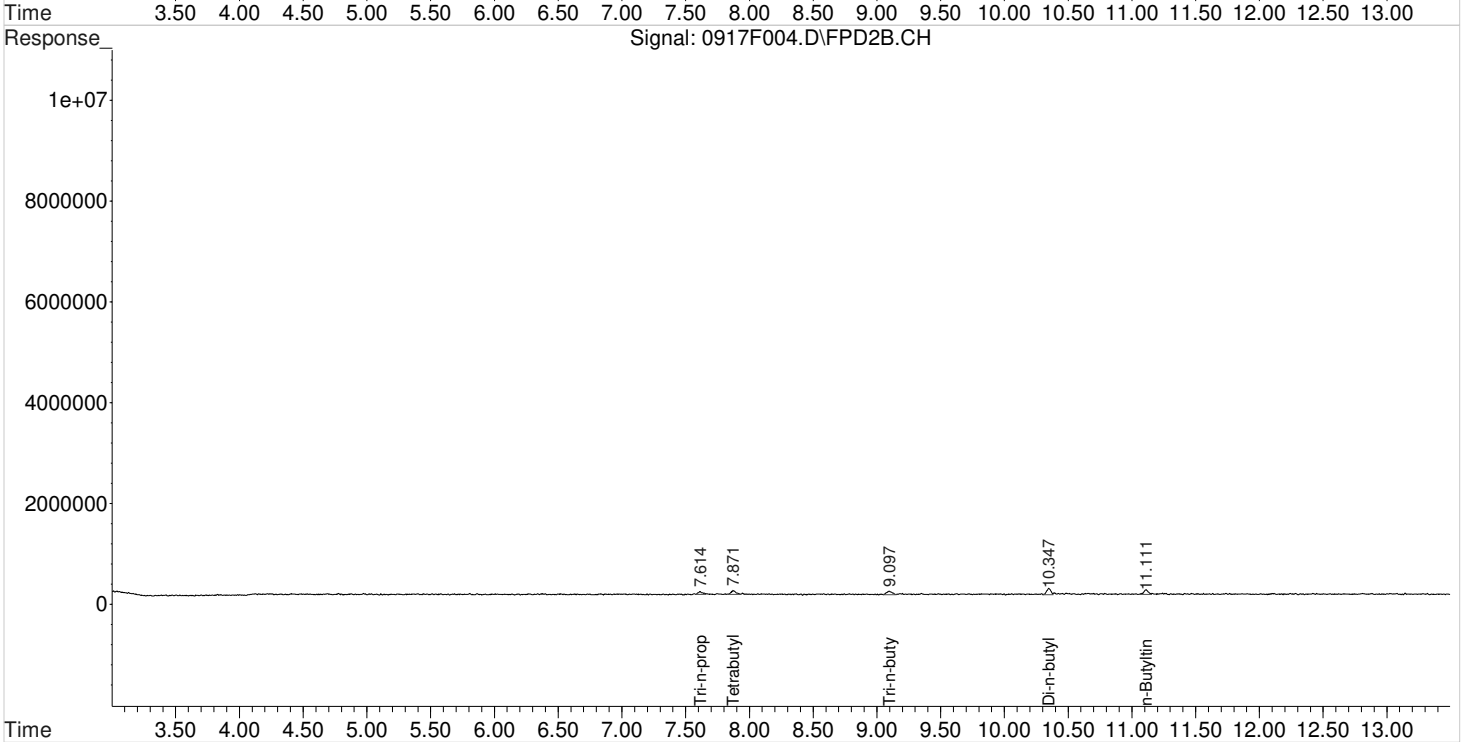
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:13 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





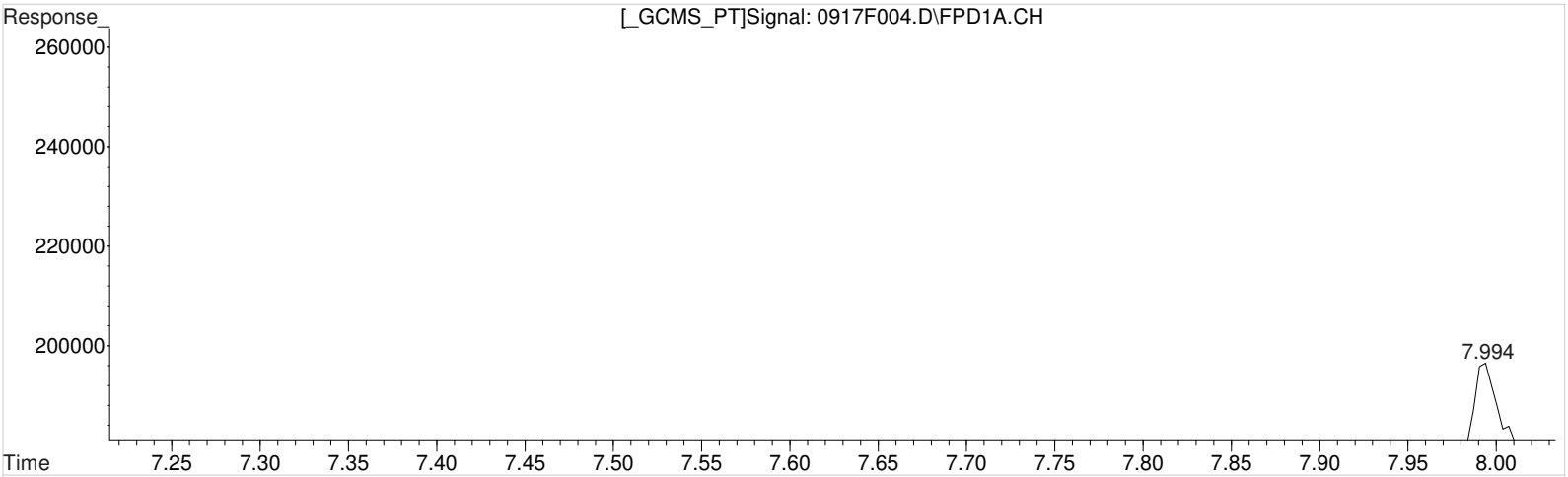
Quantitation Report (Qedit)

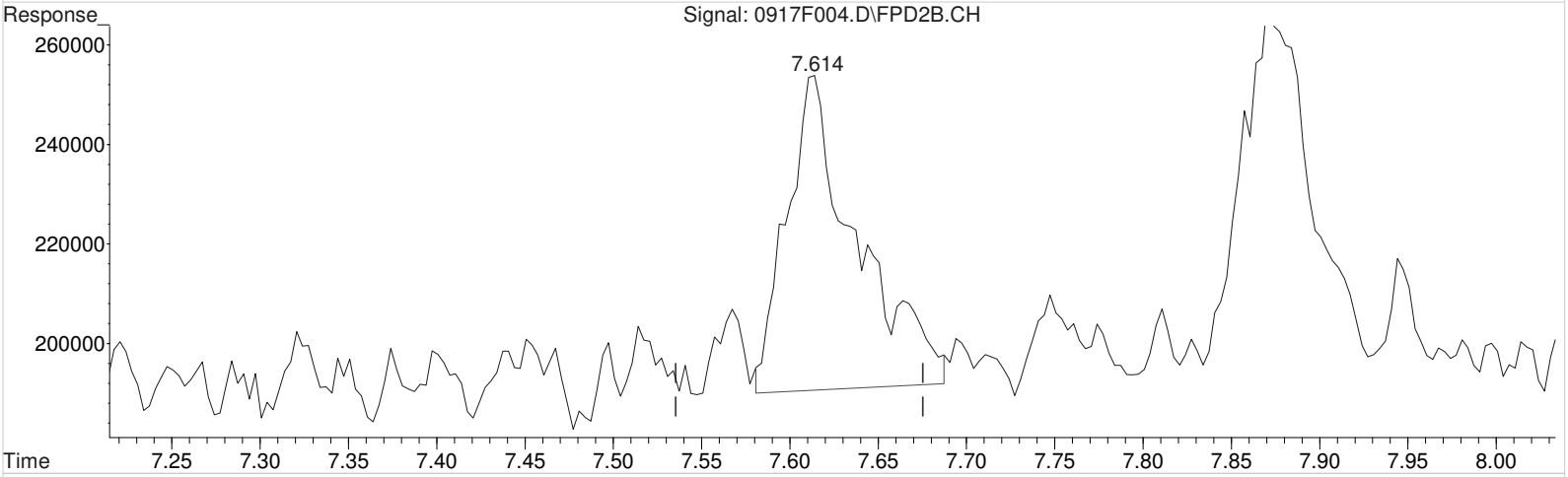
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:42:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

7.994min 3.141 ng/mL

response 136780

Manual Integration:

Before

09/18/18

(1) Tri-n-propyltin #2 (S)

7.614min 1.753 ng/mL

response 174242

(+) = Expected Retention Time

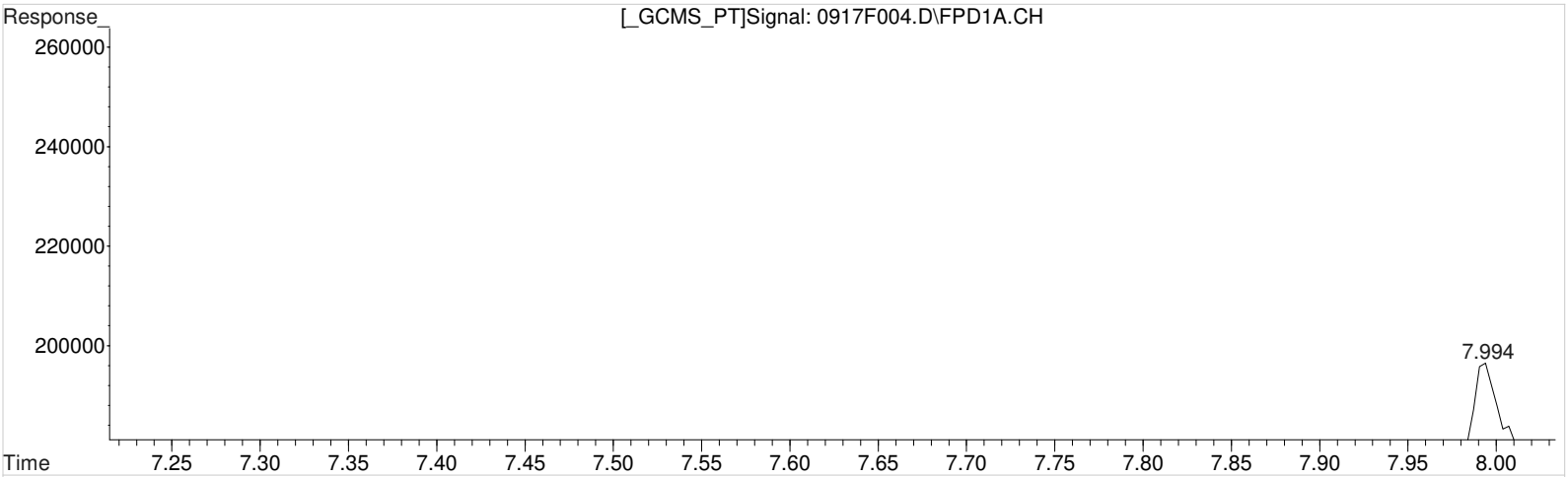
Quantitation Report (Qedit)

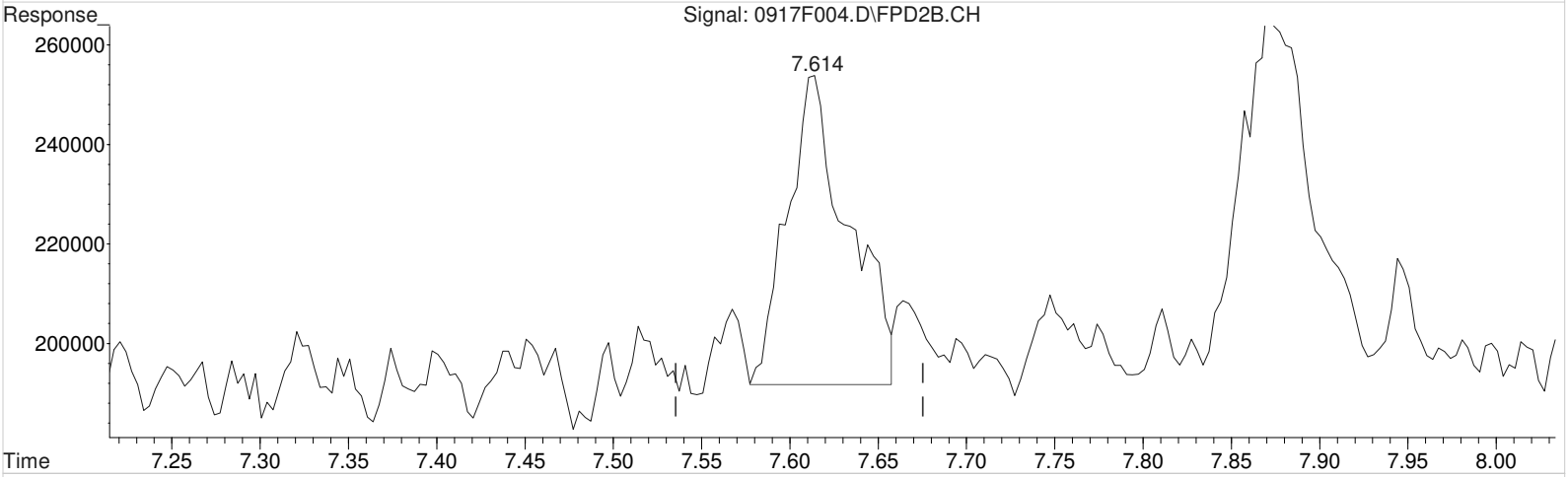
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:42:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

7.994min 3.141 ng/mL

response 136780

Manual Integration:

After

Baseline/Shoulder

09/18/18

(1) Tri-n-propyltin #2 (S)

7.614min 1.503 ng/mL m

response 149407

(+) = Expected Retention Time

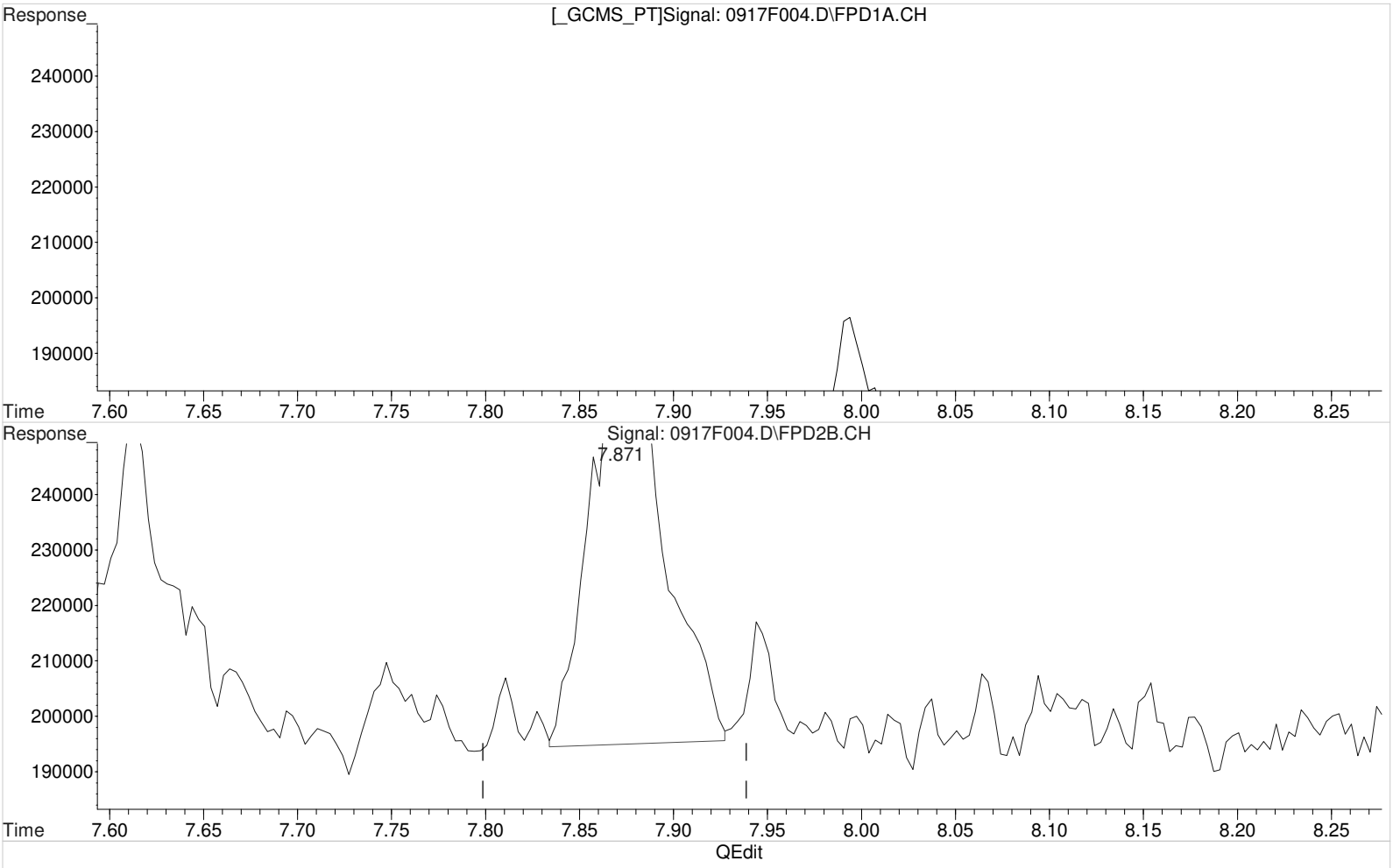
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:42:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(2) Tetrabutyltin

8.317min 2.111 ng/mL

response 109766

(2) Tetrabutyltin #2

7.871min 1.787 ng/mL

response 196534

Manual Integration:

Before

09/18/18

(+) = Expected Retention Time

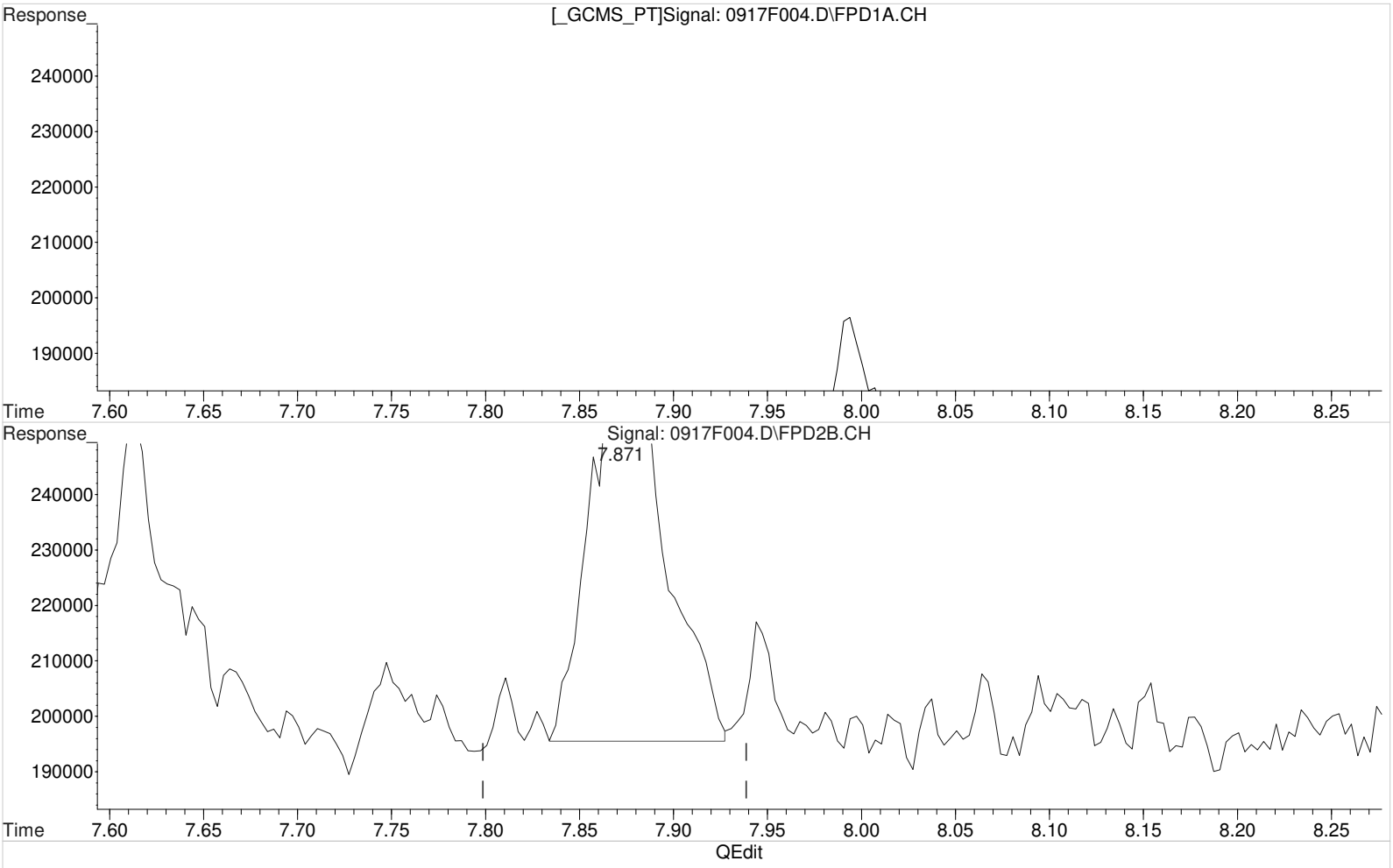
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:42:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(2) Tetrabutyltin

8.317min 2.111 ng/mL

response 109766

Manual Integration:

After

Baseline/Shoulder

09/18/18

(2) Tetrabutyltin #2

7.871min 1.764 ng/mL m

response 194011

(+) = Expected Retention Time

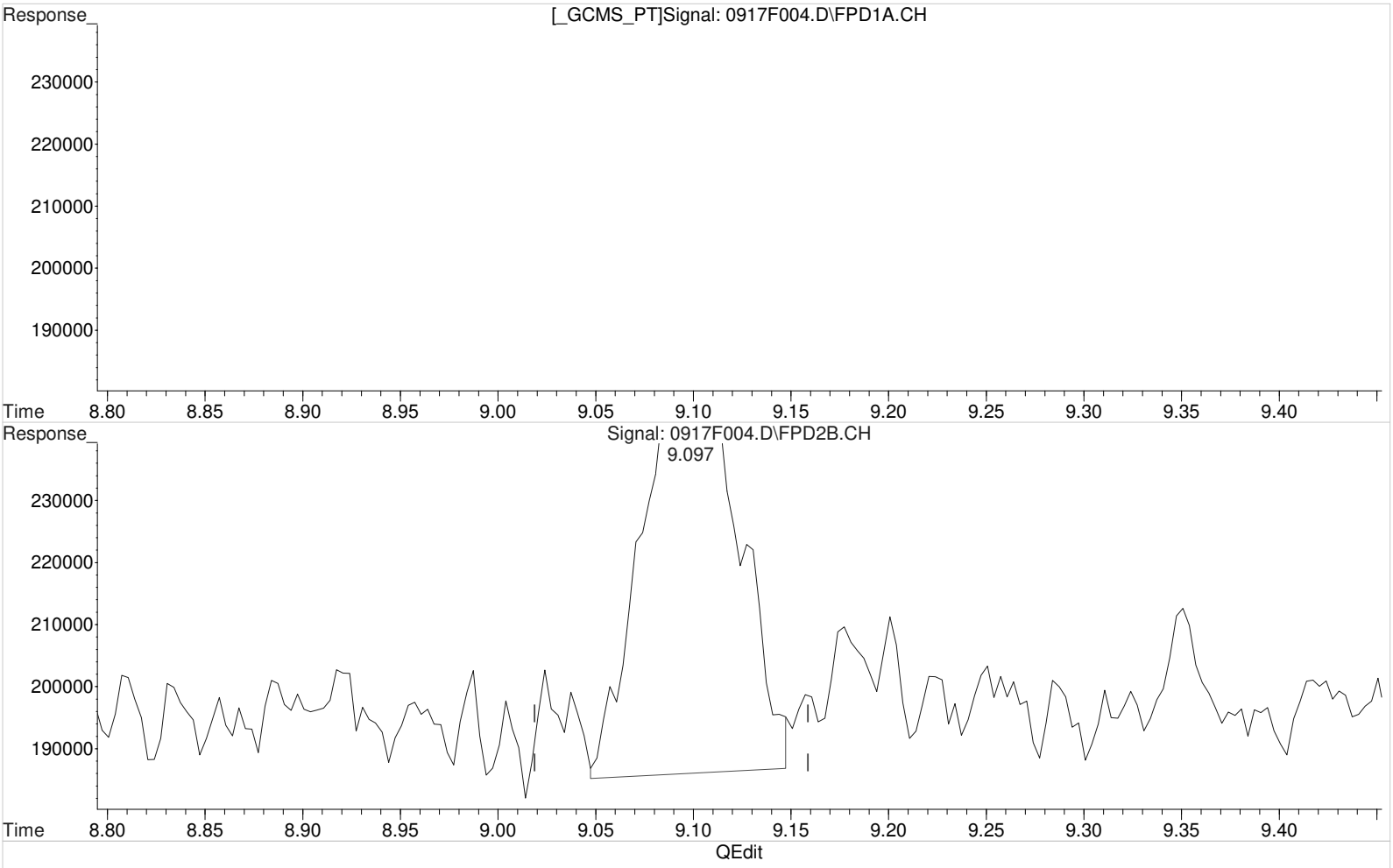
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:42:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(3) Tri-n-butyltin

9.594min 2.484 ng/mL

response 135520

Manual Integration:

Before

09/18/18

(3) Tri-n-butyltin #2

9.097min 1.936 ng/mL

response 225109

(+) = Expected Retention Time

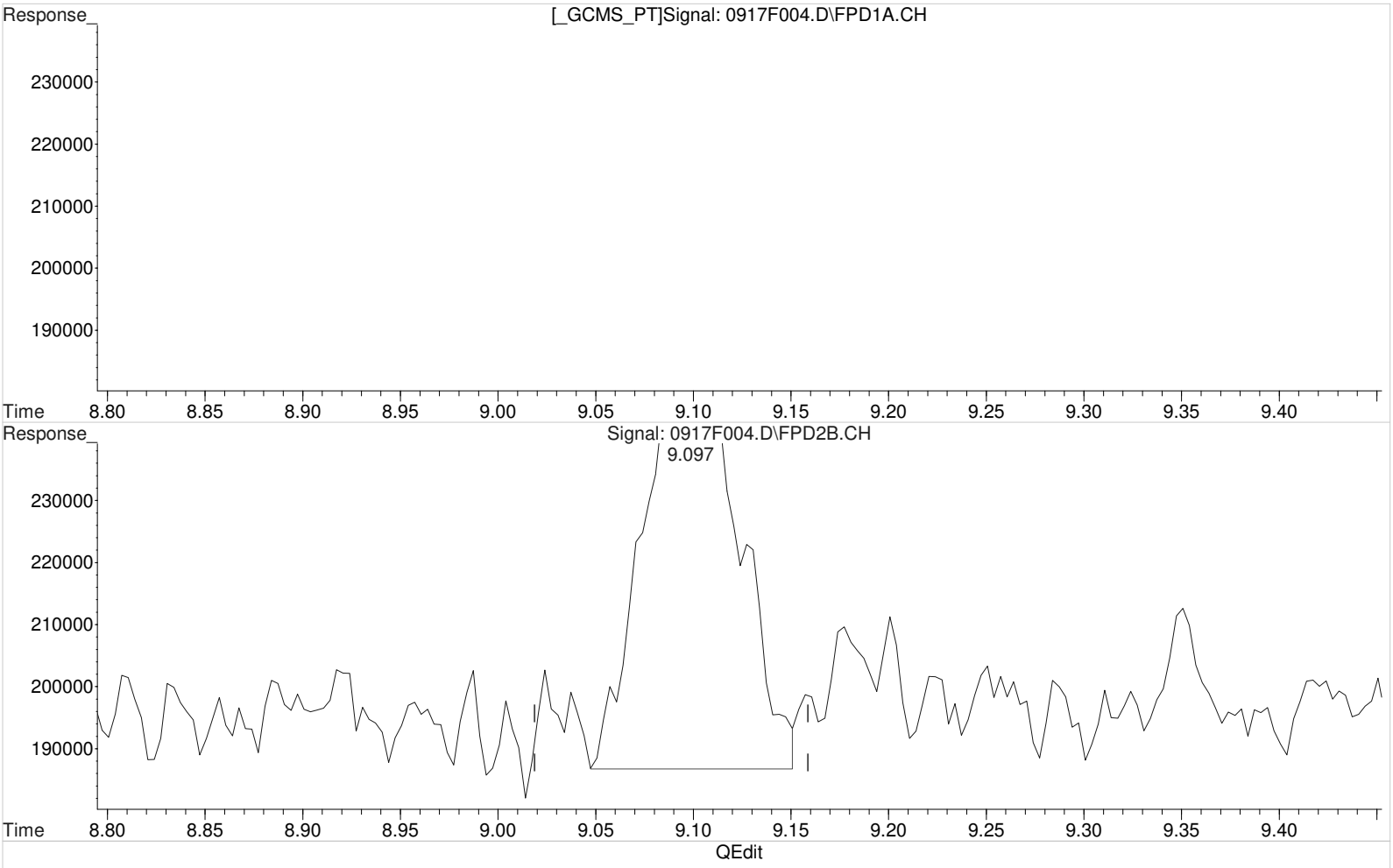
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F004.D Vial: 2
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 2:55 pm Operator: SAA
Sample : OT5-010A @ 2PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:42:08 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(3) Tri-n-butyltin

9.594min 2.484 ng/mL

response 135520

Manual Integration:

After

Baseline/Shoulder

09/18/18

(3) Tri-n-butyltin #2

9.097min 1.910 ng/mL m

response 222119

(+) = Expected Retention Time

Initial Calibration - Detailed Report

Calibration ID: KC1800436 **Instrument ID:** K-GC-26
Column Name: RTX-1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	KC1800436-01	OT5-010A @ 2PPB	J:\GC26\DATA\091718\0917F004.D	09/17/2018 14:55
02	KC1800436-02	OT5-010B @ 5PPB	J:\GC26\DATA\091718\0917F005.D	09/17/2018 15:13
03	KC1800436-03	OT5-010C @ 10PPB	J:\GC26\DATA\091718\0917F006.D	09/17/2018 15:32
04	KC1800436-04	OT5-010D @ 20PPB	J:\GC26\DATA\091718\0917F007.D	09/17/2018 15:50
05	KC1800436-05	OT5-010K@50 PPB	J:\GC26\DATA\091718\0917F008.D	09/17/2018 16:08
06	KC1800436-06	OT5-010E @ 200 PPB	J:\GC26\DATA\091718\0917F009.D	09/17/2018 16:27
07	KC1800436-07	OT5-010F @ 500 PPB	J:\GC26\DATA\091718\0917F010.D	09/17/2018 16:45

Analyte **Curve Fit** **Weighting**

Di-n-butyltin Cation

Average RF **RSD = 7.793** **Average RF = 1.15E5**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.533	1.228E5	02	3.833	1.059E5	03	7.665	1.063E5	04	15.330	1.046E5
05	38.325	1.235E5	06	153.300	1.233E5	07	383.250	1.182E5			

Tetra-n-butyltin

Average RF **RSD = 8.488** **Average RF = 6.096E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	5.488E4	02	5.000	5.406E4	03	10.000	5.808E4	04	20.000	6.346E4
05	50.000	6.437E4	06	200.000	6.622E4	07	500.000	6.567E4			

Tri-n-butyltin Cation

Average RF **RSD = 5.189** **Average RF = 6.951E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.782	7.605E4	02	4.455	7.24E4	03	8.910	6.65E4	04	17.820	6.585E4
05	44.550	6.93E4	06	178.200	6.9E4	07	445.500	6.747E4			

n-Butyltin Cation

Average RF **RSD = 7.147** **Average RF = 1.034E5**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.246	9.24E4	02	3.115	9.934E4	03	6.230	1.041E5	04	12.460	9.746E4
05	31.150	1.118E5	06	124.600	1.12E5	07	311.500	1.064E5			

Tri-n-propyltin

Average RF **RSD = 12.74** **Average RF = 5.469E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	6.839E4	02	5.000	5.283E4	03	10.000	4.594E4	04	20.000	5.002E4
05	50.000	5.595E4	06	200.000	5.459E4	07	500.000	5.511E4			

Initial Calibration - Detailed Report

Calibration ID: KC1800436 **Instrument ID:** K-GC-26
Column Name: RTX-1

Analyte

Di-n-butyltin Cation

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.533	1.64	6.9	02	3.833	3.53	-7.9	03	7.665	7.09	-7.5
04	15.330	13.9	-9.0	05	38.325	41.2	7.4	06	153.300	164	7.3
07	383.250	394	2.8								

Tetra-n-butyltin

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.000	1.80	-10.0	02	5.000	4.43	-11.3	03	10.000	9.53	-4.7
04	20.000	20.8	4.1	05	50.000	52.8	5.6	06	200.000	217	8.6
07	500.000	539	7.7								

Tri-n-butyltin Cation

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.782	1.95	9.4	02	4.455	4.64	4.2	03	8.910	8.52	-4.3
04	17.820	16.9	-5.3	05	44.550	44.4	-0.3	06	178.200	177	-0.7
07	445.500	432	-2.9								

n-Butyltin Cation

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.246	1.11	-10.6	02	3.115	2.99	-3.9	03	6.230	6.27	0.7
04	12.460	11.7	-5.7	05	31.150	33.7	8.2	06	124.600	135	8.4
07	311.500	321	3.0								

Tri-n-propyltin

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.000	2.50	25.0	02	5.000	4.83	-3.4	03	10.000	8.40	-16.0
04	20.000	18.3	-8.5	05	50.000	51.2	2.3	06	200.000	200	-0.2
07	500.000	504	0.8								

Calibration ID: KC1800436 **Instrument ID:** K-GC-26
Column Name: RTX-35

#	Lab Code	Sample Name	File Location	Aquisition Date
01	KC1800436-01	OT5-010A @ 2PPB	J:\GC26\DATA\091718\0917F004.D\0917F004c.d	09/17/2018 14:55
02	KC1800436-02	OT5-010B @ 5PPB	J:\GC26\DATA\091718\0917F005.D\0917F005c.d	09/17/2018 15:13
03	KC1800436-03	OT5-010C @ 10PPB	J:\GC26\DATA\091718\0917F006.D\0917F006c.d	09/17/2018 15:32
04	KC1800436-04	OT5-010D @ 20PPB	J:\GC26\DATA\091718\0917F007.D\0917F007c.d	09/17/2018 15:50
05	KC1800436-05	OT5-010K@50 PPB	J:\GC26\DATA\091718\0917F008.D\0917F008c.d	09/17/2018 16:08
06	KC1800436-06	OT5-010E @ 200 PPB	J:\GC26\DATA\091718\0917F009.D\0917F009c.d	09/17/2018 16:27
07	KC1800436-07	OT5-010F @ 500 PPB	J:\GC26\DATA\091718\0917F010.D\0917F010c.d	09/17/2018 16:45

Initial Calibration - Detailed Report

Calibration ID: KC1800436 **Instrument ID:** K-GC-26
Column Name: RTX-35

Analyte	Curve Fit	Weighting

Di-n-butyltin Cation

Average RF **RSD = 6.659** **Average RF = 1.742E5**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.533	1.91E5	02	3.833	1.605E5	03	7.665	1.816E5	04	15.330	1.656E5
05	38.325	1.847E5	06	153.300	1.706E5	07	383.250	1.65E5			

Tetra-n-butyltin

Average RF **RSD = 5.173** **Average RF = 9.37E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	9.701E4	02	5.000	8.957E4	03	10.000	1.021E5	04	20.000	9.142E4
05	50.000	9.517E4	06	200.000	9.281E4	07	500.000	8.782E4			

Tri-n-butyltin Cation

Average RF **RSD = 10.63** **Average RF = 1.042E5**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.782	1.246E5	02	4.455	9.429E4	03	8.910	1.125E5	04	17.820	9.717E4
05	44.550	1.058E5	06	178.200	9.935E4	07	445.500	9.552E4			

n-Butyltin Cation

Average RF **RSD = 10.69** **Average RF = 1.6E5**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.246	1.924E5	02	3.115	1.615E5	03	6.230	1.505E5	04	12.460	1.421E5
05	31.150	1.705E5	06	124.600	1.55E5	07	311.500	1.476E5			

Tri-n-propyltin

Average RF **RSD = 4.931** **Average RF = 7.824E4**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	7.47E4	02	5.000	7.544E4	03	10.000	7.709E4	04	20.000	7.852E4
05	50.000	8.615E4	06	200.000	7.943E4	07	500.000	7.633E4			

Initial Calibration - Detailed Report

Calibration ID: KC1800436 **Instrument ID:** K-GC-26
Column Name: RTX-35

Analyte

Di-n-butyltin Cation

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.533	1.68	9.7	02	3.833	3.53	-7.8	03	7.665	7.99	4.3
04	15.330	14.6	-4.9	05	38.325	40.7	6.1	06	153.300	150	-2.0
07	383.250	363	-5.2								

Tetra-n-butyltin

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.000	2.07	3.5	02	5.000	4.78	-4.4	03	10.000	10.9	8.9
04	20.000	19.5	-2.4	05	50.000	50.8	1.6	06	200.000	198	-0.9
07	500.000	469	-6.3								

Tri-n-butyltin Cation

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.782	2.13	19.6	02	4.455	4.03	-9.5	03	8.910	9.62	8.0
04	17.820	16.6	-6.7	05	44.550	45.3	1.6	06	178.200	170	-4.6
07	445.500	408	-8.3								

n-Butyltin Cation

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.246	1.50	20.3	02	3.115	3.15	1.0	03	6.230	5.86	-5.9
04	12.460	11.1	-11.2	05	31.150	33.2	6.6	06	124.600	121	-3.1
07	311.500	287	-7.7								

Tri-n-propyltin

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.000	1.91	-4.5	02	5.000	4.82	-3.6	03	10.000	9.85	-1.5
04	20.000	20.1	0.4	05	50.000	55.1	10.1	06	200.000	203	1.5
07	500.000	488	-2.4								

Initial Calibration Verification Summary Report

Calibration ID:	KC1800436	**Instrument ID:**	K-GC-26
Datafile ID:	J:\GC26\DATA\091718\0917F012.D	**Column Name:**	RTX-35

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Di-n-butyltin Cation	KC1800436-08	T	Average RF	38.3250	32.367	ng/mL	-15.5	<= 25
Tetra-n-butyltin	KC1800436-08	T	Average RF	50	40.241	ng/mL	-19.5	<= 25
Tri-n-butyltin Cation	KC1800436-08	T	Average RF	44.55	50.118	ng/mL	12.5	<= 25
n-Butyltin Cation	KC1800436-08	T	Average RF	31.15	27.152	ng/mL	-12.8	<= 25

Calibration ID:	KC1800436	**Instrument ID:**	K-GC-26
Datafile ID:	J:\GC26\DATA\091718\0917F012.D	**Column Name:**	RTX-1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Di-n-butyltin Cation	KC1800436-08	T	Average RF	38.3250	33.392	ng/mL	-12.9	<= 25
Tetra-n-butyltin	KC1800436-08	T	Average RF	50	44.756	ng/mL	-10.5	<= 25
Tri-n-butyltin Cation	KC1800436-08	T	Average RF	44.55	52.883	ng/mL	18.7	<= 25
n-Butyltin Cation	KC1800436-08	T	Average RF	31.15	29.524	ng/mL	-5.2	<= 25

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:24 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	7.998	7.618	264161	377218	6.067m	3.796m#
	Target Compounds						
2)	Tetrabuty...	8.322	7.878	270286	447857	5.199	4.072
3)	Tri-n-but...	9.602	9.098	322537	420043	5.913	3.612m#
4)	Di-n-buty...	10.678	10.348	405751	615257	4.203	2.994m#
5)	n-Butyltin	11.535	11.112	309456	503223	3.373m	2.742m

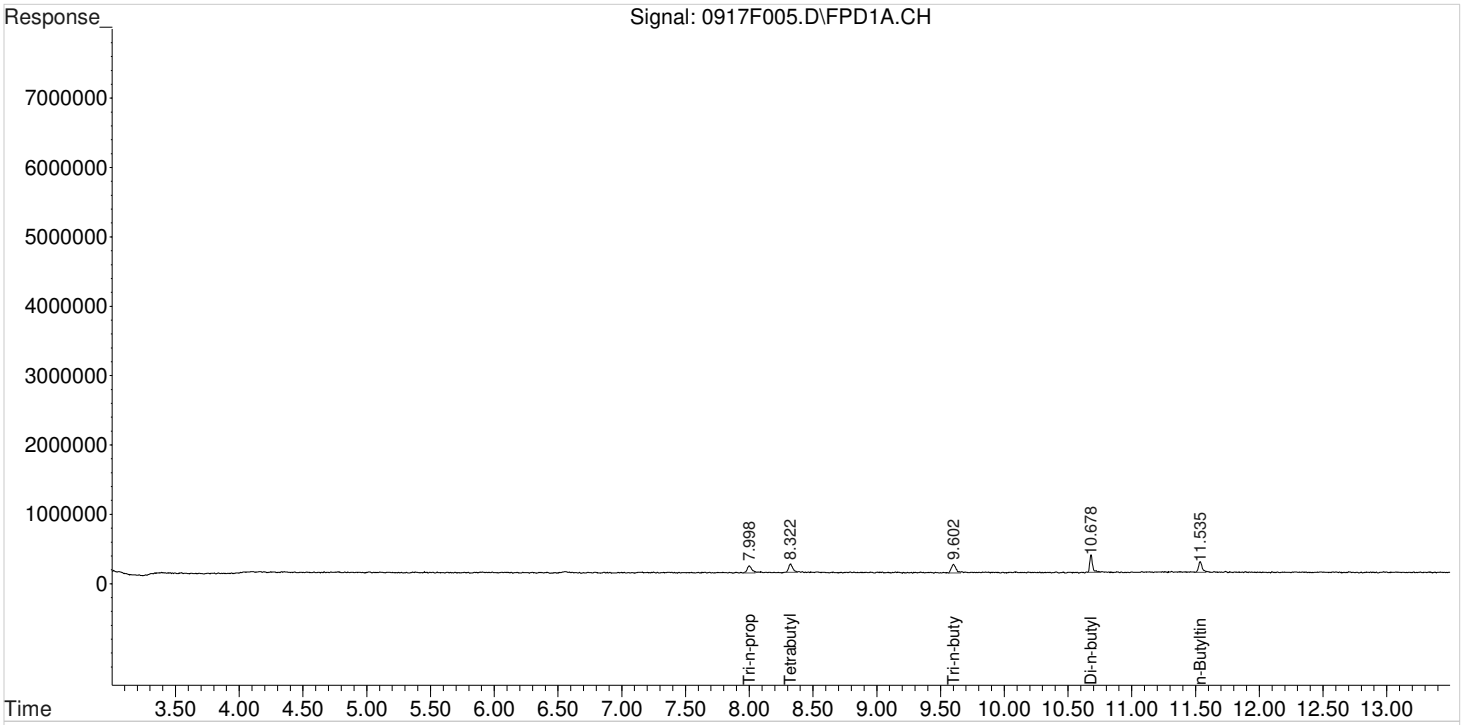
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

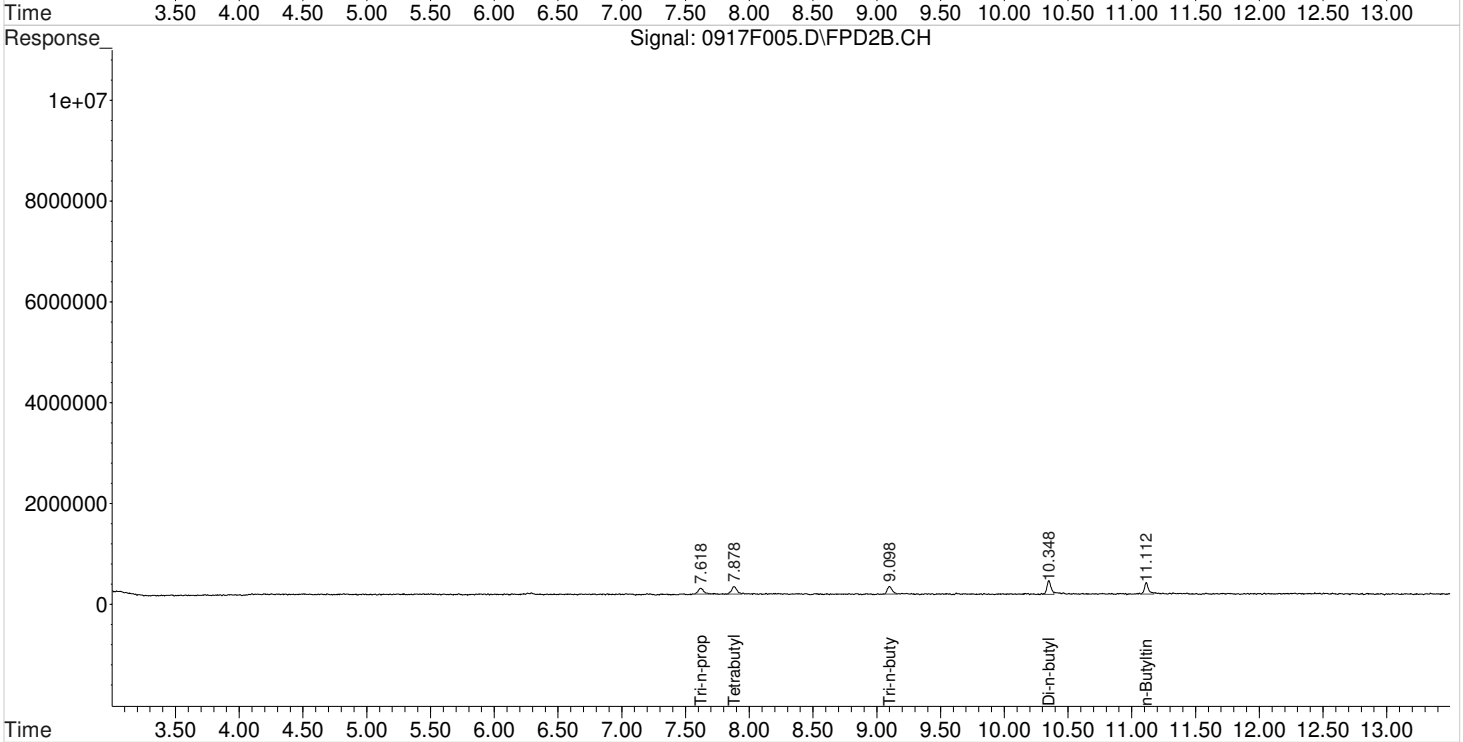
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:24 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





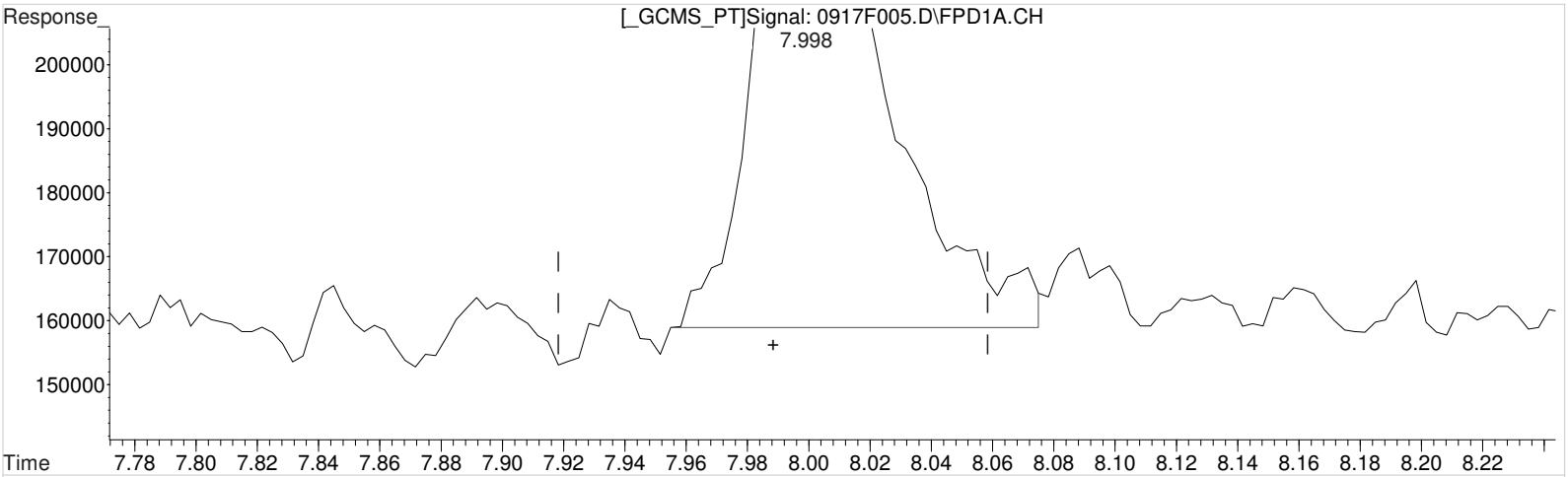
Quantitation Report (Qedit)

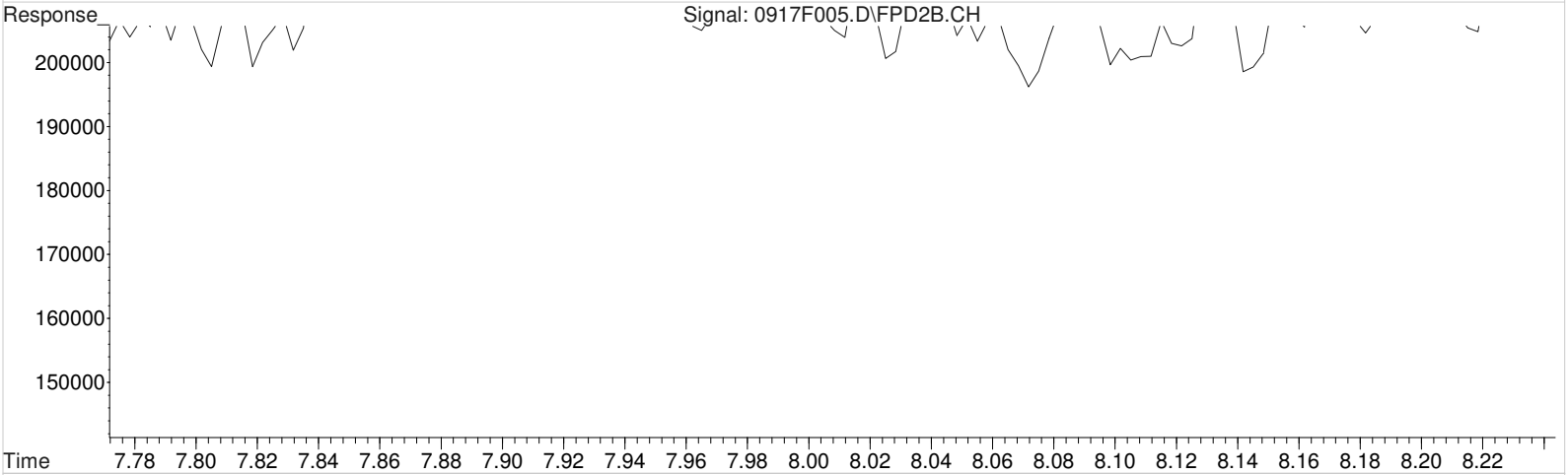
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

7.998min 5.865 ng/mL

response 255389

Manual Integration:

Before

09/18/18

(1) Tri-n-propyltin #2 (S)

7.618min 4.928 ng/mL

response 489767

(+) = Expected Retention Time

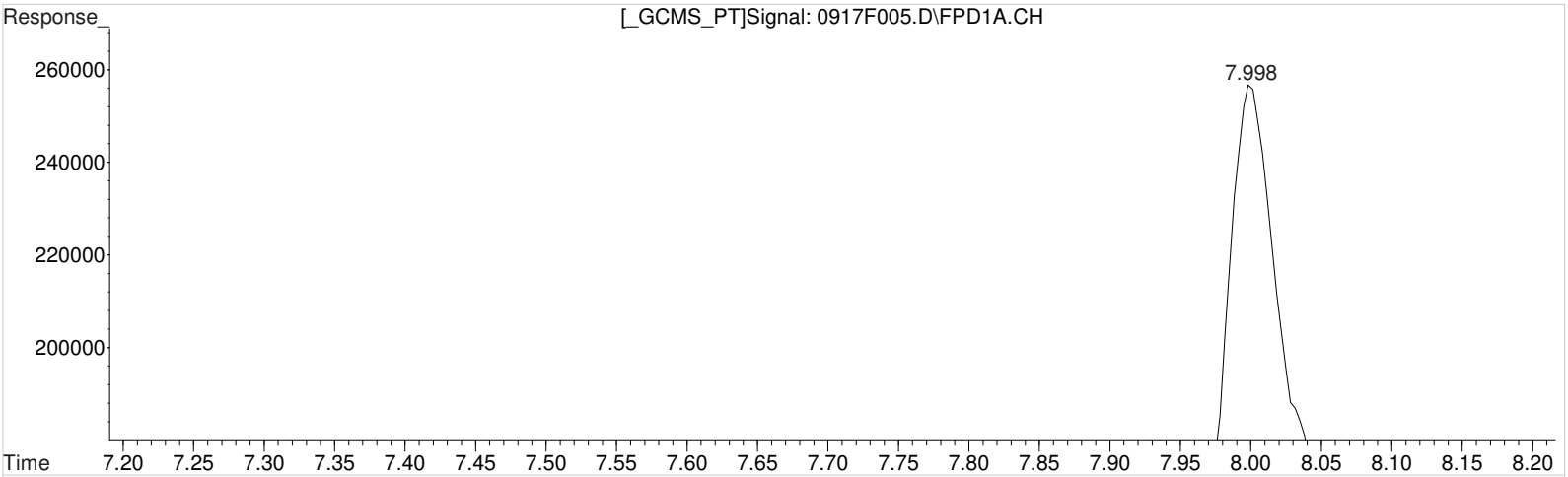
Quantitation Report (Qedit)

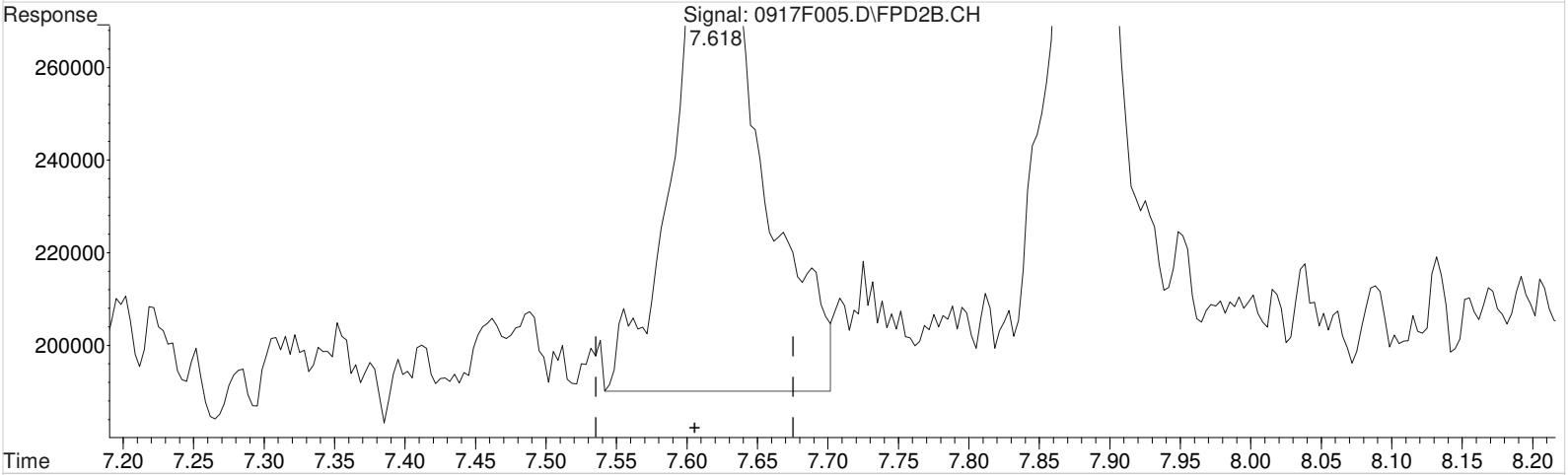
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

7.998min 6.067 ng/mL m

response 264161

Manual Integration:

Before

09/18/18

(1) Tri-n-propyltin #2 (S)

7.618min 4.928 ng/mL

response 489767

(+) = Expected Retention Time

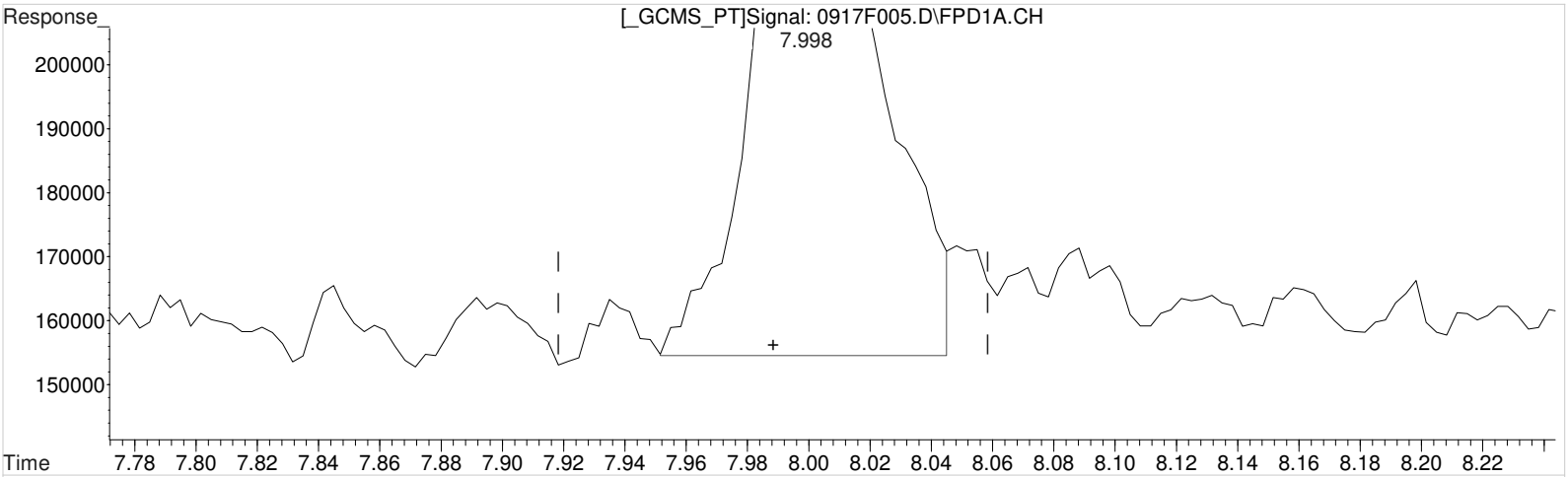
Quantitation Report (Qedit)

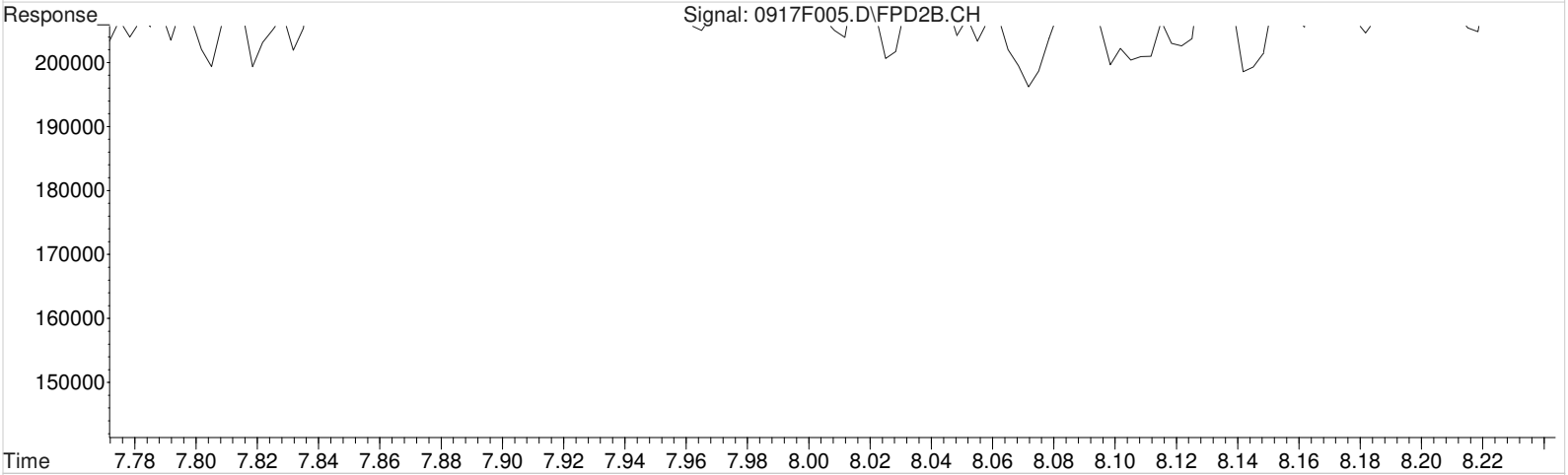
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

7.998min 6.067 ng/mL m

response 264161

Manual Integration:

After

Baseline/Shoulder

09/18/18

(1) Tri-n-propyltin #2 (S)

7.618min 4.928 ng/mL

response 489767

(+) = Expected Retention Time

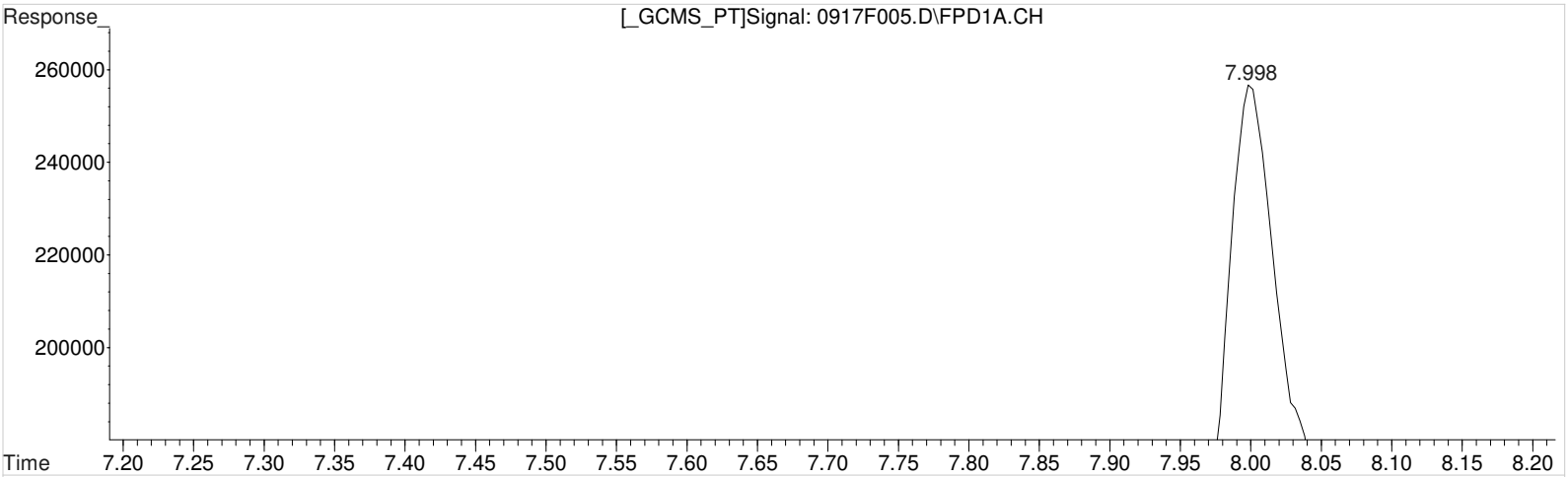
Quantitation Report (Qedit)

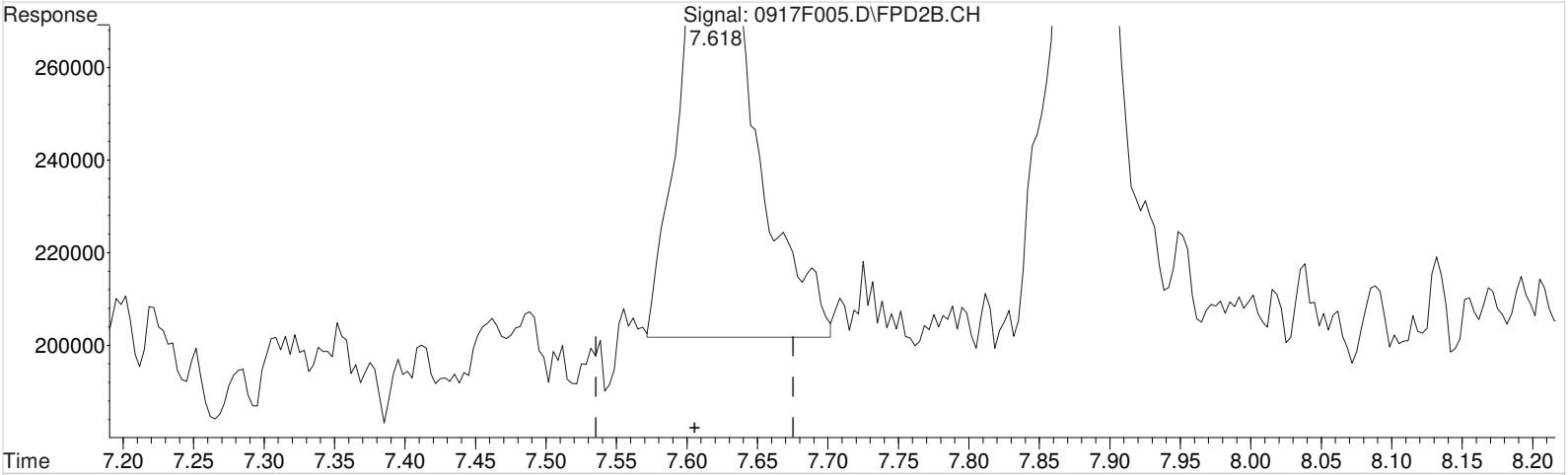
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

7.998min 6.067 ng/mL m

response 264161

Manual Integration:

After

Baseline/Shoulder

09/18/18

(1) Tri-n-propyltin #2 (S)

7.618min 3.796 ng/mL m

response 377218

(+) = Expected Retention Time

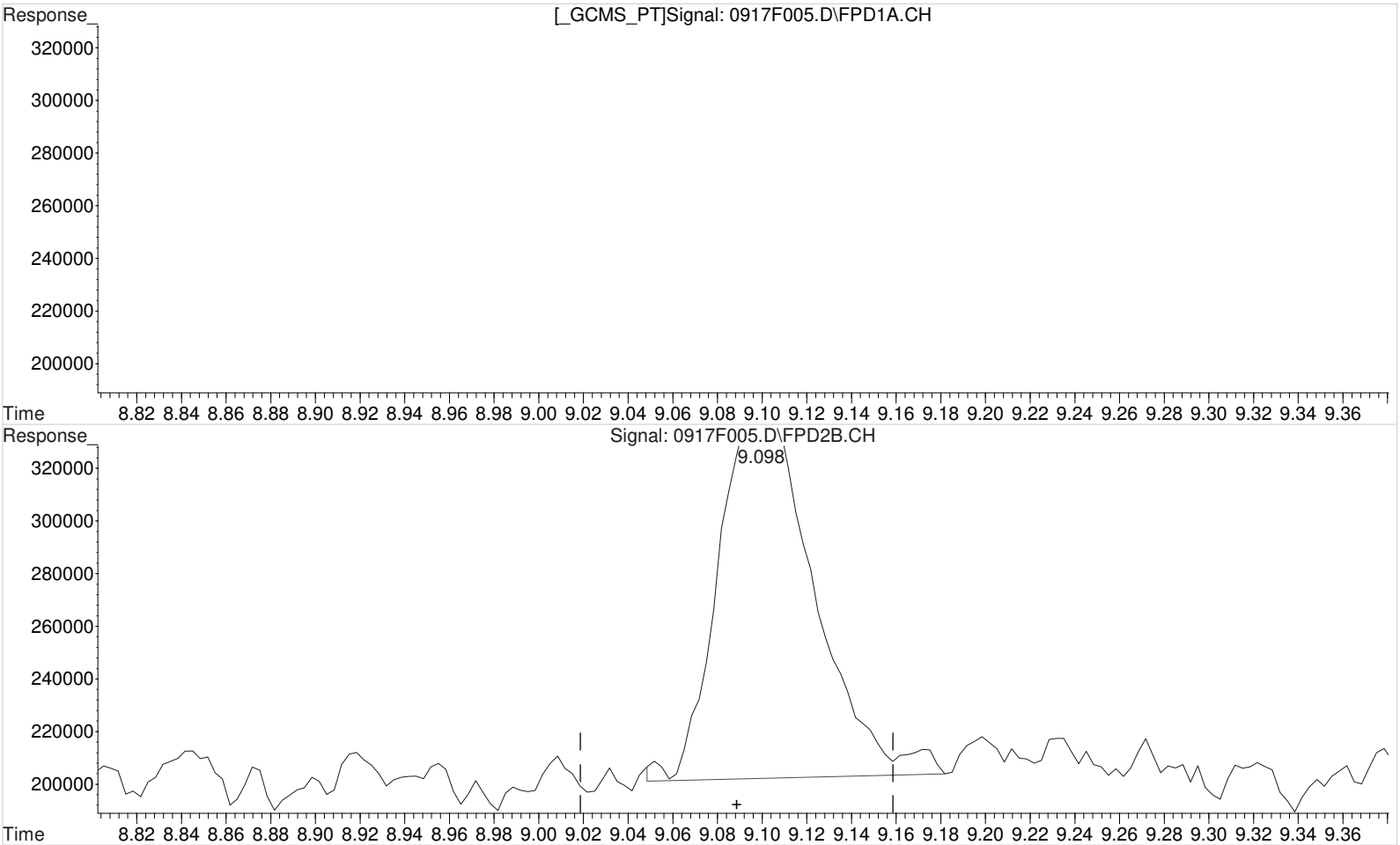
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(3) Tri-n-butyltin

9.602min 5.913 ng/mL

response 322537

Manual Integration:

Before

09/18/18

(3) Tri-n-butyltin #2

9.098min 3.661 ng/mL

response 425820

(+) = Expected Retention Time

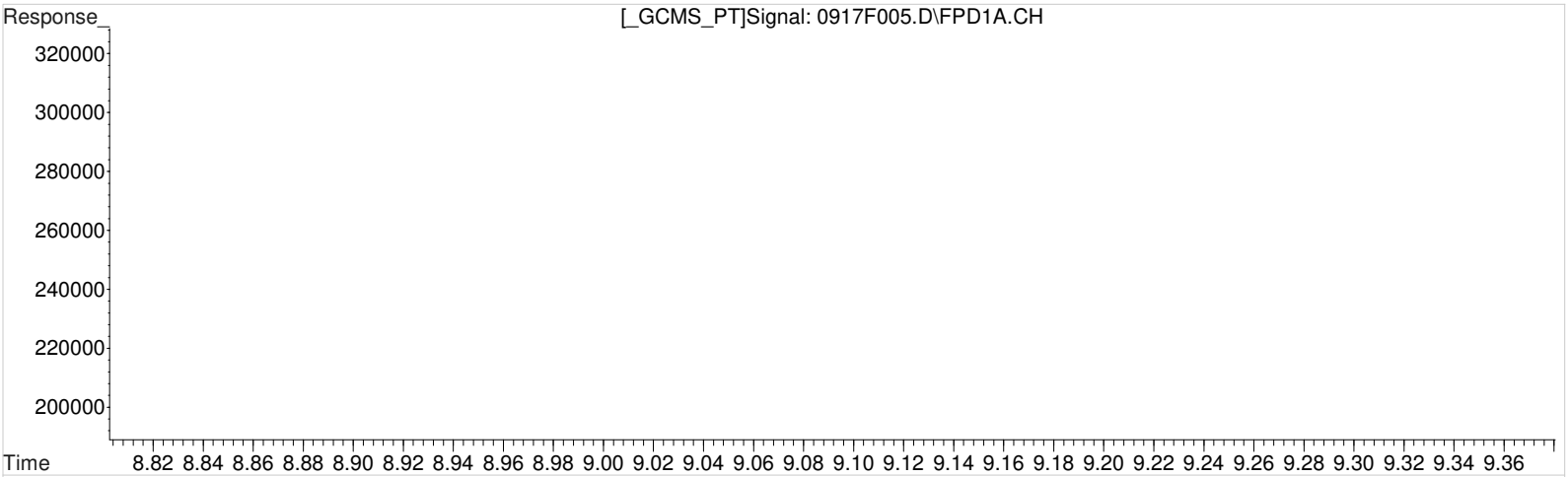
Quantitation Report (Qedit)

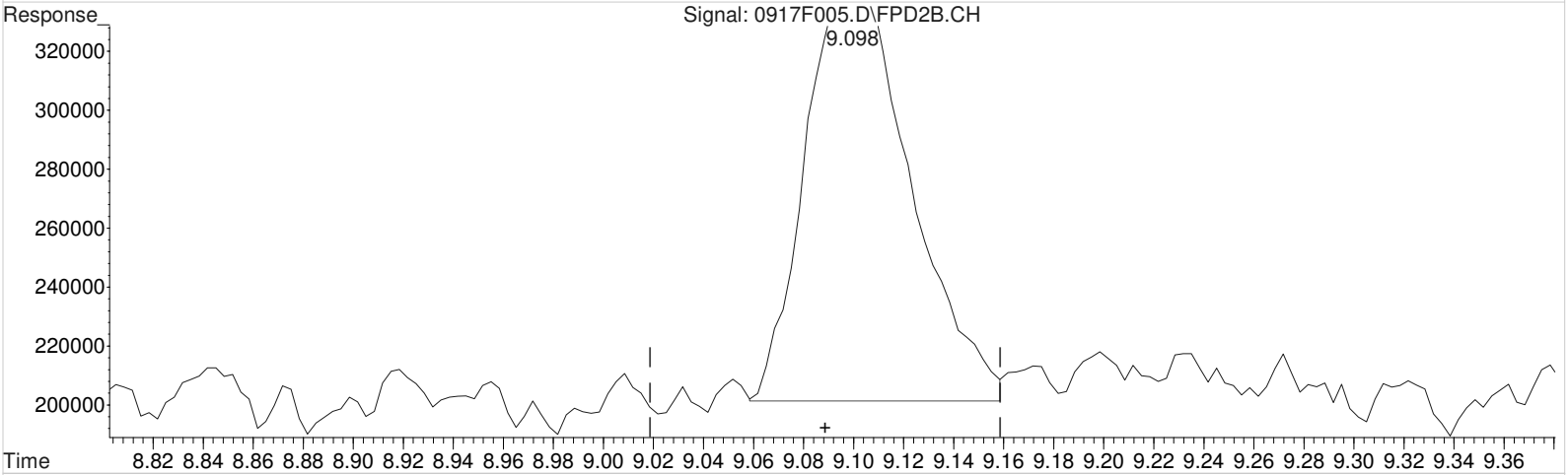
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(3) Tri-n-butyltin

9.602min 5.913 ng/mL

response 322537

Manual Integration:

After

Baseline/Shoulder

09/18/18

(3) Tri-n-butyltin #2

9.098min 3.612 ng/mL m

response 420043

(+) = Expected Retention Time

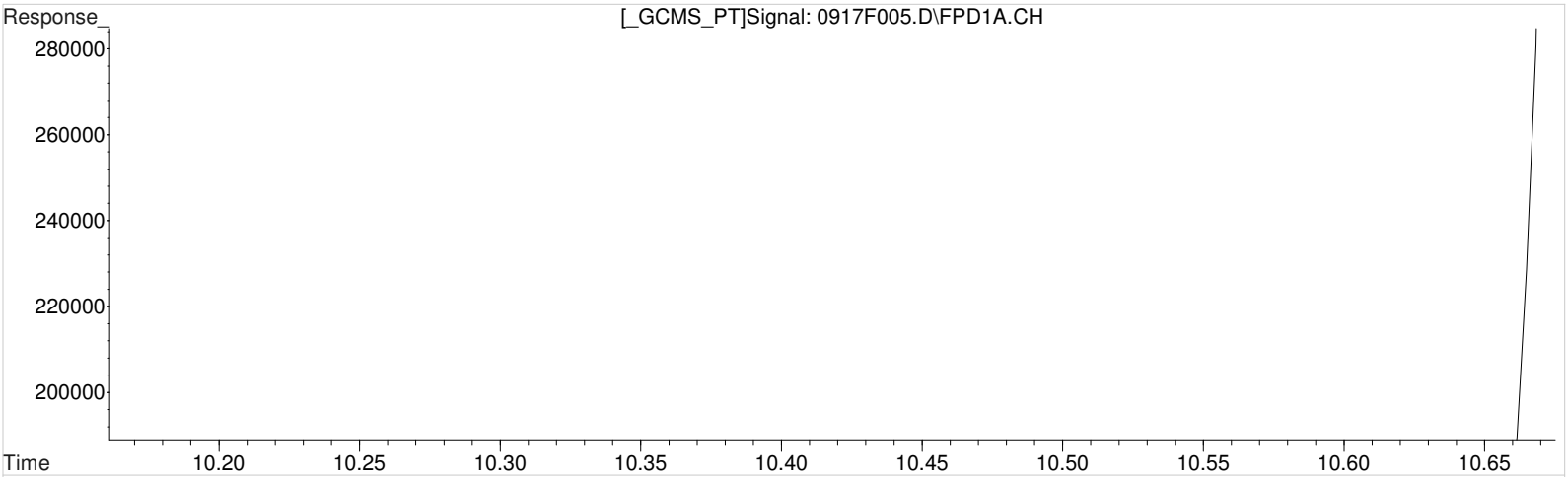
Quantitation Report (Qedit)

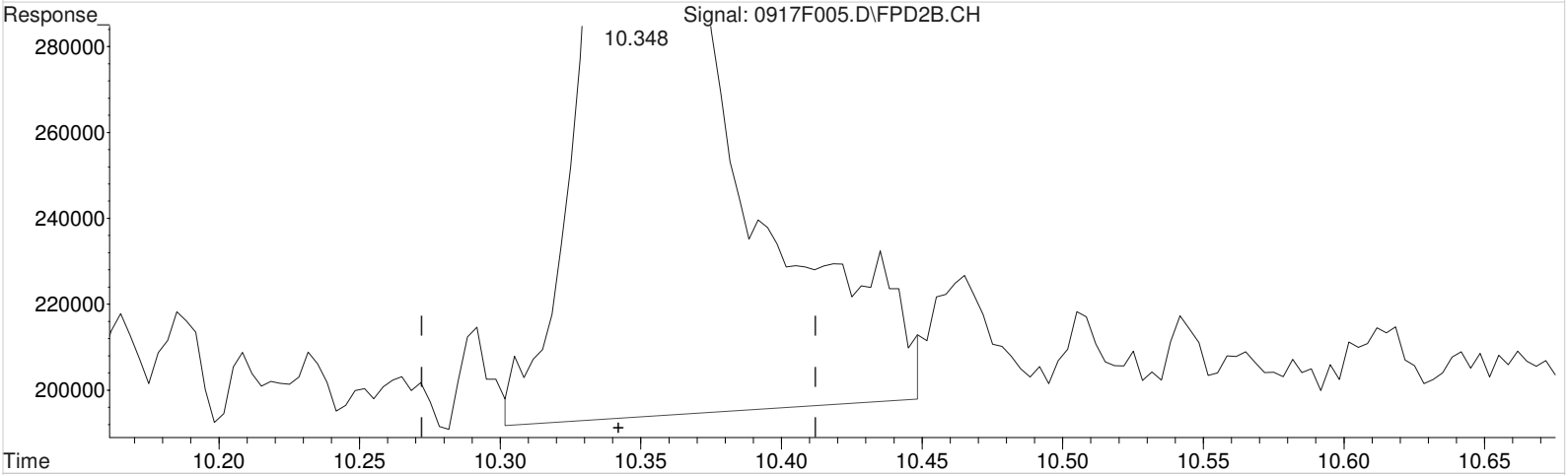
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(4) Di-n-butyltin

10.678min 4.203 ng/mL

response 405751

Manual Integration:

Before

09/18/18

(4) Di-n-butyltin #2

10.348min 3.619 ng/mL

response 743750

(+) = Expected Retention Time

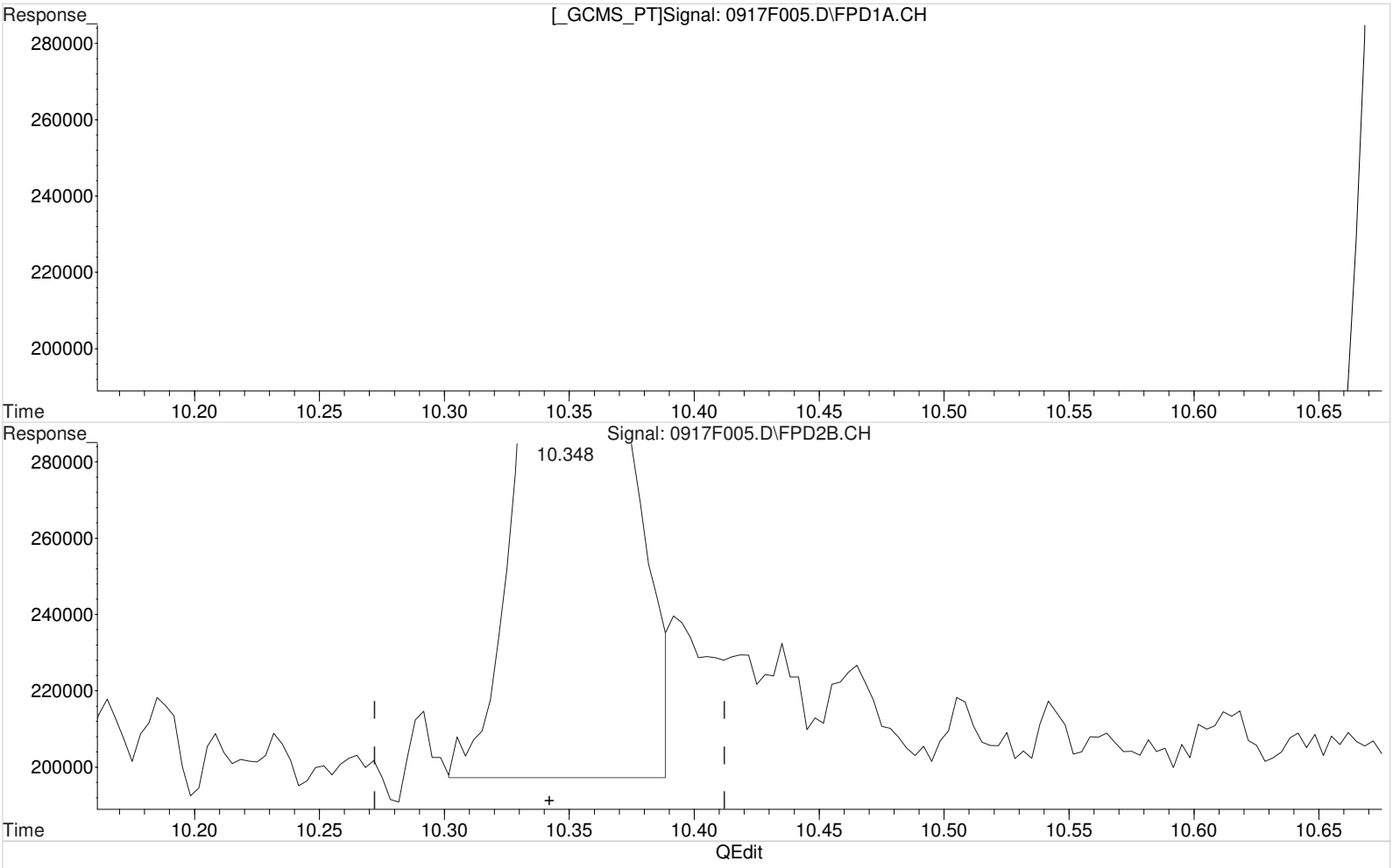
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



(4) Di-n-butyltin

10.678min 4.203 ng/mL

response 405751

Manual Integration:

After

Baseline/Shoulder

09/18/18

(4) Di-n-butyltin #2

10.348min 2.994 ng/mL m

response 615257

(+) = Expected Retention Time

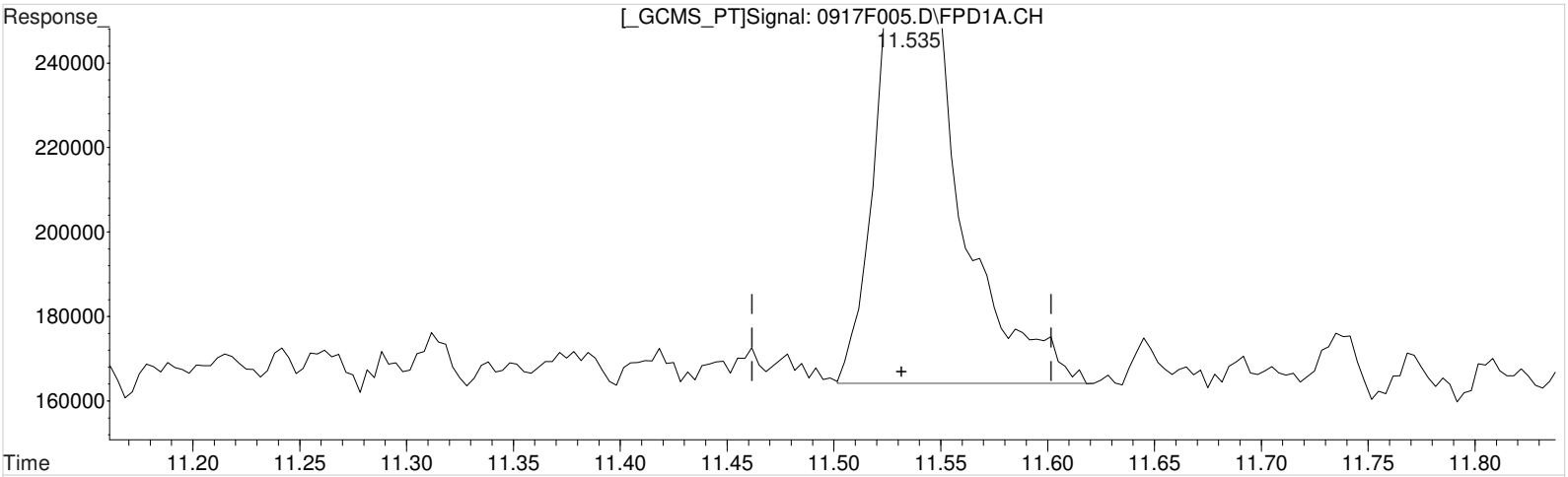
Quantitation Report (Qedit)

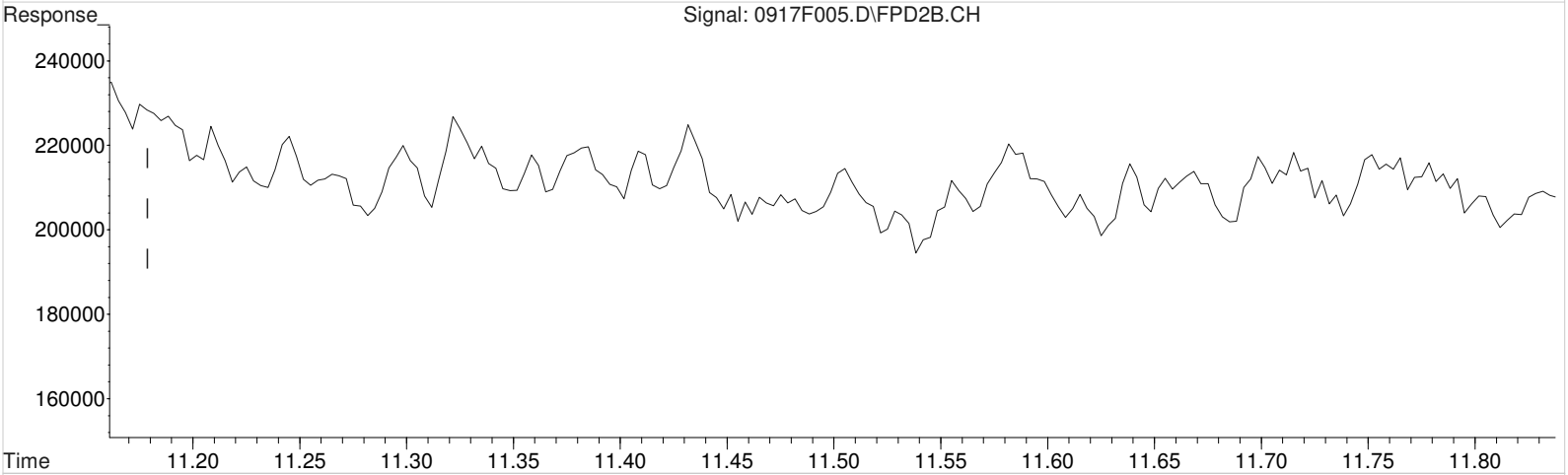
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.535min 3.559 ng/mL

response 326552

Manual Integration:

Before

09/18/18

(5) n-Butyltin #2

11.112min 3.013 ng/mL

response 552955

(+) = Expected Retention Time

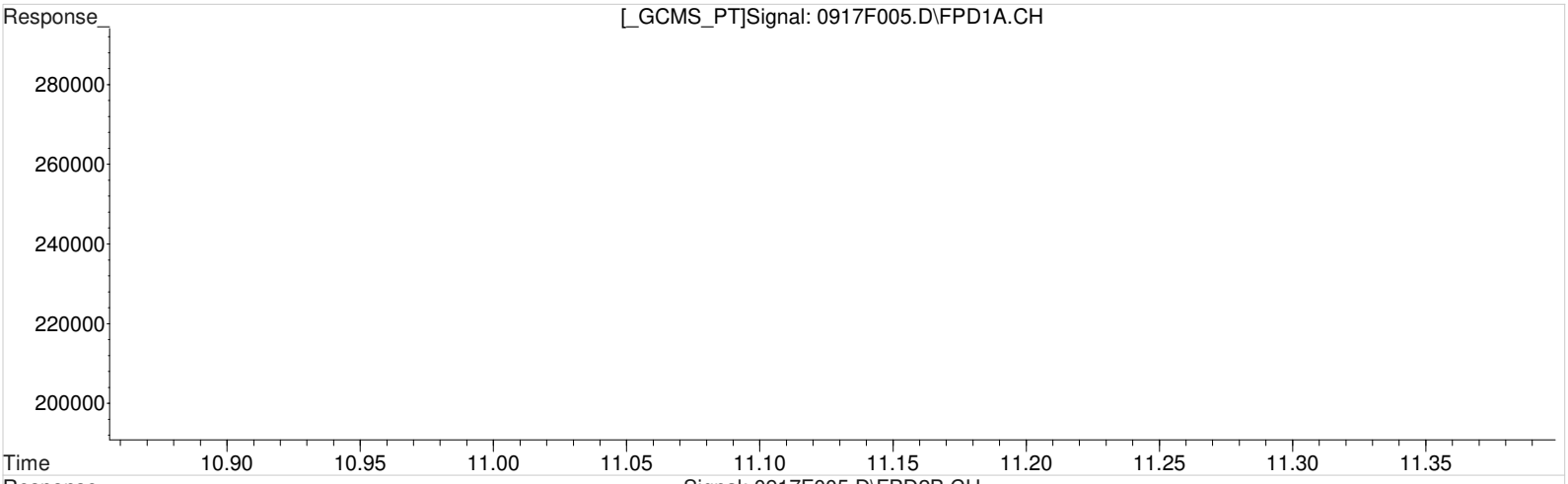
Quantitation Report (Qedit)

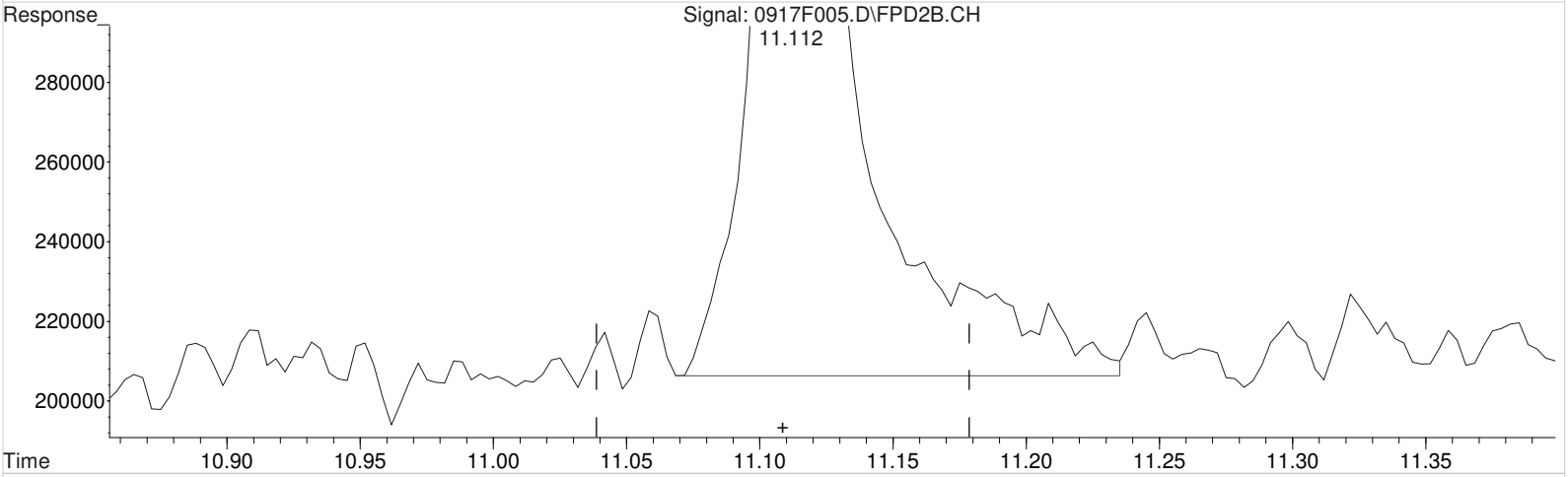
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.535min 3.373 ng/mL m

response 309456

Manual Integration:

Before

09/18/18

(5) n-Butyltin #2

11.112min 3.013 ng/mL

response 552955

(+) = Expected Retention Time

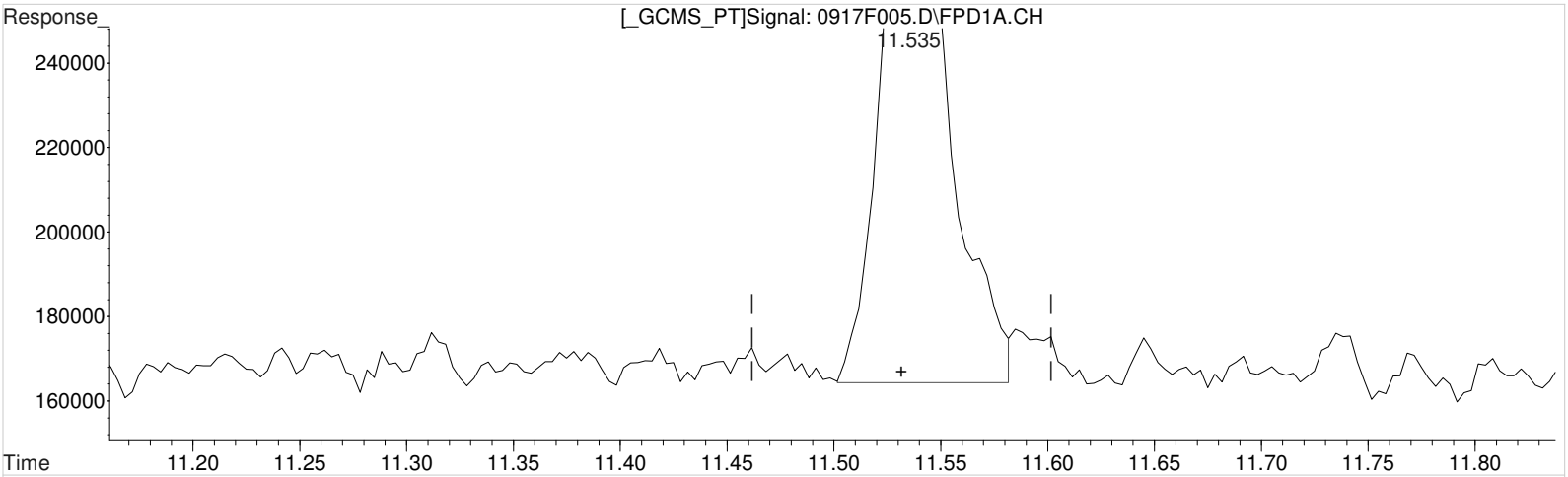
Quantitation Report (Qedit)

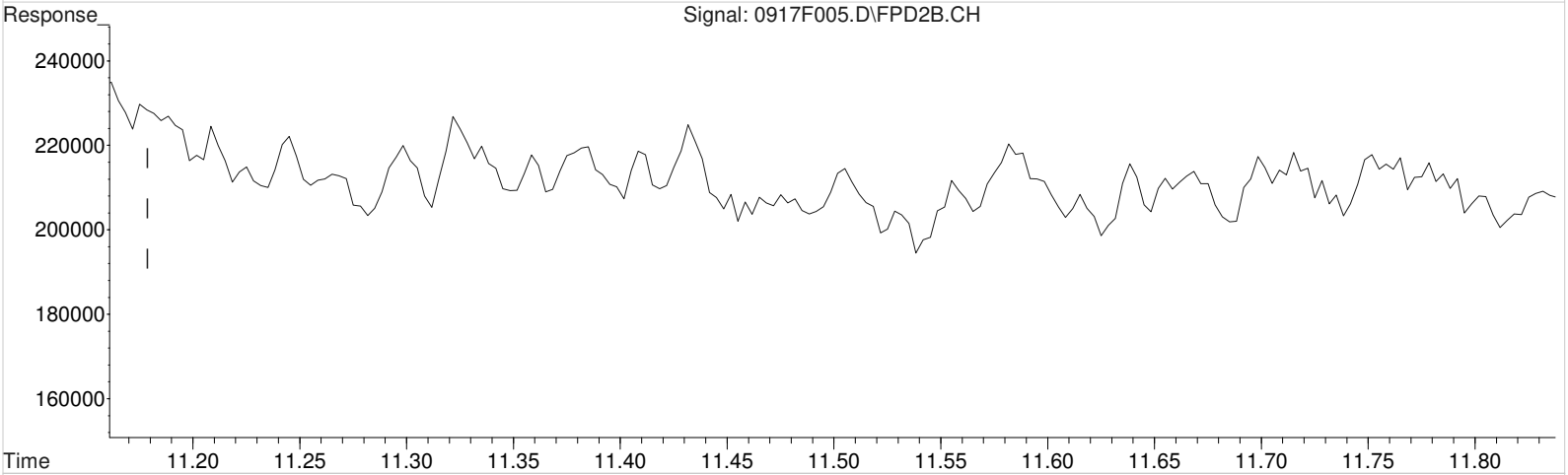
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.535min 3.373 ng/mL m

response 309456

Manual Integration:

After

Baseline/Shoulder

09/18/18

(5) n-Butyltin #2

11.112min 3.013 ng/mL

response 552955

(+) = Expected Retention Time

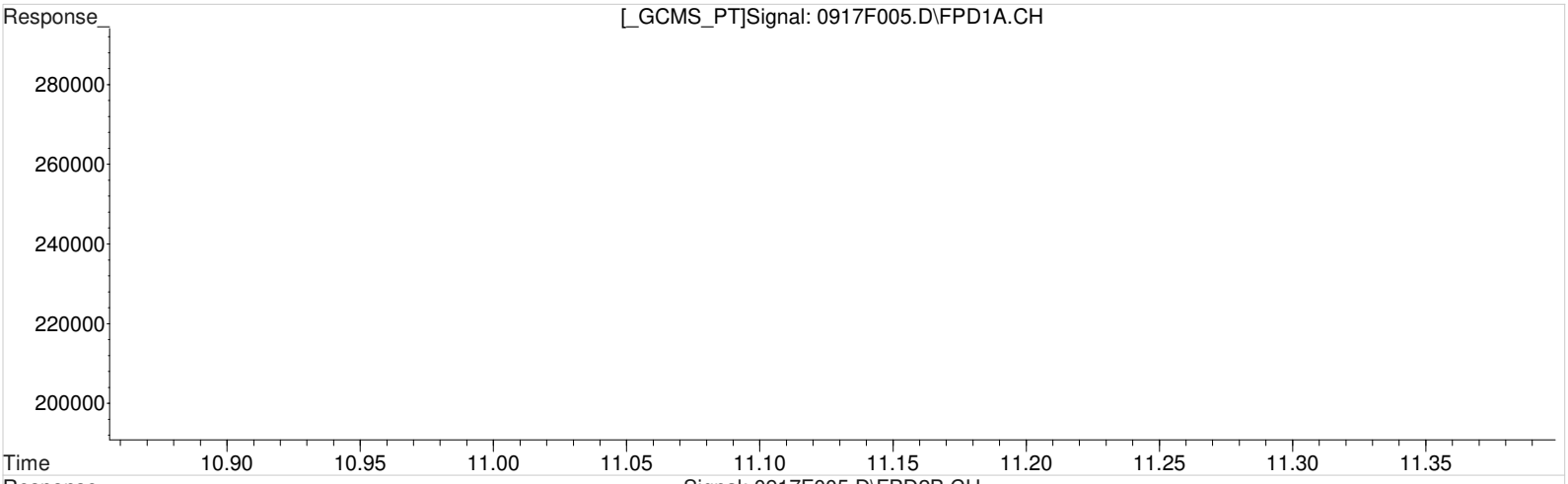
Quantitation Report (Qedit)

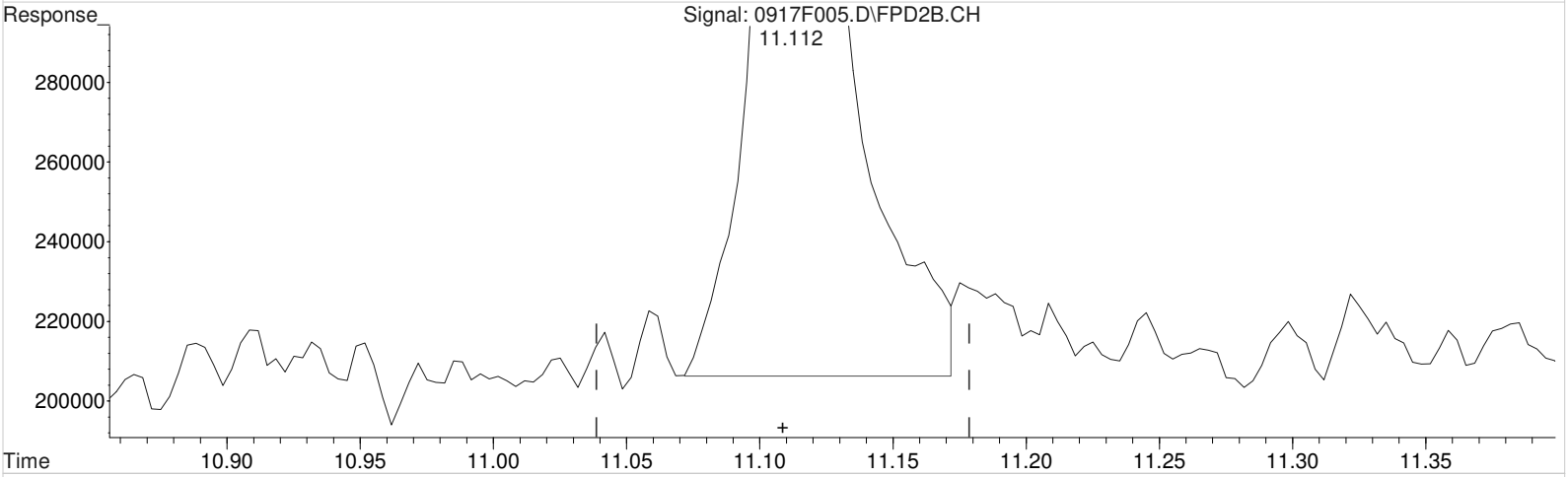
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F005.D Vial: 3
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:13 pm Operator: SAA
Sample : OT5-010B @ 5PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:44:40 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.535min 3.373 ng/mL m

response 309456

Manual Integration:

After

Baseline/Shoulder

09/18/18

(5) n-Butyltin #2

11.112min 2.742 ng/mL m

response 503223

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:49:50 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.006	7.626	459388	770923	10.550m	7.757 #
	Target Compounds						
2)	Tetrabuty...	8.326	7.883	580762	1020802	11.171m	9.280
3)	Tri-n-but...	9.603	9.103	592543	1002341	10.863	8.619
4)	Di-n-buty...	10.683	10.353	814890	1391803	8.441m	6.772
5)	n-Butyltin	11.539	11.116	648548	937500	7.069	5.108m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

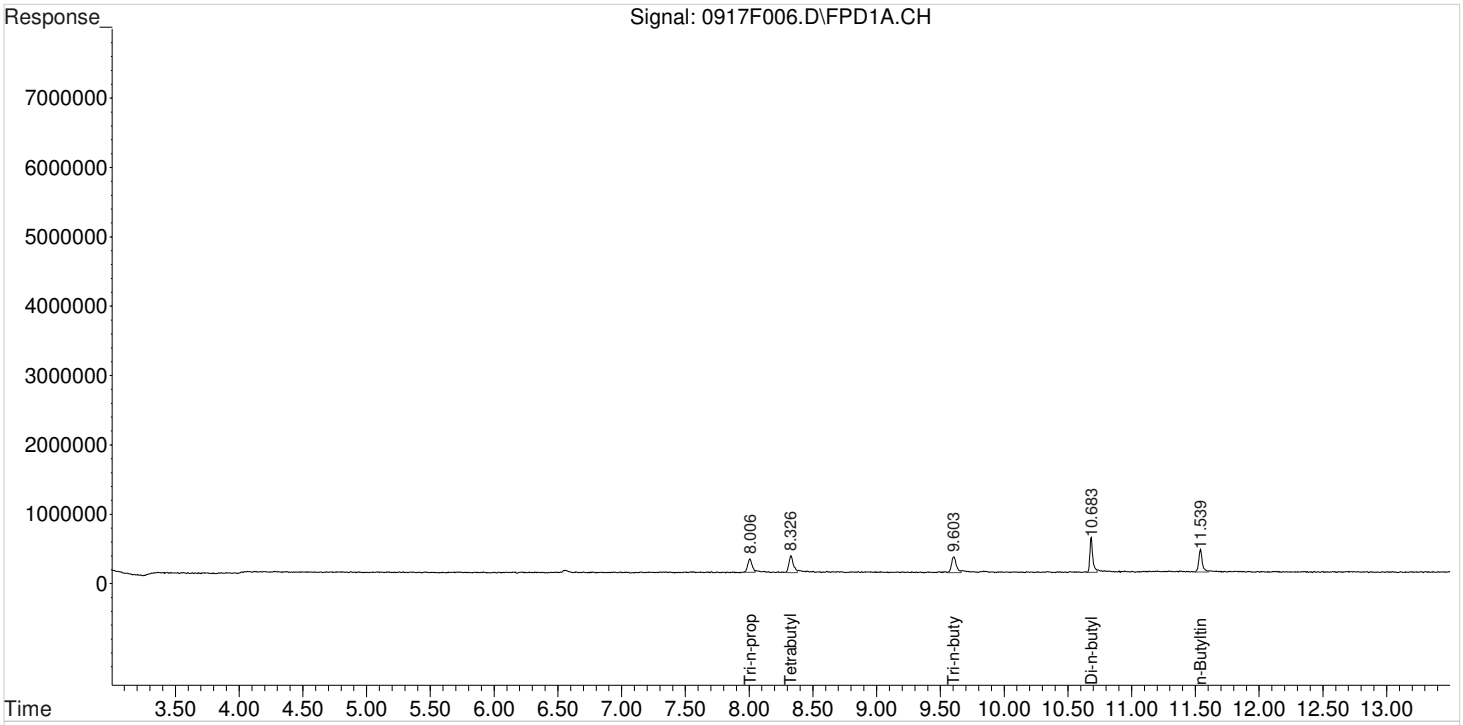
Quantitation Report (QT Reviewed)

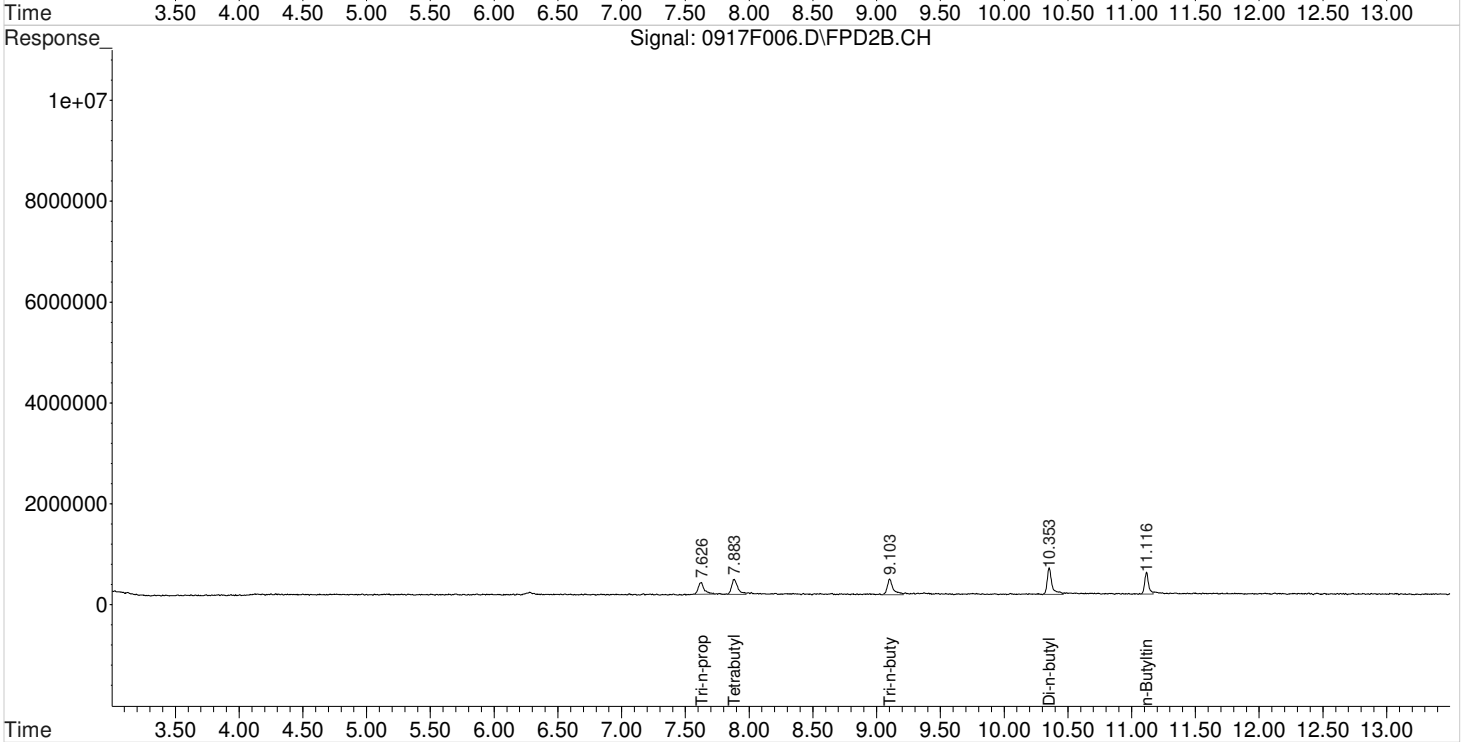
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:49:50 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





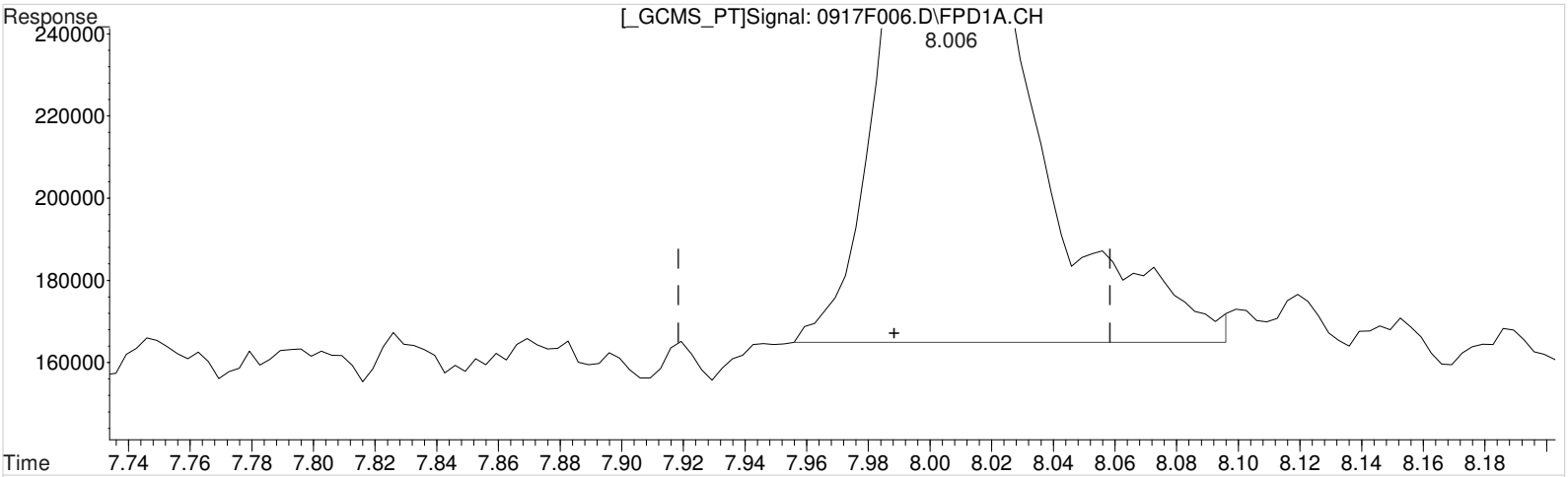
Quantitation Report (Qedit)

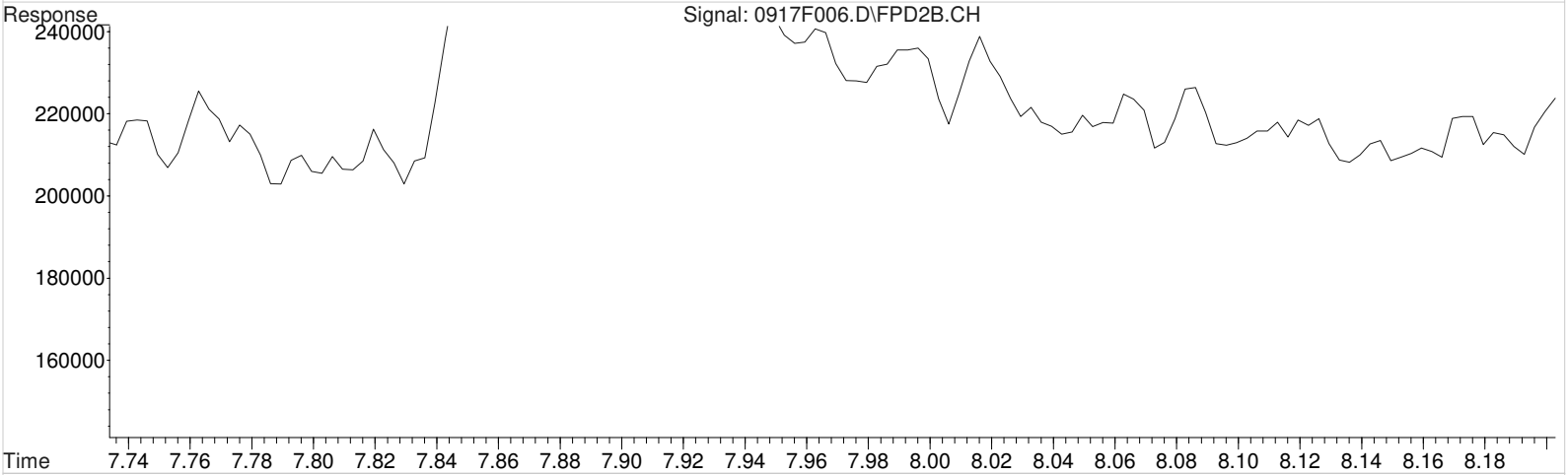
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

8.006min 11.443 ng/mL

response 498268

Manual Integration:

Before

09/18/18

(1) Tri-n-propyltin #2 (S)

7.626min 7.757 ng/mL

response 770923

(+) = Expected Retention Time

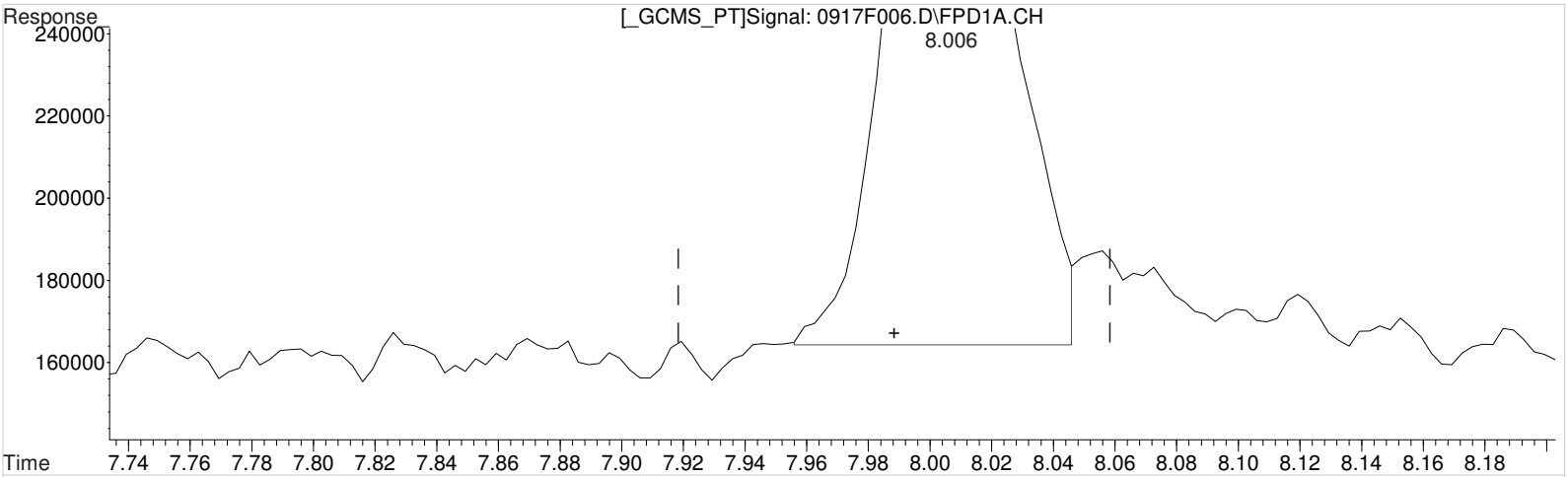
Quantitation Report (Qedit)

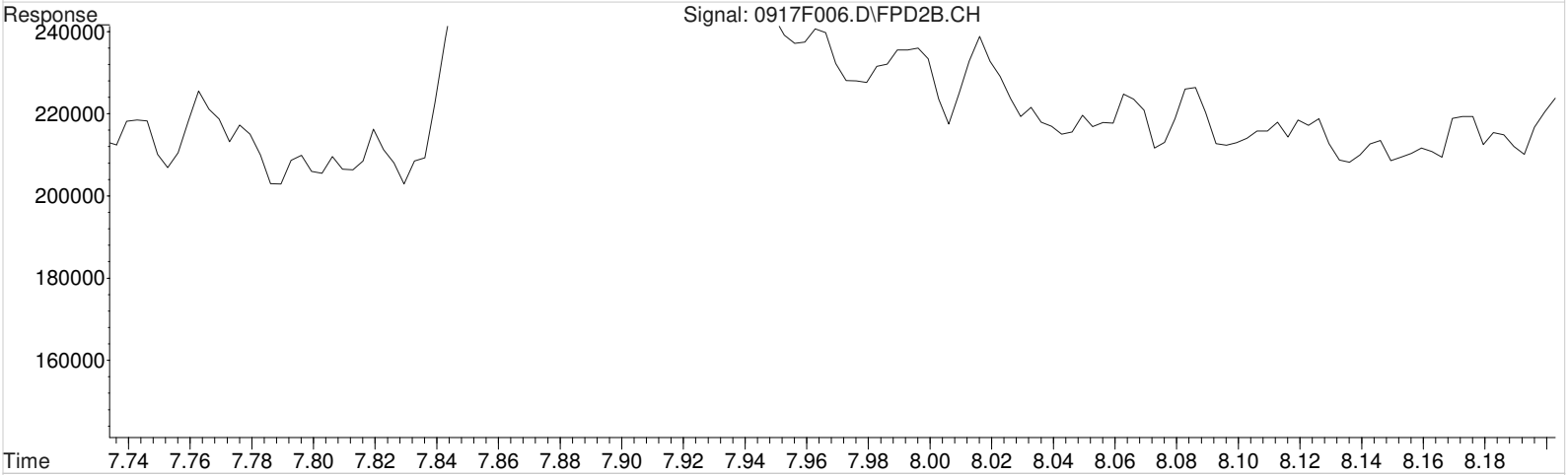
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(1) Tri-n-propyltin (S)

8.006min 10.550 ng/mL m

response 459388

Manual Integration:

After

Baseline/Shoulder

09/18/18

(1) Tri-n-propyltin #2 (S)

7.626min 7.757 ng/mL

response 770923

(+) = Expected Retention Time

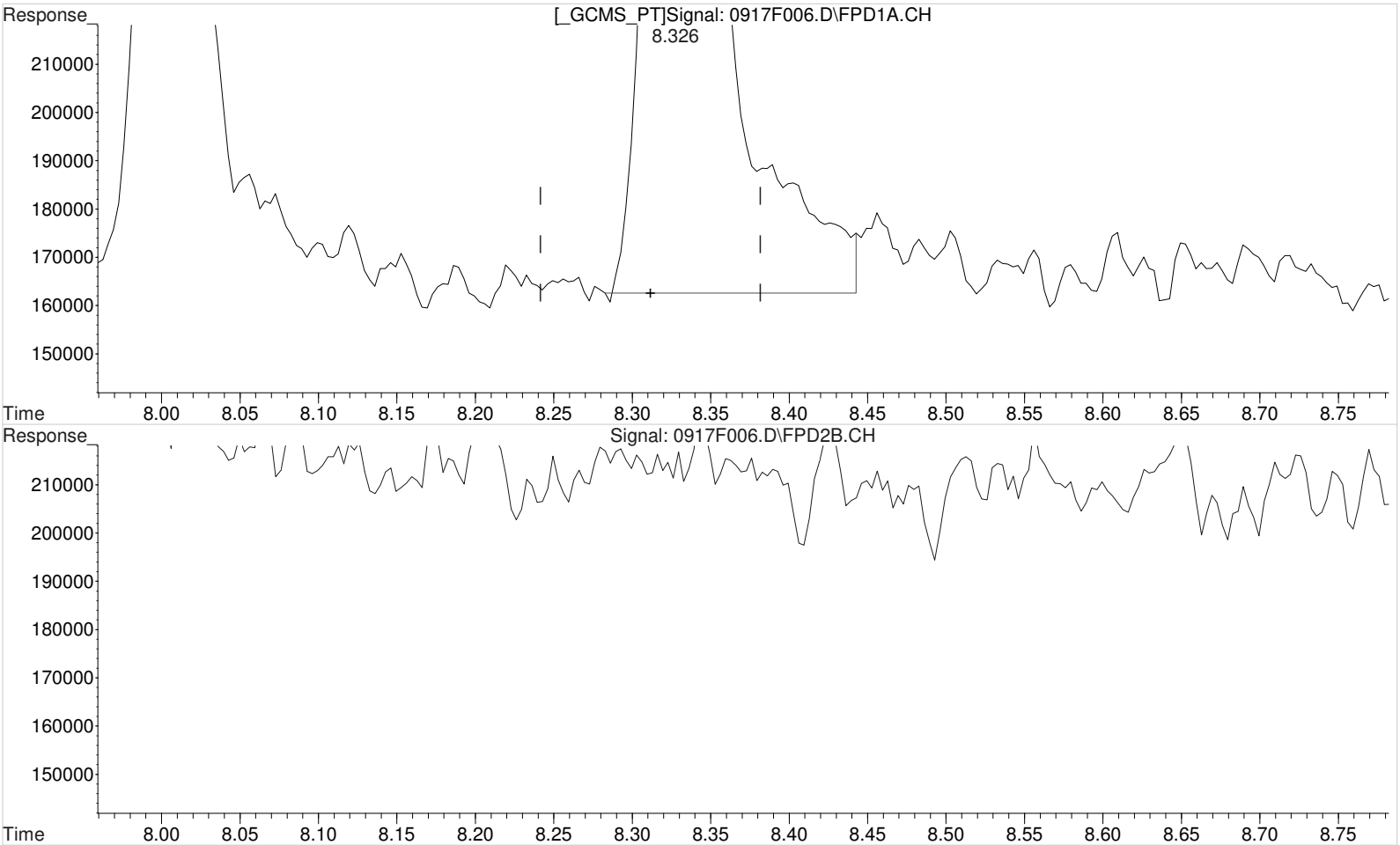
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(2) Tetrabutyltin

8.326min 12.374 ng/mL

response 643304

Manual Integration:

Before

09/18/18

(2) Tetrabutyltin #2

7.883min 9.280 ng/mL

response 1020802

(+) = Expected Retention Time

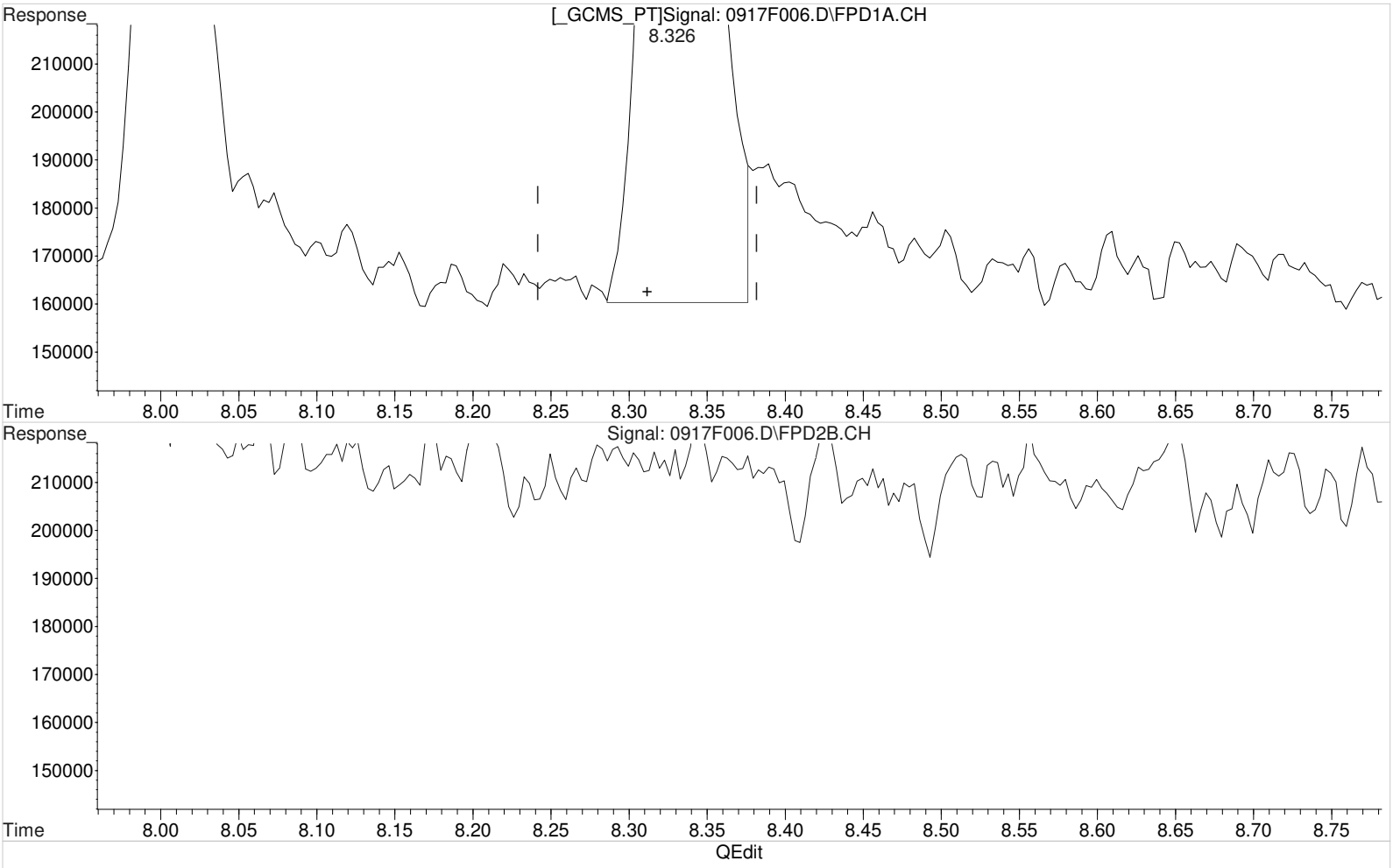
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(2) Tetrabutyltin

8.326min 11.171 ng/mL m

response 580762

Manual Integration:

After

Baseline/Shoulder

09/18/18

(2) Tetrabutyltin #2

7.883min 9.280 ng/mL

response 1020802

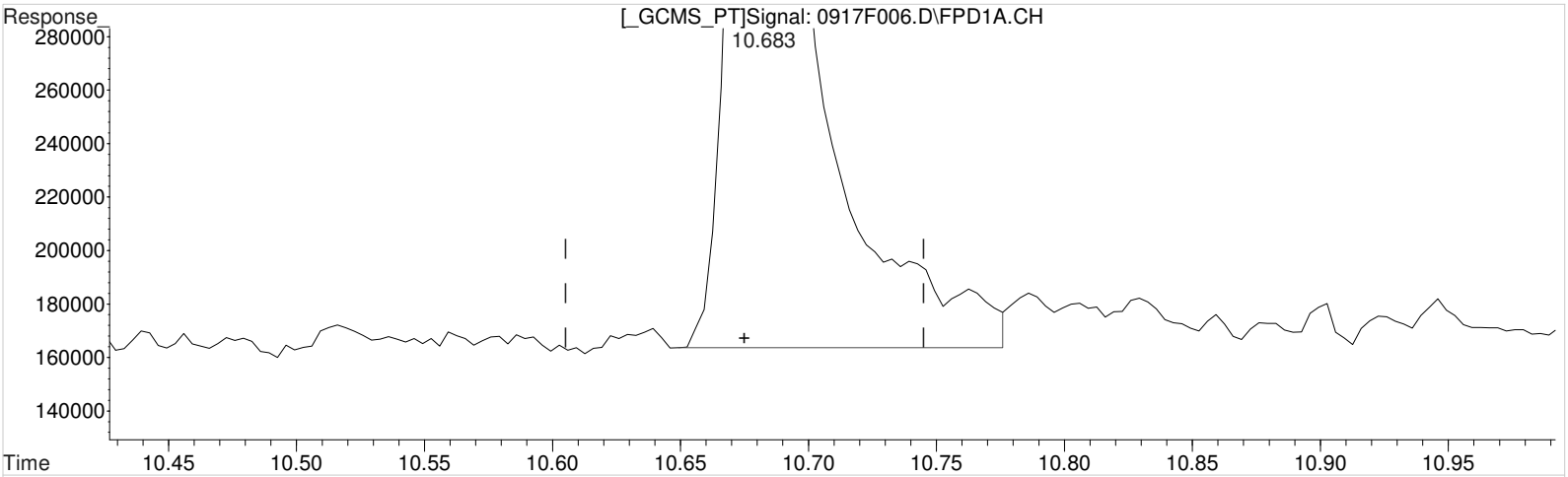
(+) = Expected Retention Time

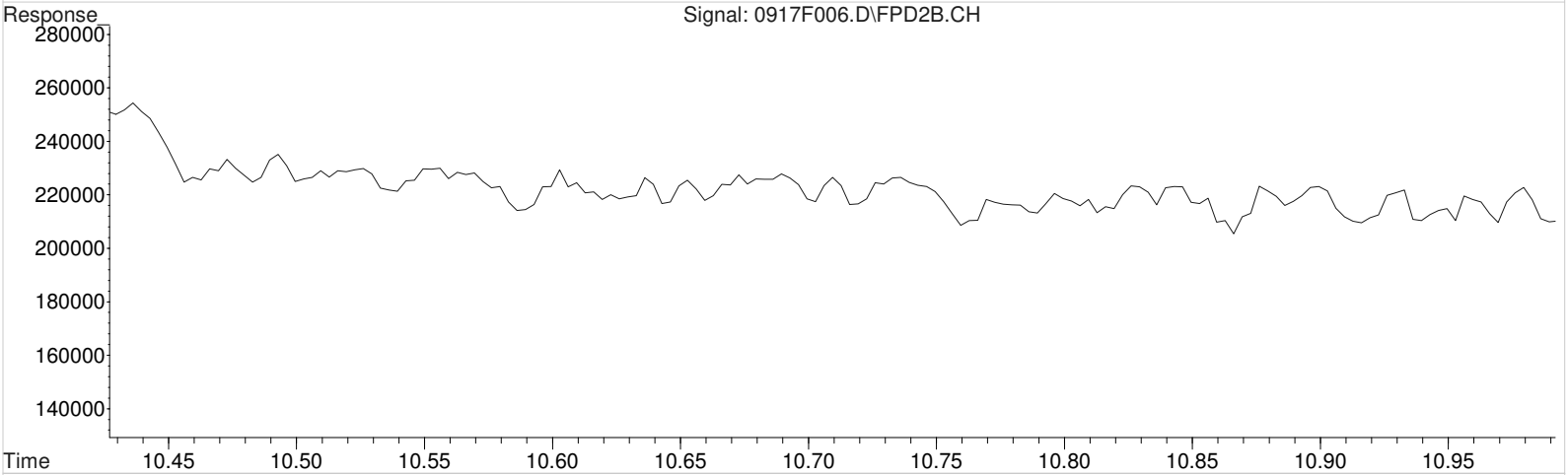
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(4) Di-n-butyltin

10.683min 9.076 ng/mL

response 876176

Manual Integration:

Before

09/18/18

(4) Di-n-butyltin #2

10.353min 6.772 ng/mL

response 1391803

(+) = Expected Retention Time

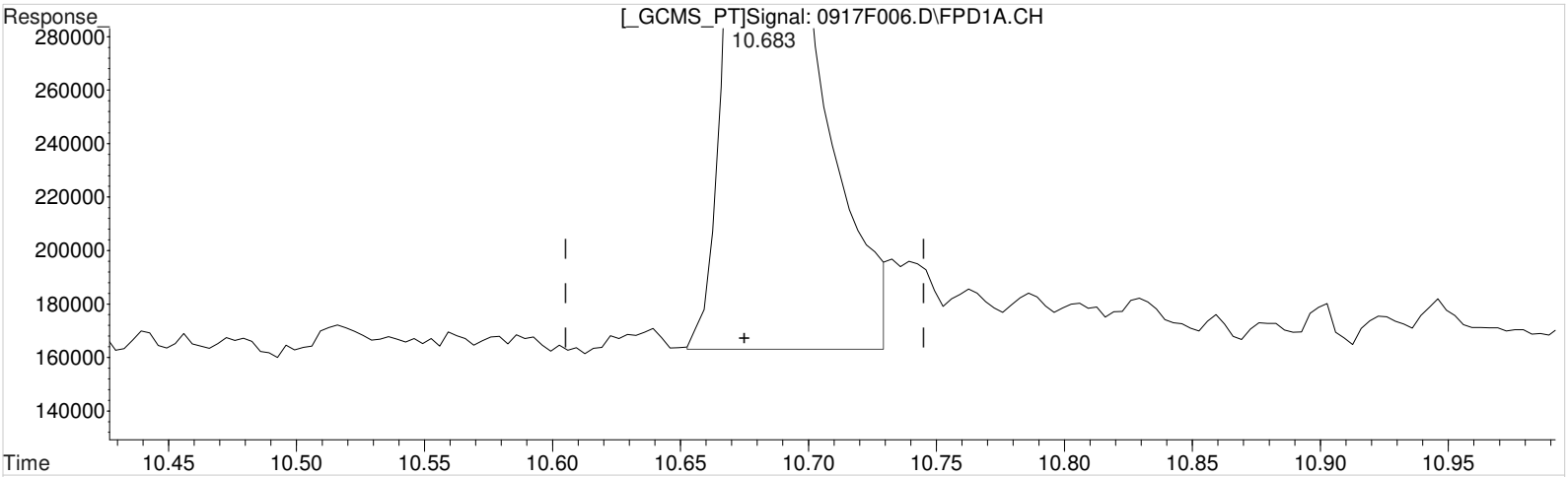
Quantitation Report (Qedit)

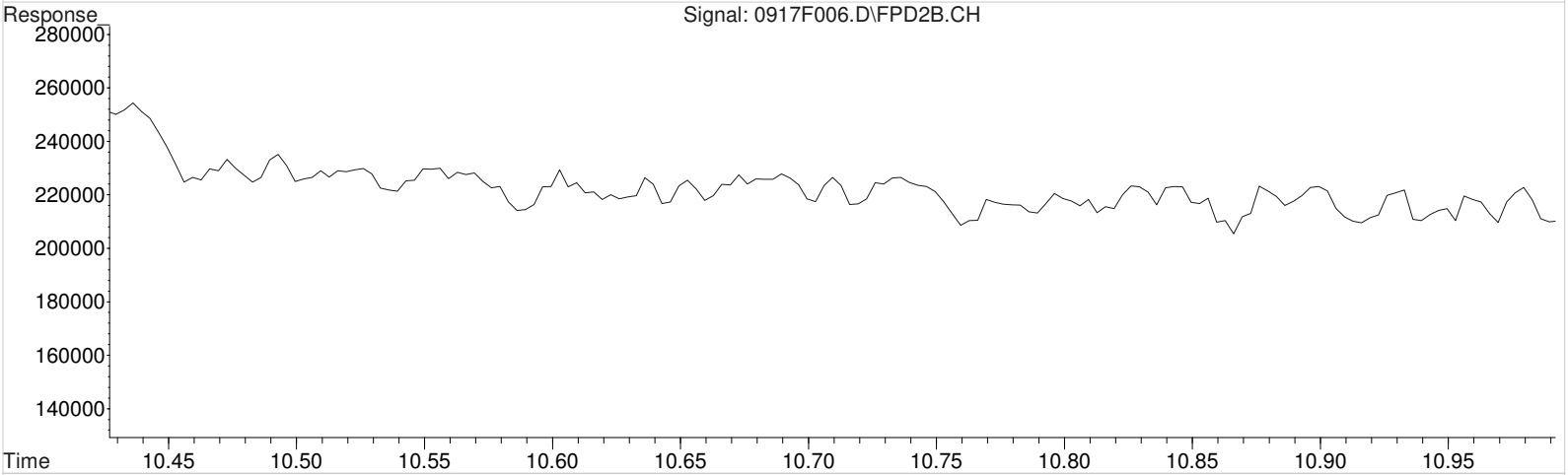
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(4) Di-n-butyltin

10.683min 8.441 ng/mL m

response 814890

Manual Integration:

After

Baseline/Shoulder

09/18/18

(4) Di-n-butyltin #2

10.353min 6.772 ng/mL

response 1391803

(+) = Expected Retention Time

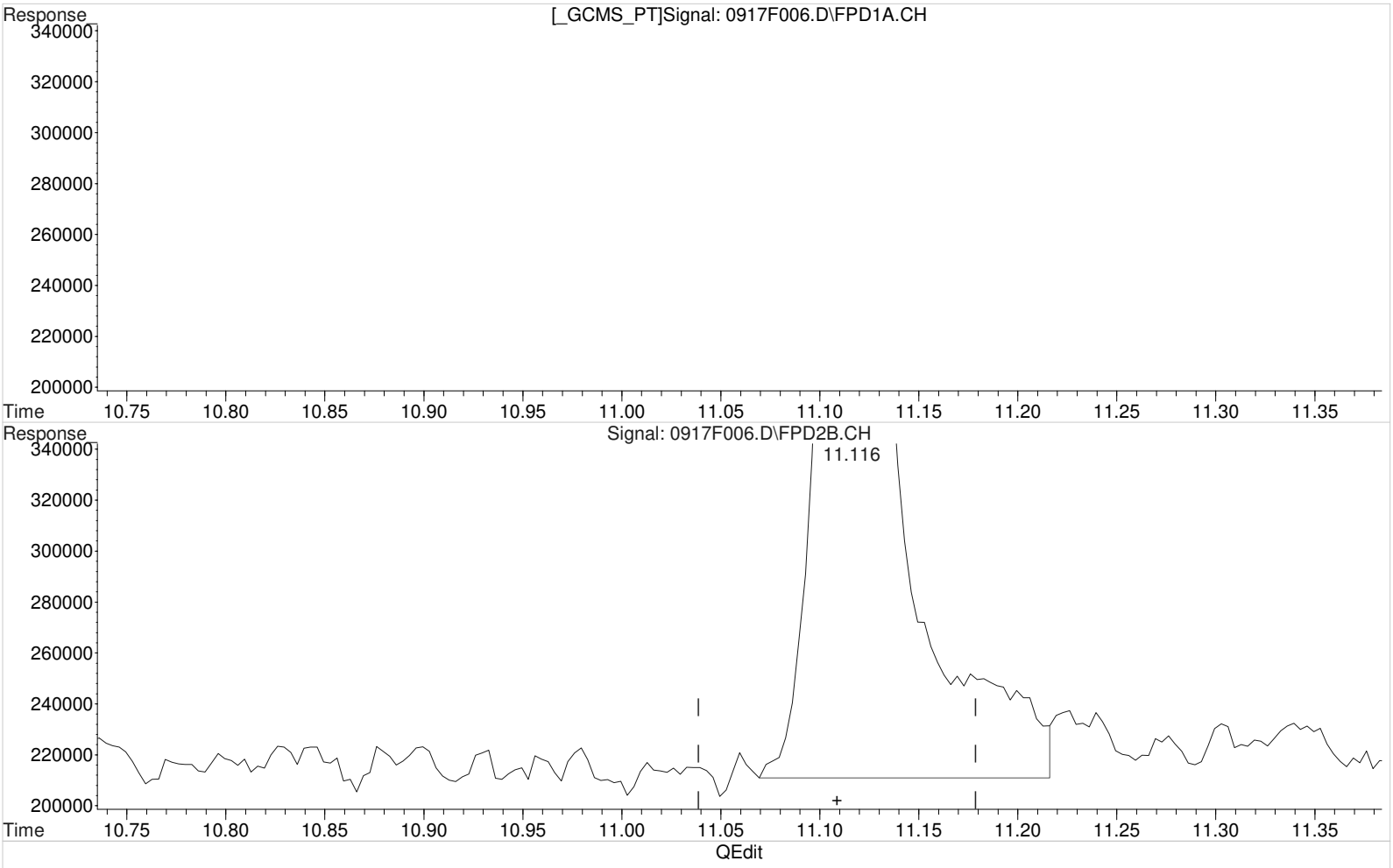
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(5) n-Butyltin

11.539min 7.069 ng/mL

response 648548

(5) n-Butyltin #2

11.116min 5.597 ng/mL

response 1027399

Manual Integration:

Before

09/18/18

(+) = Expected Retention Time

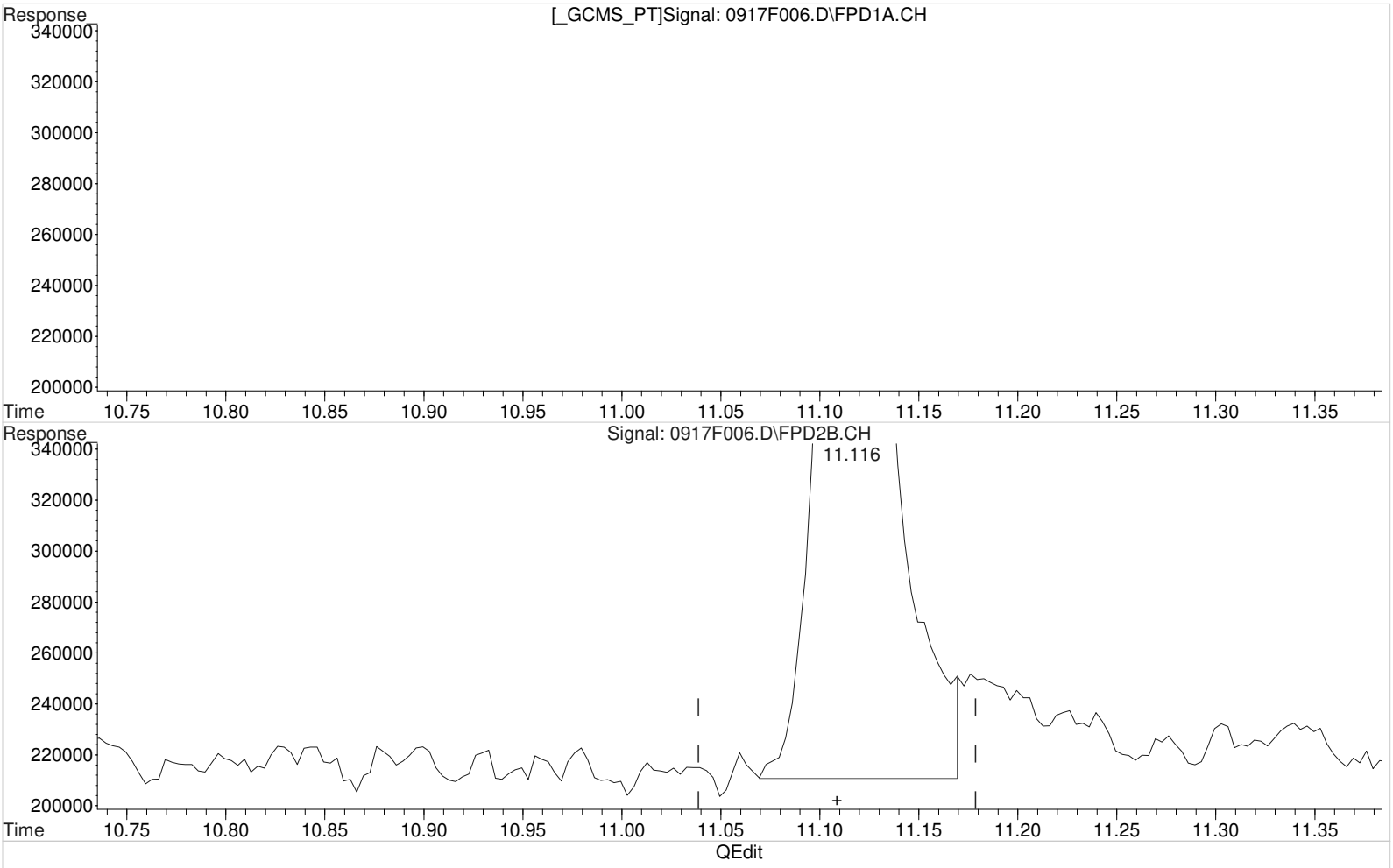
Quantitation Report (Qedit)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F006.D Vial: 4
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:32 pm Operator: SAA
Sample : OT5-010C @ 10PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:47:36 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m



QEdit

(5) n-Butyltin

11.539min 7.069 ng/mL

response 648548

Manual Integration:

After

Baseline/Shoulder

09/18/18

(5) n-Butyltin #2

11.116min 5.108 ng/mL m

response 937500

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:50 pm Operator: SAA
Sample : OT5-010D @ 20PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:51:22 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1)	S Tri-n-pro...	8.004	7.627	1000322	1570376	22.973	15.801	#
	Target Compounds							
2)	Tetrabuty...	8.330	7.884	1269276	1828470	24.414	16.623	#
3)	Tri-n-but...	9.607	9.104	1173371	1731538	21.510	14.889	#
4)	Di-n-buty...	10.684	10.354	1603141	2538425	16.606m	12.351	#
5)	n-Butyltin	11.540	11.117	1214324	1770749	13.235	9.647m	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

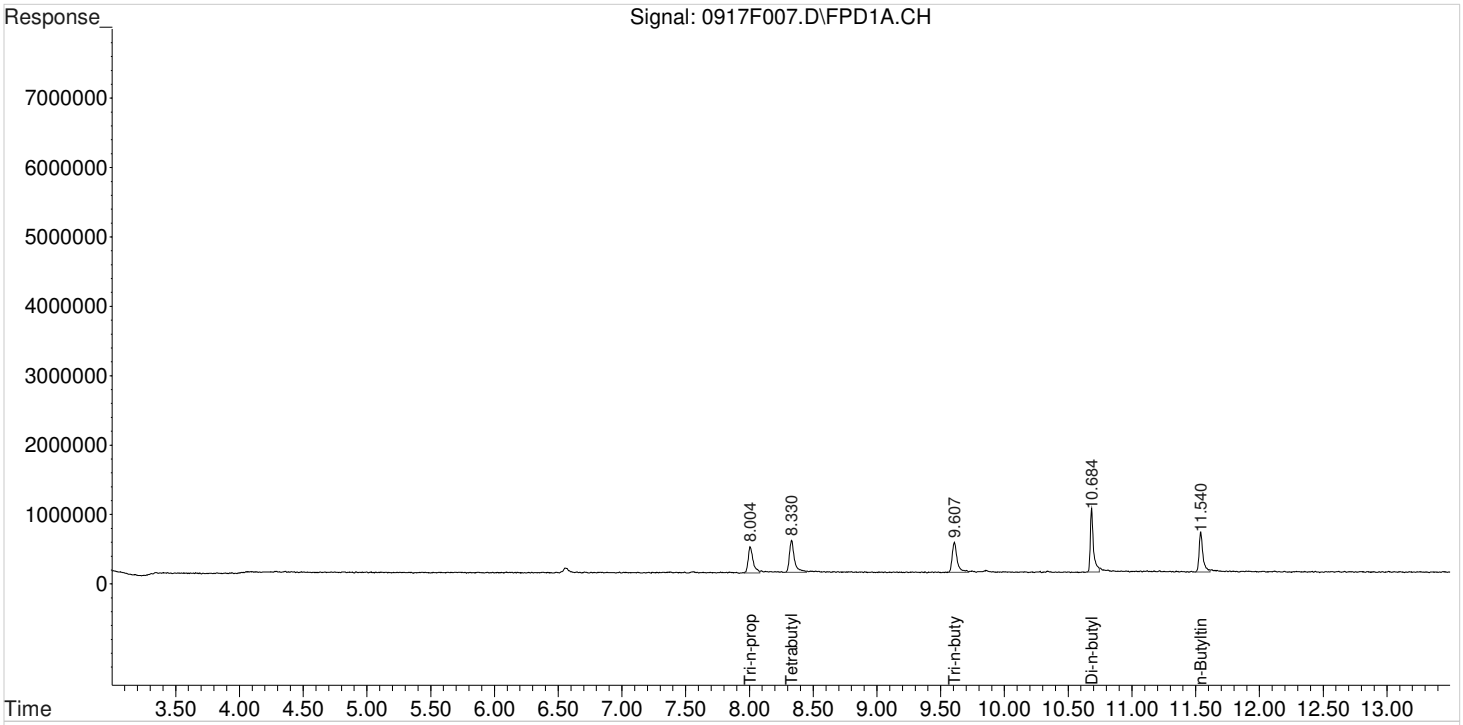
Quantitation Report (QT Reviewed)

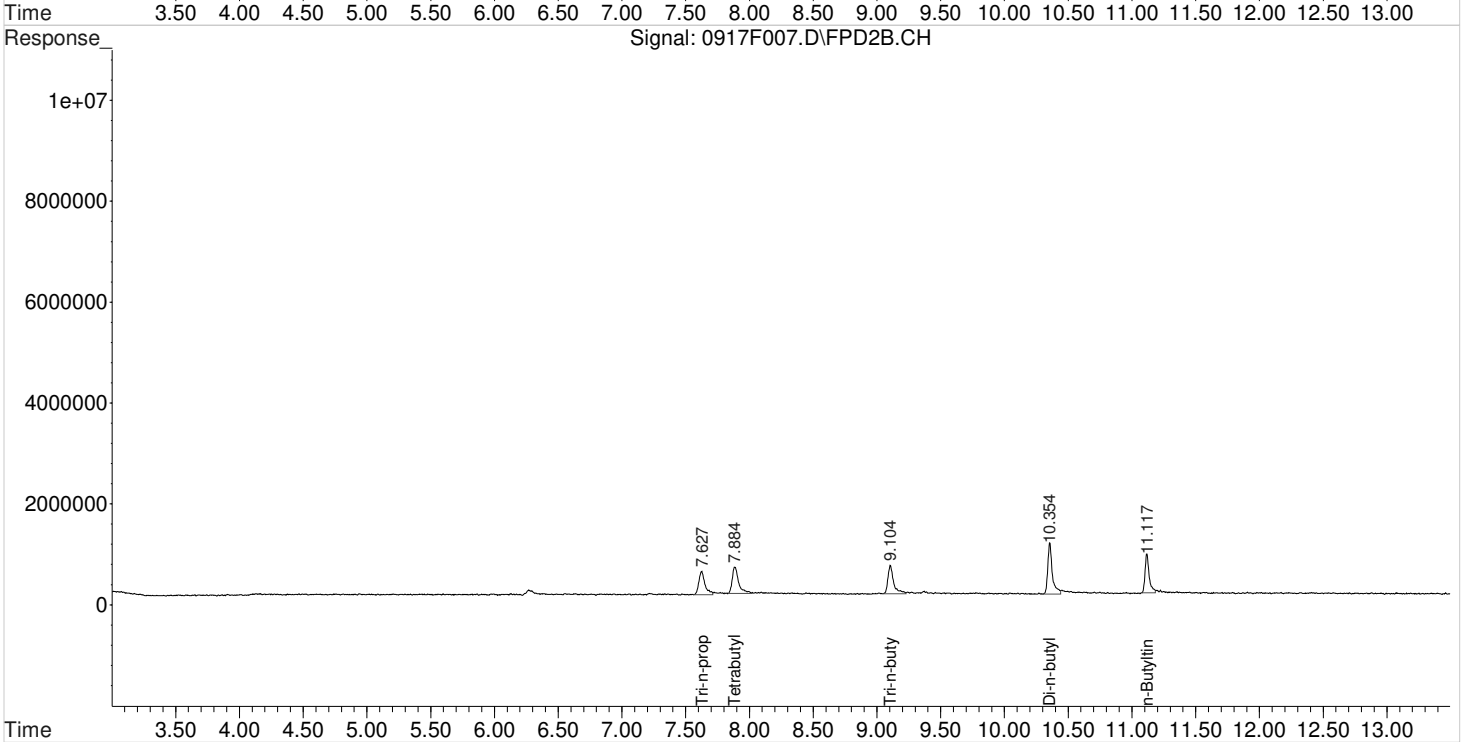
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:50 pm Operator: SAA
Sample : OT5-010D @ 20PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:51:22 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





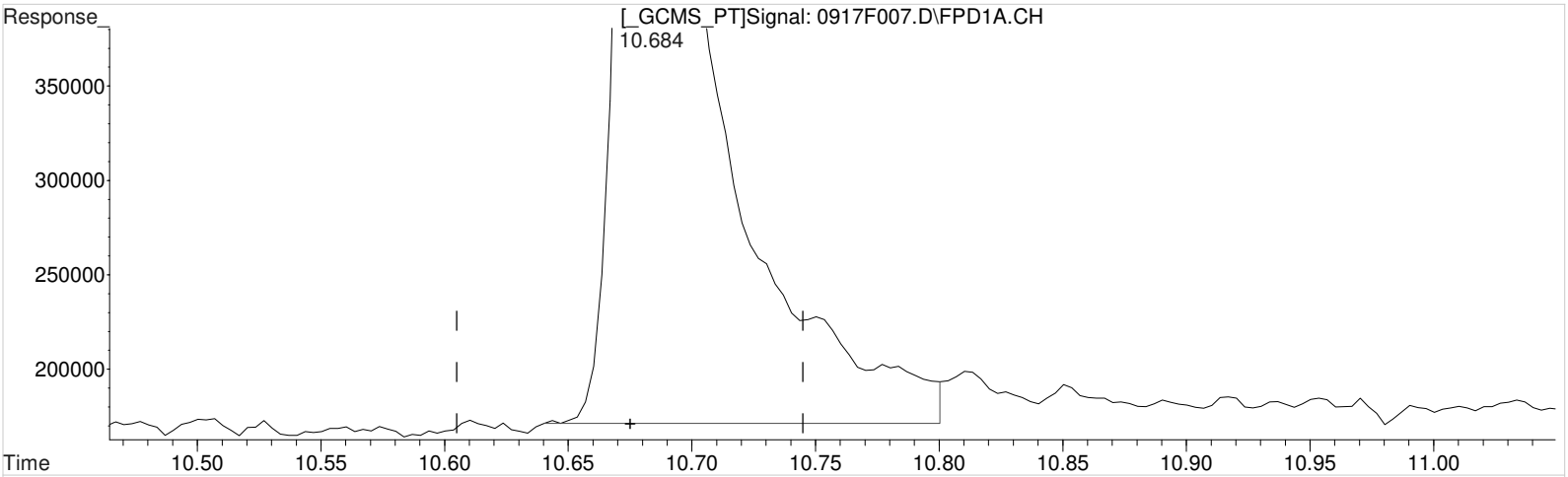
Quantitation Report (Qedit)

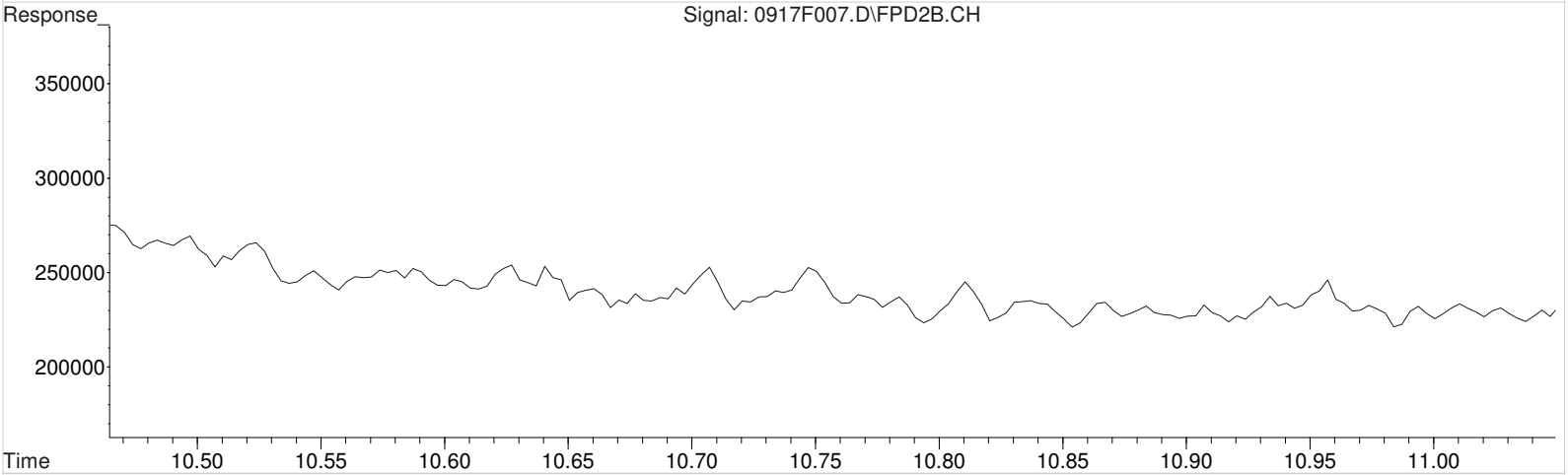
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:50 pm Operator: SAA
Sample : OT5-010D @ 20PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:50:11 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(4) Di-n-butyltin

10.684min 17.833 ng/mL

response 1721576

Manual Integration:

Before

09/18/18

(4) Di-n-butyltin #2

10.354min 12.351 ng/mL

response 2538425

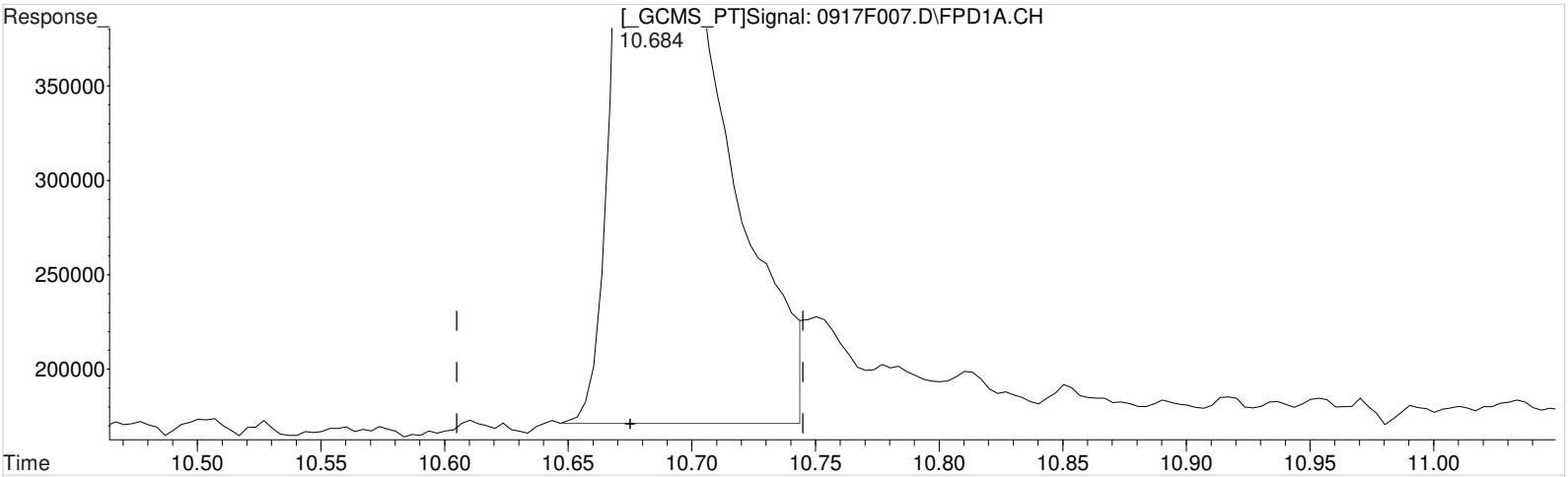
(+) = Expected Retention Time

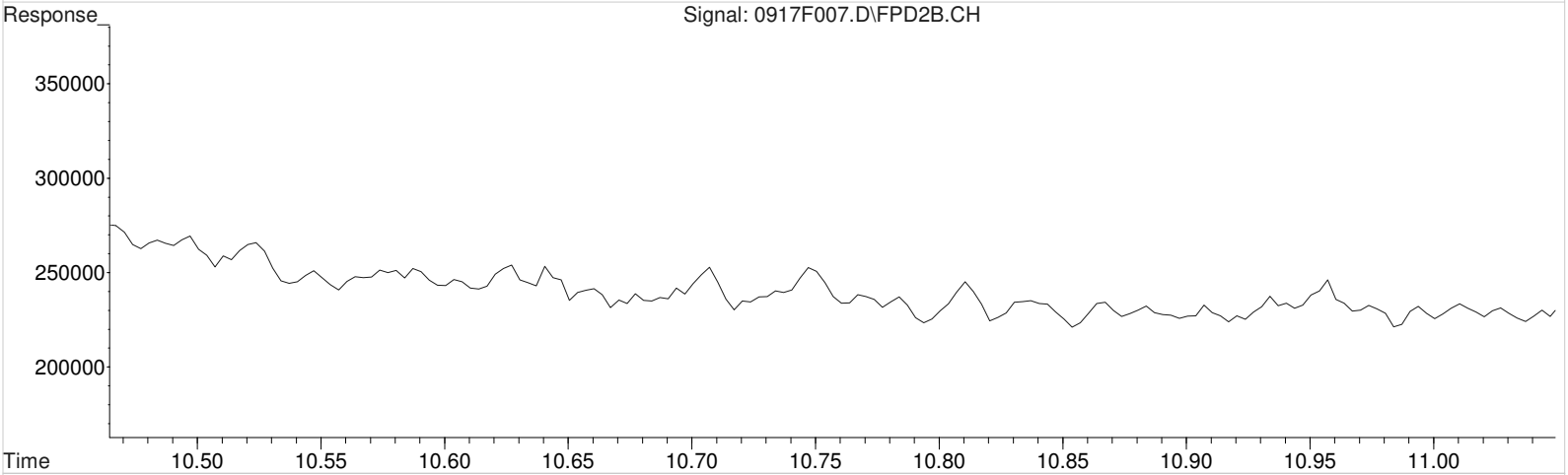
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:50 pm Operator: SAA
Sample : OT5-010D @ 20PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:50:11 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(4) Di-n-butyltin

10.684min 16.606 ng/mL m

response 1603141

Manual Integration:

After

Baseline/Shoulder

09/18/18

(4) Di-n-butyltin #2

10.354min 12.351 ng/mL

response 2538425

(+) = Expected Retention Time

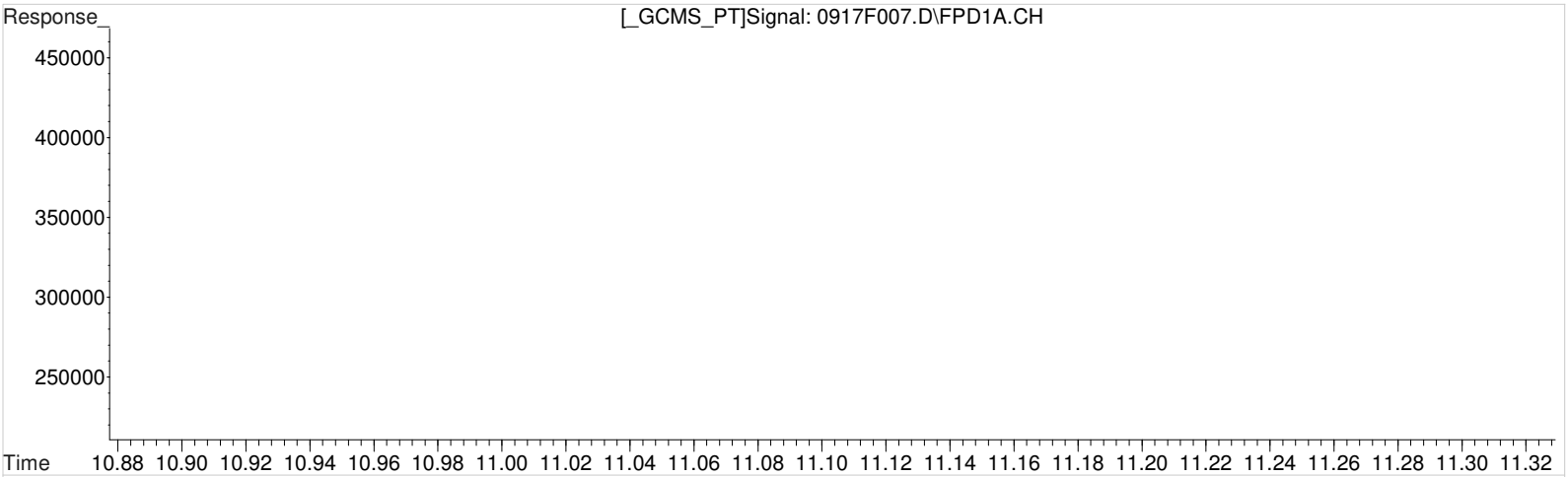
Quantitation Report (Qedit)

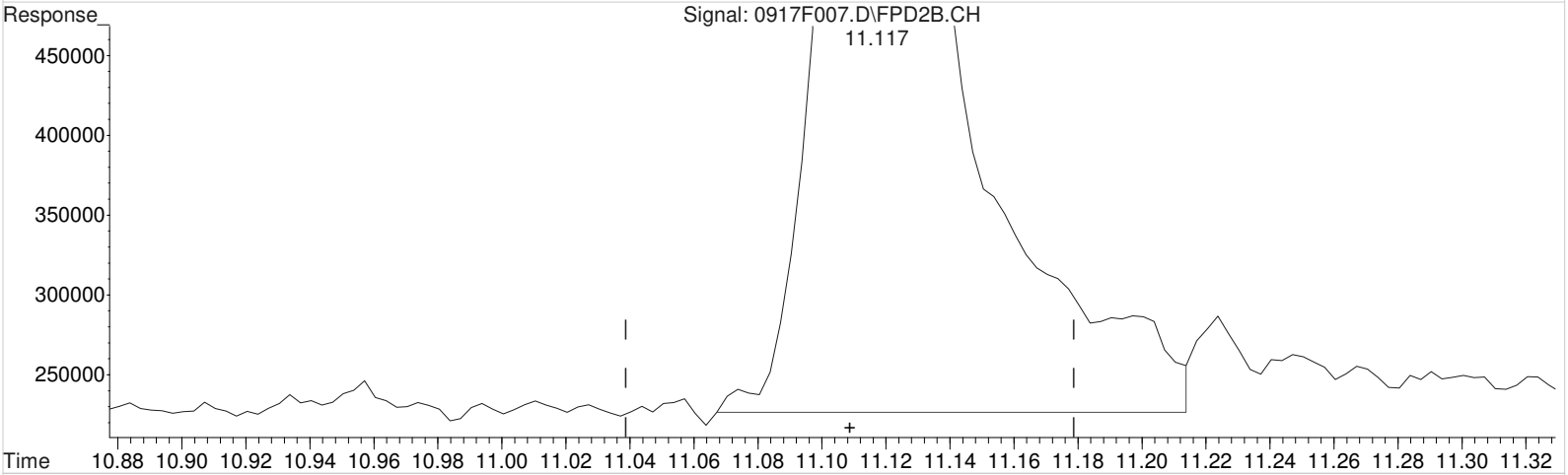
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:50 pm Operator: SAA
Sample : OT5-010D @ 20PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:50:11 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.540min 13.235 ng/mL

response 1214324

Manual Integration:

Before

09/18/18

(5) n-Butyltin #2

11.117min 10.521 ng/mL

response 1931146

(+) = Expected Retention Time

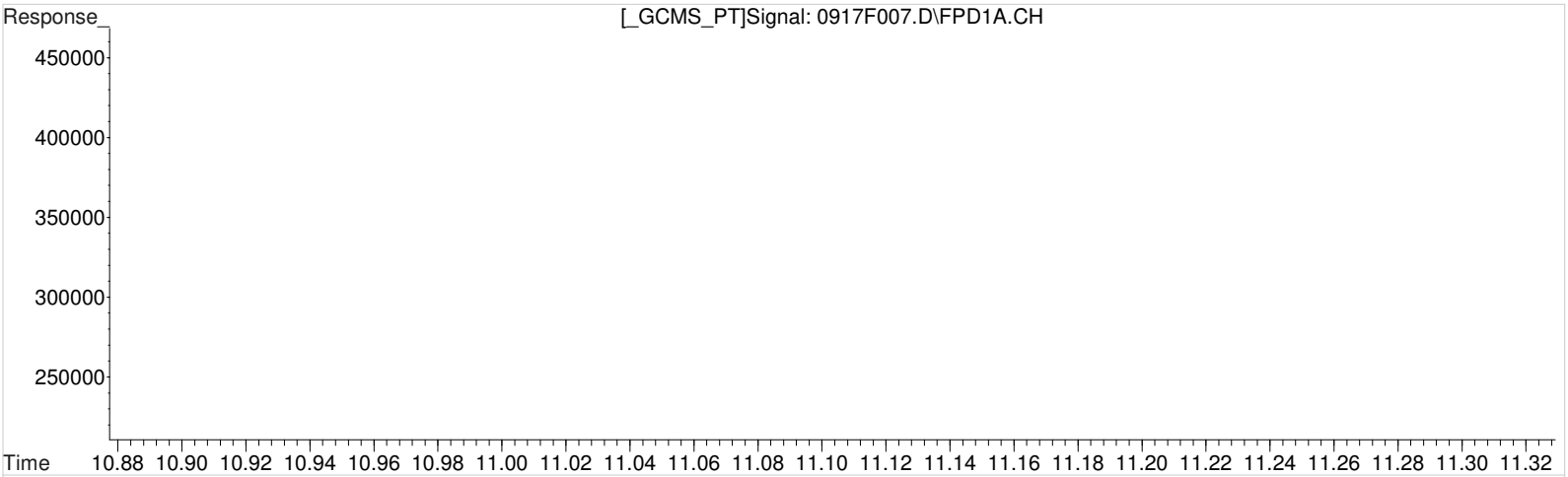
Quantitation Report (Qedit)

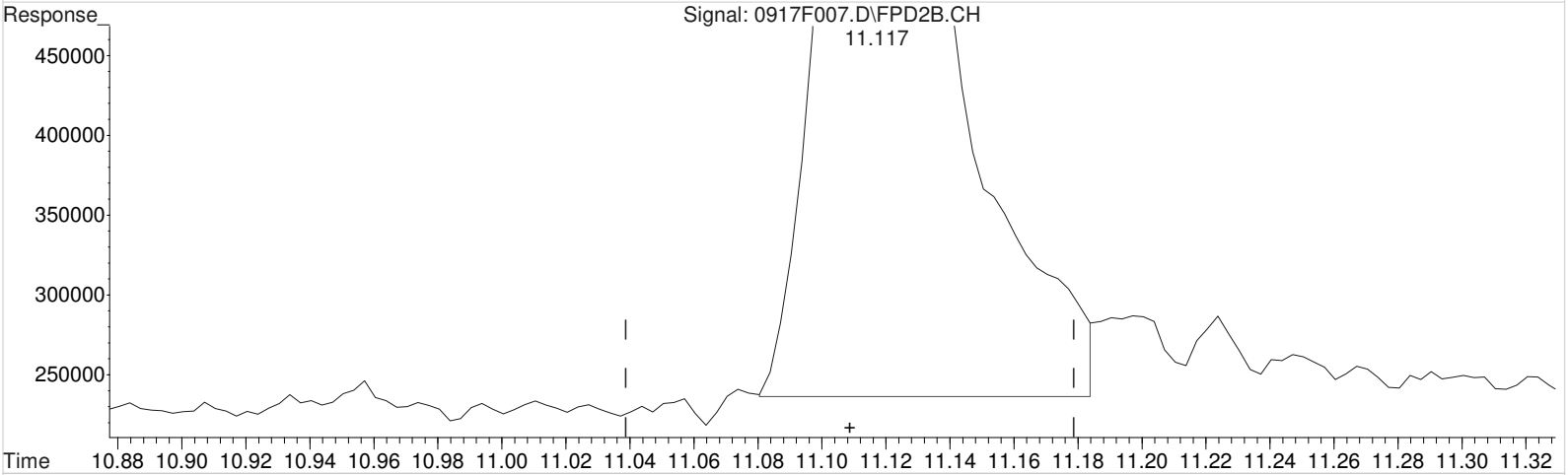
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F007.D Vial: 5
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 3:50 pm Operator: SAA
Sample : OT5-010D @ 20PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:50:11 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.540min 13.235 ng/mL

response 1214324

Manual Integration:

After

Baseline/Shoulder

09/18/18

(5) n-Butyltin #2

11.117min 9.647 ng/mL m

response 1770749

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F008.D Vial: 6
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:08 pm Operator: SAA
Sample : OT5-010K@50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:41:15 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1)	S Tri-n-pro...	8.004	7.621	2797695	4307358	64.252	43.341	#
	Target Compounds							
2)	Tetrabuty...	8.331	7.885	3218508	4758354	61.907	43.259	#
3)	Tri-n-but...	9.604	9.105	3087278	4715252	56.597	40.544	#
4)	Di-n-buty...	10.684	10.355	4733323	7079281	49.030	34.446	#
5)	n-Butyltin	11.538	11.118	3482758	5311485	37.959	28.937	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

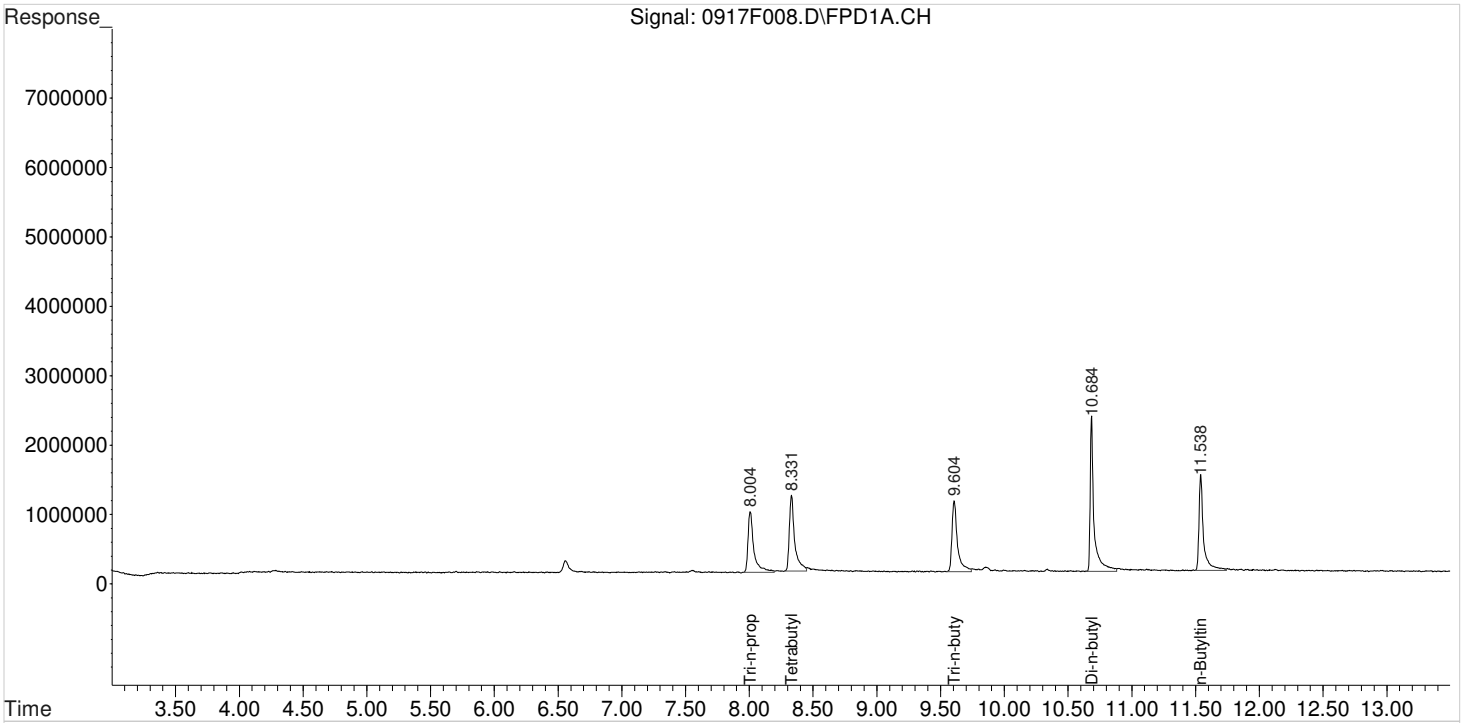
Quantitation Report (QT Reviewed)

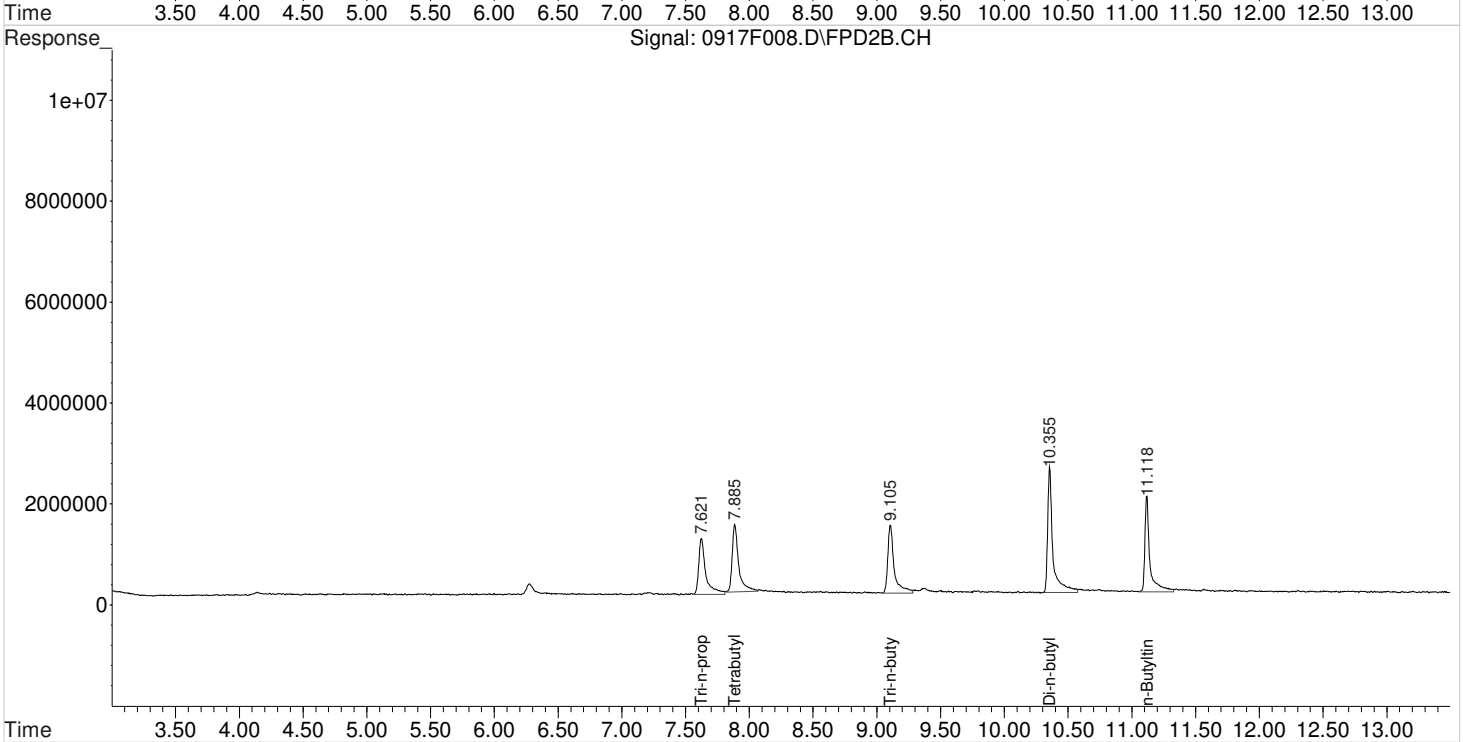
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F008.D Vial: 6
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:08 pm Operator: SAA
Sample : OT5-010K@50 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:41:15 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F009.D Vial: 7
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:27 pm Operator: SAA
Sample : OT5-010E @ 200 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:52:04 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL	
	System Monitoring Compounds							
1)	S Tri-n-pro...	8.008	7.622	10918297	15885758	250.749	159.842	#
	Target Compounds							
2)	Tetrabuty...	8.332	7.885	13244521	18561728	254.756	168.748	m#
3)	Tri-n-but...	9.608	9.105	12295658	17704439	225.406	152.233	#
4)	Di-n-buty...	10.685	10.355	18907216	26155501	195.849	127.265	#
5)	n-Butyltin	11.542	11.115	13956740	19316210	152.118	105.235	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

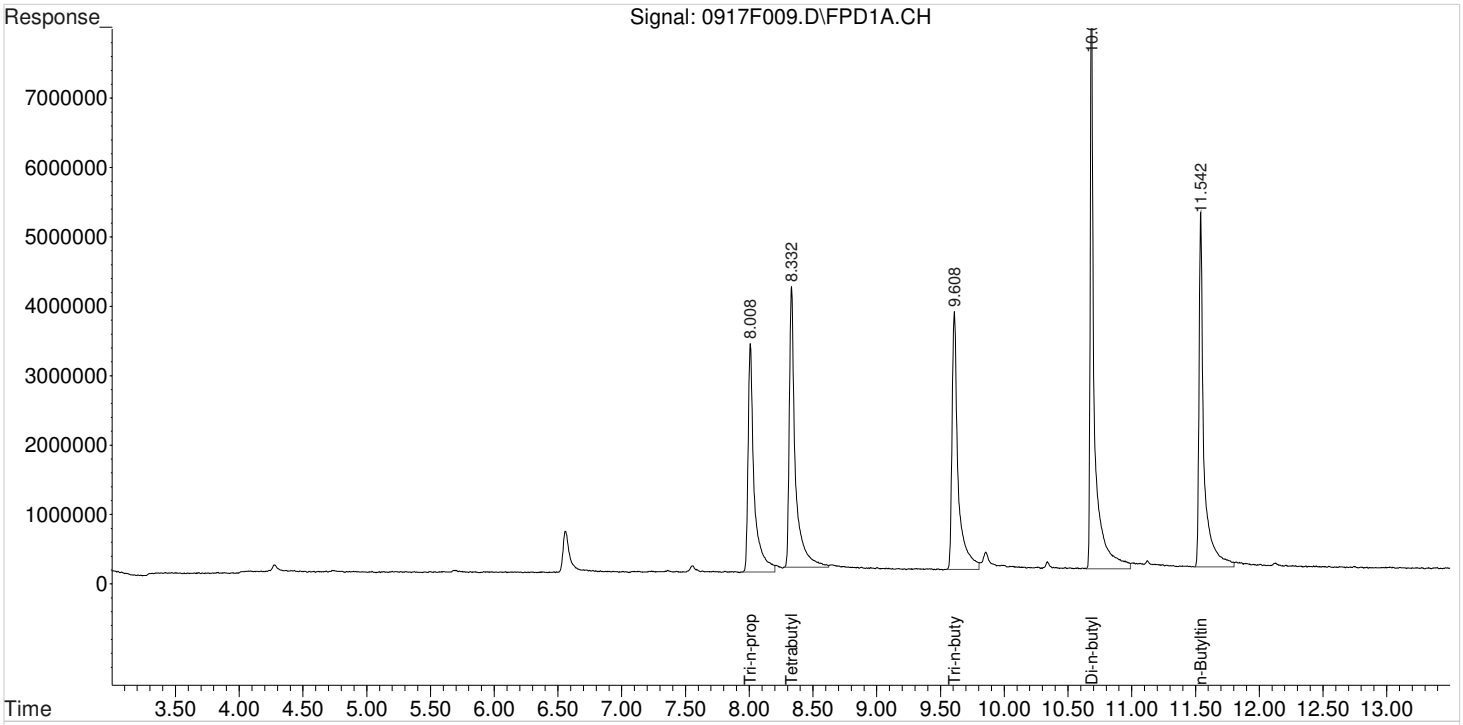
Quantitation Report (QT Reviewed)

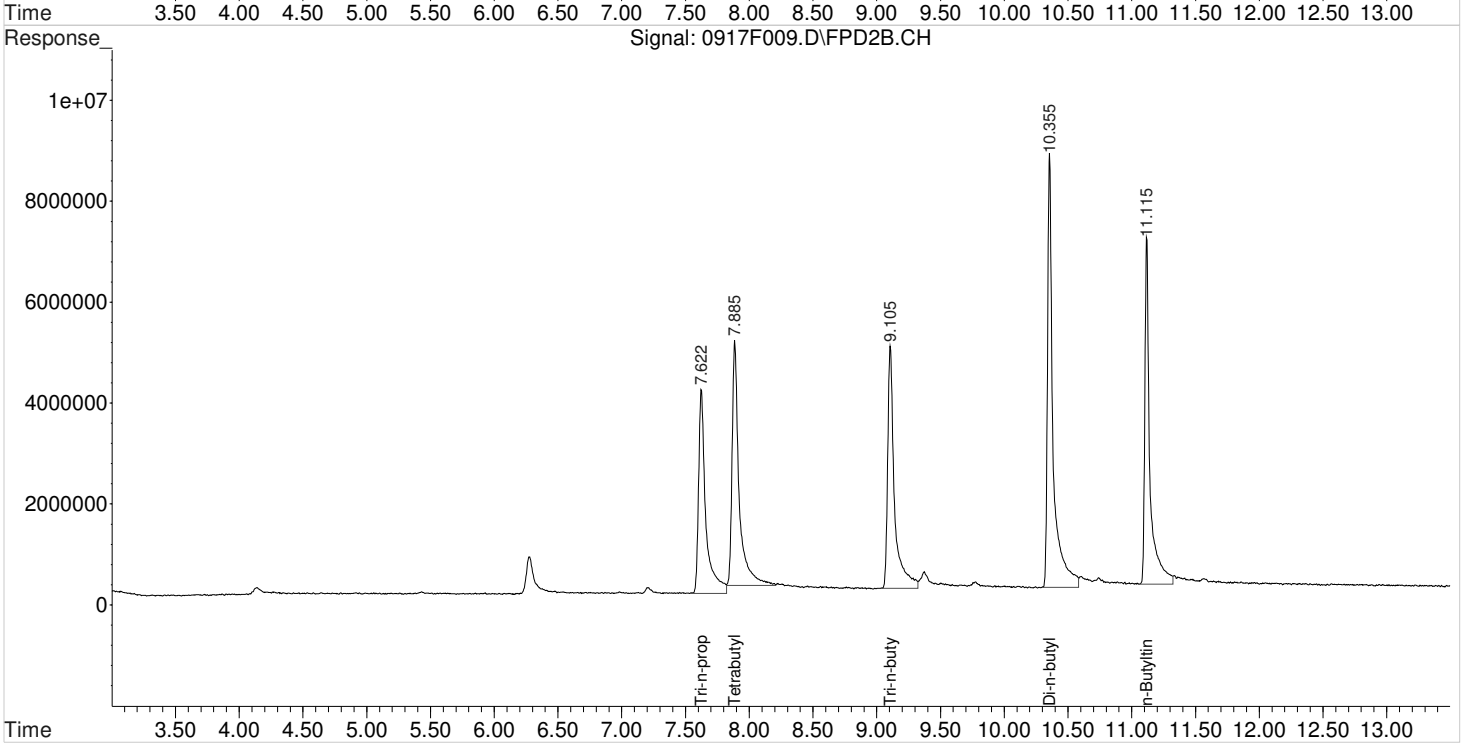
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F009.D Vial: 7
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:27 pm Operator: SAA
Sample : OT5-010E @ 200 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:52:04 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





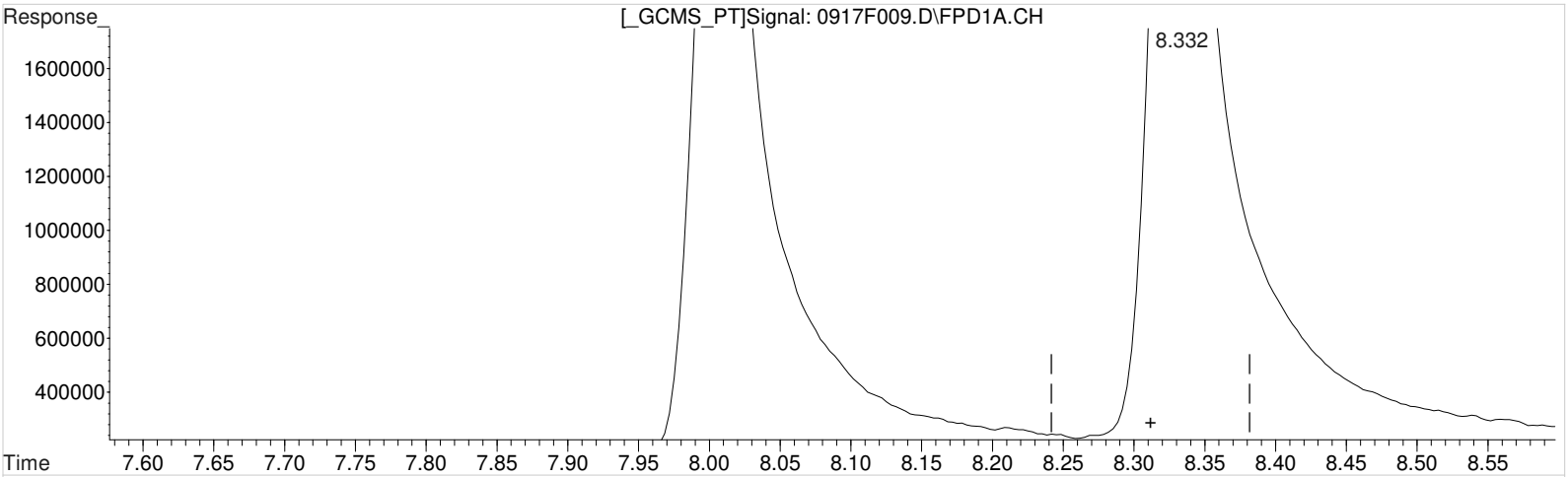
Quantitation Report (Qedit)

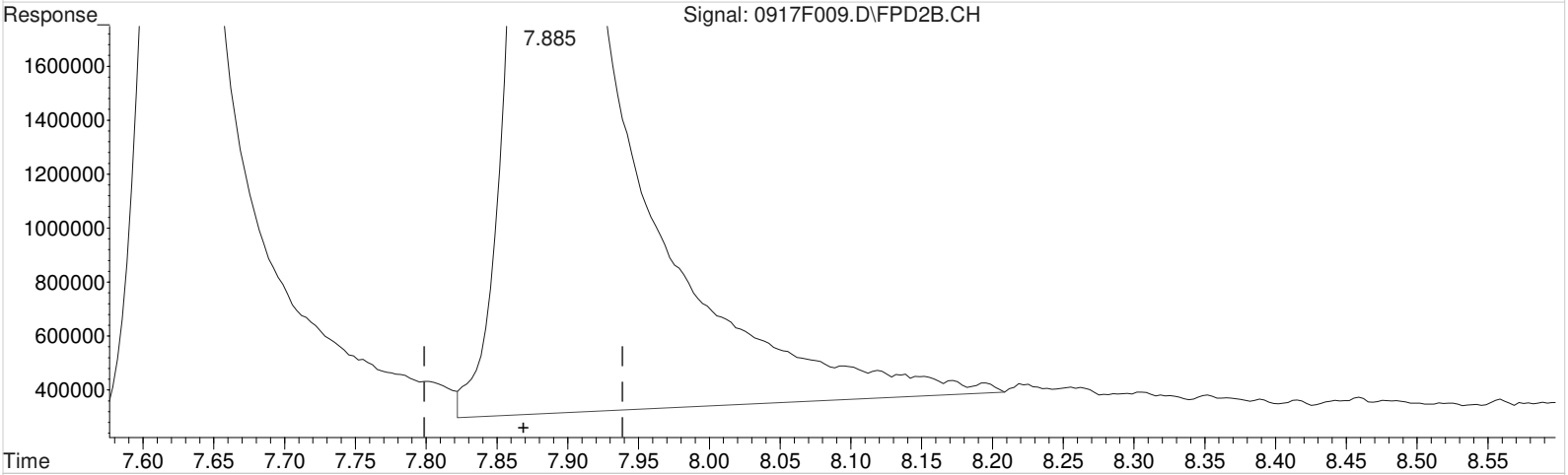
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F009.D Vial: 7
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:27 pm Operator: SAA
Sample : OT5-010E @ 200 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:51:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(2) Tetrabutyltin

8.332min 254.756 ng/mL

response 13244521

Manual Integration:

Before

09/18/18

(2) Tetrabutyltin #2

7.885min 177.827 ng/mL

response 19560360

(+) = Expected Retention Time

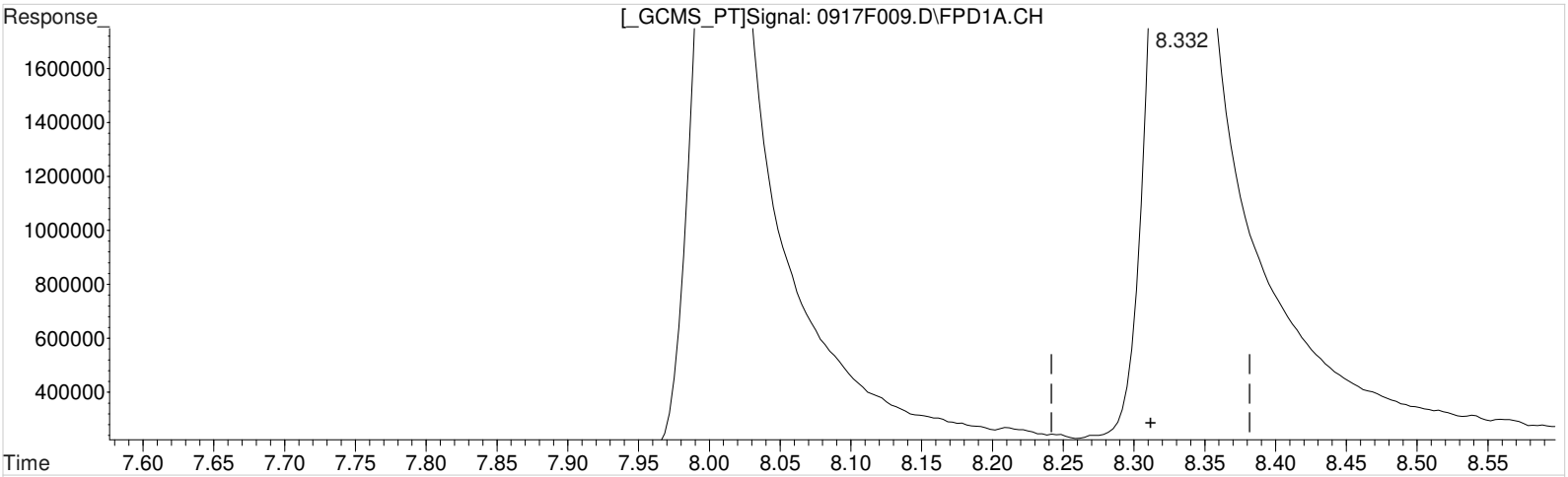
Quantitation Report (Qedit)

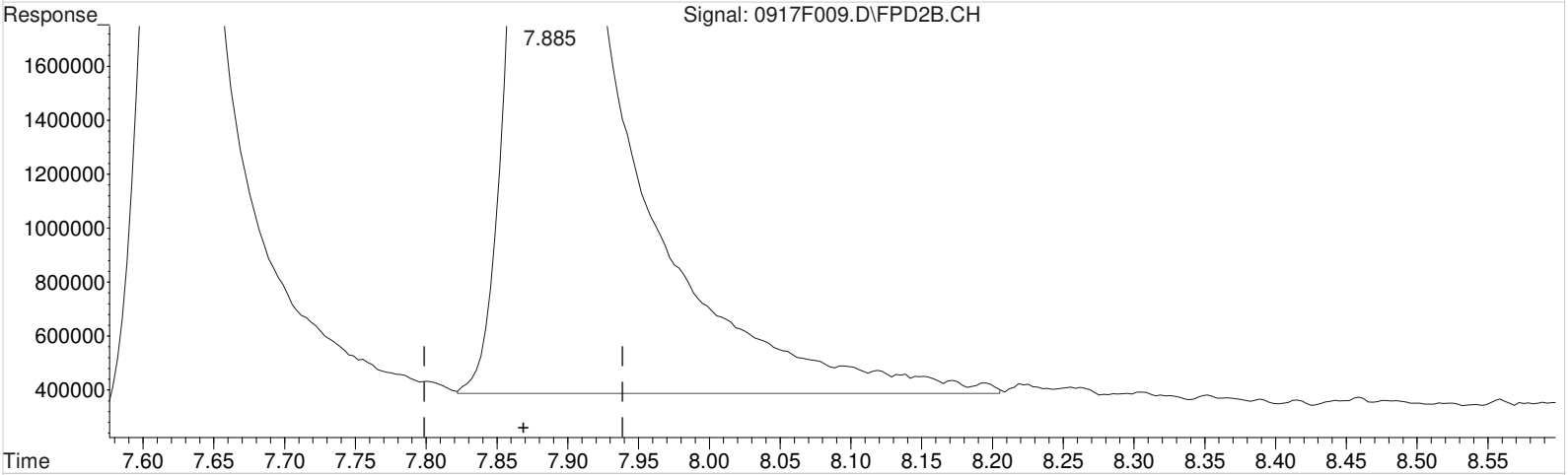
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F009.D Vial: 7
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:27 pm Operator: SAA
Sample : OT5-010E @ 200 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:51:44 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(2) Tetrabutyltin

8.332min 254.756 ng/mL

response 13244521

Manual Integration:

After

Baseline/Shoulder

09/18/18

(2) Tetrabutyltin #2

7.885min 168.748 ng/mL m

response 18561728

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F010.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:45 pm Operator: SAA
Sample : OT5-010F @ 500 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:57:26 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
1) S	Tri-n-pro...	8.008	7.625	27554709	38163720	632.820	384.002 #
	Target Compounds						
2)	Tetrabuty...	8.331	7.888	32834159	43908007	631.559	399.176m#
3)	Tri-n-but...	9.608	9.105	30057567	42552723	551.021	365.892 #
4)	Di-n-buty...	10.685	10.355	45309843	63243238	469.339	307.723 #
5)	n-Butyltin	11.541	11.118	33157121	45986502	361.388m	250.536 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

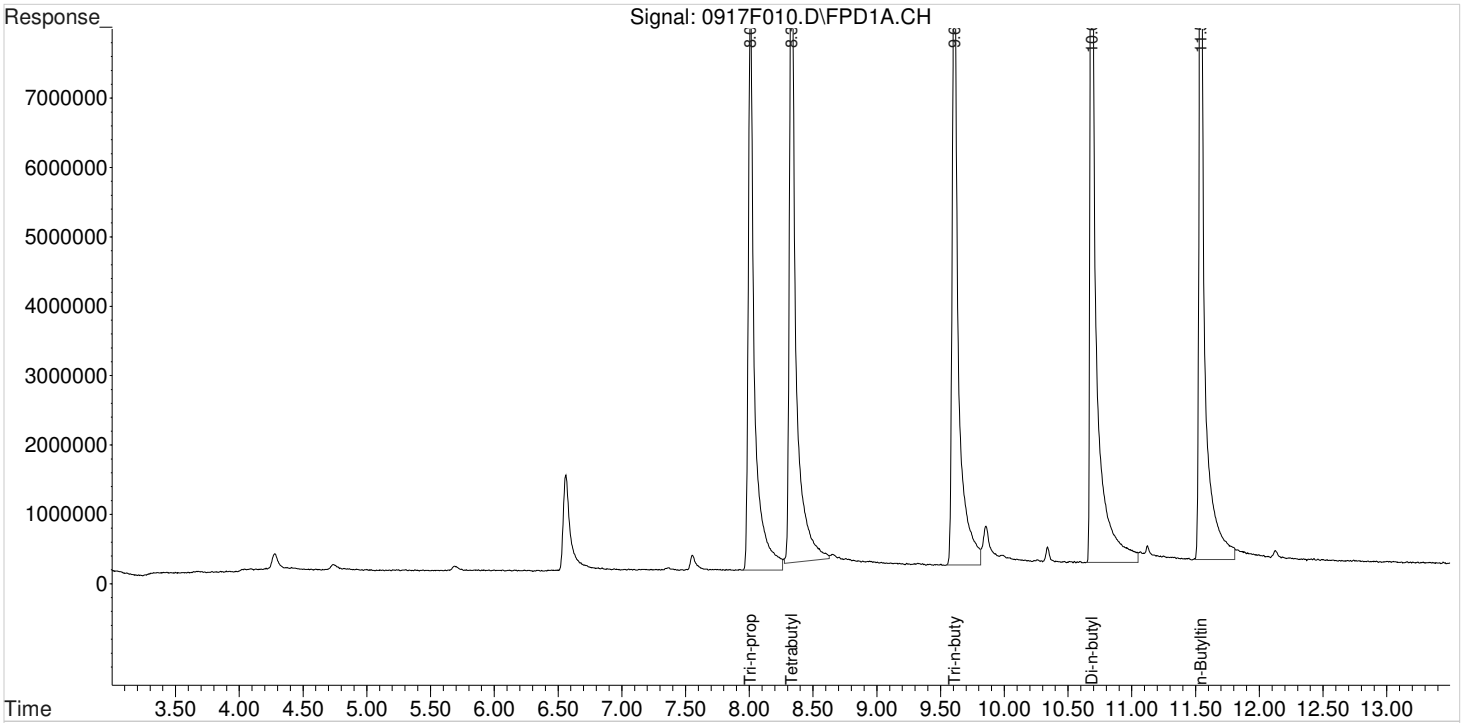
Quantitation Report (QT Reviewed)

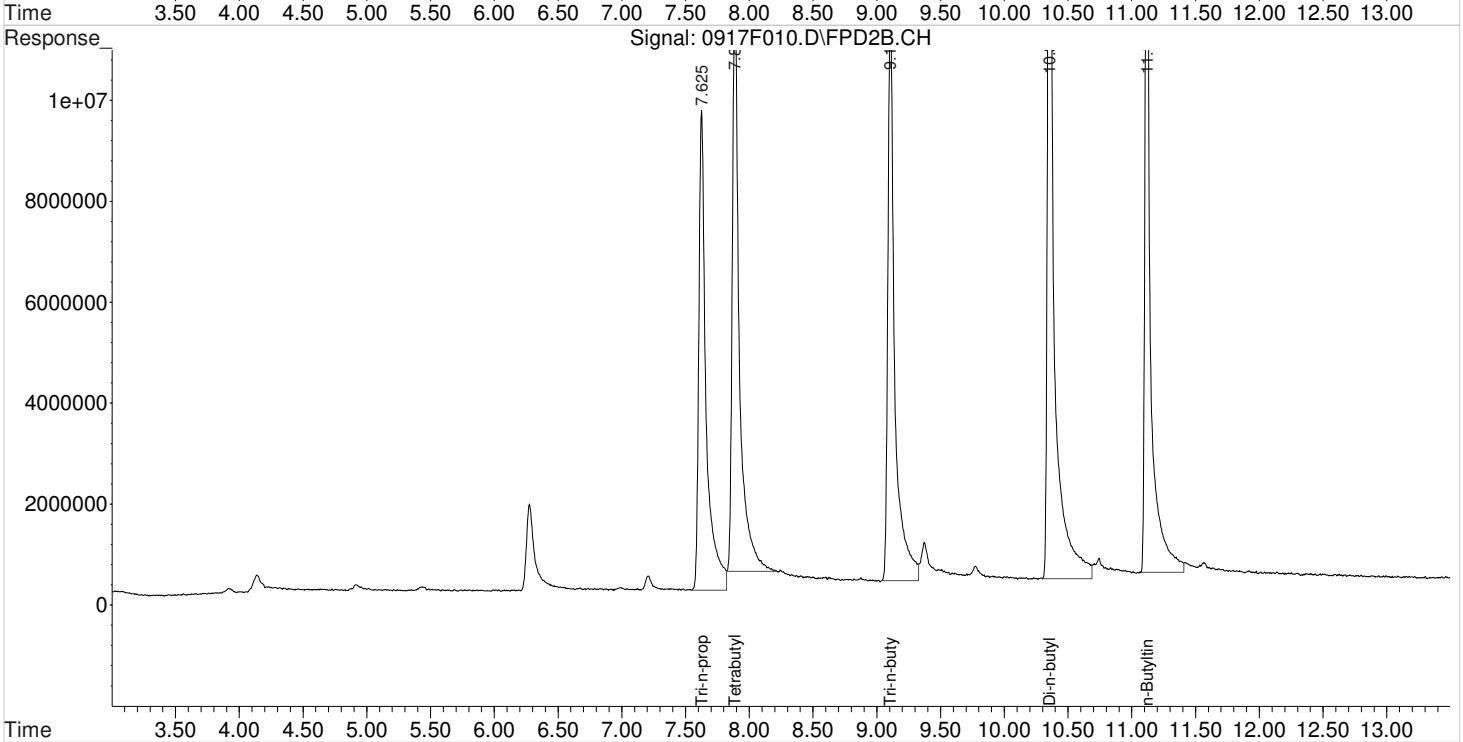
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F010.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:45 pm Operator: SAA
Sample : OT5-010F @ 500 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:57:26 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





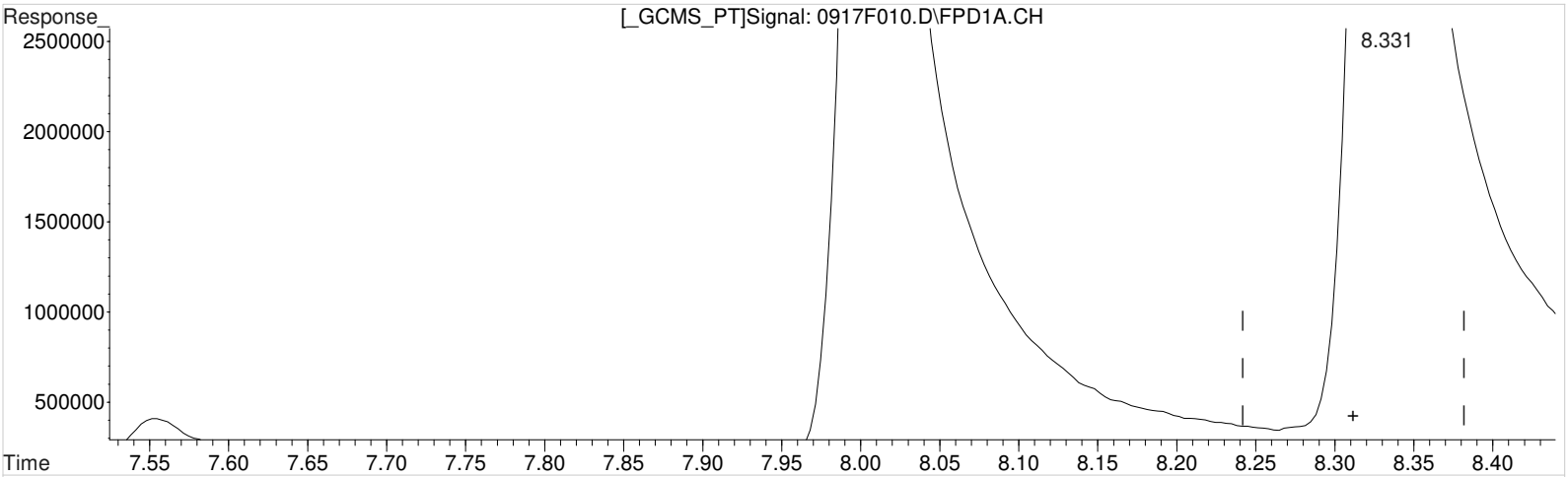
Quantitation Report (Qedit)

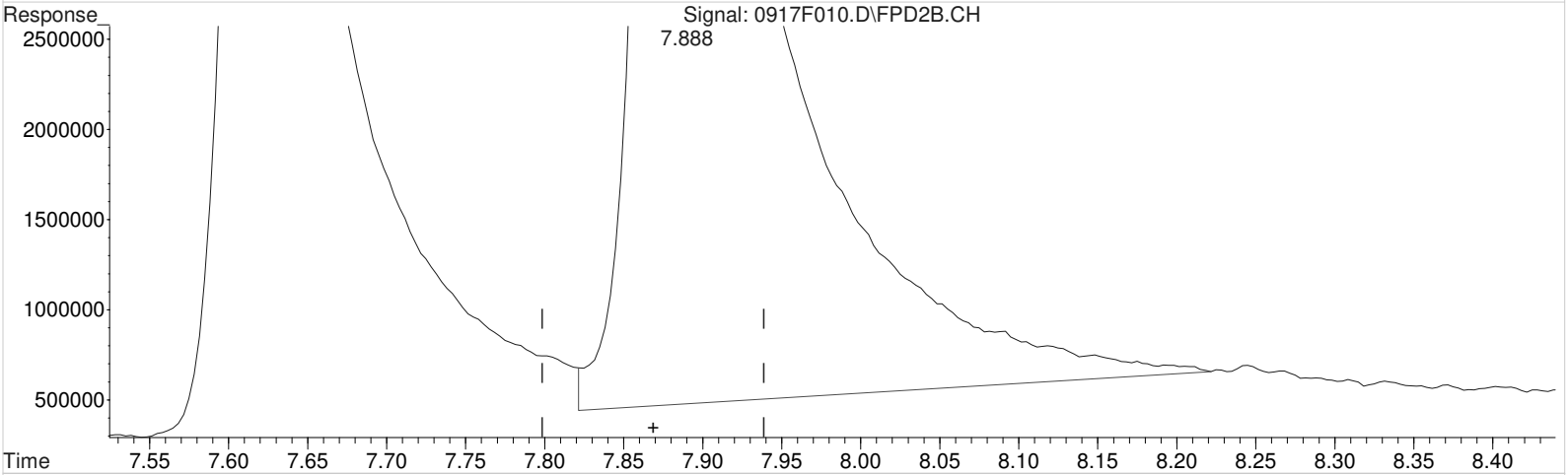
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F010.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:45 pm Operator: SAA
Sample : OT5-010F @ 500 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:52:37 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(2) Tetrabutyltin

8.331min 631.559 ng/mL

response 32834159

(2) Tetrabutyltin #2

7.888min 425.095 ng/mL

response 46758969

Manual Integration:

Before

09/18/18

(+) = Expected Retention Time

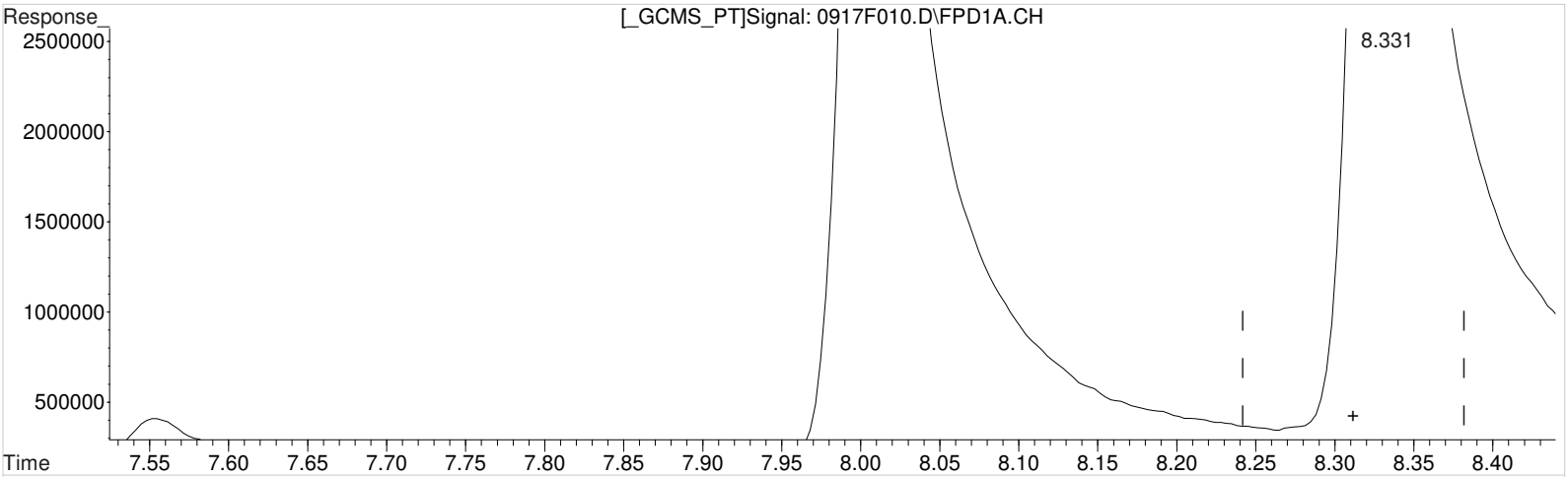
Quantitation Report (Qedit)

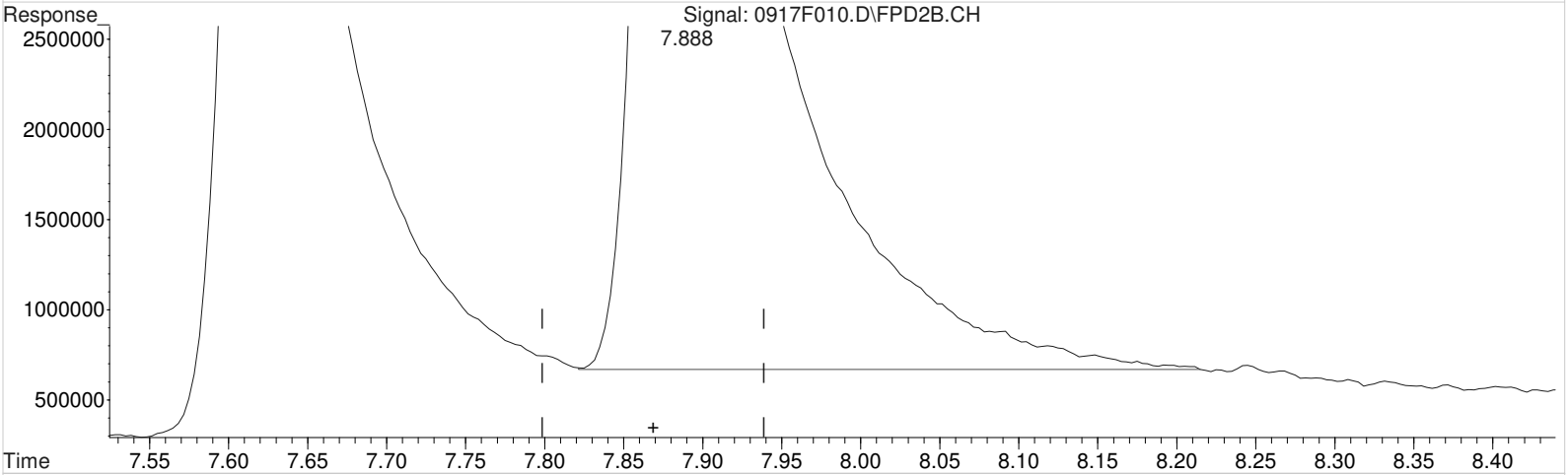
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F010.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:45 pm Operator: SAA
Sample : OT5-010F @ 500 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:52:37 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(2) Tetrabutyltin

8.331min 631.559 ng/mL

response 32834159

Manual Integration:

After

Baseline/Shoulder

09/18/18

(2) Tetrabutyltin #2

7.888min 399.176 ng/mL m

response 43908007

(+) = Expected Retention Time

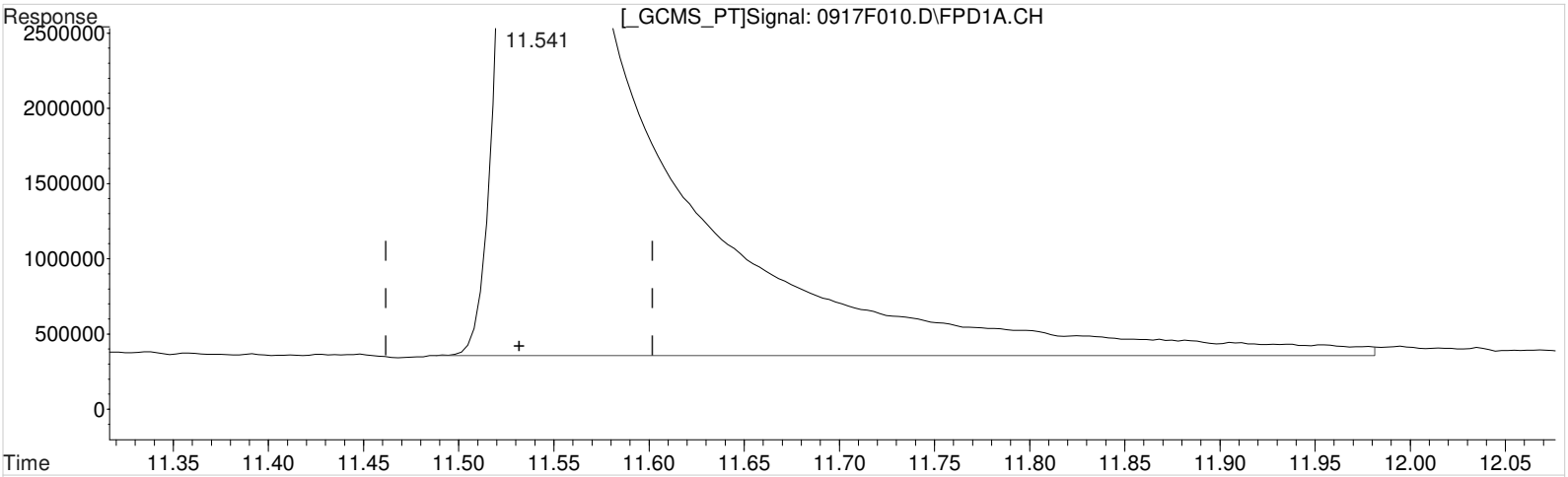
Quantitation Report (Qedit)

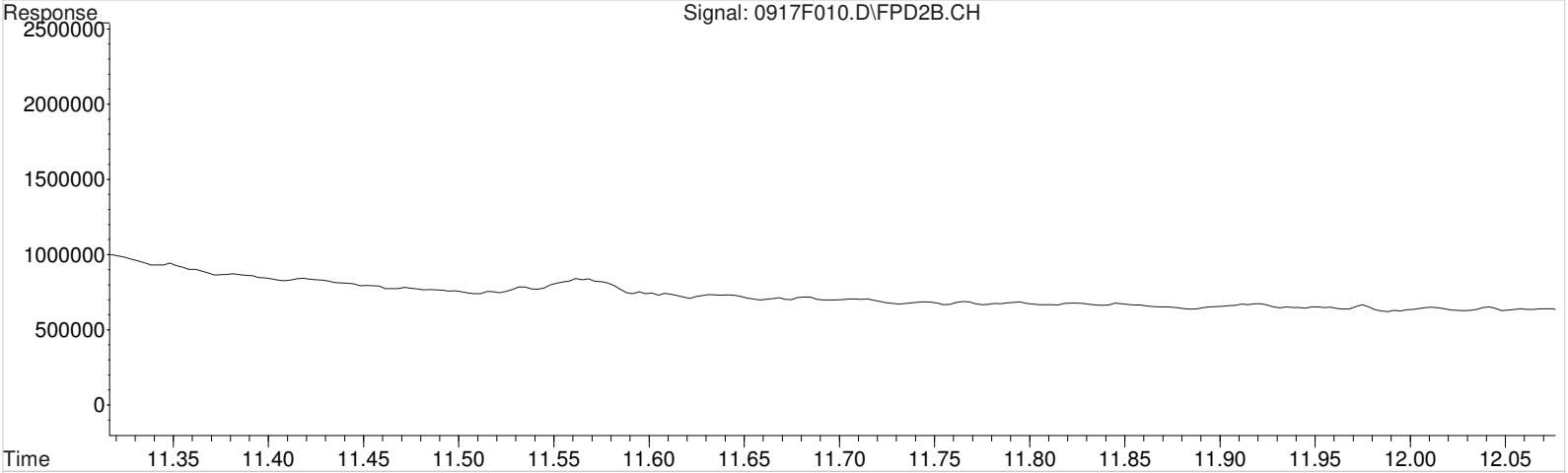
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F010.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:45 pm Operator: SAA
Sample : OT5-010F @ 500 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:52:37 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.541min 370.273 ng/mL

response 33972291

Manual Integration:

Before

09/18/18

(5) n-Butyltin #2

11.118min 250.536 ng/mL

response 45986502

(+) = Expected Retention Time

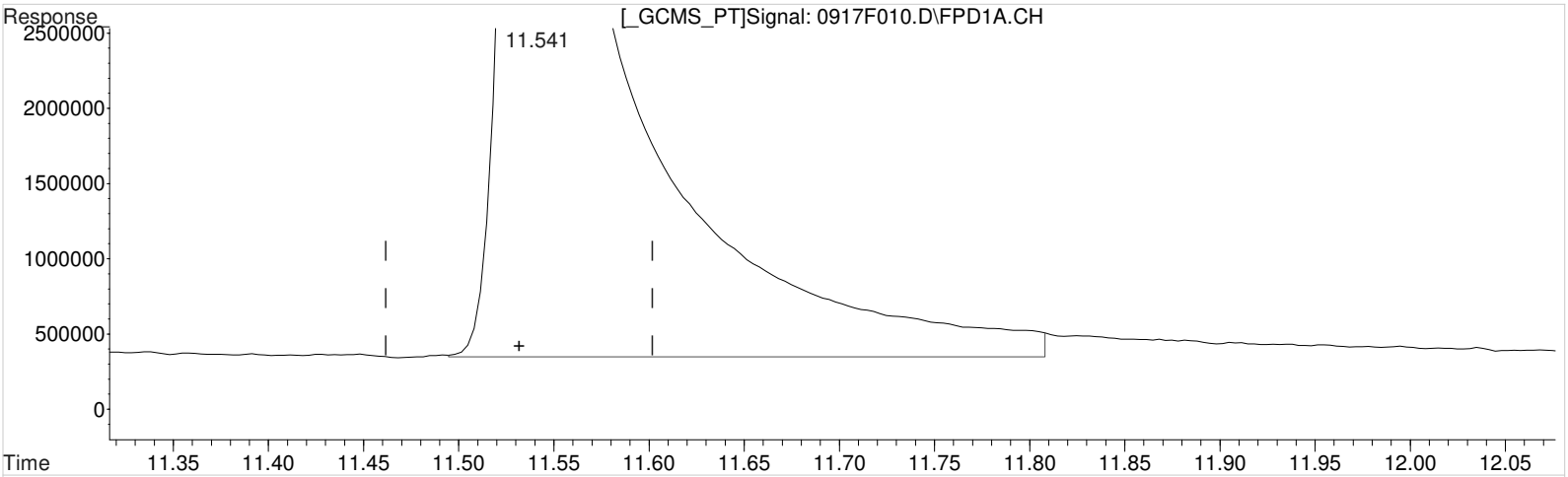
Quantitation Report (Qedit)

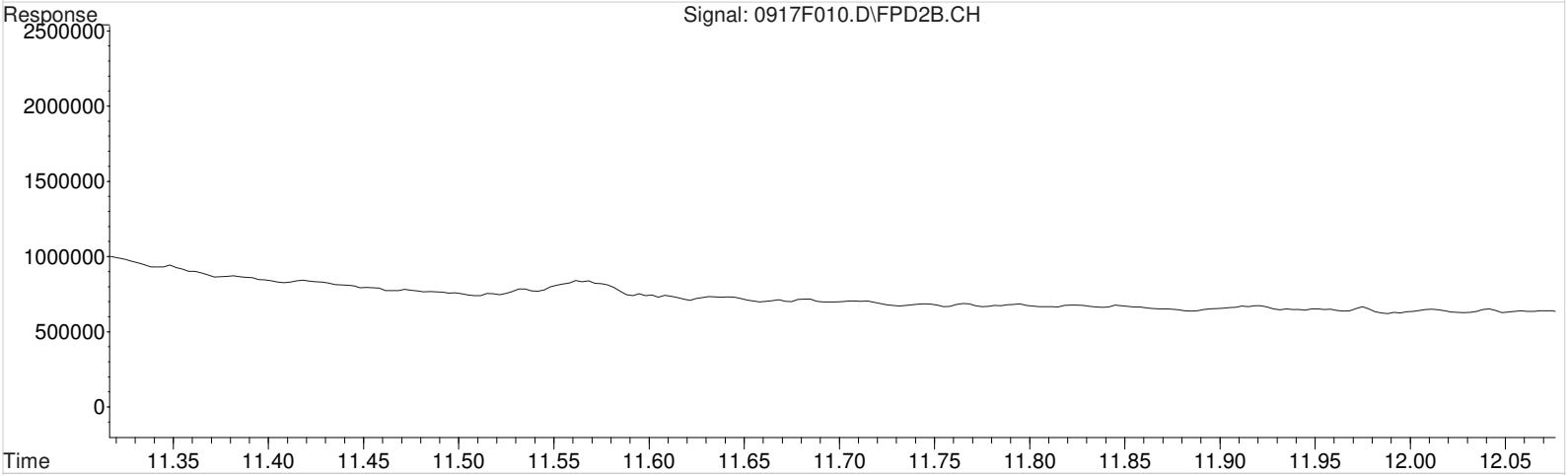
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F010.D Vial: 8
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 4:45 pm Operator: SAA
Sample : OT5-010F @ 500 PPB Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 09:52:37 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Wed Sep 12 12:38:42 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





QEdit

(5) n-Butyltin

11.541min 361.388 ng/mL m

response 33157121

Manual Integration:

After

Baseline/Shoulder

09/18/18

(5) n-Butyltin #2

11.118min 250.536 ng/mL

response 45986502

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F012.D Vial: 9
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 5:22 pm Operator: SAA
Sample : OT5-09P @ 50PPB ICV Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 10:07:50 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:00:45 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
	System Monitoring Compounds						
	Target Compounds						
2)	Tetrabuty...	8.332	7.889	2728446	3770443	44.756	40.241
3)	Tri-n-but...	9.609	9.109	3675883	5221633	52.883	50.118
4)	Di-n-buty...	10.686	10.359	3838496	5636775	33.392	32.367
5)	n-Butyltin	11.542	11.119	3051800	4343351	29.524	27.152

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

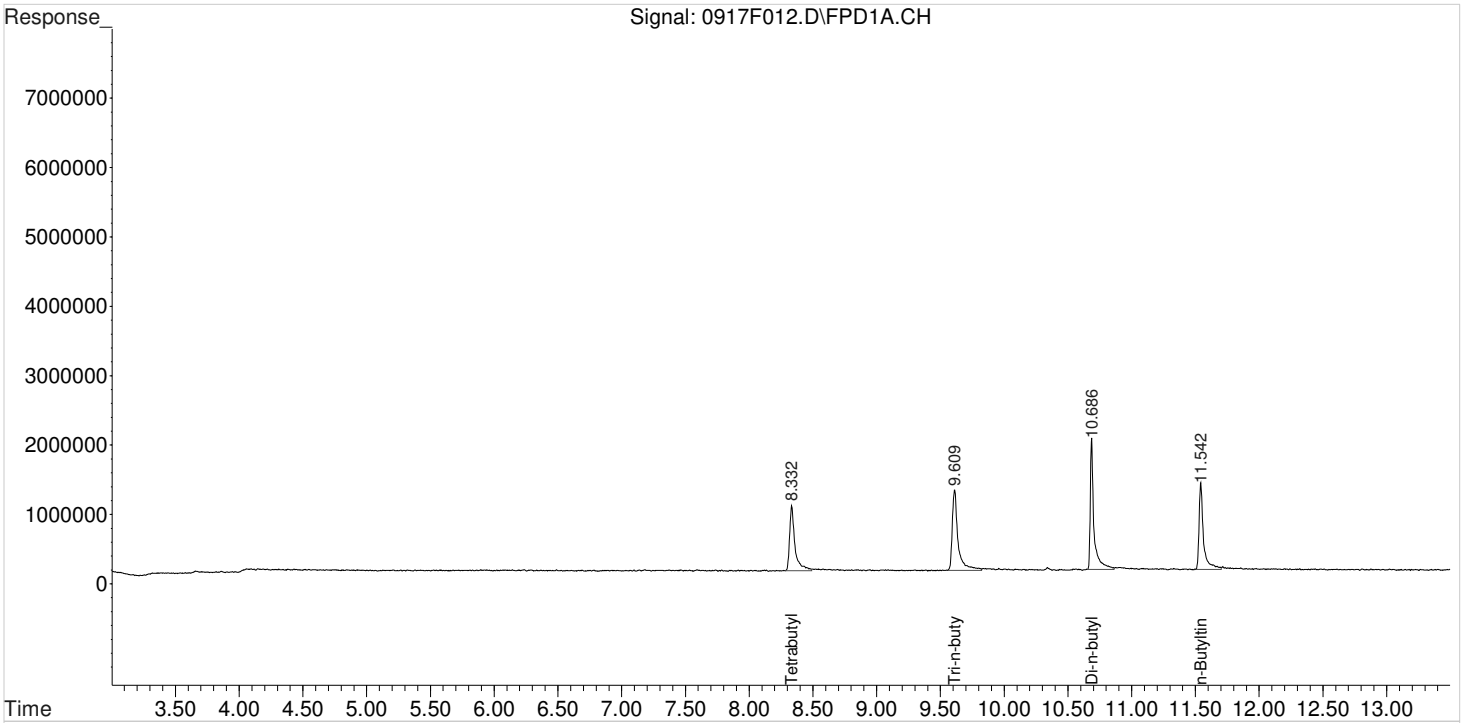
Quantitation Report (QT Reviewed)

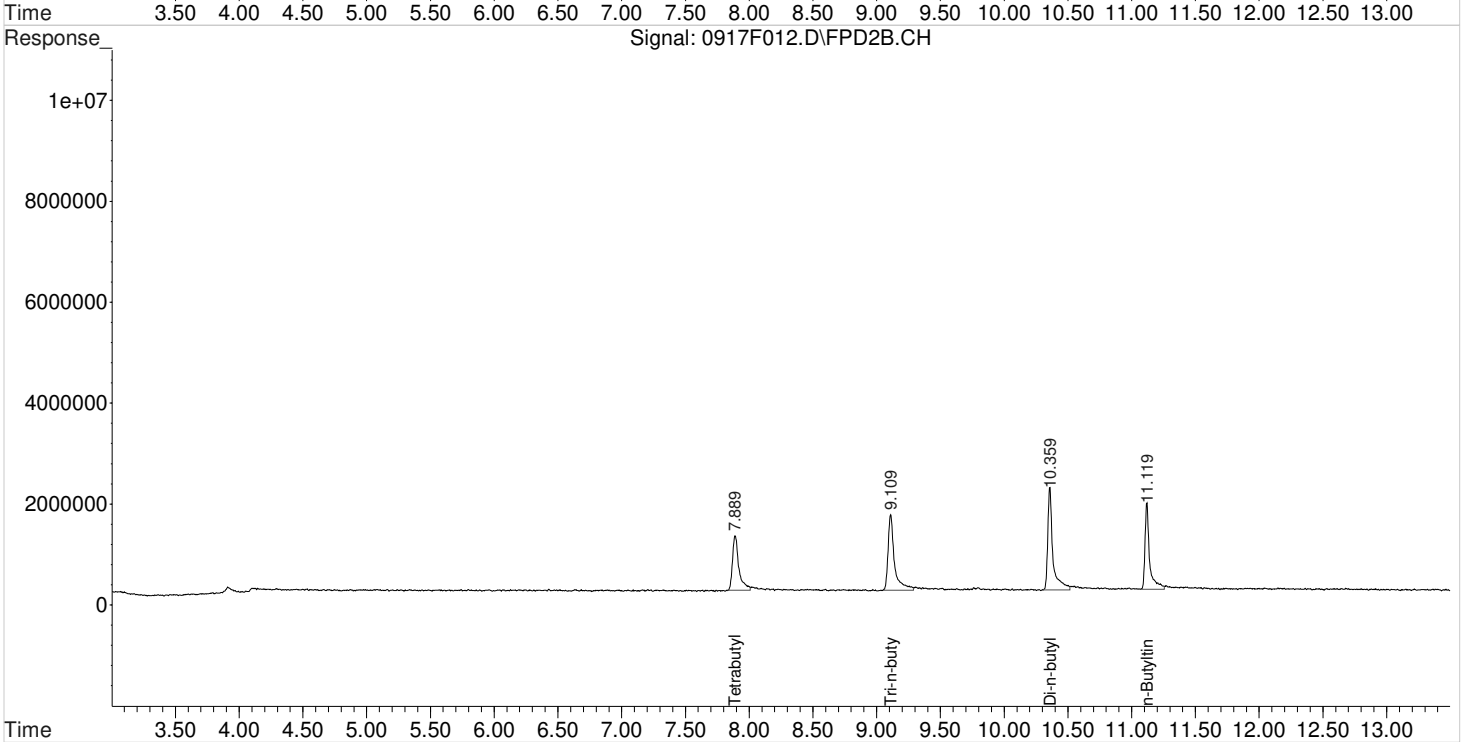
1st 09/18/18
2nd 09/18/18

Data File : J:\GC26\DATA\091718\0917F012.D Vial: 9
Signal(s) : Signal #1: FPD1A.CH Signal #2: FPD2B.CH
Acq On : 17 Sep 2018 5:22 pm Operator: SAA
Sample : OT5-09P @ 50PPB ICV Inst : GC26
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: RTEINT2.P
Quant Time: Sep 18 10:07:50 2018
Quant Results File: GC26-091718-HTIN.RES

Quant Method : J:\GC26\METHODS\GC26-091718-HTIN.M
Quant Title : Hexylated Butyltins CAL KC1800264
QLast Update : Tue Sep 18 10:00:45 2018
Response via : Initial Calibration
DataAcq Meth:OTIN1.M

Volume Inj. : 25 µL
Signal #1 Phase : RTX-1 Signal #2 Phase: RTX-35
Signal #1 Info : 320µm/1.0µm/30m Signal #2 Info : 320µm/1.0µm/30m





Comment: Butyltins by Krone
Operator: SMURRAY
Data Path: C:\GC26\DATA\112318\
Pre-Seq Cmd:
Post-Seq Cmd:

QC: KC1800136
RUN: 6/6178

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name	
1	SOLN	100	1123F001	OTIN1	PRIMER	
2	SOLN	100	1123F002	OTIN1	PRIMER	
3	CCV	1	1123F003	OTIN1	OT5-010K @ 50 PPB	ok, ok
4	IB	2	1123F004	OTIN1	IB	
5	SMPL	3	1123F005	OTIN1	K1810270-004 RR	
6	SMPL	6	1123F006	OTIN1	K1810270-011 RR	
7	SMPL	7	1123F007	OTIN1	K1810270-012 RR	
8	SMPL	8	1123F008	OTIN1	K1810270-013 RR	
9	SMPL	9	1123F009	OTIN1	K1810270-015 RR	
10	SMPL	10	1123F010	OTIN1	K1810270-016@10X	
11	SMPL	11	1123F011	OTIN1	K1810270-017	
12	SMPL	12	1123F012	OTIN1	K1810270-018@10X	
13	CCV	1	1123F013	OTIN1	OT5-010K @ 50 PPB	ok, surr ↓
14	IB	2	1123F014	OTIN1	IB	
15	SMPL	14	1123F015	OTIN1	K1810270-020@10X	
16	SMPL	15	1123F016	OTIN1	K1810270-029@10X	
17	SMPL	21	1123F017	OTIN1	K1810417-002@10X	
18	SMPL	32	1123F018	OTIN1	K1810417-013@10X	
19	CCV	47	1123F019	OTIN1	OT5-010K @ 50 PPB	ok, ok
20	IB	48	1123F020	OTIN1	IB	
21						

Last Modified: Fri Nov 23 16:00:53 2018

DILUTION LOG

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	By:	Solvent Lot #	COMMENTS / **Ext. Date**
K181022O-16	100uL	1mL	10X	11/23/18	SM	196293	TBT
-18							
-20							
-29							
K181041-2							
-13							

R:\SVG\FORMS\DILUTION LOG.DOC

Comment: Butyltins by Krone
Operator: SMURRAY
Data Path: C:\GC26\DATA\112218\
Pre-Seq Cmd:
Post-Seq Cmd:

GC: KE1800436
Run: 6161)

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	SOLN	100	1122F001	OTIN1	PRIMER
2	SOLN	100	1122F002	OTIN1	PRIMER
3	CCV	1	1122F003	OTIN1	OT5-010K @ 50 PPB TBTs, OK
4	IB	2	1122F004	OTIN1	IB
5	SMPL	3	1122F005	OTIN1	K1810270-004 - NR CCV
6	SMPL	4	1122F006	OTIN1	K1810270-006
7	SMPL	5	1122F007	OTIN1	K1810270-010
8	SMPL	6	1122F008	OTIN1	K1810270-011] NR CCV
9	SMPL	7	1122F009	OTIN1	K1810270-012]
10	SMPL	8	1122F010	OTIN1	K1810270-013]
11	SMPL	9	1122F011	OTIN1	K1810270-015]
12	SMPL	10	1122F012	OTIN1	K1810270-016 - See 10X
13	SMPL	11	1122F013	OTIN1	K1810270-017 - NR CCV
14	SMPL	12	1122F014	OTIN1	K1810270-018 - See 10X
15	CCV	1	1122F015	OTIN1	OT5-010K @ 50 PPB OK, OK
16	IB	2	1122F016	OTIN1	IB
17	SMPL	13	1122F017	OTIN1	K1810270-019
18	SMPL	14	1122F018	OTIN1	K1810270-020] See 10X
19	SMPL	15	1122F019	OTIN1	K1810270-029]
20	MS	16	1122F020	OTIN1	K1810270-004 MS
21	DMS	17	1122F021	OTIN1	K1810270-004 DMS
22	LCS	18	1122F022	OTIN1	KQ1805623-03LCS
23	MB	19	1122F023	OTIN1	KQ1805623-04MB
24	CCV	45	1122F024	OTIN1	OT5-010K @ 50 PPB Sum b, ok
25	IB	46	1122F025	OTIN1	IB
26	SMPL	20	1122F026	OTIN1	K1810417-001
27	SMPL	21	1122F027	OTIN1	K1810417-002 - See 10X
28	SMPL	22	1122F028	OTIN1	K1810417-003
29	SMPL	23	1122F029	OTIN1	K1810417-004
30	SMPL	24	1122F030	OTIN1	K1810417-005
31	SMPL	25	1122F031	OTIN1	K1810417-006
32	SMPL	26	1122F032	OTIN1	K1810417-007
33	SMPL	27	1122F033	OTIN1	K1810417-008
34	SMPL	28	1122F034	OTIN1	K1810417-009
35	SMPL	29	1122F035	OTIN1	K1810417-010
36	CCV	45	1122F036	OTIN1	OT5-010K @ 50 PPB OK, OK
37	IB	46	1122F037	OTIN1	IB
38	SMPL	30	1122F038	OTIN1	K1810417-011
39	SMPL	31	1122F039	OTIN1	K1810417-012
40	SMPL	32	1122F040	OTIN1	K1810417-013 - See 10X
41	SMPL	33	1122F041	OTIN1	K1810417-014
42	SMPL	35	1122F043	OTIN1	K1810417-016
43	SMPL	36	1122F044	OTIN1	K1810417-017

Last Modified: Thu Nov 22 16:22:00 2018

Line	Type	Vial	DataFile	Method	Sample Name
44	SMPL	37	1122F045	OTIN1	K1810417-018
45	SMPL	38	1122F046	OTIN1	K1810417-019
46	SMPL	39	1122F047	OTIN1	K1810417-020
47	CCV	47	1122F048	OTIN1	OT5-010K @ 50 PPB ok, ok
48	IB	48	1122F049	OTIN1	IB
49	SMPL	40	1122F050	OTIN1	K1810417-021
50	MS	41	1122F051	OTIN1	K1810417-005 MS
51	DMS	42	1122F052	OTIN1	K1810417-005 DMS
52	LCS	43	1122F053	OTIN1	KQ1815717-05 LCS
53	MB	44	1122F054	OTIN1	KQ1815717-06 MB
54	CCV	47	1122F055	OTIN1	OT5-010K @ 50 PPB ok, Surr ↓
55	IB	48	1122F056	OTIN1	IB

Comment: Butyltins by Krone
Operator: SMURRAY
Data Path: C:\GC26\DATA\120218\
Pre-Seq Cmd:
Post-Seq Cmd:

GC: KC1800C136
RUN: 617148

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	SOLN	100	1202F001	OTIN1	PRIMER
2	SOLN	100	1202F002	OTIN1	PRIMER
3	CCV	34	1202F003	OTIN1	OT5-011B 50 PPB ok, ok
4	IB	35	1202F004	OTIN1	IB
5	SMPL	3	1202F005	OTIN1	K1810320-001
6	SMPL	6	1202F006	OTIN1	K1810320-004
7	SMPL	11	1202F007	OTIN1	K1810270-001
8	SMPL	14	1202F008	OTIN1	K1810565-001RE NR, Report original
9	CCV	34	1202F009	OTIN1	OT5-011B 50 PPB ok, ok
10	IB	35	1202F010	OTIN1	IB
11					

Last Modified: Sun Dec 02 10:27:56 2018 Page: 1

Sequence Name: C:\GC26\SEQUENCE\[illegible]
Comment: Butyltins by Krone
Operator: SMURRAY
Data Path: C:\GC26\DATA\120118\
Pre-Seq Cmd:
Post-Seq Cmd:

CAL: KC1800MB6
RUN: 617147
615183 E

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	SOLN	100	1201F001	OTIN1	PRIMER
2	SOLN	100	1201F002	OTIN1	PRIMER
3	CCV	1	1201F003	OTIN1	OT5-011B 50 PPB Surr ↓, OK
4	IB	2	1201F004	OTIN1	IB
5	SMPL	3	1201F005	OTIN1	K1810320-001 -NR CCV
6	SMPL	4	1201F006	OTIN1	K1810320-002 TBT only
7	SMPL	5	1201F007	OTIN1	K1810320-003
8	SMPL	6	1201F008	OTIN1	K1810320-004 -NR CCV
9	MS	7	1201F009	OTIN1	K1810320-002MS
10	DMS	8	1201F010	OTIN1	K1810320-002DMS
11	LCS	9	1201F011	OTIN1	KQ1815368-03 LCS
12	MB	10	1201F012	OTIN1	KQ1815368-04 MB
13	CCV	1	1201F013	OTIN1	OT5-011B 50 PPB - OK, TBT ↓
14	IB	2	1201F014	OTIN1	IB
15	SMPL	11	1201F015	OTIN1	K1810270-001 - NR CCV
16	SMPL	12	1201F016	OTIN1	K1810946-001
17	SMPL	13	1201F017	OTIN1	K1810946-002
18	SMPL	14	1201F018	OTIN1	K1810565-001RE -NR CCV - report original
19	SMPL	15	1201F019	OTIN1	K1810302-016 - frozen
20	MS	16	1201F020	OTIN1	K1810270-001MS
21	DMS	17	1201F021	OTIN1	K1810270-001DMS
22	LCS	18	1201F022	OTIN1	KQ1816241-03 LCS
23	MB	19	1201F023	OTIN1	KQ1816241-04 MB
24	CCV	34	1201F024	OTIN1	OT5-011B 50 PPB ok, OK
25	IB	35	1201F025	OTIN1	IB
26	SMPL	20	1201F026	OTIN1	K1810565-001 - original
27	SMPL	21	1201F027	OTIN1	K1810565-002
28	MS	22	1201F028	OTIN1	K1810565-001MS
29	DMS	23	1201F029	OTIN1	K1810565-001DMS
30	LCS	24	1201F030	OTIN1	KQ1815898-03 LCS
31	MB	25	1201F031	OTIN1	KQ1815898-04 MB
32	SMPL	26	1201F032	OTIN1	K1810683-001
33	SMPL	27	1201F033	OTIN1	K1810683-002
34	SMPL	28	1201F034	OTIN1	K1810683-003
35	SMPL	29	1201F035	OTIN1	K1810683-004
36	MS	30	1201F036	OTIN1	K1810683-002MS
37	DMS	31	1201F037	OTIN1	K1810683-002DMS
38	LCS	32	1201F038	OTIN1	KQ1816028-03 LCS
39	MB	33	1201F039	OTIN1	KQ1816028-04 MB
40	CCV	34	1201F040	OTIN1	OT5-011B 50 PPB Surr ↓, OK
41	IB	35	1201F041	OTIN1	IB

Last Modified: Sat Dec 01 10:44:17 2018 Page: 1

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F013.D
Lab ID: K1810270-001
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/14/2018 10:56
Date Quantitated: 11/30/2018 12:36
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	23	NA	14		x
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F013.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 10:56	**Quant Date:**	11/30/2018 12:36	**Vial:**	13
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-001			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/15/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702211	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	54405	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	28102	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	69438	200.00	OK
4	Chrysene-d12	10.11	0.01	240	76819	200.00	OK
5	Perylene-d12	13.32	0.03	264	83953	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.74	-0.01	0.00	176	25936	144.34	72	26-102	OK	
3	Fluoranthene-d10	8.54	0.01	0.00	212	58482	133.63	67	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	51347	154.10	77	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.76	-0.01	0.00	128	6234	19.85	6.7	D	
1	2-Methylnaphthalene	5.41		0.00	142	2277	12.02	4.0	D	
2	Acenaphthylene	6.19		0.00	152	7020	20.94	7.0	D	
2	Acenaphthene	6.33	-0.01	0.00	154	5078	26.36	8.9	D	
2	Dibenzofuran	6.48	-0.01	0.00	168	6983	22.59	7.6	D	
2	Fluorene	6.77		0.00	166	8208	35.23	12	D	
3	Phenanthrene	7.57		0.00	178	136856	315.94	110	D	
3	Anthracene	7.61		0.00	178	18878	45.65	15	D	
3	Fluoranthene	8.56	0.01	0.00	202	368603	689.14	230	D	
4	Pyrene	8.75		0.00	202	341269	647.51	220	D	
4	Benz(a)anthracene	10.09		0.00	228	119958	241.53	81	D	
4	Chrysene	10.15	0.01	0.00	228	199086	418.48	140	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F013.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 10:56	**Quant Date:**	11/30/2018 12:36	**Vial:**	13
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-001			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	234790	452.67	150	D	
5	Benzo(k)fluoranthene	12.30	0.02	0.00	252	89246**m**	173.45	58	D	
5	Benzo(a)pyrene	13.14	0.02	0.00	252	120435	264.77	89	D	
5	Indeno(1,2,3-cd)pyrene	15.51	0.02	0.00	276	91721	205.64	69	D	
5	Dibenz(a,h)anthracene	15.54	0.02	0.00	278	20518	45.38	15	D	
5	Benzo(g,h,i)perylene	15.91	0.03	0.00	276	109561	209.75	70	D	

Prep Amount:	40.062 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	74.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

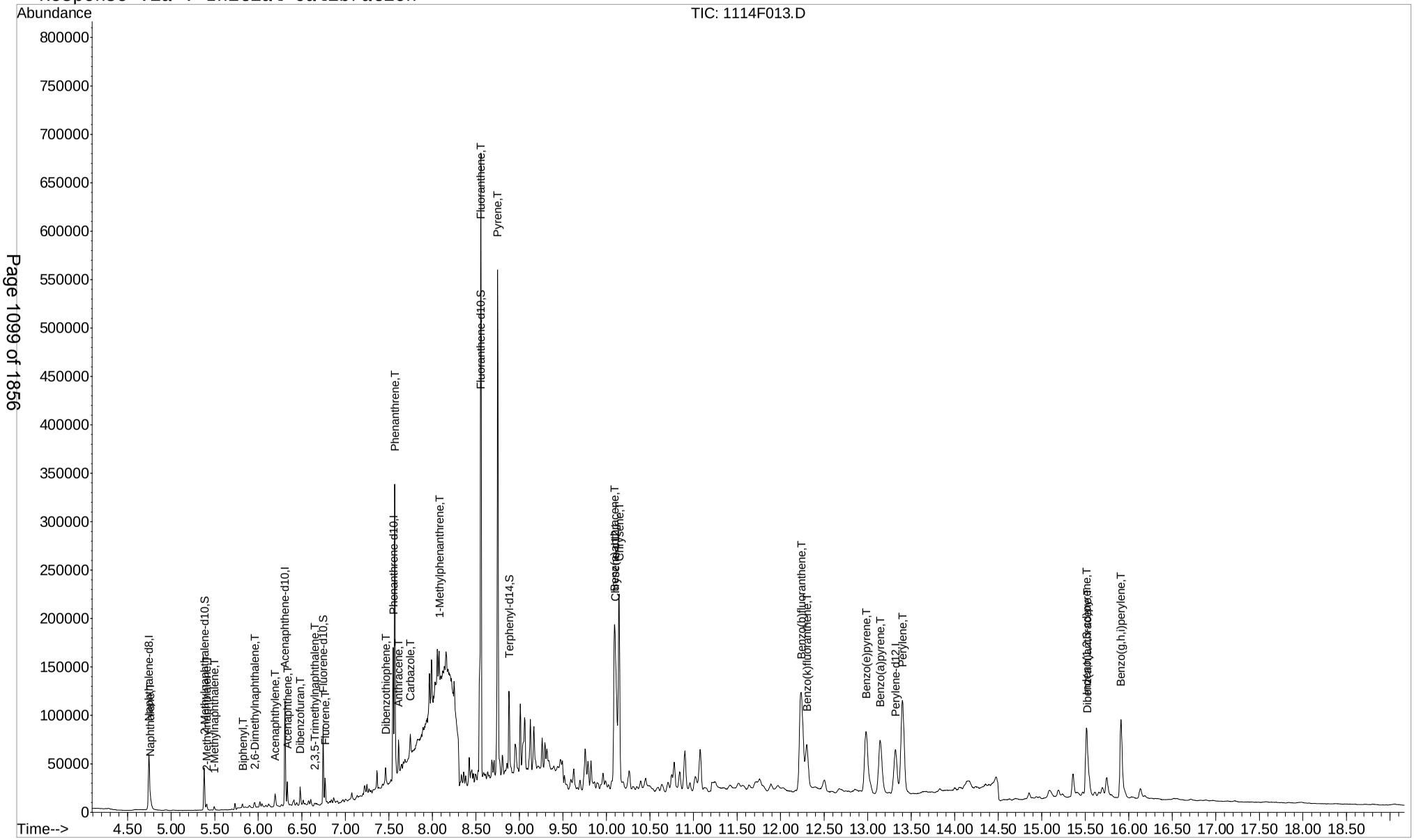
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

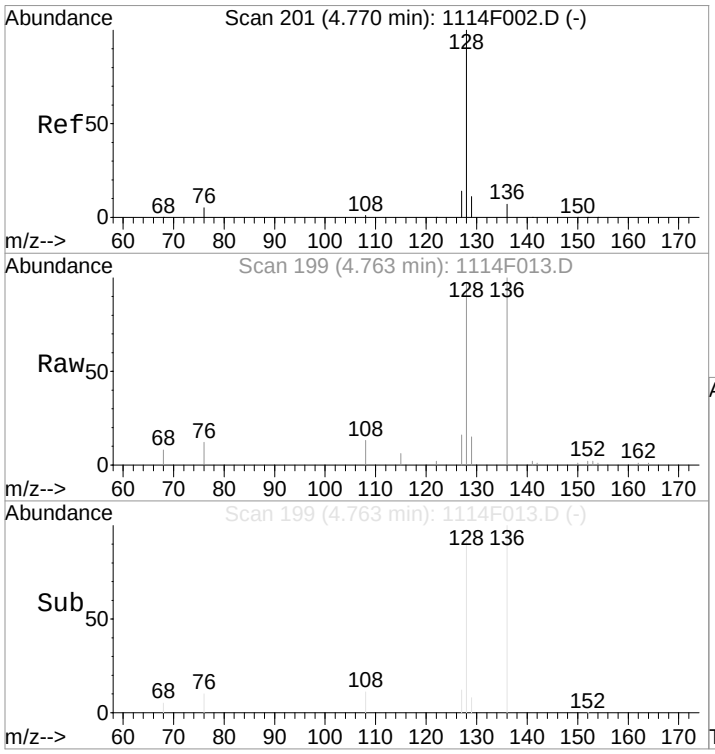
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F013.D Vial: 13
Acq On : 14 Nov 2018 10:56 am Operator: LWeiskopf
Sample : K1810270-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:36 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



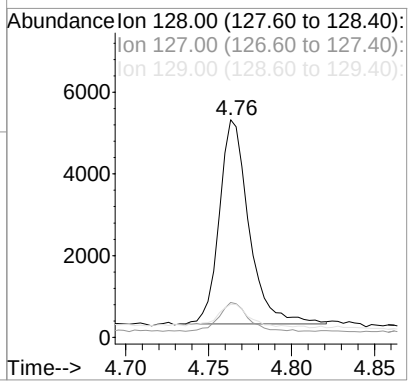
1st 12/03/18
2nd 12/06/18

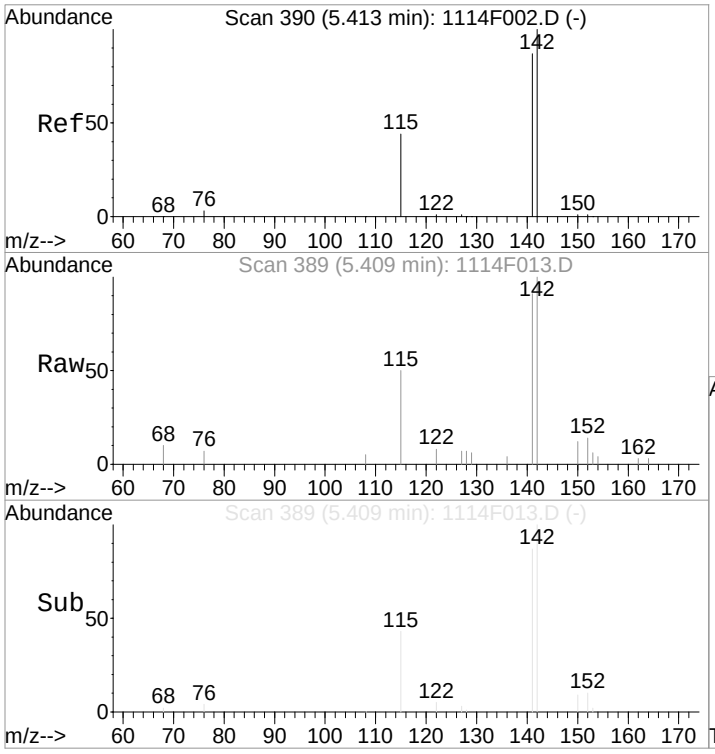


#2
Naphthalene
Concen: 19.85 ng/ml
RT: 4.76 min Scan# 199
Delta R.T. -0.02 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:128 Resp: 6234

Ion	Ratio	Lower	Upper
128	100		
127	14.2	0.0	43.7
129	11.3	0.0	30.8

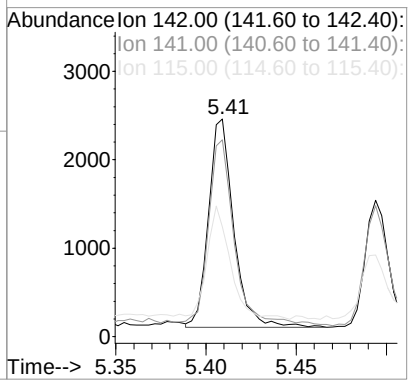




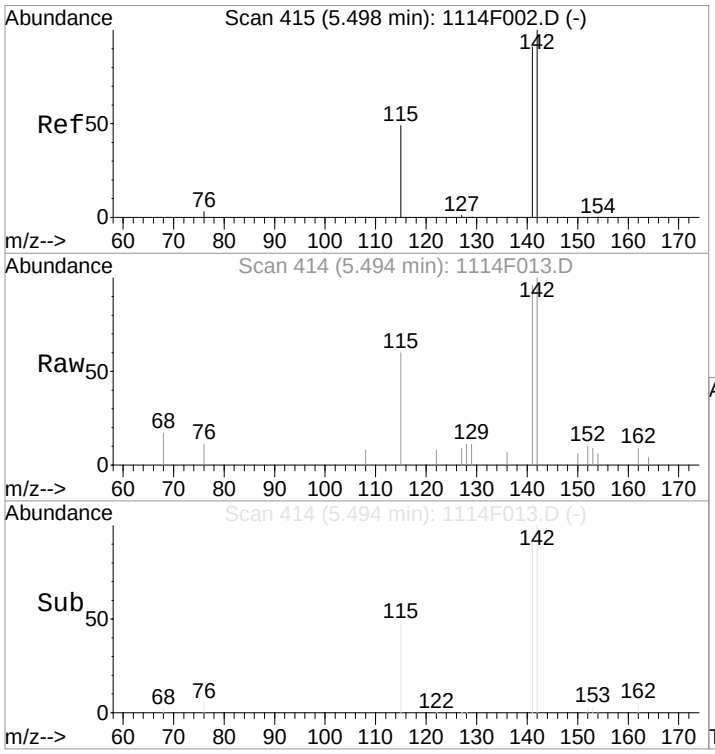
#4
2-Methylnaphthalene
Concen: 12.02 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:142 Resp: 2277

Ion	Ratio	Lower	Upper
142	100		
141	88.8	56.8	116.8
115	42.8	13.3	53.3



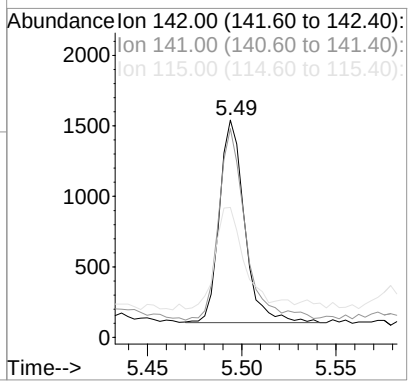
1st 12/03/18
2nd 12/06/18

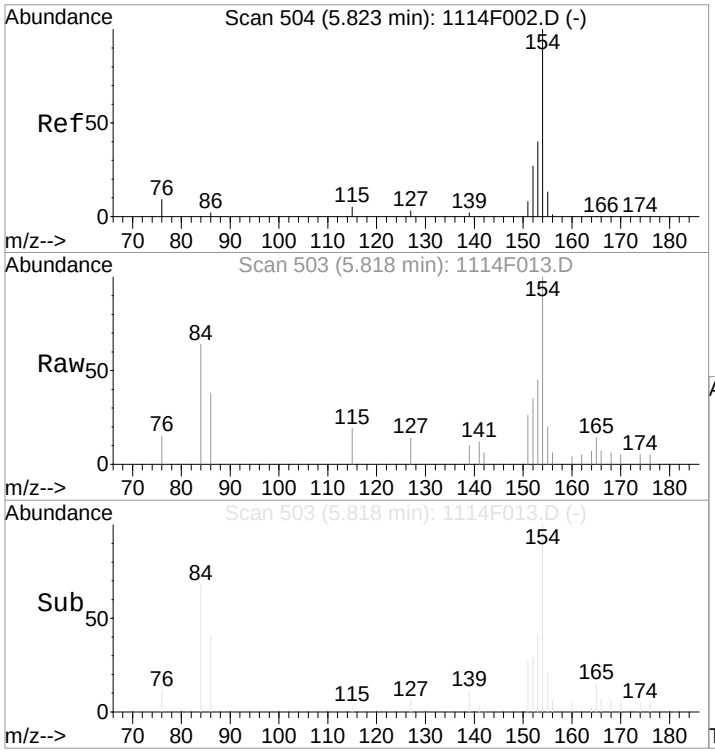


#5
1-Methylnaphthalene
Concen: 7.34 ng/ml
RT: 5.49 min Scan# 414
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:142 Resp: 1338

Ion	Ratio	Lower	Upper
142	100		
141	94.4	59.7	119.7
115	50.1	13.7	53.7

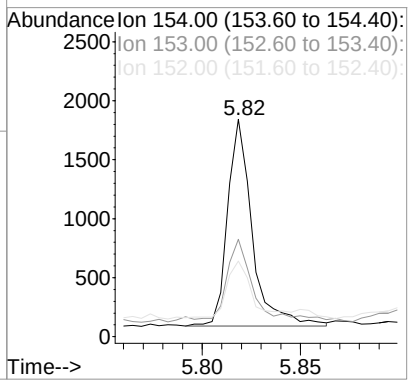




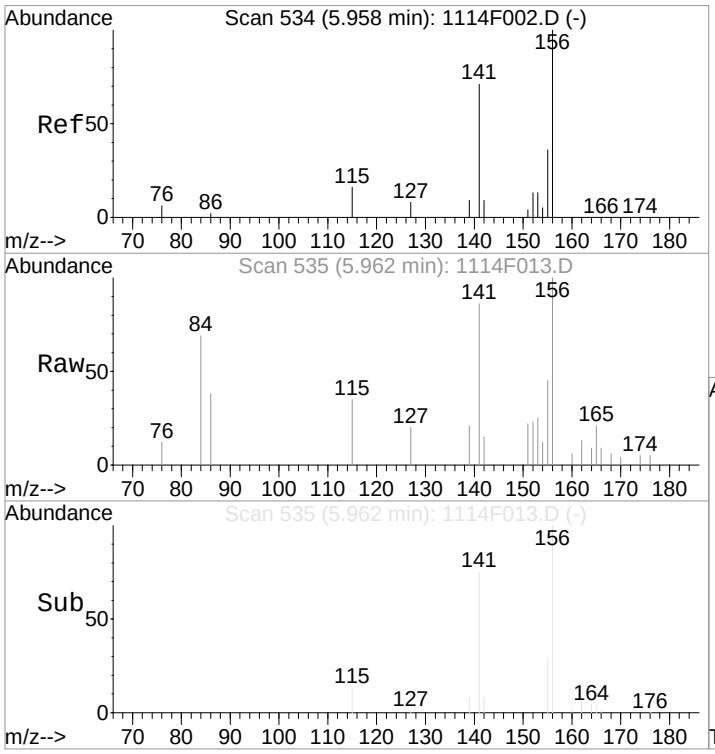
#6
Biphenyl
Concen: 6.51 ng/ml
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:154 Resp: 1539

Ion	Ratio	Lower	Upper
154	100		
153	38.8	11.4	71.4
152	27.2	7.1	47.1



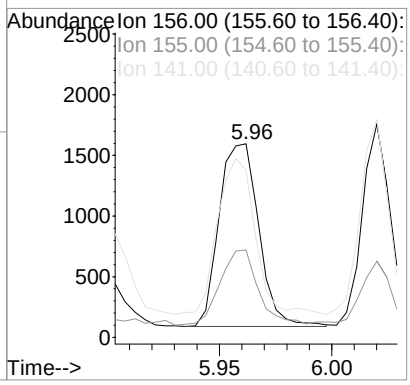
1st 12/03/18
2nd 12/06/18

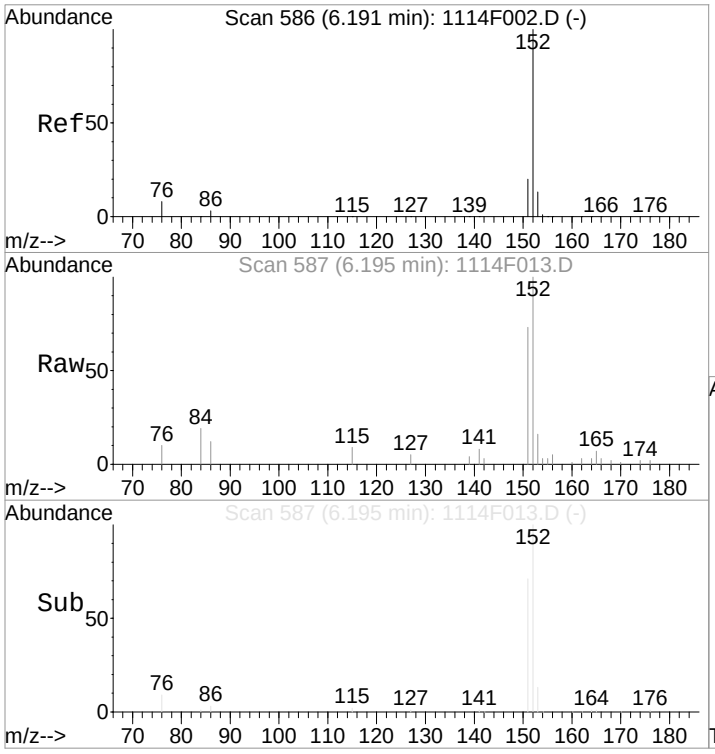


#7
2,6-Dimethylnaphthalene
Concen: 11.32 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. -0.00 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:156 Resp: 1840

Ion	Ratio	Lower	Upper
156	100		
155	40.6	7.0	67.0
141	78.8	47.9	87.9

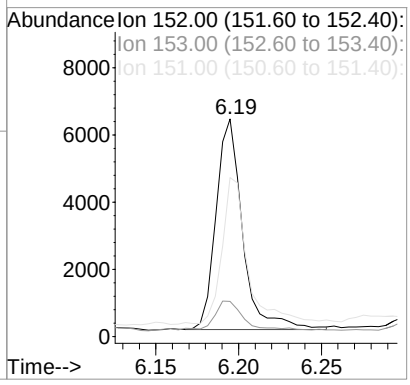


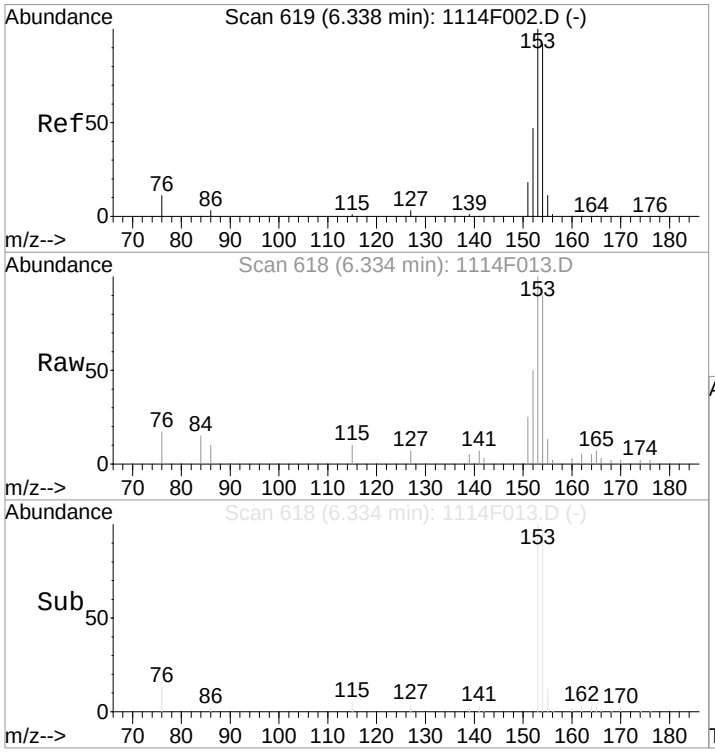


#9
Acenaphthylene
Concen: 20.94 ng/ml
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:152 Resp: 7020

Ion	Ratio	Lower	Upper
152	100		
153	13.5	0.0	42.9
151	68.9	0.2	40.2#

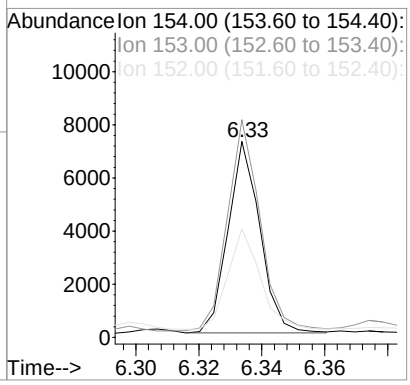


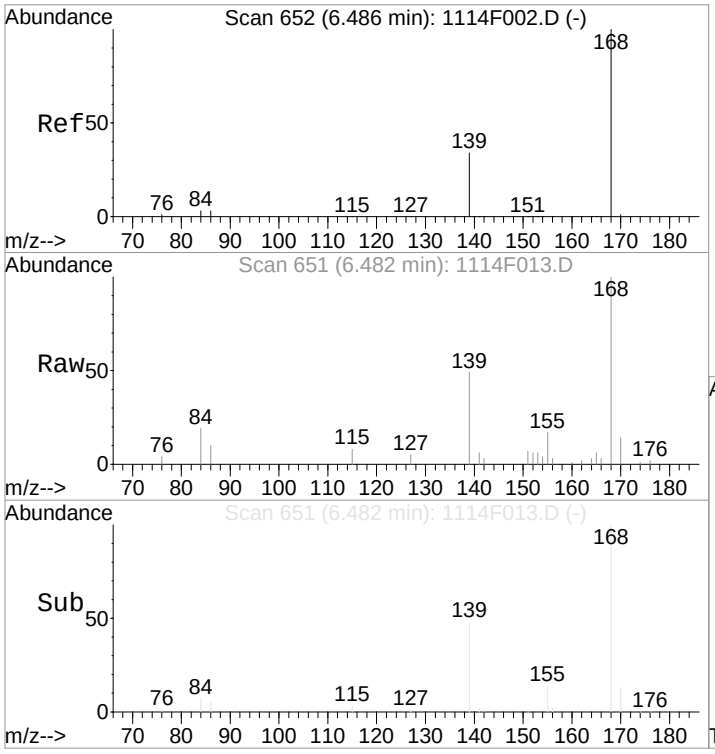


#10
Acenaphthene
Concen: 26.36 ng/ml
RT: 6.33 min Scan# 618
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:154 Resp: 5078

Ion	Ratio	Lower	Upper
154	100		
153	110.3	77.1	137.1
152	52.7	19.7	79.7

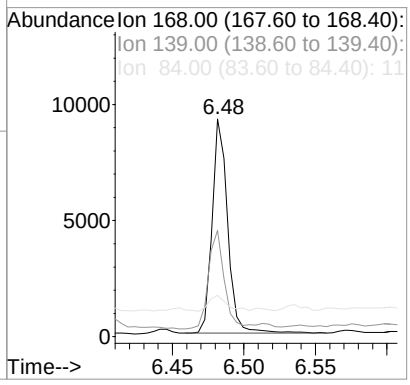




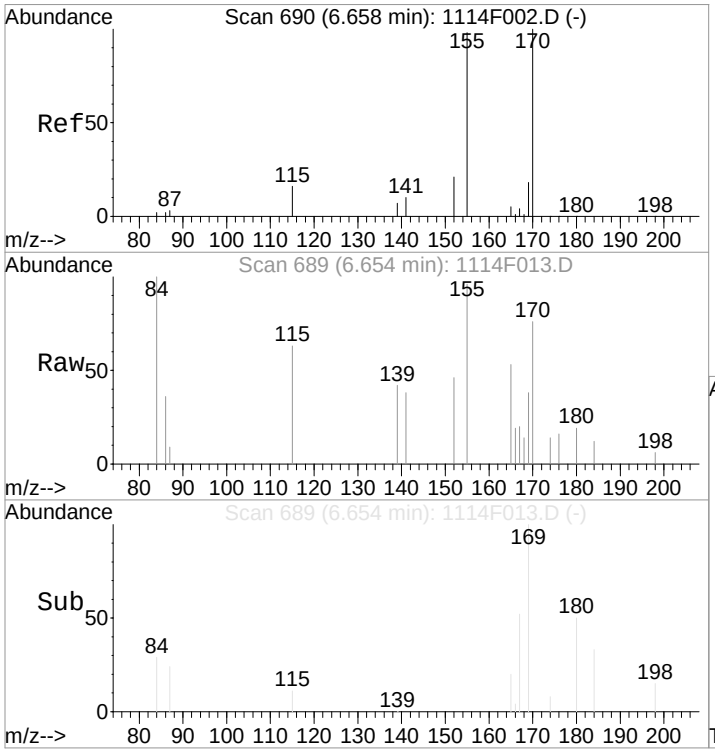
#11
Dibenzofuran
Concen: 22.59 ng/ml
RT: 6.48 min Scan# 651
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:168 Resp: 6983

Ion	Ratio	Lower	Upper
168	100		
139	46.0	0.0	55.8
84	6.9	0.0	23.5



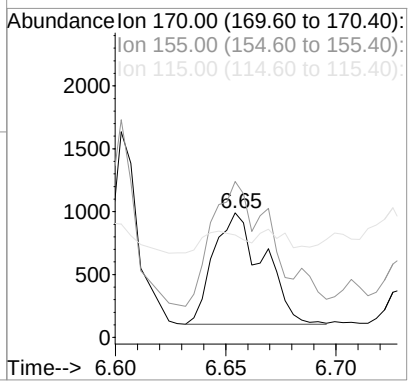
1st 12/03/18
2nd 12/06/18

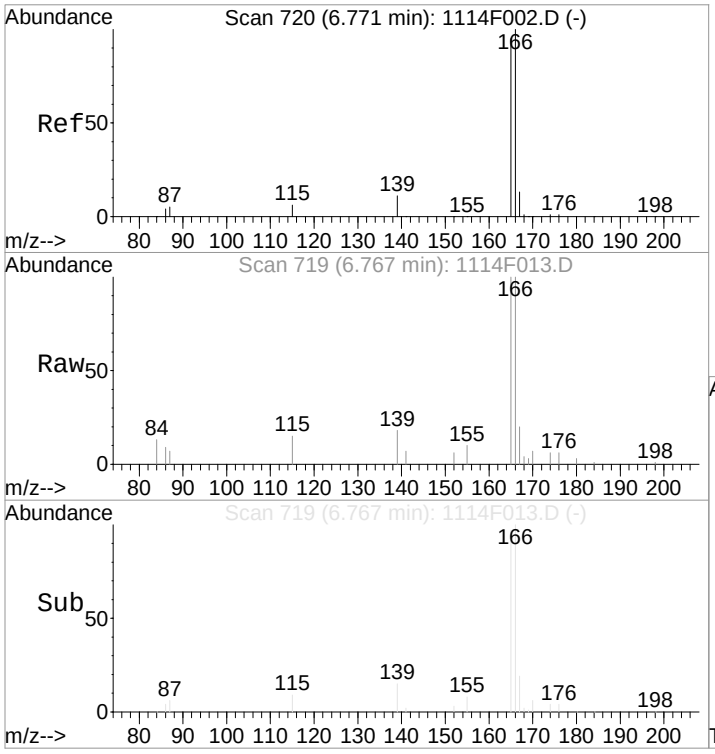


#12
2,3,5-Trimethylnaphthalene
Concen: 7.90 ng/ml
RT: 6.65 min Scan# 689
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:170 Resp: 1407

Ion	Ratio	Lower	Upper
170	100		
155	112.2	59.2	119.2
115	16.4	0.0	30.1

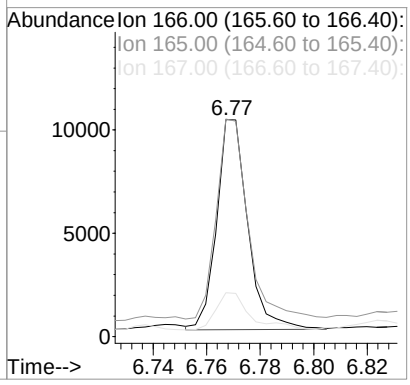




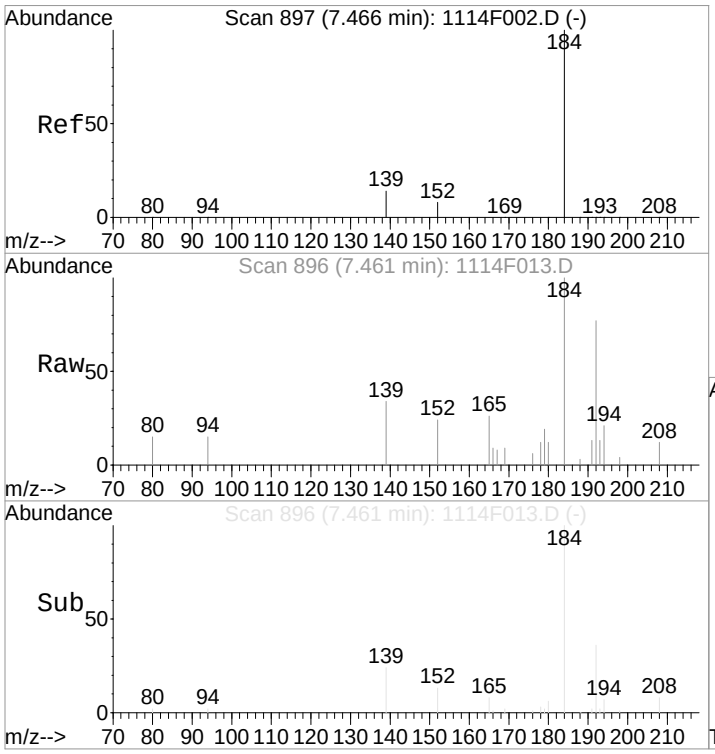
#14
Fluorene
Concen: 35.23 ng/ml
RT: 6.77 min Scan# 719
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:166 Resp: 8208

Ion	Ratio	Lower	Upper
166	100		
165	95.5	63.4	123.4
167	17.7	0.0	33.1



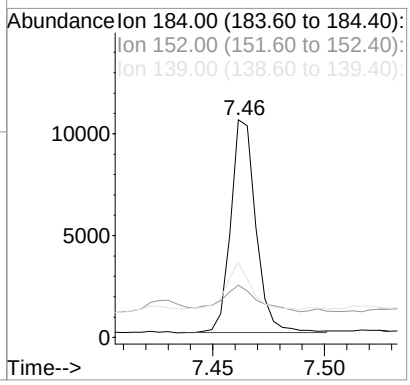
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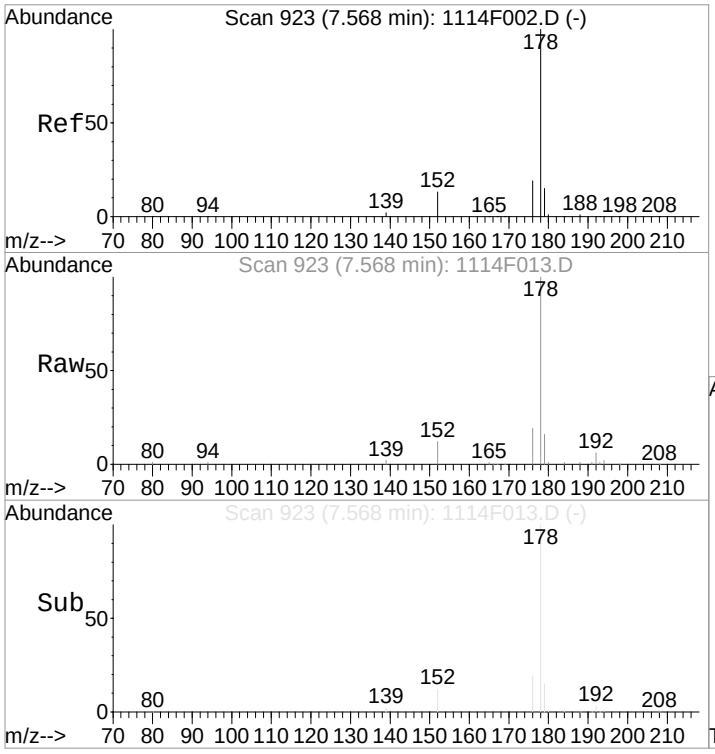


#16
Dibenzothiophene
Concen: 18.97 ng/ml
RT: 7.46 min Scan# 896
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:184 Resp: 8217

Ion	Ratio	Lower	Upper
184	100		
152	12.1	0.0	37.8
139	21.5	0.0	32.6

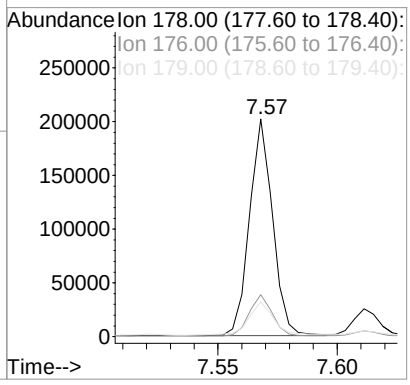




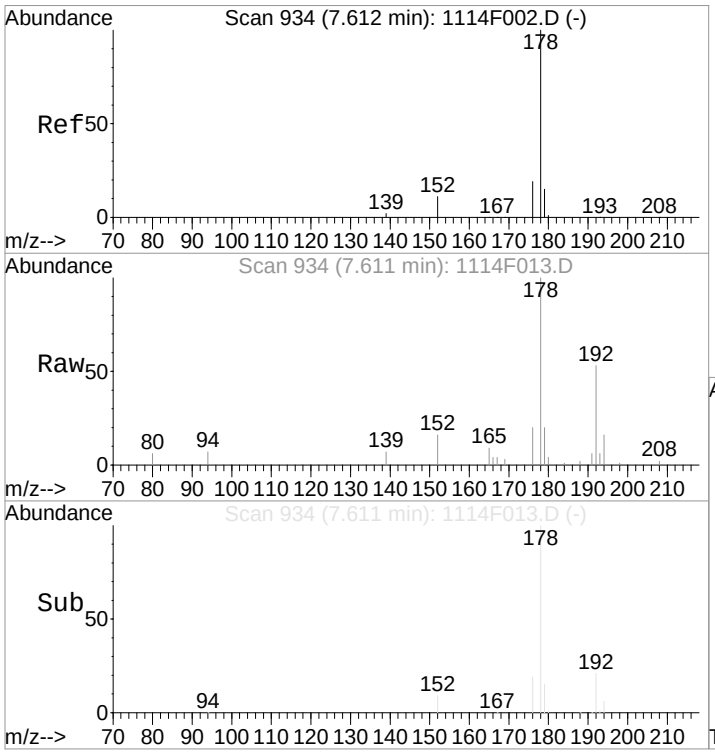
#17
Phenanthrene
Concen: 315.94 ng/ml
RT: 7.57 min Scan# 923
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:178 Resp: 136856

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	48.7
179	15.3	0.0	35.1



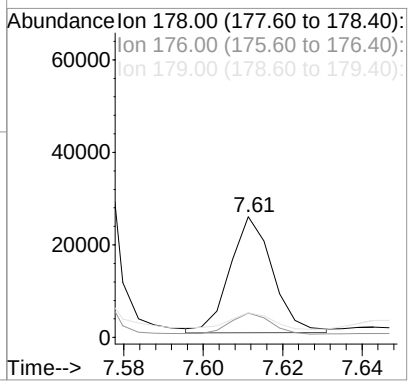
1st 12/03/18
2nd 12/06/18

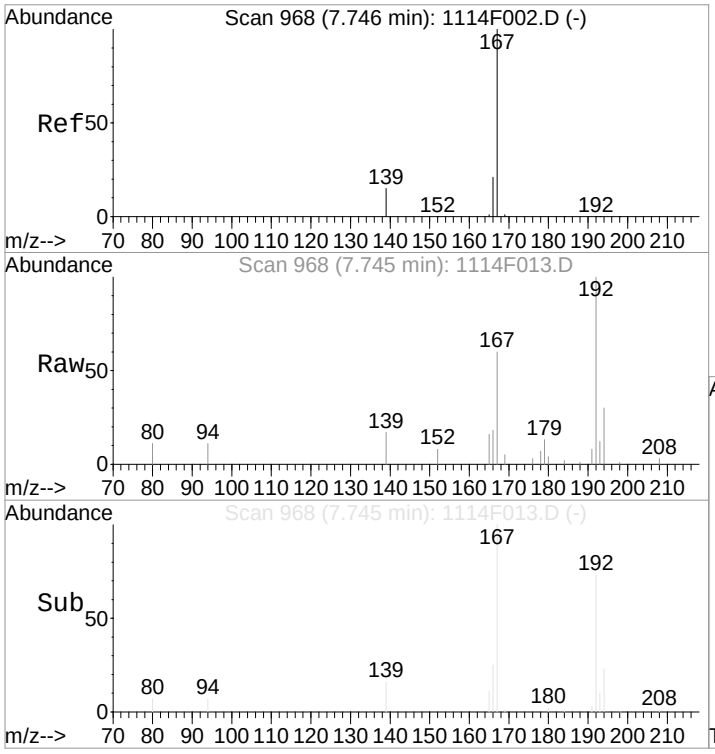


#18
Anthracene
Concen: 45.65 ng/ml
RT: 7.61 min Scan# 934
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:178 Resp: 18878

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	48.0
179	14.5	0.0	35.1

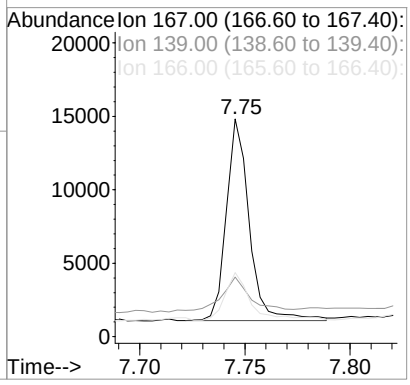


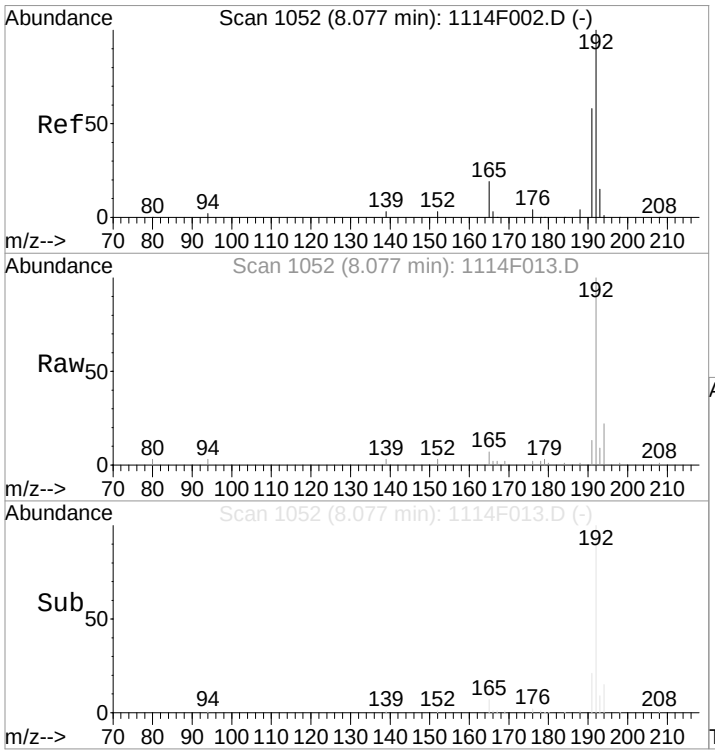


#19
Carbazole
Concen: 25.91 ng/ml
RT: 7.75 min Scan# 968
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:167 Resp: 10455

Ion	Ratio	Lower	Upper
167	100		
139	16.5	0.0	41.5
166	23.3	0.7	40.7

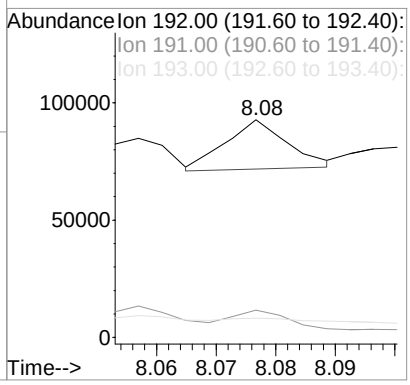


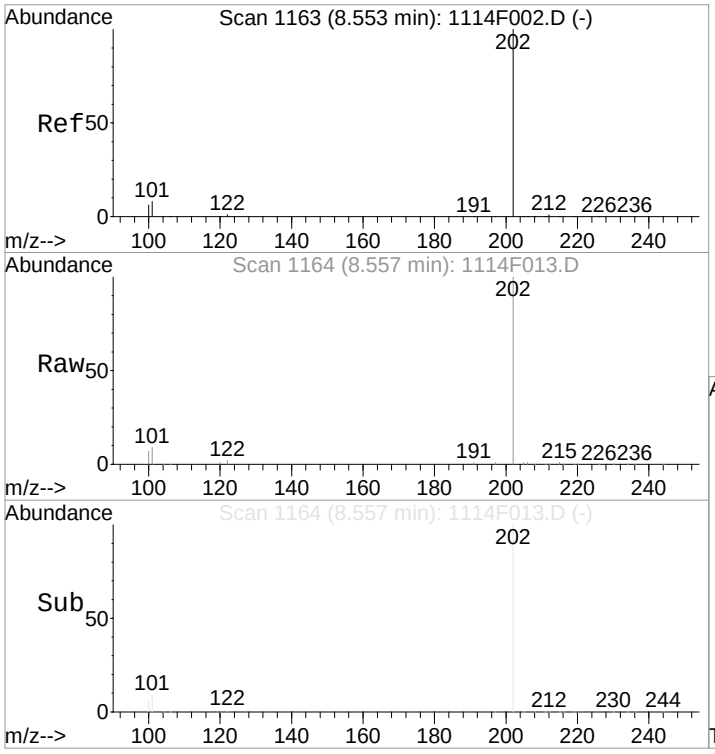


#20
1-Methylphenanthrene
Concen: 46.62 ng/ml
RT: 8.08 min Scan# 1052
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:192 Resp: 15295

Ion	Ratio	Lower	Upper
192	100		
191	39.1	27.7	87.7
193	5.9	0.0	45.4

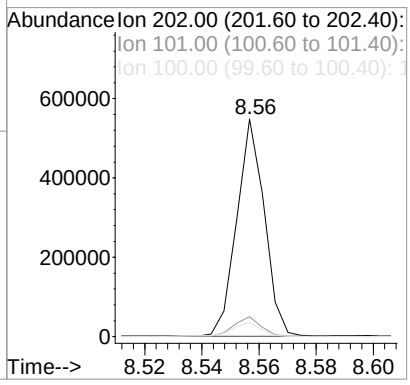




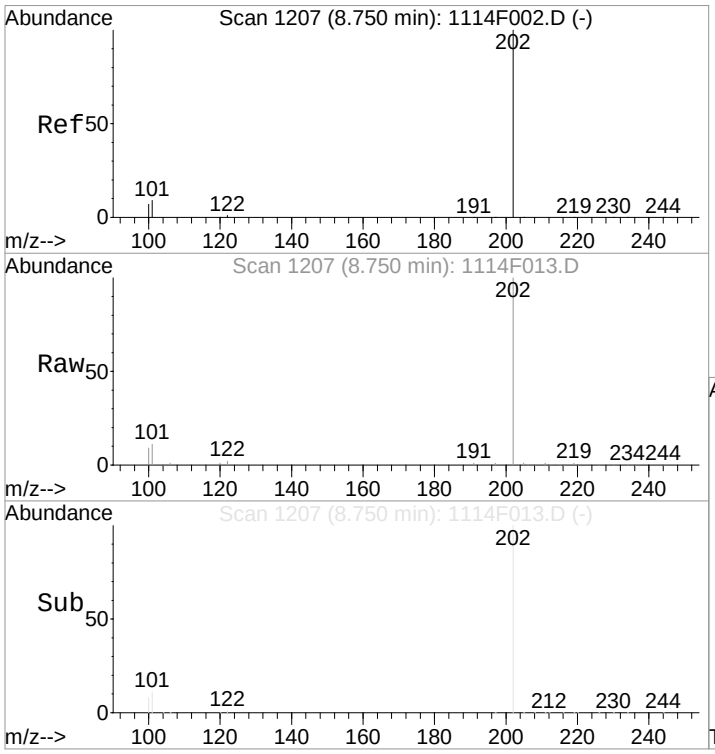
#21
Fluoranthene
Concen: 689.14 ng/ml
RT: 8.56 min Scan# 1164
Delta R.T. -0.00 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:202 Resp: 368603

Ion	Ratio	Lower	Upper
202	100		
101	9.0	0.0	41.3
100	6.4	0.0	28.6



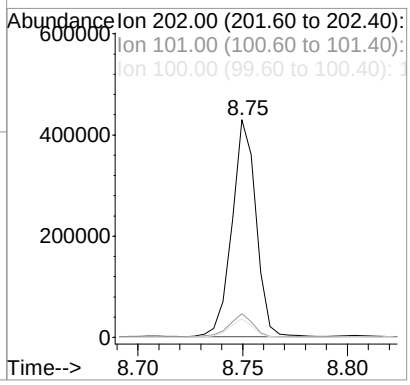
1st 12/03/18
2nd 12/06/18

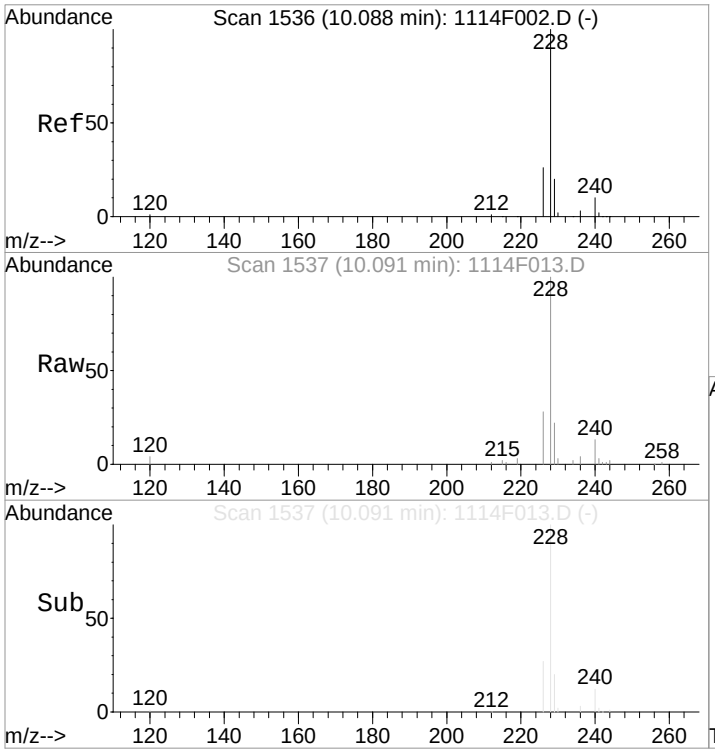


#24
Pyrene
Concen: 647.51 ng/ml
RT: 8.75 min Scan# 1207
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:202 Resp: 341269

Ion	Ratio	Lower	Upper
202	100		
101	10.8	0.0	40.8
100	8.5	0.0	28.5

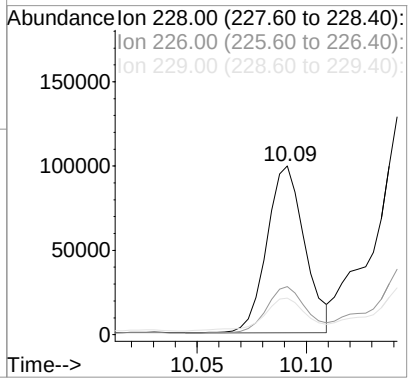


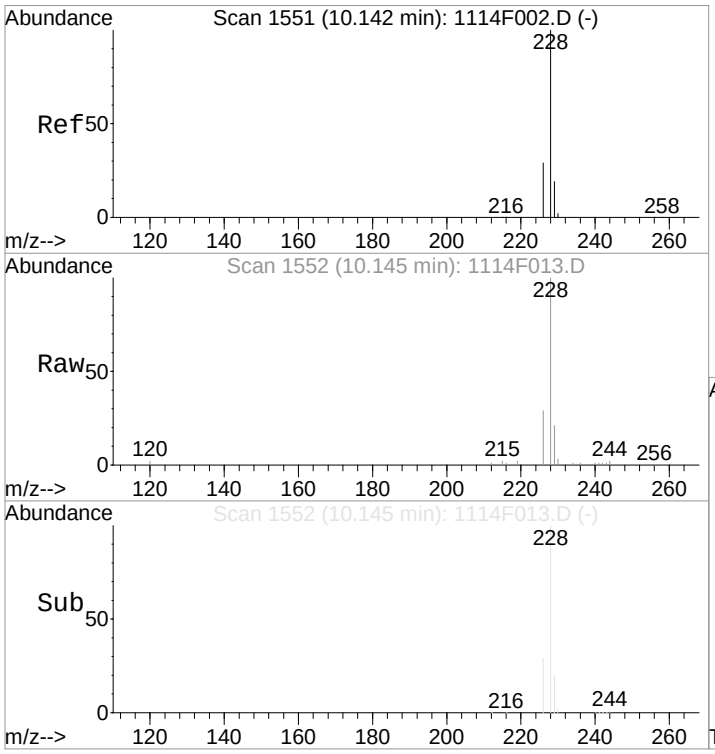


#26
Benz(a)anthracene
Concen: 241.53 ng/ml
RT: 10.09 min Scan# 1537
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:228 Resp: 119958

Ion	Ratio	Lower	Upper
228	100		
226	27.8	0.0	56.3
229	19.8	0.0	39.1

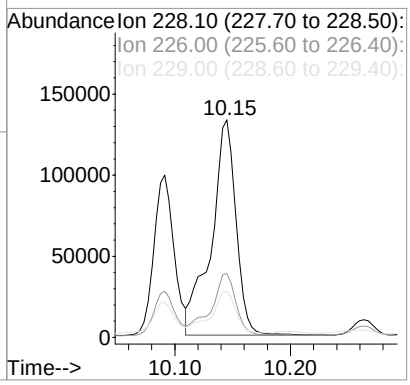


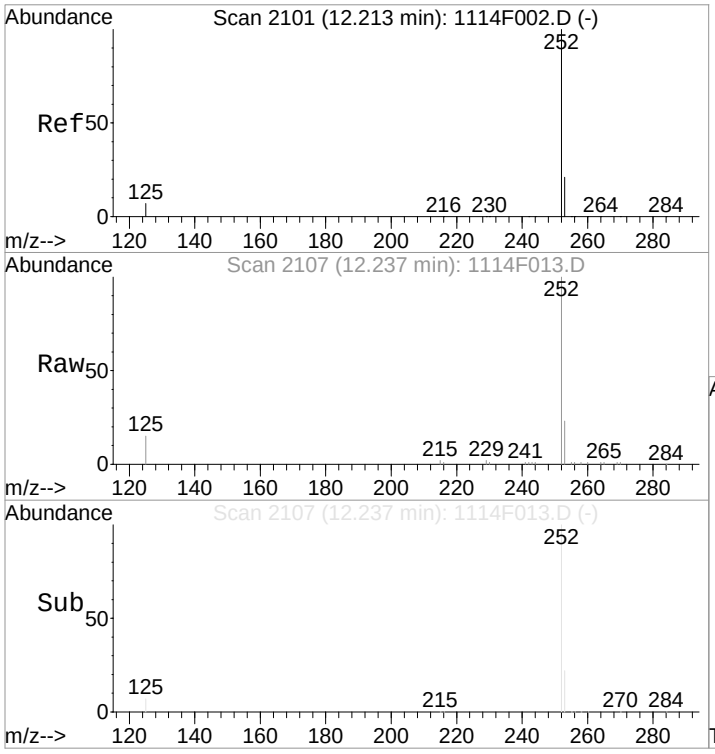


#27
Chrysene
Concen: 418.48 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:228 Resp: 199086

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.7
229	19.5	0.0	39.2

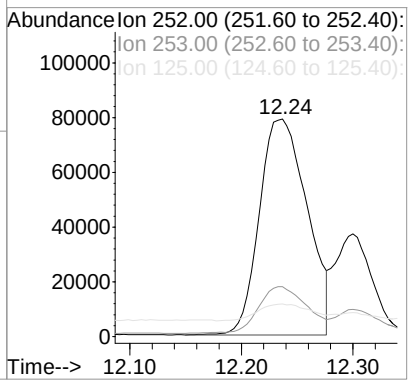




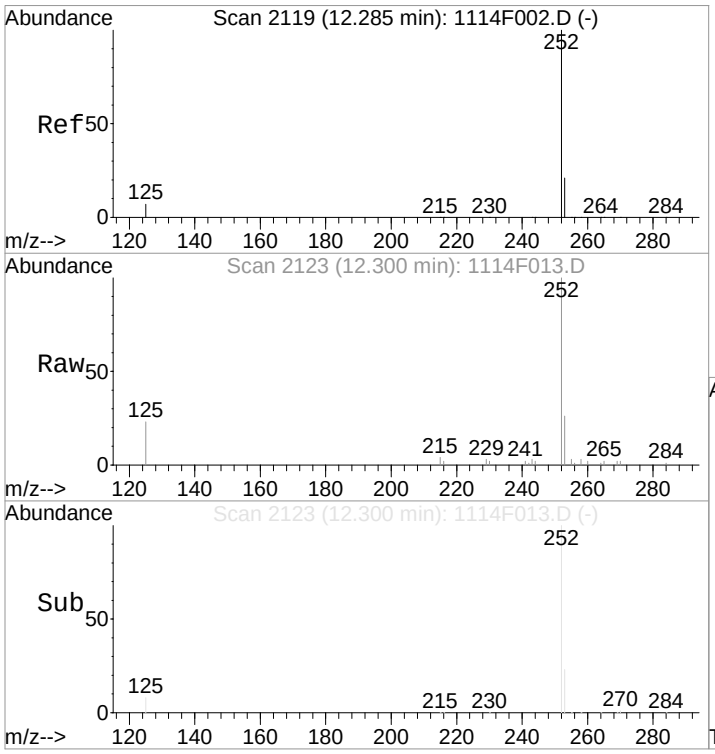
#29
Benzo(b)fluoranthene
Concen: 452.67 ng/ml
RT: 12.24 min Scan# 2107
Delta R.T. 0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:252 Resp: 234790

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.2
125	7.6	0.0	29.5



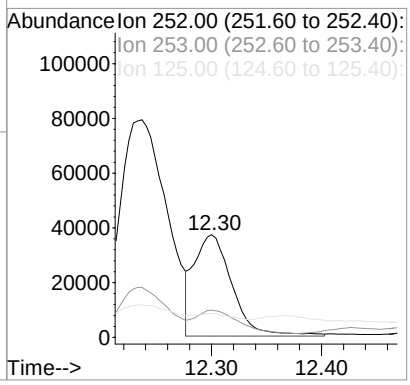
1st 12/03/18
2nd 12/06/18

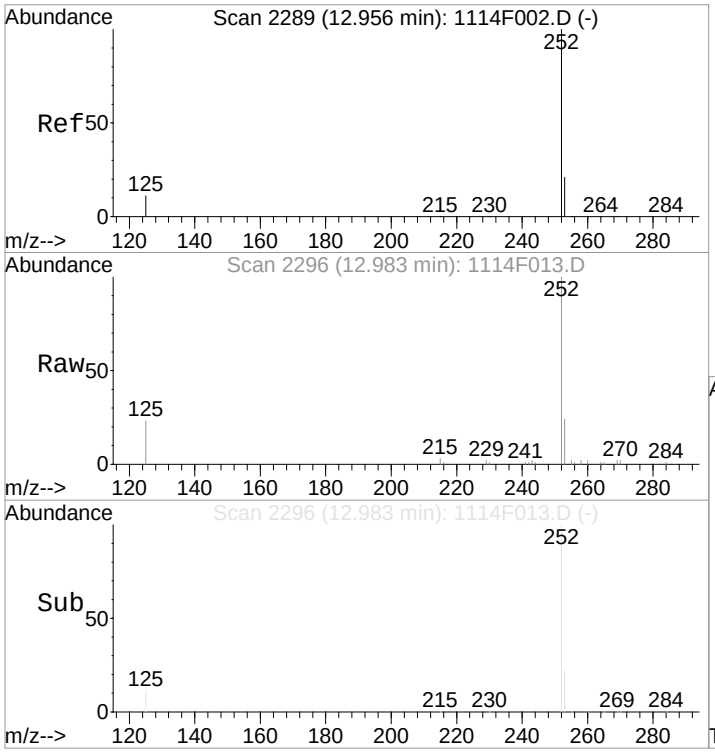


#30
Benzo(k)fluoranthene
Concen: 173.45 ng/ml m
RT: 12.30 min Scan# 2123
Delta R.T. 0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:252 Resp: 89246

Ion	Ratio	Lower	Upper
252	100		
253	26.5	0.0	51.2
125	23.3	0.0	29.7

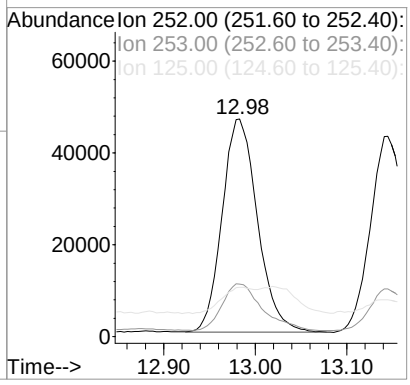




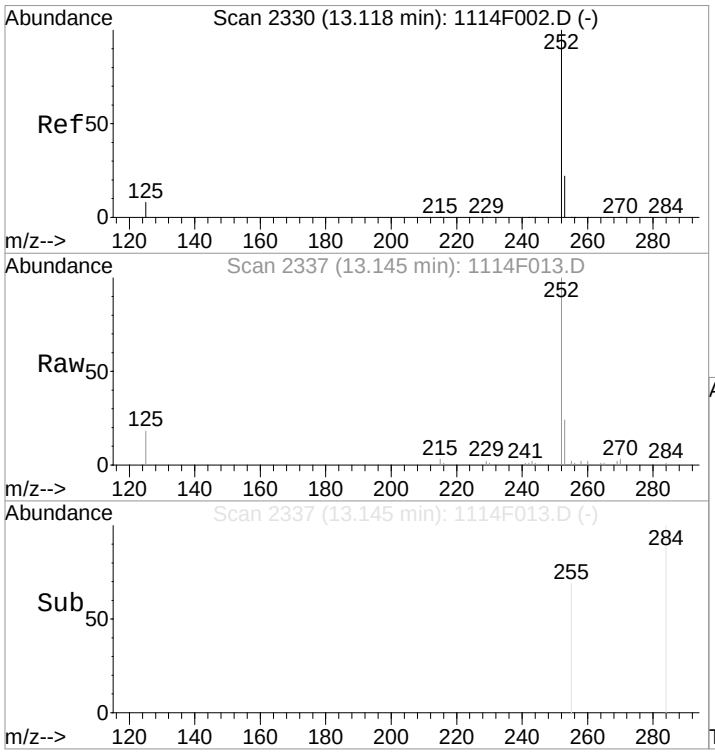
#31
Benzo(e)pyrene
Concen: 251.60 ng/ml
RT: 12.98 min Scan# 2296
Delta R.T. 0.02 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:252 Resp: 124390

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.3
125	12.0	0.0	33.5



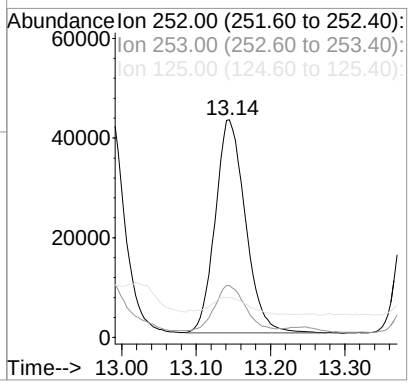
1st 12/03/18
2nd 12/06/18

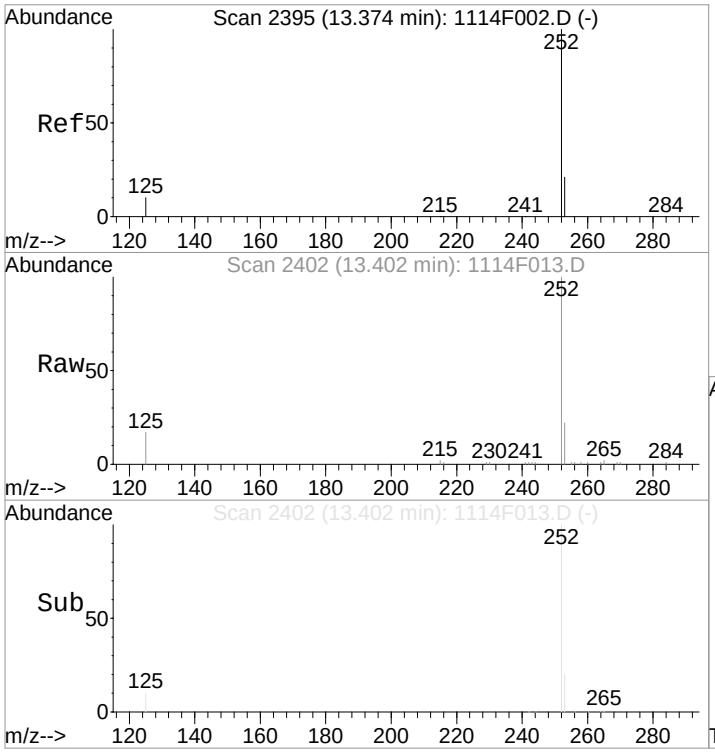


#32
Benzo(a)pyrene
Concen: 264.77 ng/ml
RT: 13.14 min Scan# 2337
Delta R.T. 0.02 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:252 Resp: 120435

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	50.9
125	8.0	0.0	30.3

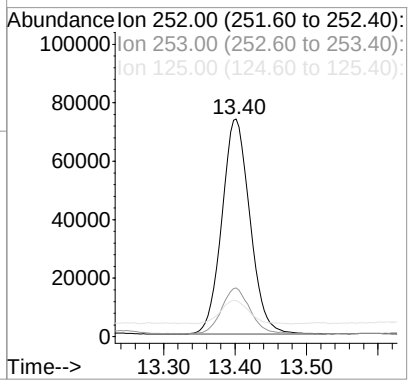


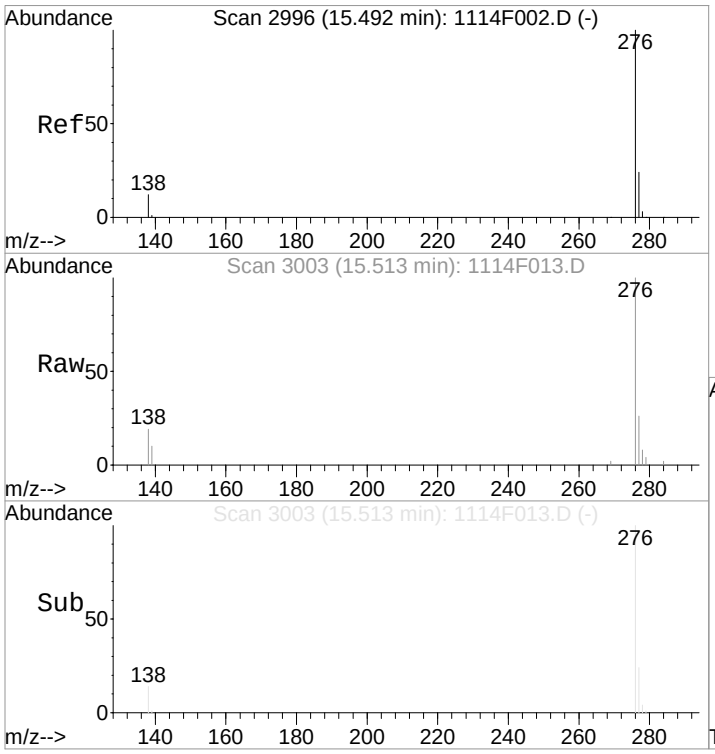


#33
Perylene
Concen: 422.28 ng/ml
RT: 13.40 min Scan# 2402
Delta R.T. 0.02 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:252 Resp: 201495

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.2
125	10.6	0.0	33.8

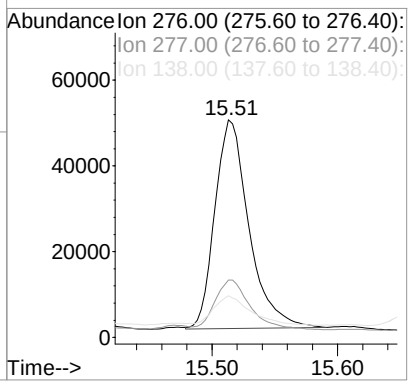


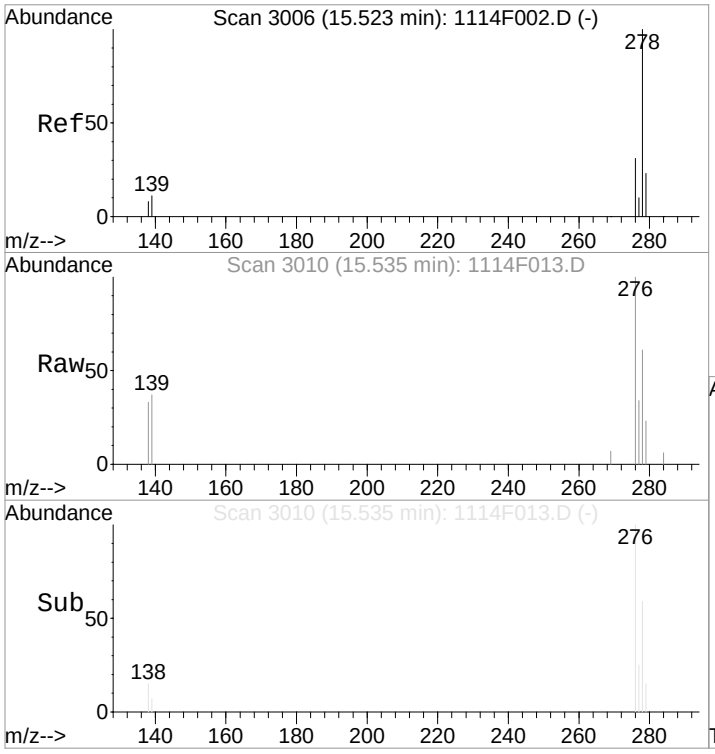


#34
Indeno(1,2,3-cd)pyrene
Concen: 205.64 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. 0.03 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:276 Resp: 91721

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.4
138	13.9	0.0	37.7

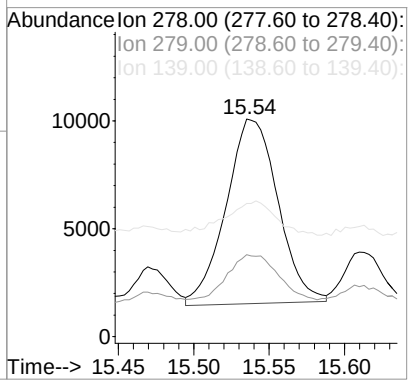




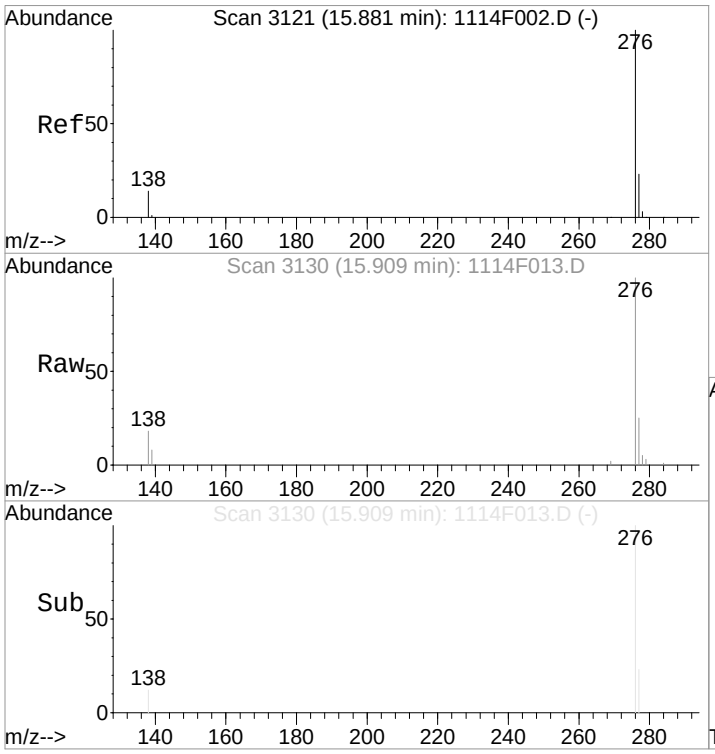
#35
Dibenz(a,h)anthracene
Concen: 45.38 ng/ml
RT: 15.54 min Scan# 3010
Delta R.T. 0.01 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:278 Resp: 20518

Ion	Ratio	Lower	Upper
278	100		
279	25.0	0.0	53.5
139	16.6	0.0	35.0



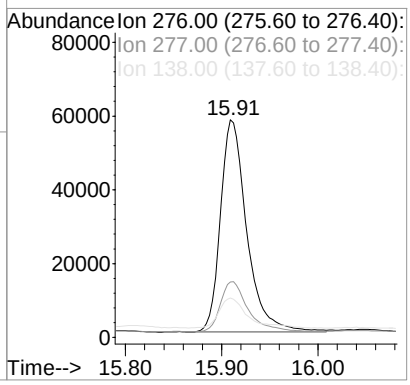
1st 12/03/18
2nd 12/06/18



#36
Benzo(g,h,i)perylene
Concen: 209.75 ng/ml
RT: 15.91 min Scan# 3130
Delta R.T. 0.03 min
Lab File: 1114F013.D
Acq: 14 Nov 2018 10:56 am

Tgt Ion:276 Resp: 109561

Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	53.1
138	14.1	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F013.D Vial: 13
Acq On : 14 Nov 2018 10:56 am Operator: LWeiskopf
Sample : K1810270-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:05:57 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	54405	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	28102	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	69438	200.00	ng/ml	-0.01
23) Chrysene-d12	10.11	240	76819	200.00	ng/ml	0.00
28) Perylene-d12	13.32	264	83953	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	14616	96.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	9.63%		
13) Fluorene-d10	6.74	176	25936	144.34	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	14.43%		
22) Fluoranthene-d10	8.54	212	58482	133.63	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.36%		
25) Terphenyl-d14	8.88	244	51347	154.10	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	15.41%		
Target Compounds						Qvalue
2) Naphthalene	4.76	128	6234	19.85	ng/ml	99
4) 2-Methylnaphthalene	5.41	142	2277	12.02	ng/ml	94
5) 1-Methylnaphthalene	5.49	142	1338	7.34	ng/ml	89
6) Biphenyl	5.82	154	1539	6.51	ng/ml	97
7) 2,6-Dimethylnaphthalene	5.96	156	1840	11.32	ng/ml	89
9) Acenaphthylene	6.19	152	7020	20.94	ng/ml#	35
10) Acenaphthene	6.33	154	5078	26.36	ng/ml	97
11) Dibenzofuran	6.48	168	6983	22.59	ng/ml	64
12) 2,3,5-Trimethylnaphthalene	6.65	170	1407	7.90	ng/ml	76
14) Fluorene	6.77	166	8208	35.23	ng/ml	97
16) Dibenzothiophene	7.46	184	8217	18.97	ng/ml	81
17) Phenanthrene	7.57	178	136856	315.94	ng/ml	99
18) Anthracene	7.61	178	18878	45.65	ng/ml	98
19) Carbazole	7.75	167	10455	25.91	ng/ml	92
20) 1-Methylphenanthrene	8.08	192	15295	46.62	ng/ml	75
21) Fluoranthene	8.56	202	368603	689.14	ng/ml	94
24) Pyrene	8.75	202	341269	647.51	ng/ml	100
26) Benz(a)anthracene	10.09	228	119958	241.53	ng/ml	98
27) Chrysene	10.15	228	199086	418.48	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	234790	452.67	ng/ml	98
30) Benzo(k)fluoranthene	12.30	252	89246m	173.45	ng/ml	
31) Benzo(e)pyrene	12.98	252	124390	251.60	ng/ml	98
32) Benzo(a)pyrene	13.14	252	120435	264.77	ng/ml	97
33) Perylene	13.40	252	201495	422.28	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.51	276	91721	205.64	ng/ml	96
35) Dibenz(a,h)anthracene	15.54	278	20518	45.38	ng/ml	97
36) Benzo(g,h,i)perylene	15.91	276	109561	209.75	ng/ml	94

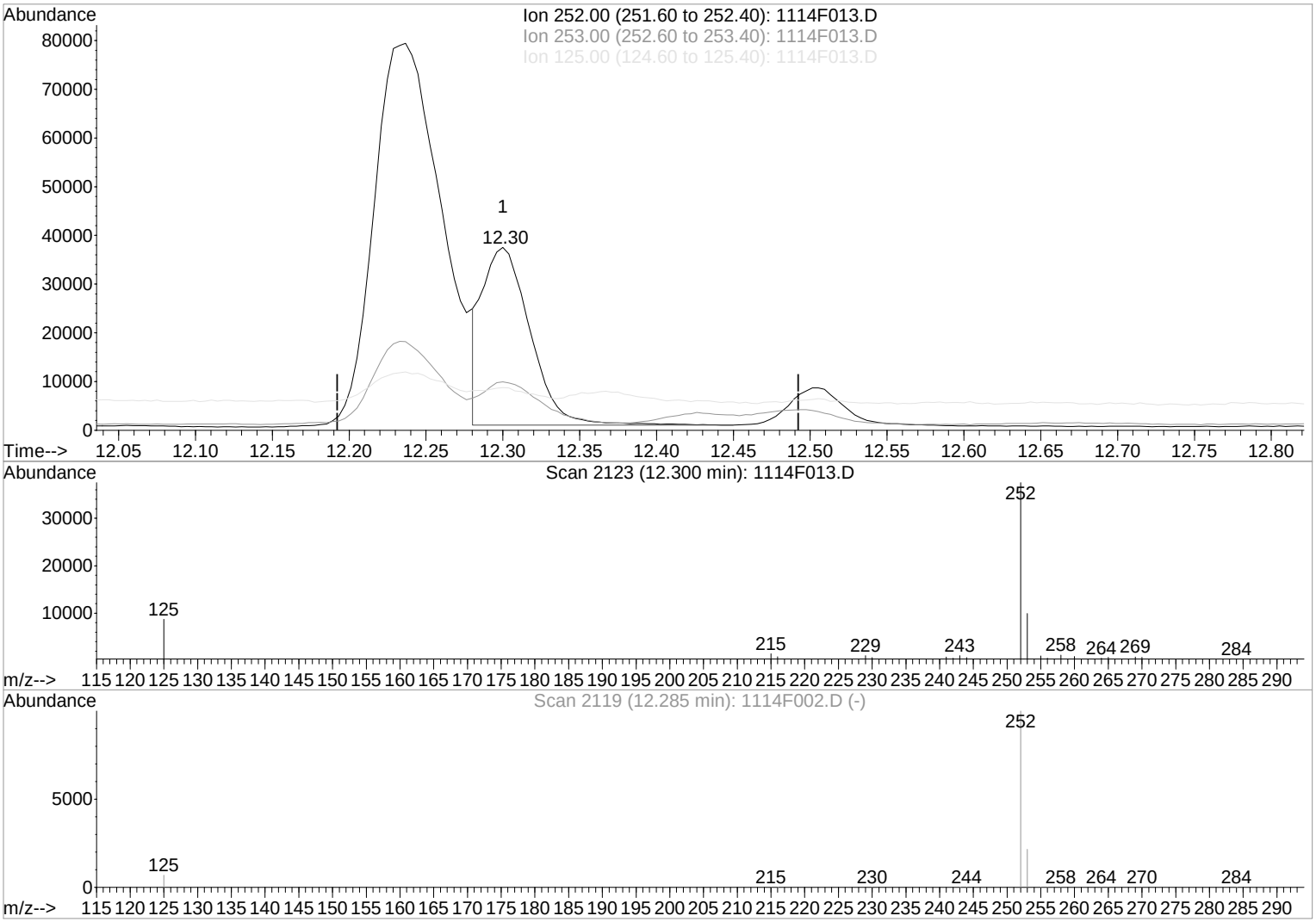
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F013.D Vial: 13
Acq On : 14 Nov 2018 10:56 am Operator: LWeiskopf
Sample : K1810270-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 5:05 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F013.D

(30) Benzo(k)fluoranthene (T)

12.30min 154.96ng/ml

response 79736

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	18.70
125.00	9.70	8.11
0.00	0.00	0.00

Manual Integration:

Before

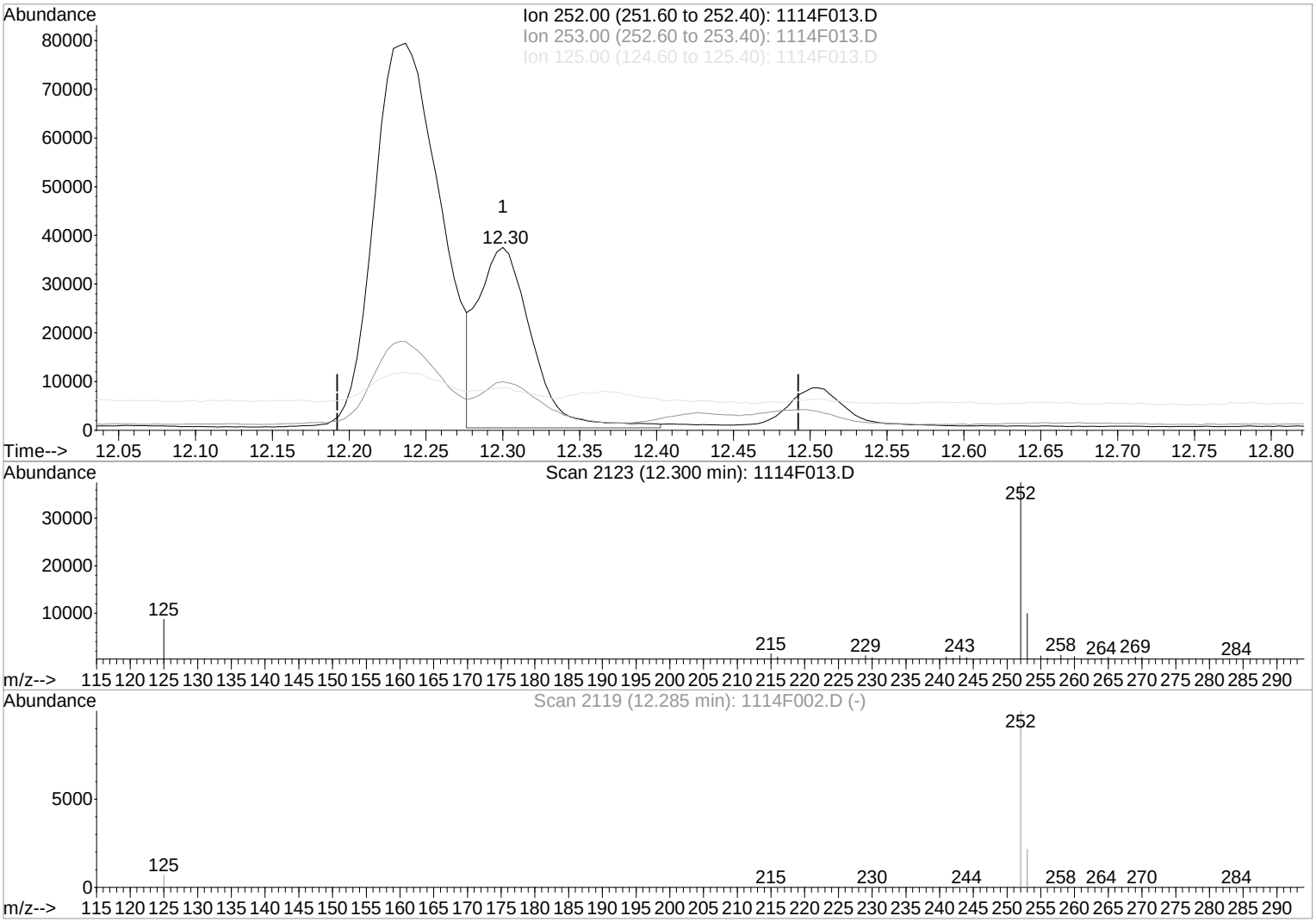
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F013.D Vial: 13
Acq On : 14 Nov 2018 10:56 am Operator: LWeiskopf
Sample : K1810270-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F013.D

(30) Benzo(k)fluoranthene (T)

12.30min 173.45ng/ml m

response 89246

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	26.49
125.00	9.70	23.29
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 11/19/18
2nd 12/05/18

Exception Report

Data File: J:\MS14\DATA\110718\1107F009.D
Lab ID: K1810270-004
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/07/2018 08:58
Date Quantitated: 11/16/2018 13:19
Batch ID: KWG1806028
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 11/19/18
2nd 12/05/18

Quantitation Report

Data File:	J:\MS14\DATA\110718\1107F009.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 08:58	**Quant Date:**	11/16/2018 13:19	**Vial:**	9
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	4.0
Lab ID:	K1810270-004			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/15/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806028	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700765	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110718\1107F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.01	136	64297	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31463	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	65645	200.00	OK
4	Chrysene-d12	10.11	0.00	240	78079	200.00	OK
5	Perylene-d12	13.30	0.02	264	88139	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	-0.01	0.00	176	35449	176.21	70	26-102	OK	
3	Fluoranthene-d10	8.54	0.00	0.00	212	74921	181.09	72	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	67351	198.87	80	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77	-0.01	0.00	128	1098	2.96	0.65	JD	
1	2-Methylnaphthalene	5.42		0.00	142	543	2.43	0.53	JD	
2	Acenaphthylene	6.20		0.00	152	2702	7.20	1.6	D	
2	Acenaphthene	6.34	-0.01	0.00	154	1131	5.24	1.1	D	
2	Dibenzofuran	6.49	-0.01	0.00	168	764**m**	2.21	0.48	JD	
2	Fluorene	6.78		0.00	166	1283	4.92	1.1	JD	
3	Phenanthrene	7.58		0.00	178	27378	66.86	15	D	
3	Anthracene	7.62		0.00	178	5030	12.87	2.8	D	
3	Fluoranthene	8.56		0.00	202	45512	90.01	20	D	
4	Pyrene	8.75		0.00	202	50629	94.51	21	D	
4	Benz(a)anthracene	10.10		0.00	228	23205	45.97	10	D	
4	Chrysene	10.15		0.00	228	32298	66.80	15	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110718\1107F009.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 08:58	**Quant Date:**	11/16/2018 13:19	**Vial:**	9
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	4.0
Lab ID:	K1810270-004			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.23	0.02	0.00	252	44242	81.25	18	D	
5	Benzo(k)fluoranthene	12.29	0.01	0.00	252	14360	26.58	5.8	D	
5	Benzo(a)pyrene	13.12	0.01	0.00	252	28914	60.55	13	D	
5	Indeno(1,2,3-cd)pyrene	15.49	0.01	0.00	276	26222	56.00	12	D	
5	Dibenz(a,h)anthracene	15.52		0.00	278	6955	14.65	3.2	D	
5	Benzo(g,h,i)perylene	15.88	0.01	0.00	276	32455	59.18	13	D	

Prep Amount:	40.410 g	**Dilution:**	4.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	90.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

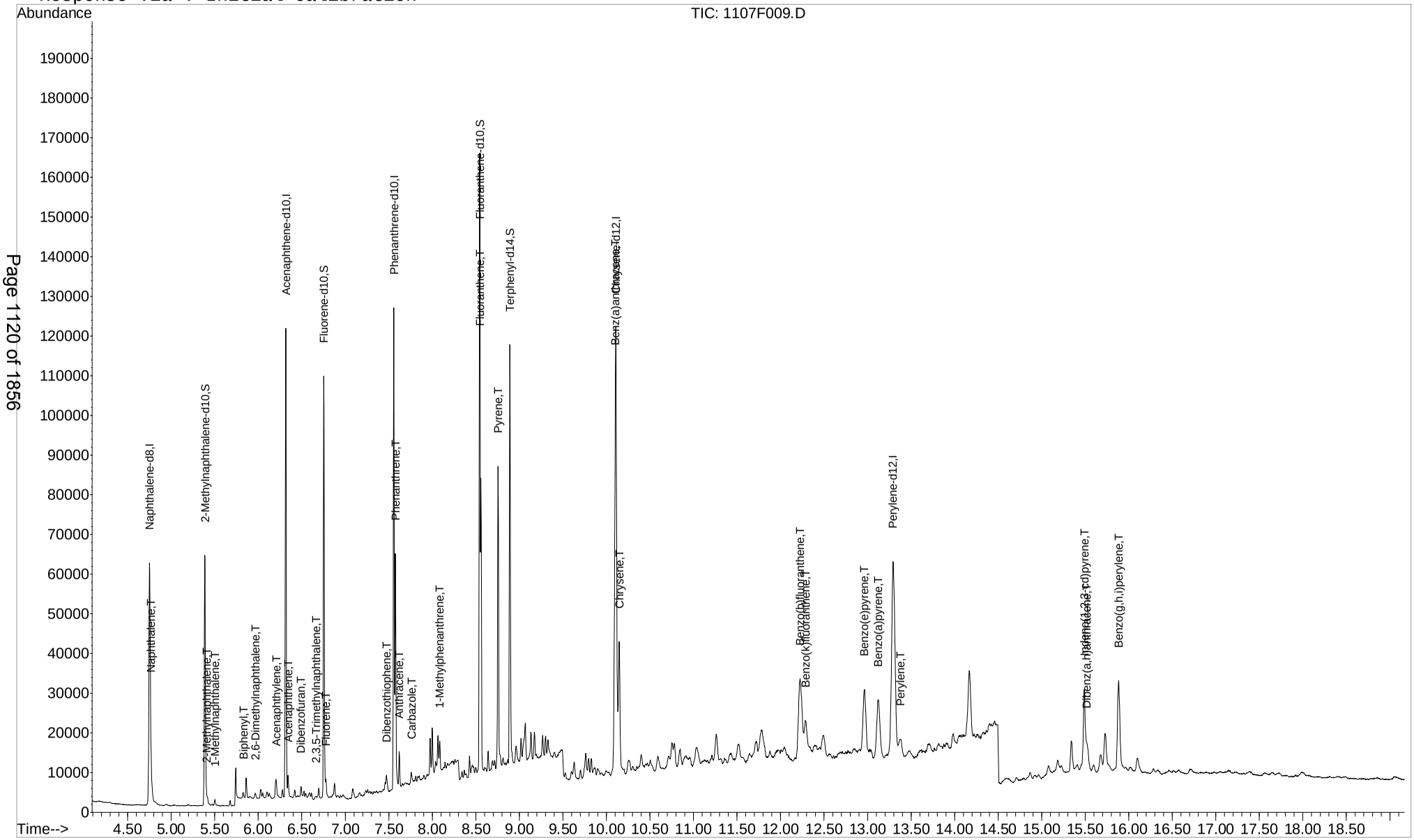
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

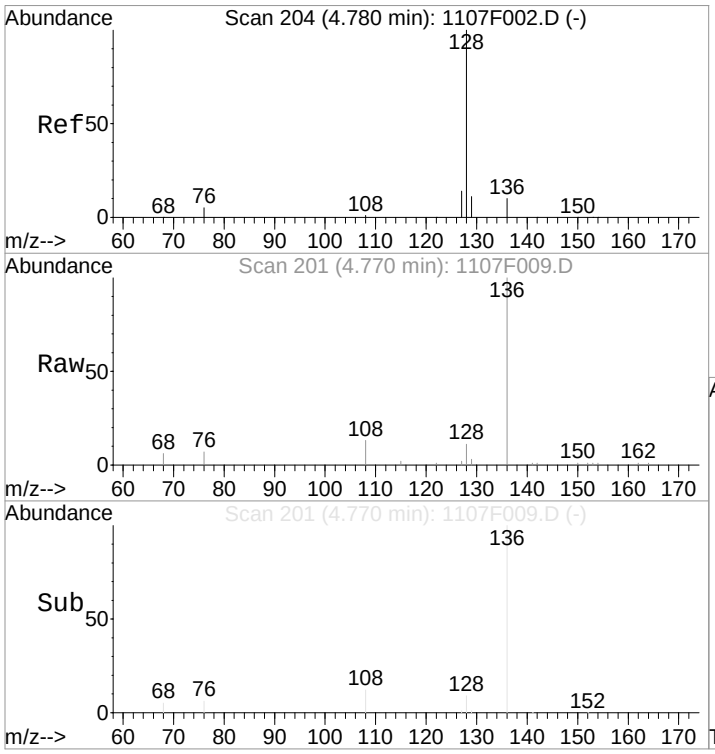
1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F009.D Vial: 9
Acq On : 7 Nov 2018 8:58 am Operator: LWeiskopf
Sample : K1810270-004DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 13:19 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration



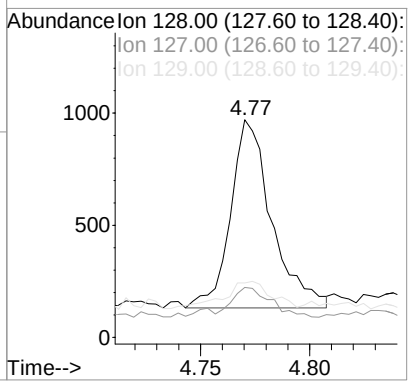
1st 11/19/18
2nd 12/05/18

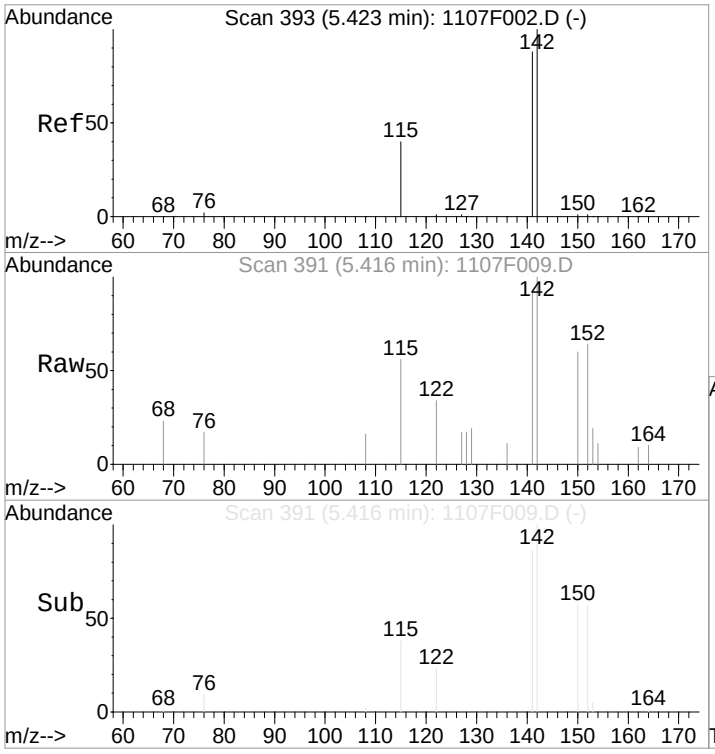


#2
Naphthalene
Concen: 2.96 ng/ml
RT: 4.77 min Scan# 201
Delta R.T. -0.01 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:128 Resp: 1098

Ion	Ratio	Lower	Upper
128	100		
127	15.4	0.0	43.7
129	12.2	0.0	30.8

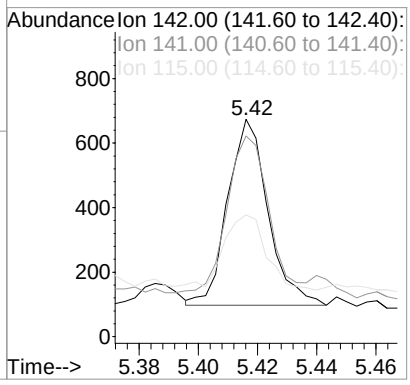


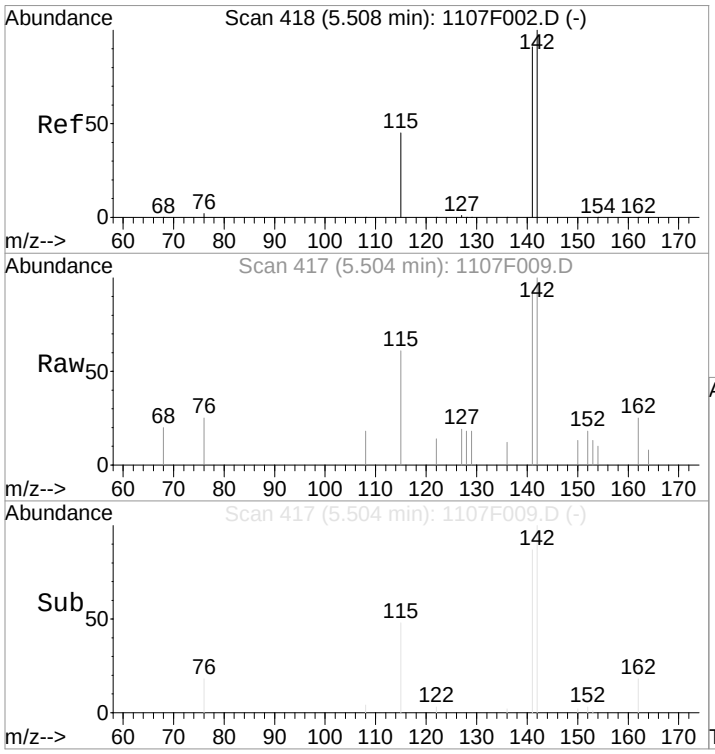


#4
2-Methylnaphthalene
Concen: 2.43 ng/ml
RT: 5.42 min Scan# 391
Delta R.T. -0.01 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:142 Resp: 543

Ion	Ratio	Lower	Upper
142	100		
141	83.3	56.8	116.8
115	38.9	13.3	53.3

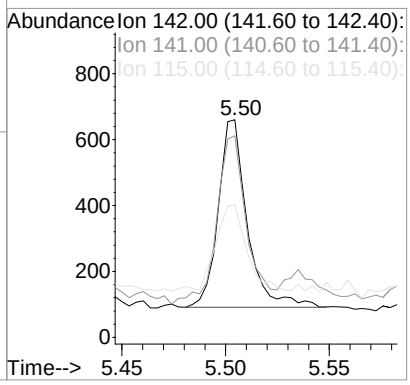


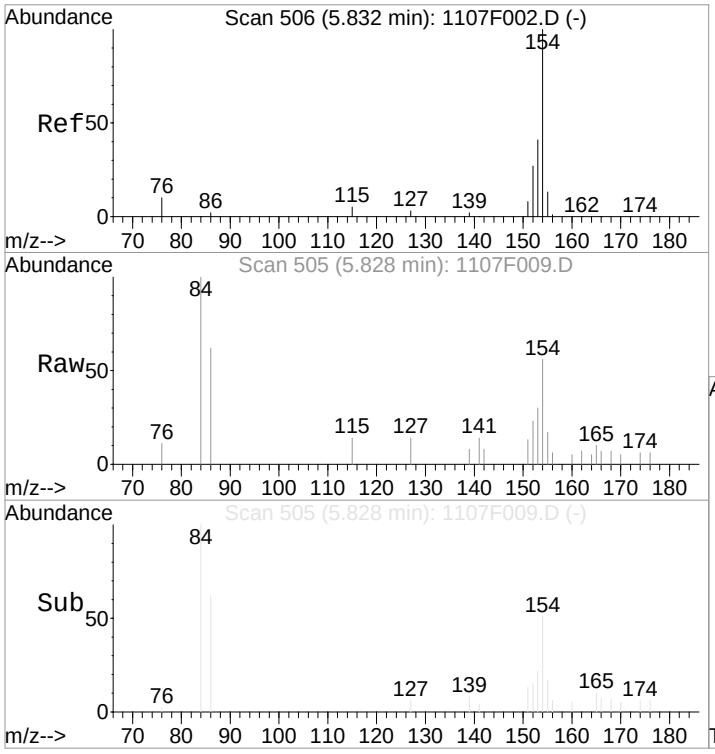


#5
1-Methylnaphthalene
Concen: 2.57 ng/ml
RT: 5.50 min Scan# 417
Delta R.T. -0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:142 Resp: 553

Ion	Ratio	Lower	Upper
142	100		
141	86.6	59.7	119.7
115	43.8	13.7	53.7

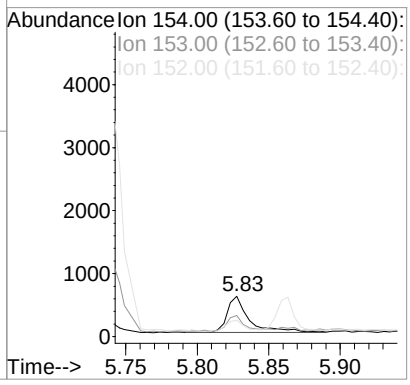




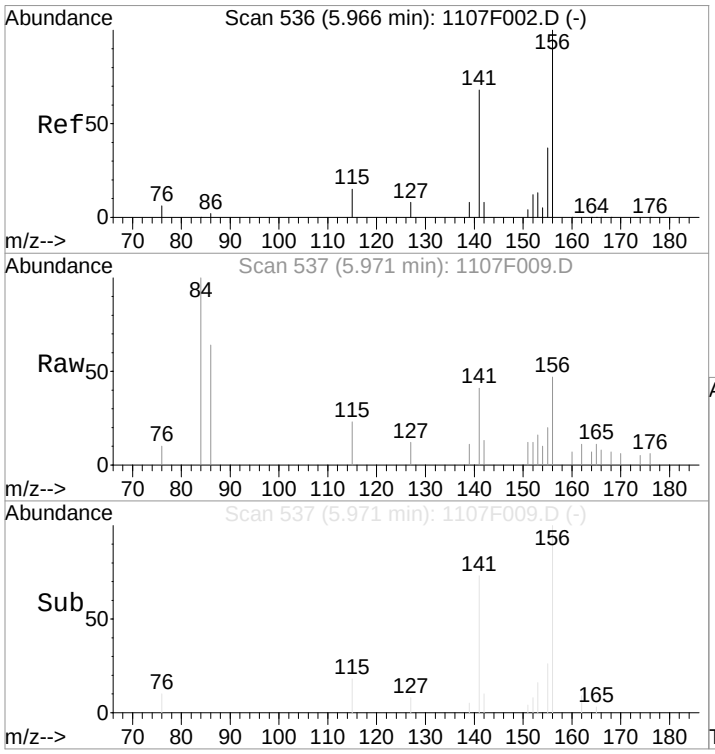
#6
Biphenyl
Concen: 2.23 ng/ml
RT: 5.83 min Scan# 505
Delta R.T. -0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:154 Resp: 623

Ion	Ratio	Lower	Upper
154	100		
153	43.0	11.4	71.4
152	28.0	7.1	47.1



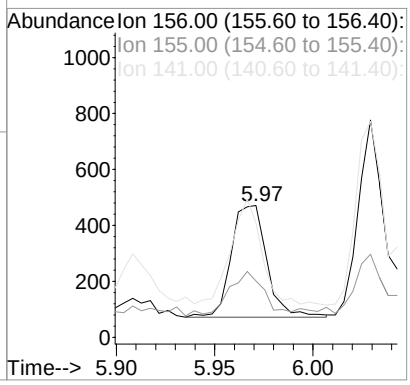
1st 11/19/18
2nd 12/05/18

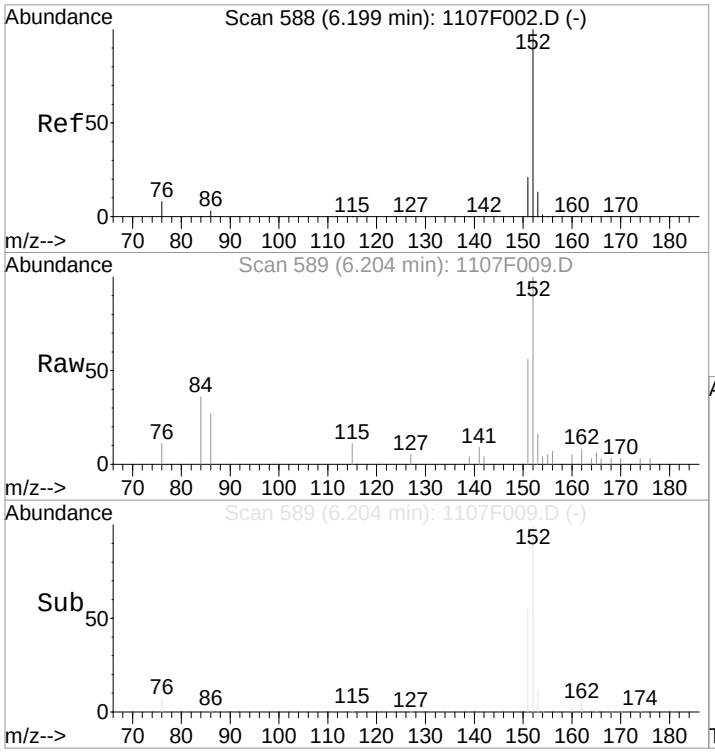


#7
2,6-Dimethylnaphthalene
Concen: 2.63 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:156 Resp: 505

Ion	Ratio	Lower	Upper
156	100		
155	31.3	7.0	67.0
141	73.4	47.9	87.9

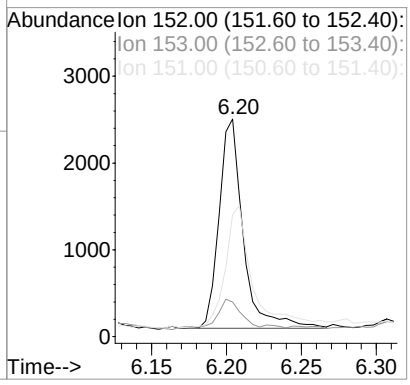




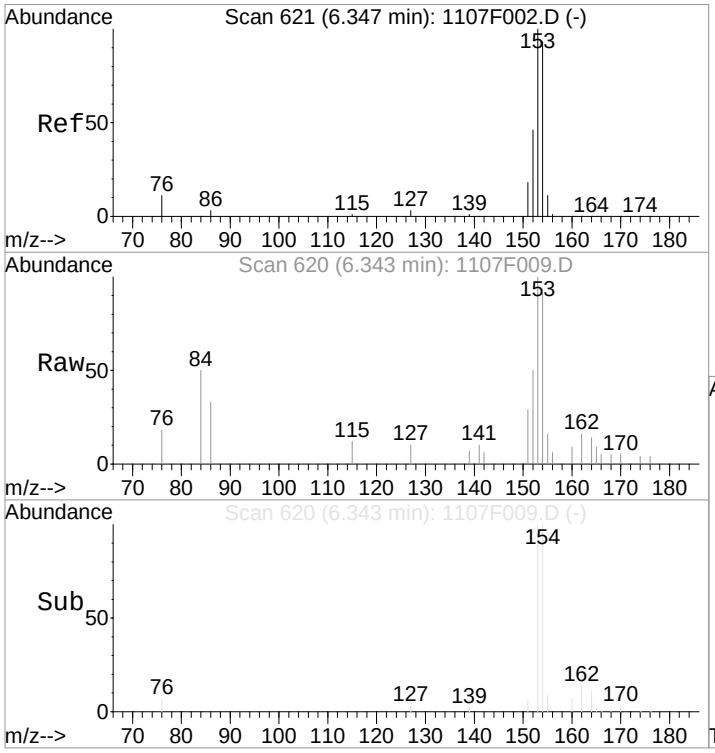
#9
Acenaphthylene
Concen: 7.20 ng/ml
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:152 Resp: 2702

Ion	Ratio	Lower	Upper
152	100		
153	12.8	0.0	42.9
151	54.0	0.2	40.2#



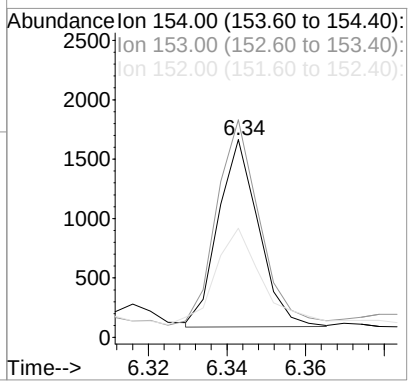
1st 11/19/18
2nd 12/05/18

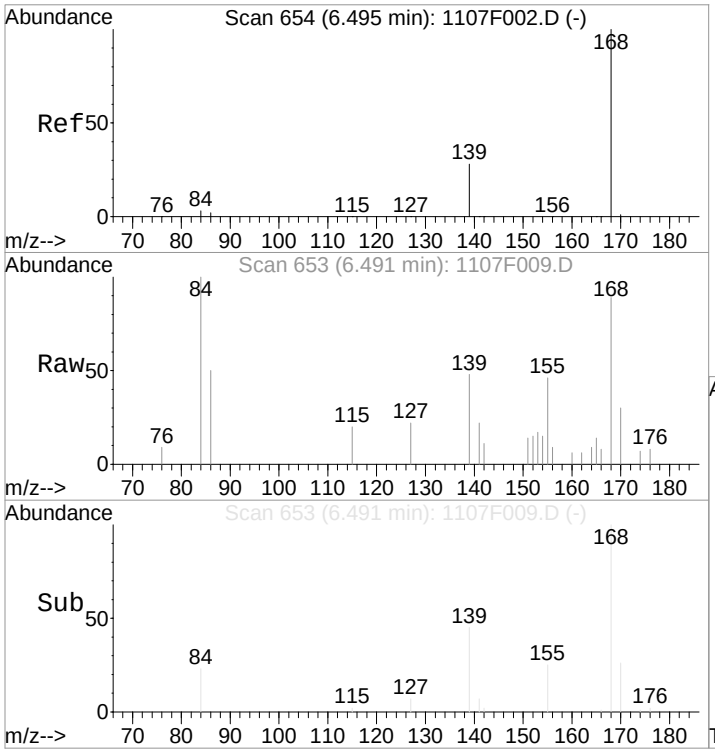


#10
Acenaphthene
Concen: 5.24 ng/ml
RT: 6.34 min Scan# 620
Delta R.T. -0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:154 Resp: 1131

Ion	Ratio	Lower	Upper
154	100		
153	108.2	77.1	137.1
152	49.9	19.7	79.7

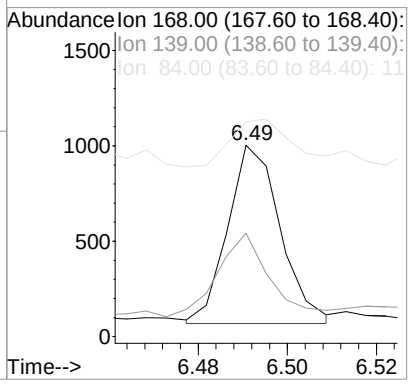




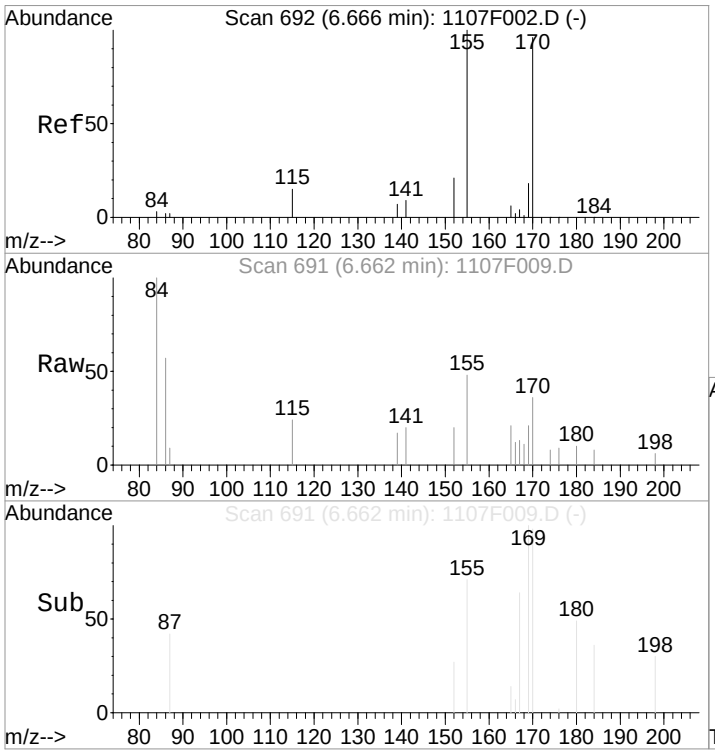
#11
Dibenzofuran
Concen: 2.21 ng/ml m
RT: 6.49 min Scan# 653
Delta R.T. -0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:168 Resp: 764

Ion	Ratio	Lower	Upper
168	100		
139	54.0	0.0	55.8
84	112.2	0.0	23.5#



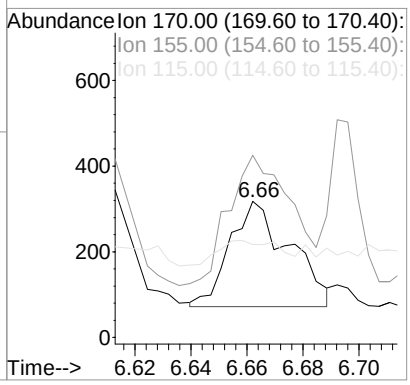
1st 11/19/18
2nd 12/05/18

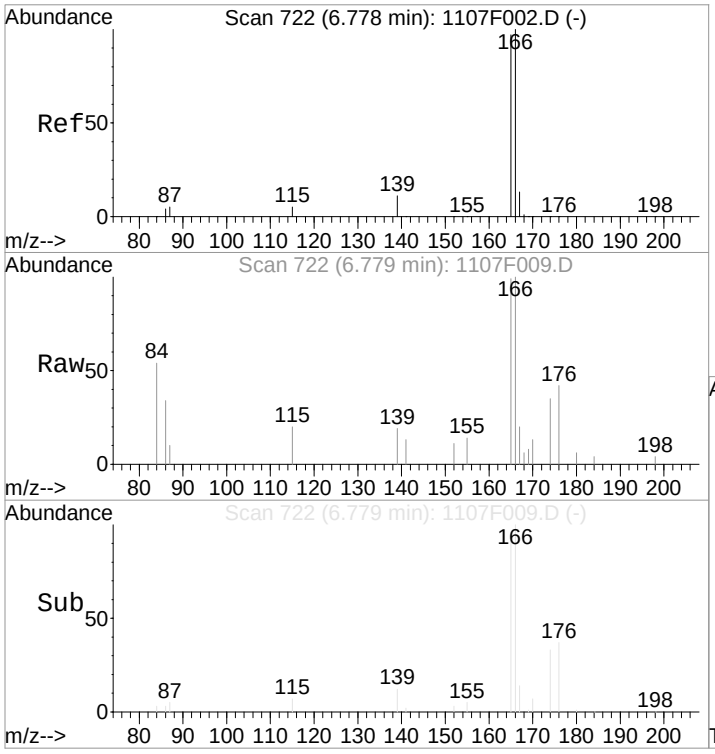


#12
2,3,5-Trimethylnaphthalene
Concen: 1.82 ng/ml m
RT: 6.66 min Scan# 691
Delta R.T. -0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:170 Resp: 364

Ion	Ratio	Lower	Upper
170	100		
155	133.6	59.2	119.2#
115	68.2	0.0	30.1#

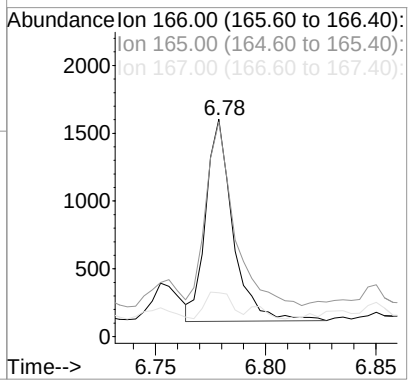




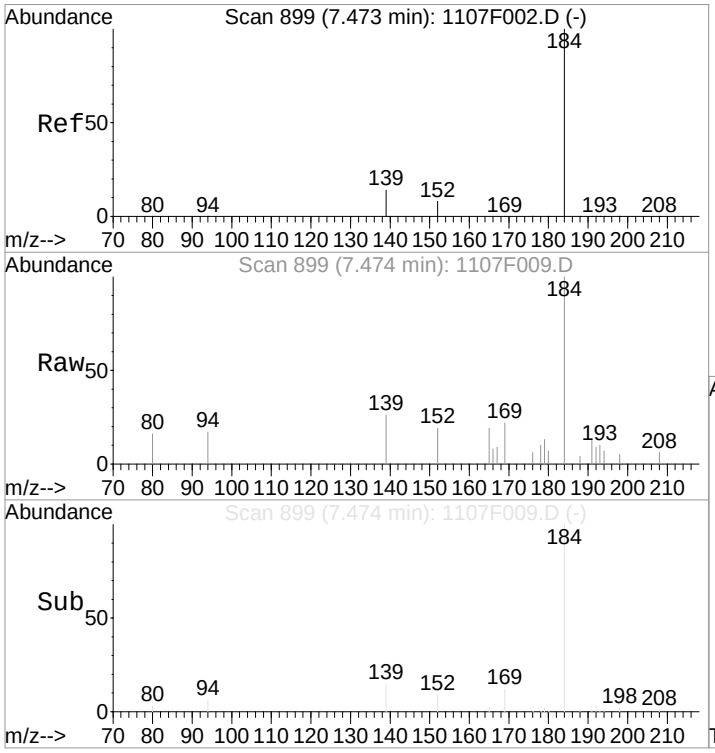
#14
Fluorene
Concen: 4.92 ng/ml
RT: 6.78 min Scan# 722
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:166 Resp: 1283

Ion	Ratio	Lower	Upper
166	100		
165	89.3	63.4	123.4
167	12.0	0.0	33.1



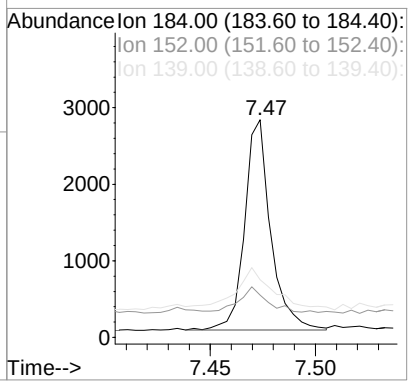
1st 11/19/18
2nd 11/05/18

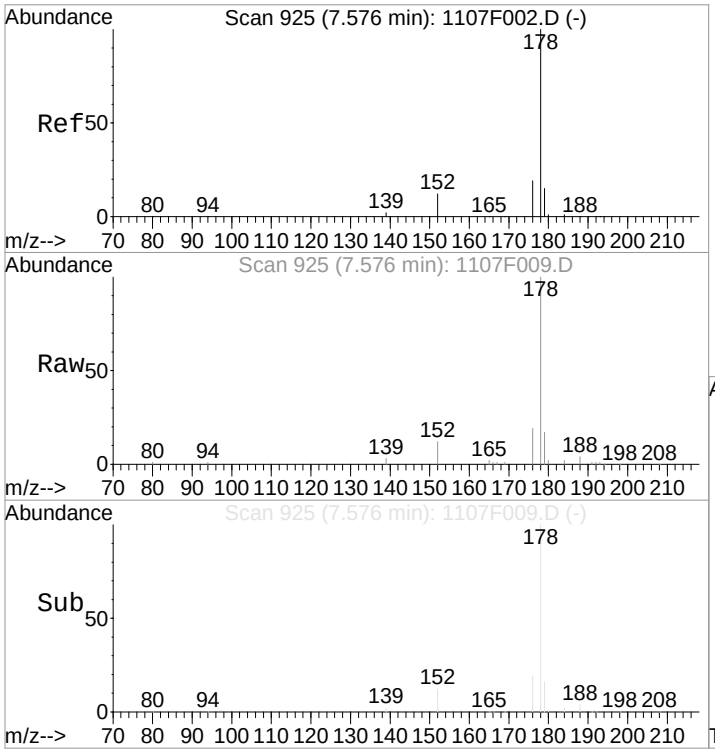


#16
Dibenzothiophene
Concen: 5.79 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:184 Resp: 2370

Ion	Ratio	Lower	Upper
184	100		
152	7.8	0.0	37.8
139	12.9	0.0	32.6

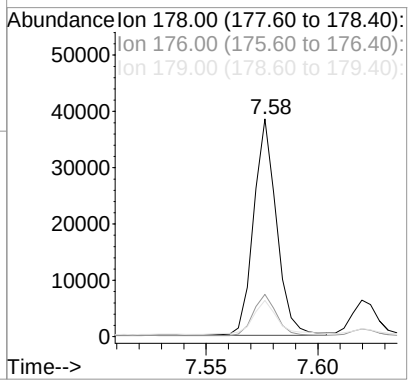




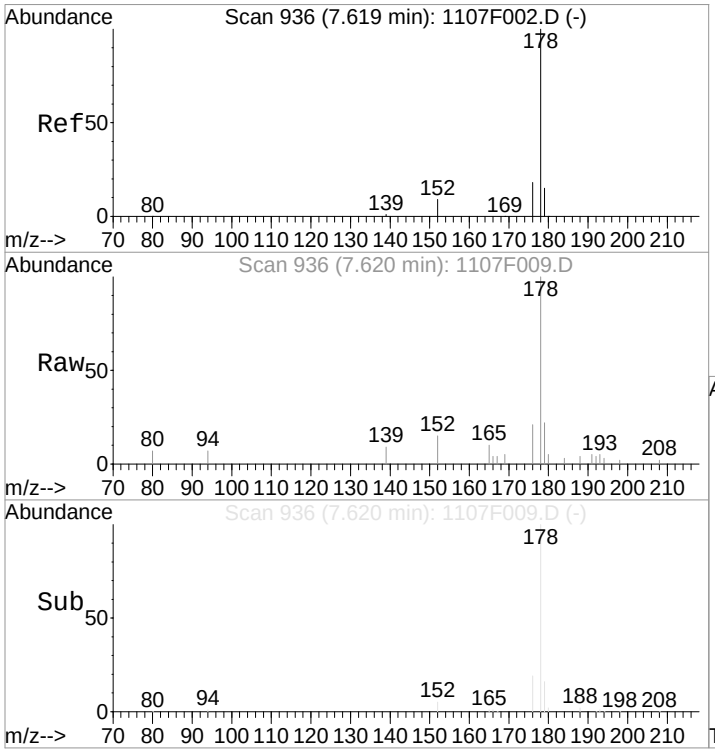
#17
Phenanthrene
Concen: 66.86 ng/ml
RT: 7.58 min Scan# 925
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:178 Resp: 27378

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.7
179	15.7	0.0	35.1



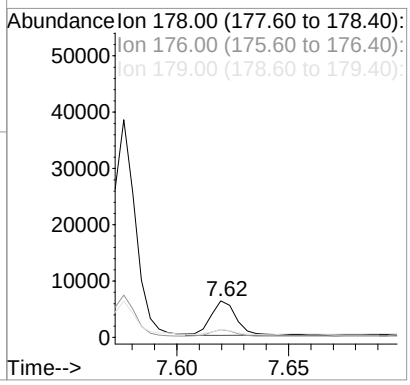
1st 11/19/18
2nd 12/05/18

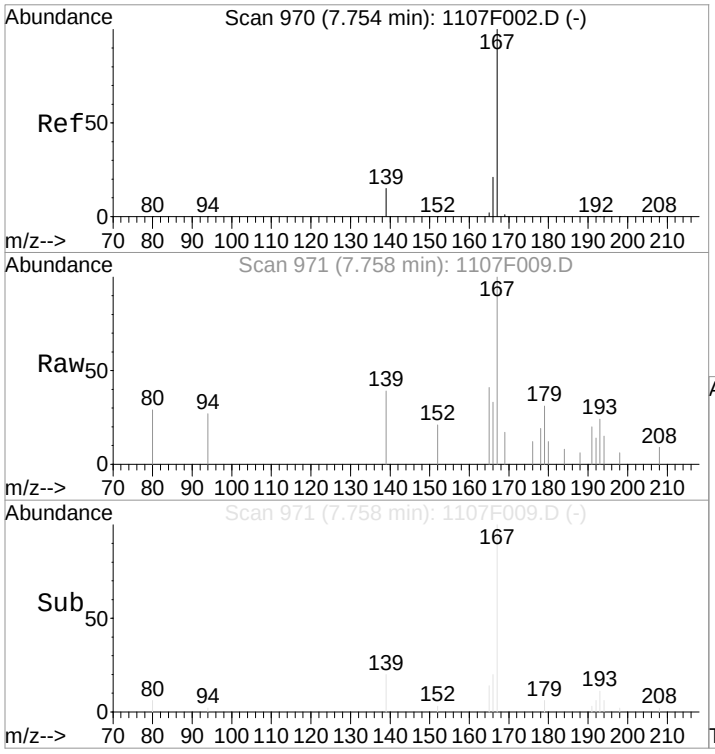


#18
Anthracene
Concen: 12.87 ng/ml
RT: 7.62 min Scan# 936
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:178 Resp: 5030

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	48.0
179	14.5	0.0	35.1

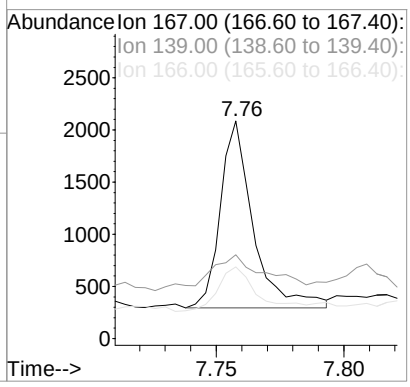


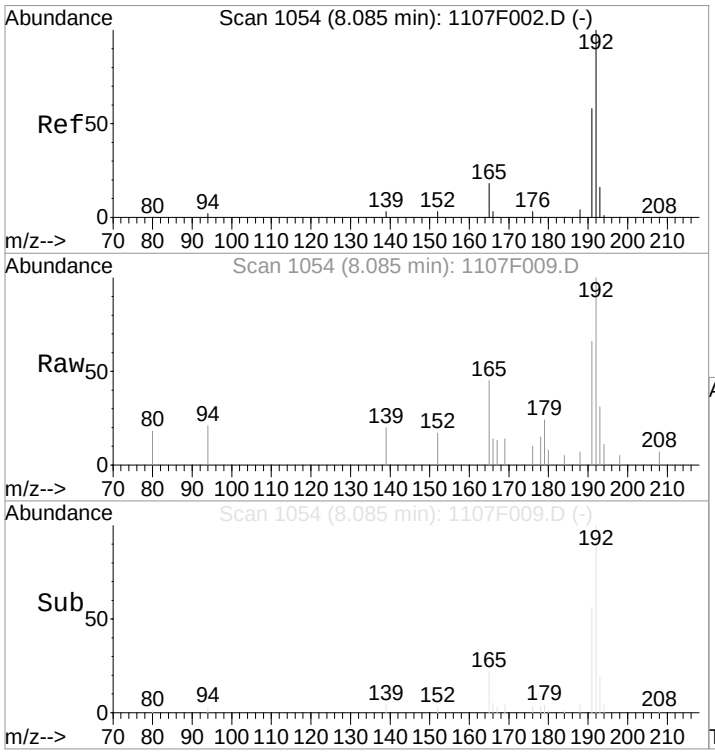


#19
Carbazole
Concen: 4.22 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:167 Resp: 1609

Ion	Ratio	Lower	Upper
167	100		
139	16.5	0.0	41.5
166	23.4	0.7	40.7

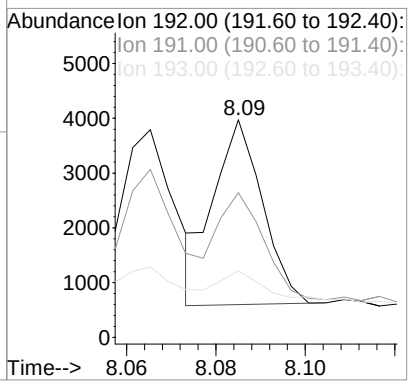


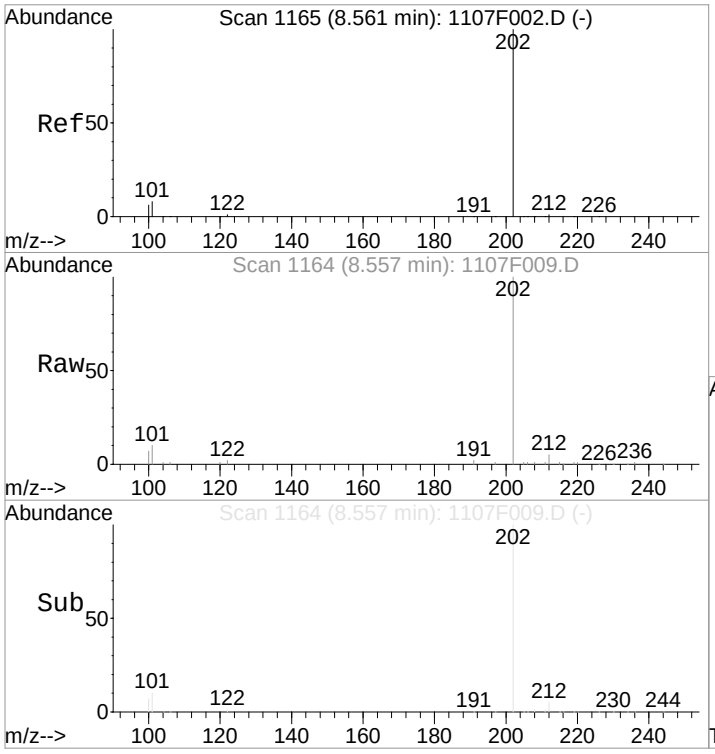


#20
1-Methylphenanthrene
Concen: 8.30 ng/ml
RT: 8.09 min Scan# 1054
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:192 Resp: 2573

Ion	Ratio	Lower	Upper
192	100		
191	58.4	27.7	87.7
193	16.0	0.0	45.4

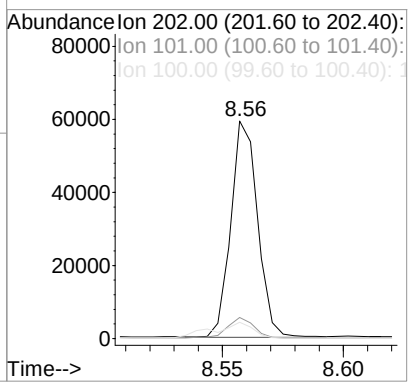




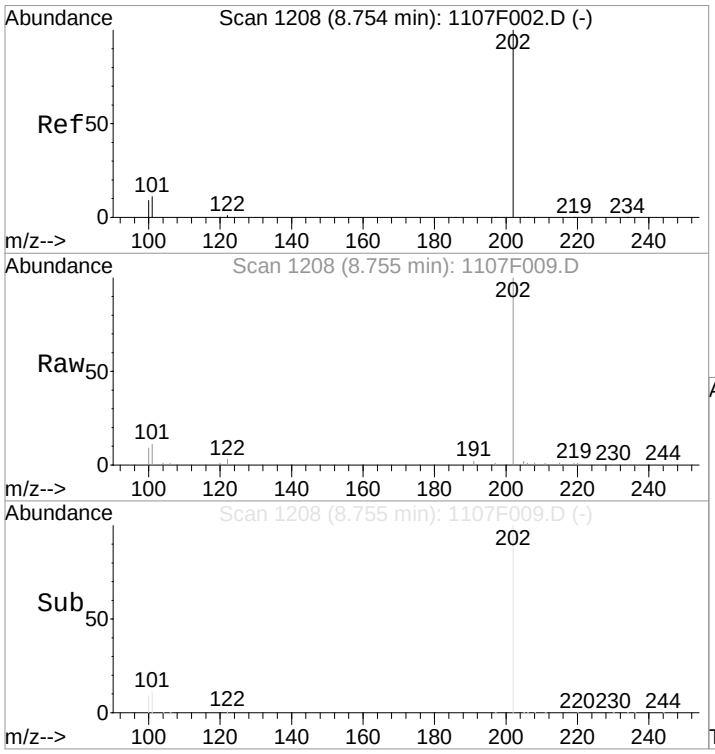
#21
Fluoranthene
Concen: 90.01 ng/ml
RT: 8.56 min Scan# 1164
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:202 Resp: 45512

Ion	Ratio	Lower	Upper
202	100		
101	9.4	0.0	41.3
100	7.3	0.0	28.6



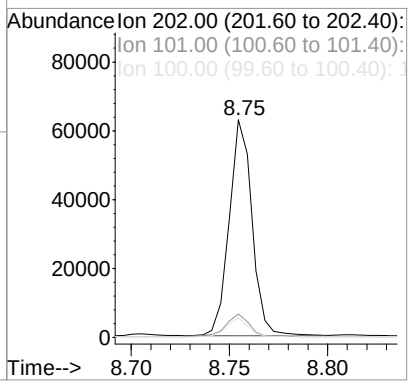
1st 11/19/18
2nd 12/05/18

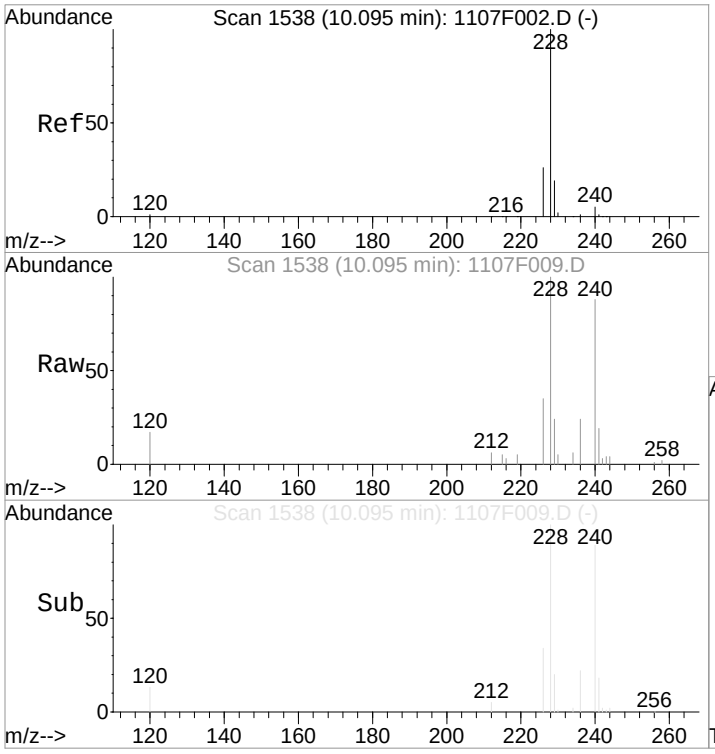


#24
Pyrene
Concen: 94.51 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:202 Resp: 50629

Ion	Ratio	Lower	Upper
202	100		
101	10.5	0.0	40.8
100	8.8	0.0	28.5

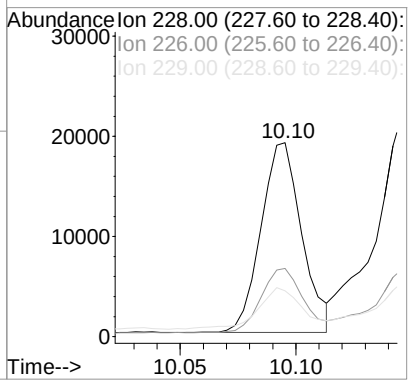




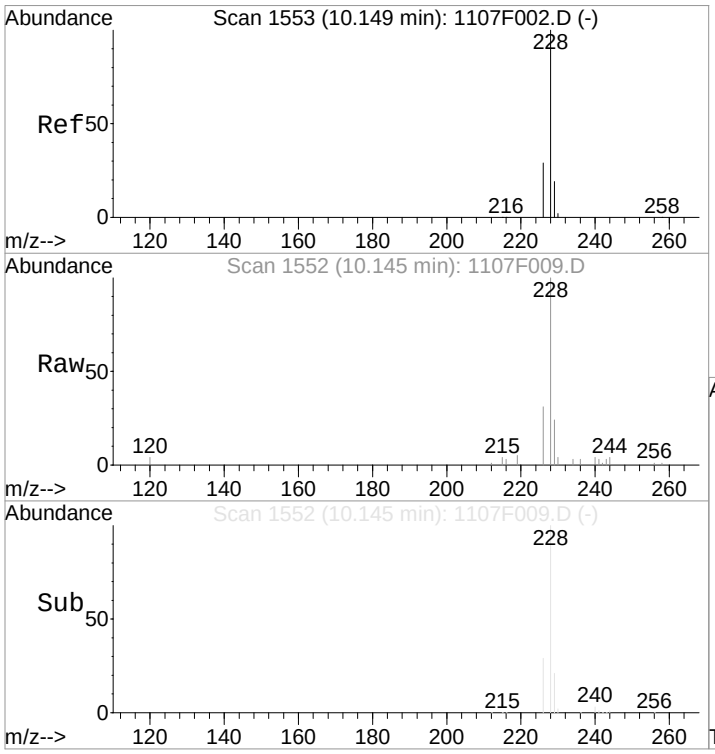
#26
Benz(a)anthracene
Concen: 45.97 ng/ml
RT: 10.10 min Scan# 1538
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:228 Resp: 23205

Ion	Ratio	Lower	Upper
228	100		
226	33.8	0.0	56.3
229	20.1	0.0	39.1



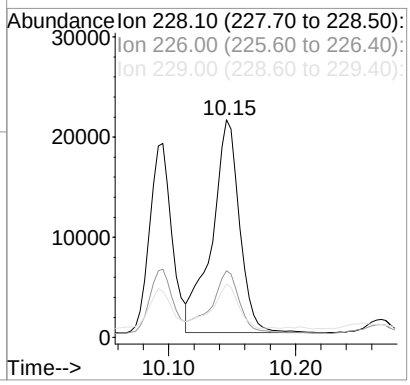
1st 11/19/18
2nd 12/05/18

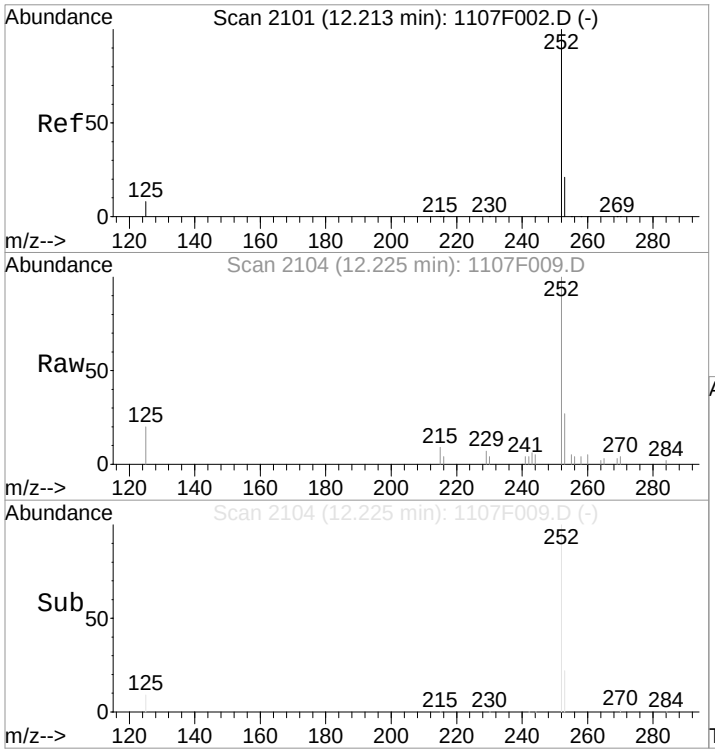


#27
Chrysene
Concen: 66.80 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. 0.00 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:228 Resp: 32298

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.7
229	20.8	0.0	39.2

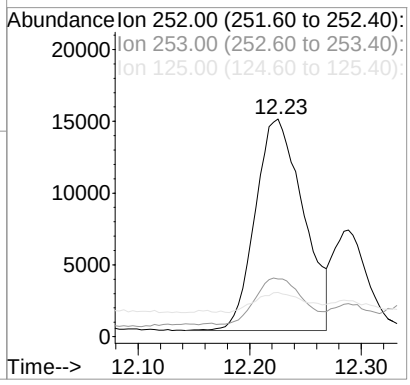




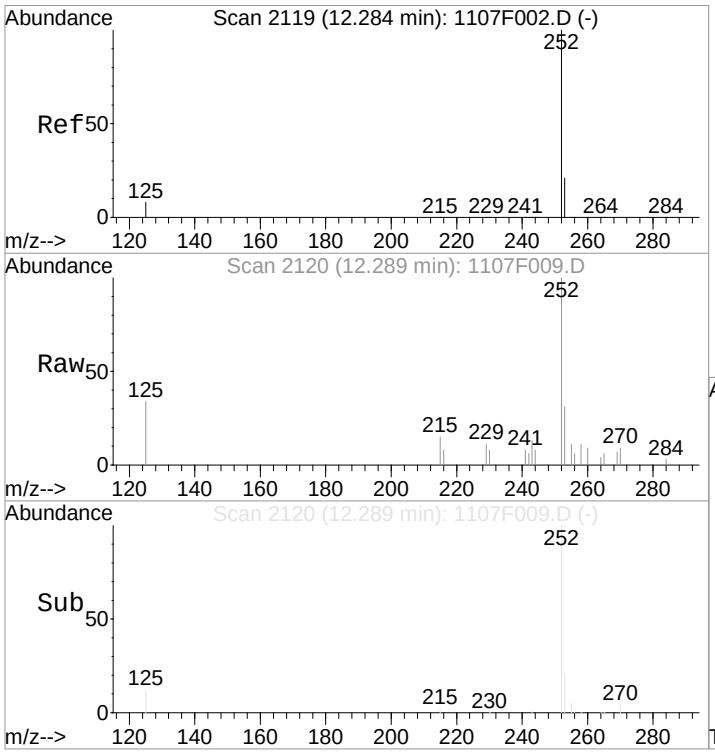
#29
Benzo(b)fluoranthene
Concen: 81.25 ng/ml
RT: 12.23 min Scan# 2104
Delta R.T. 0.02 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:252 Resp: 44242

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.2
125	9.5	0.0	29.5



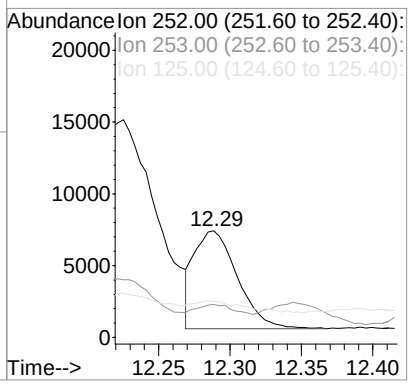
1st 11/19/18
2nd 12/05/18

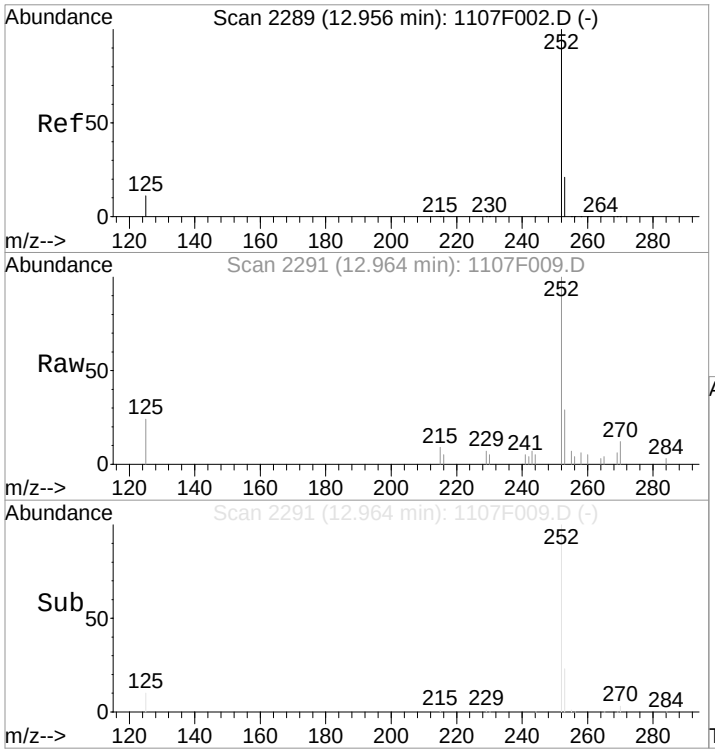


#30
Benzo(k)fluoranthene
Concen: 26.58 ng/ml
RT: 12.29 min Scan# 2120
Delta R.T. 0.01 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:252 Resp: 14360

Ion	Ratio	Lower	Upper
252	100		
253	8.7	0.0	51.2
125	10.1	0.0	29.7

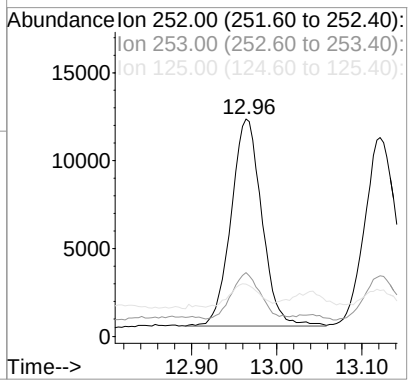




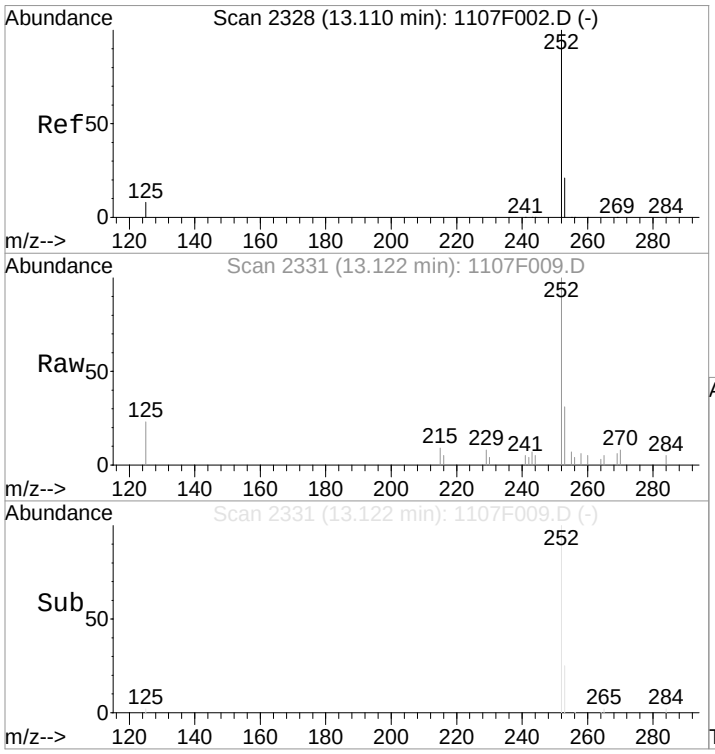
#31
Benzo(e)pyrene
Concen: 56.95 ng/ml
RT: 12.96 min Scan# 2291
Delta R.T. 0.02 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:252 Resp: 29561

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.3
125	11.8	0.0	33.5



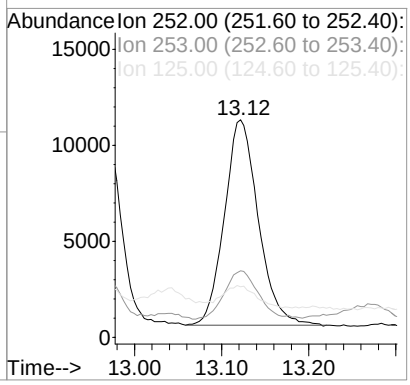
1st 11/19/18
2nd 12/05/18

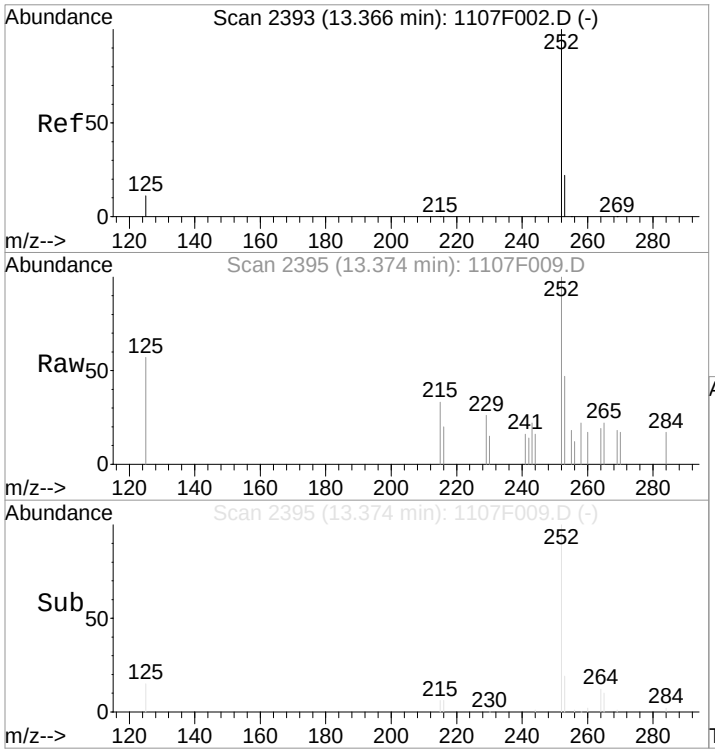


#32
Benzo(a)pyrene
Concen: 60.55 ng/ml
RT: 13.12 min Scan# 2331
Delta R.T. 0.02 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:252 Resp: 28914

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	50.9
125	10.4	0.0	30.3

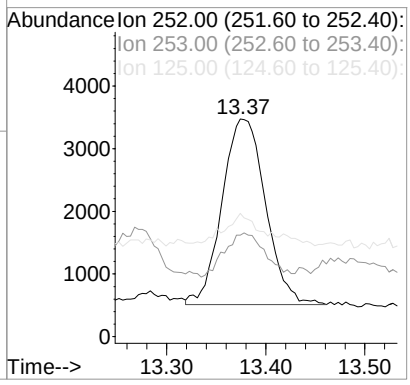


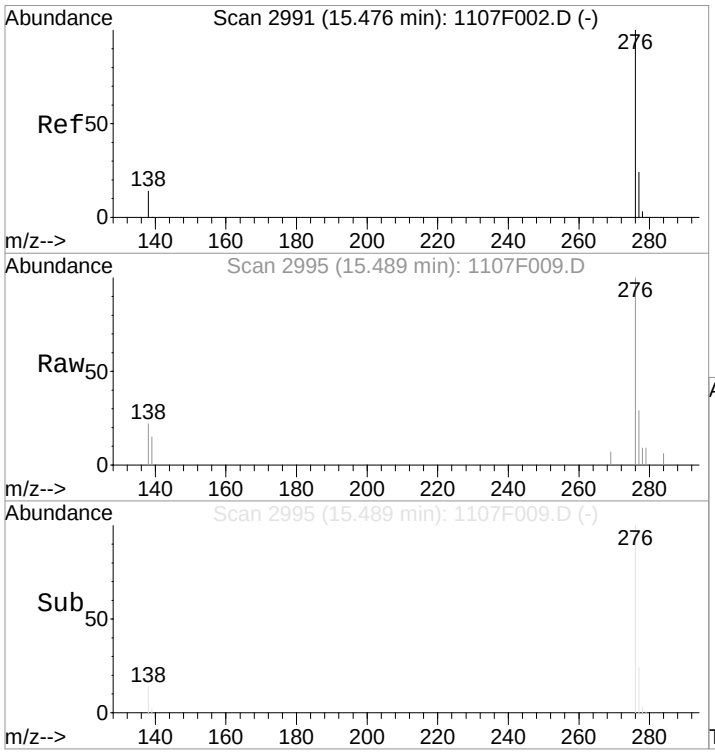


#33
Perylene
Concen: 18.04 ng/ml
RT: 13.37 min Scan# 2395
Delta R.T. 0.02 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:252 Resp: 9036

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.2
125	16.2	0.0	33.8

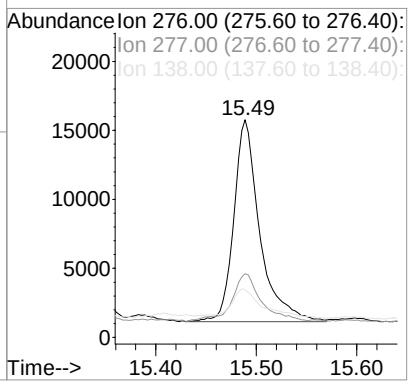


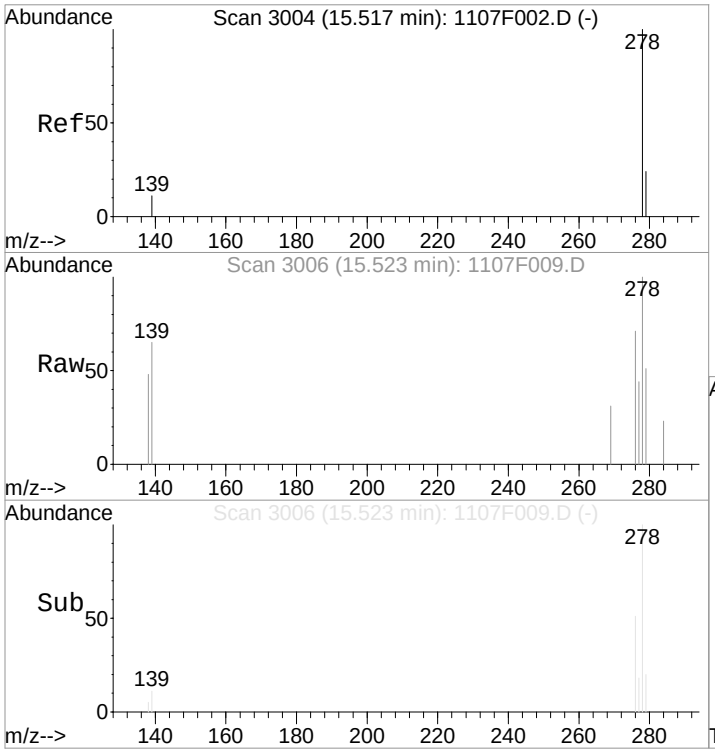


#34
Indeno(1,2,3-cd)pyrene
Concen: 56.00 ng/ml
RT: 15.49 min Scan# 2995
Delta R.T. 0.02 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:276 Resp: 26222

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.4
138	14.0	0.0	37.7

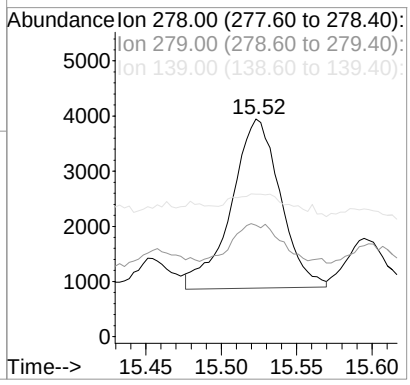




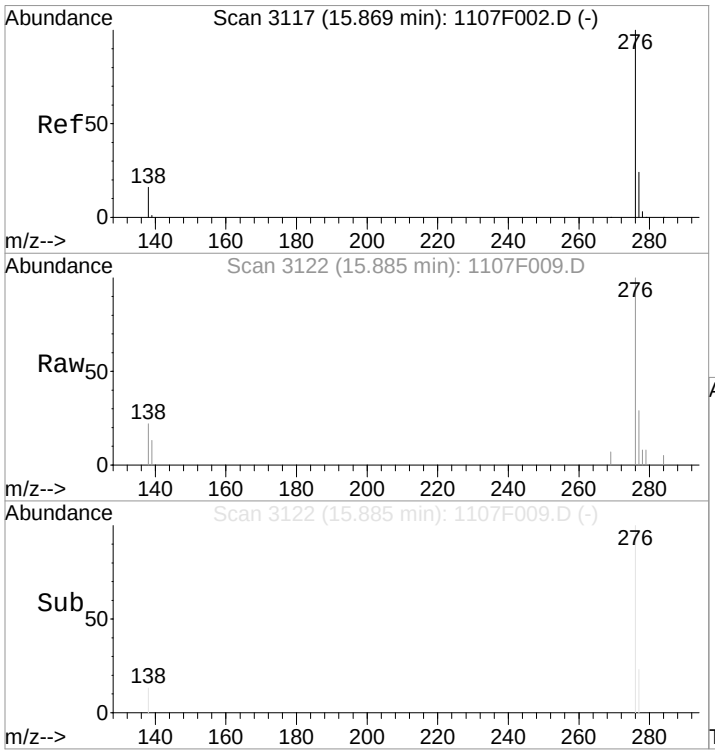
#35
Dibenz(a,h)anthracene
Concen: 14.65 ng/ml
RT: 15.52 min Scan# 3006
Delta R.T. 0.01 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:278 Resp: 6955

Ion	Ratio	Lower	Upper
278	100		
279	23.2	0.0	53.5
139	13.8	0.0	35.0



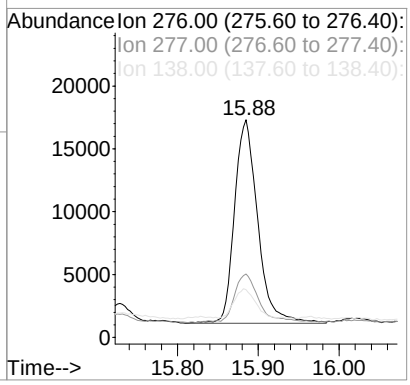
1st 11/19/18
2nd 12/05/18



#36
Benzo(g,h,i)perylene
Concen: 59.18 ng/ml
RT: 15.88 min Scan# 3122
Delta R.T. 0.03 min
Lab File: 1107F009.D
Acq: 7 Nov 2018 8:58 am

Tgt Ion:276 Resp: 32455

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.1
138	14.1	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F009.D Vial: 9
Acq On : 7 Nov 2018 8:58 am Operator: LWeiskopf
Sample : K1810270-004DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:56:05 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	64297	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31463	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	65645	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	78079	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	88139	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	22371	124.65	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	12.47%		
13) Fluorene-d10	6.75	176	35449	176.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	17.62%		
22) Fluoranthene-d10	8.54	212	74921	181.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	18.11%		
25) Terphenyl-d14	8.89	244	67351	198.87	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	19.89%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	1098	2.96	ng/ml	96
4) 2-Methylnaphthalene	5.42	142	543	2.43	ng/ml	95
5) 1-Methylnaphthalene	5.50	142	553	2.57	ng/ml	93
6) Biphenyl	5.83	154	623	2.23	ng/ml	98
7) 2,6-Dimethylnaphthalene	5.97	156	505	2.63	ng/ml	92
9) Acenaphthylene	6.20	152	2702	7.20	ng/ml#	55
10) Acenaphthene	6.34	154	1131	5.24	ng/ml	99
11) Dibenzofuran	6.49	168	764m	2.21	ng/ml	
12) 2,3,5-Trimethylnaphthalene	6.66	170	364m	1.82	ng/ml	
14) Fluorene	6.78	166	1283	4.92	ng/ml	96
16) Dibenzothiophene	7.47	184	2370	5.79	ng/ml	100
17) Phenanthrene	7.58	178	27378	66.86	ng/ml	99
18) Anthracene	7.62	178	5030	12.87	ng/ml	99
19) Carbazole	7.76	167	1609	4.22	ng/ml	92
20) 1-Methylphenanthrene	8.09	192	2573	8.30	ng/ml	99
21) Fluoranthene	8.56	202	45512	90.01	ng/ml	96
24) Pyrene	8.75	202	50629	94.51	ng/ml	99
26) Benz(a)anthracene	10.10	228	23205	45.97	ng/ml	91
27) Chrysene	10.15	228	32298	66.80	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	44242	81.25	ng/ml	100
30) Benzo(k)fluoranthene	12.29	252	14360	26.58	ng/ml	81
31) Benzo(e)pyrene	12.96	252	29561	56.95	ng/ml	98
32) Benzo(a)pyrene	13.12	252	28914	60.55	ng/ml	98
33) Perylene	13.37	252	9036	18.04	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.49	276	26222	56.00	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	6955	14.65	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	32455	59.18	ng/ml	94

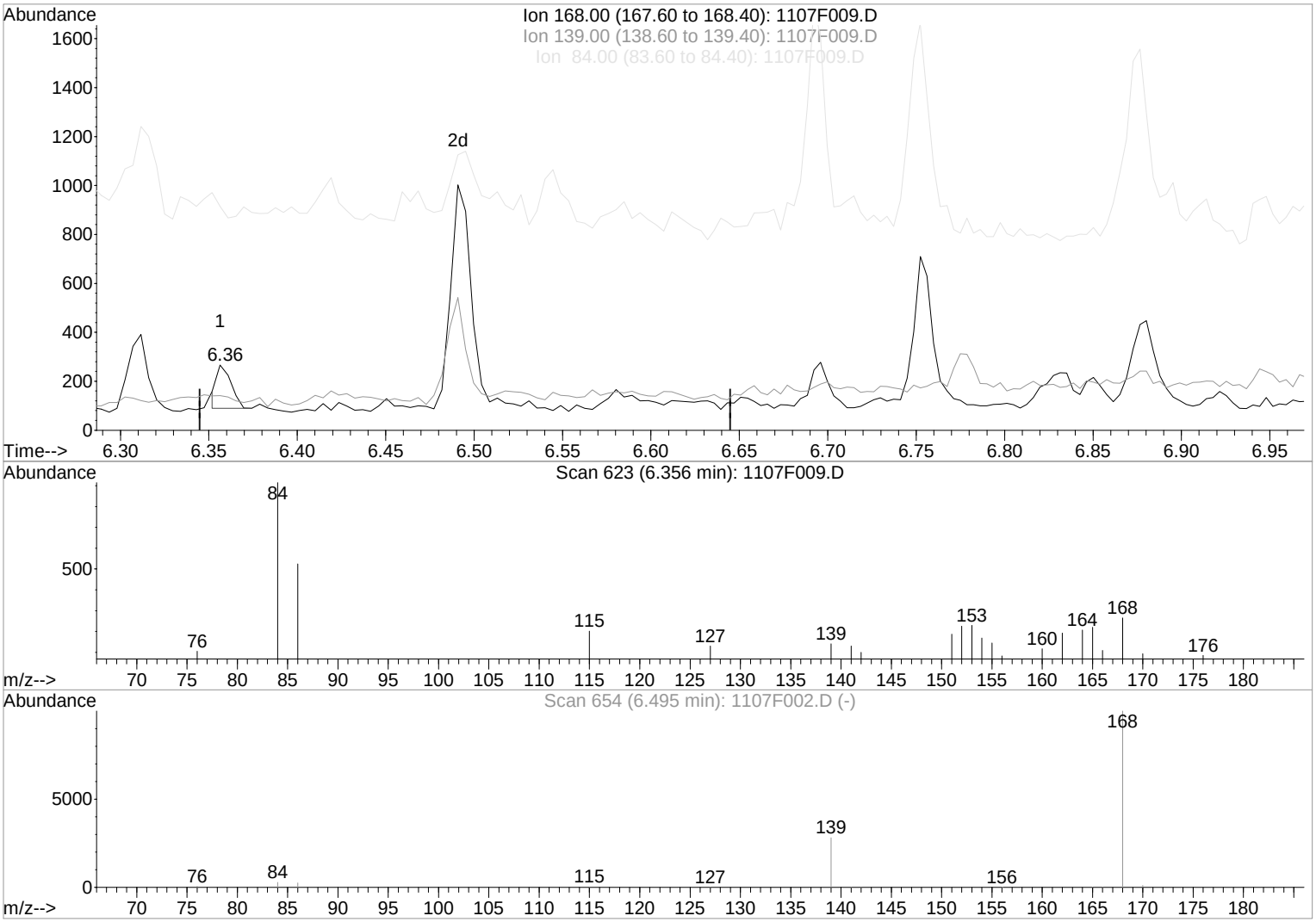
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F009.D Vial: 9
Acq On : 7 Nov 2018 8:58 am Operator: LWeiskopf
Sample : K1810270-004DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:56 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Multiple Level Calibration



TIC: 1107F009.D

(11) Dibenzofuran (T)

6.36min 0.28ng/ml

response 98

Ion	Exp%	Act%
168.00	100	100
139.00	25.80	11.93
84.00	3.50	14.20
0.00	0.00	0.00

Manual Integration:

Before

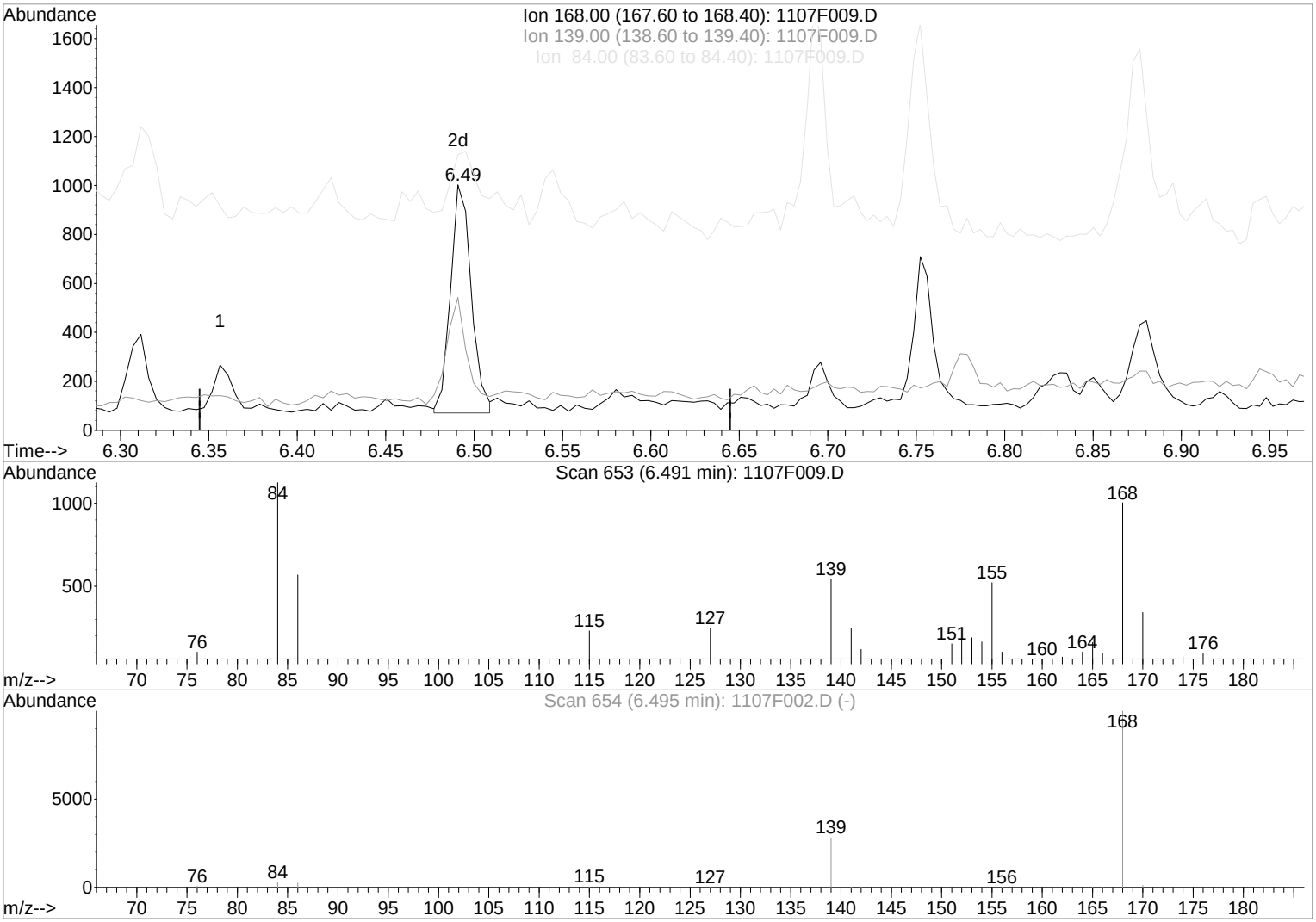
11/16/18

Quantitation Report (Qedit)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F009.D Vial: 9
Acq On : 7 Nov 2018 8:58 am Operator: LWeiskopf
Sample : K1810270-004DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 13:18 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Multiple Level Calibration



TIC: 1107F009.D

(11) Dibenzofuran (T)

6.49min 2.21ng/ml m

response 764

Ion	Exp%	Act%
168.00	100	100
139.00	25.80	54.04
84.00	3.50	112.16#
0.00	0.00	0.00

Manual Integration:

After

WP

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F020.D
Lab ID: K1810270-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/05/2018 18:41
Date Quantitated: 11/16/2018 08:43
Batch ID: KWG1806019
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F020.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 18:41	**Quant Date:**	11/16/2018 08:43	**Vial:**	20
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-006			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/15/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700766	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	73202	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	32934	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	65954	200.00	OK
4	Chrysene-d12	10.11	0.01	240	78844	200.00	OK
5	Perylene-d12	13.28	0.02	264	90255	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	130221	618.39	62	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	285269	686.28	69	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	252088	737.14	74	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	2109	4.99	0.33	J	
1	2-Methylnaphthalene	5.43	0.01	0.00	142	634	2.49	0.16	J	
2	Acenaphthylene	6.20		0.00	152	2061**m**	5.24	0.35	X	
2	Acenaphthene	6.35		0.00	154	415	1.84	0.12	J	
2	Dibenzofuran	6.50		0.00	168	990**m**	2.73	0.18	J	
2	Fluorene	6.78		0.00	166	475	1.74	0.11	J	
3	Phenanthrene	7.58		0.00	178	8202	19.94	1.3		
3	Anthracene	7.62		0.00	178	2029	5.17	0.34		
3	Fluoranthene	8.56		0.00	202	21590	42.50	2.8		
4	Pyrene	8.75		0.00	202	27859	51.50	3.4		
4	Benz(a)anthracene	10.10	0.01	0.00	228	10772	21.13	1.4		
4	Chrysene	10.15	0.01	0.00	228	15505	31.75	2.1		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F020.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 18:41	**Quant Date:**	11/16/2018 08:43	**Vial:**	20
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-006			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.21	0.02	0.00	252	24830	44.53	2.9		
5	Benzo(k)fluoranthene	12.28	0.02	0.00	252	7822**m**	14.14	0.93		
5	Benzo(a)pyrene	13.11	0.02	0.00	252	17509	35.80	2.4		
5	Indeno(1,2,3-cd)pyrene	15.48	0.02	0.00	276	17386	36.26	2.4		
5	Dibenz(a,h)anthracene	15.52	0.02	0.00	278	2842**m**	5.85	0.39		
5	Benzo(g,h,i)perylene	15.87	0.02	0.00	276	22363	39.82	2.6		

Prep Amount:	40.031 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	75.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

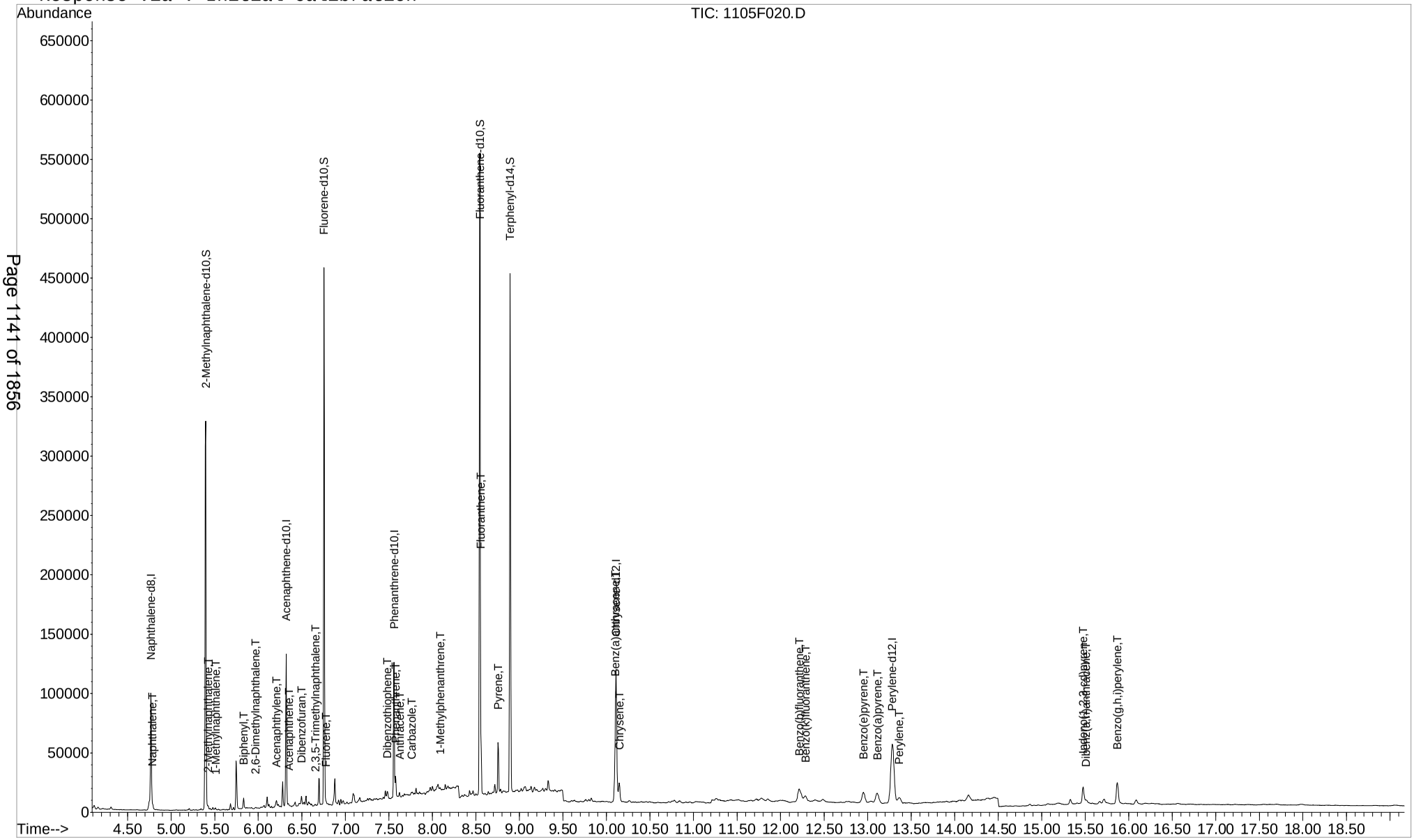
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

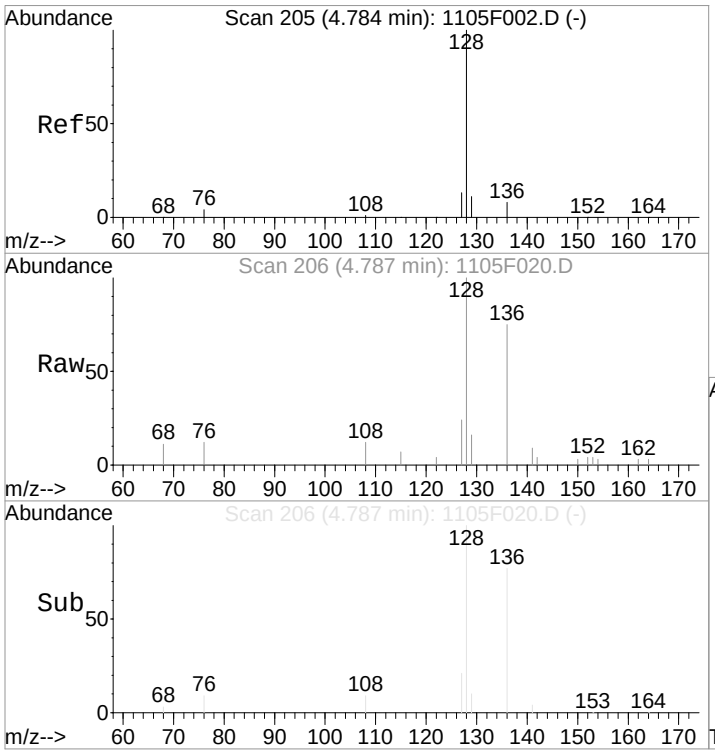
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:43 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



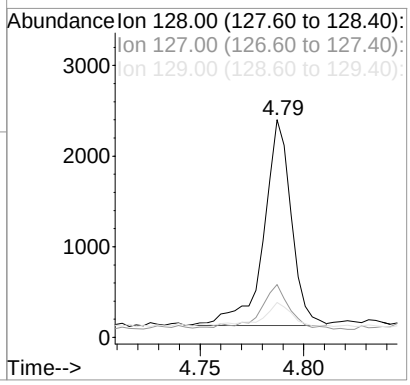
1st 11/16/18
2nd 11/27/18

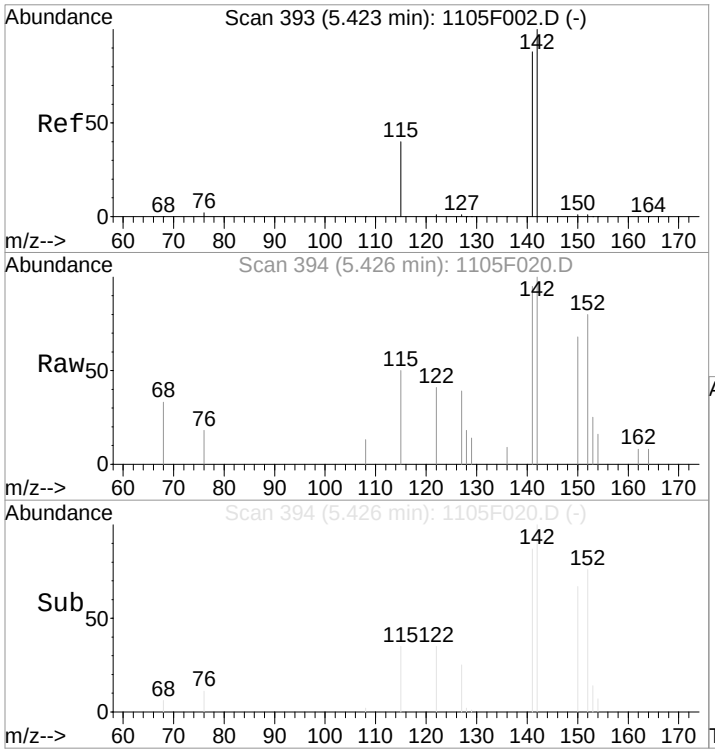


#2
Naphthalene
Concen: 4.99 ng/ml
RT: 4.79 min Scan# 206
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:128 Resp: 2109

Ion	Ratio	Lower	Upper
128	100		
127	20.7	0.0	43.7
129	11.0	0.0	30.8

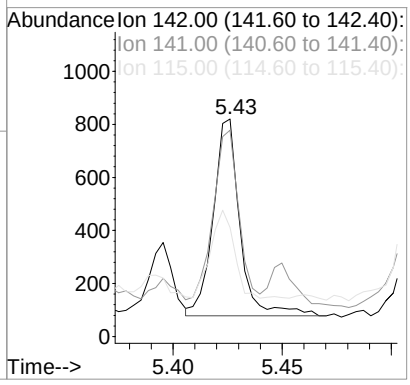




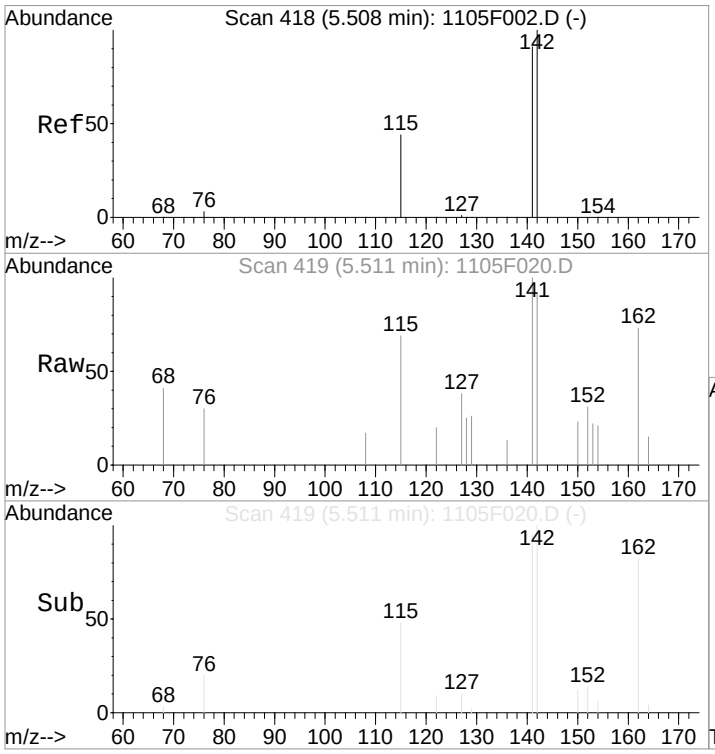
#4
2-Methylnaphthalene
Concen: 2.49 ng/ml
RT: 5.43 min Scan# 394
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:142 Resp: 634

Ion	Ratio	Lower	Upper
142	100		
141	88.5	56.8	116.8
115	36.9	13.3	53.3



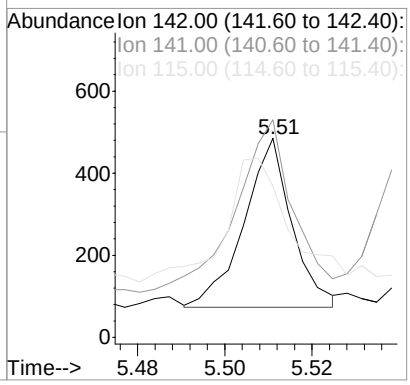
1st 11/16/18
2nd 11/27/18

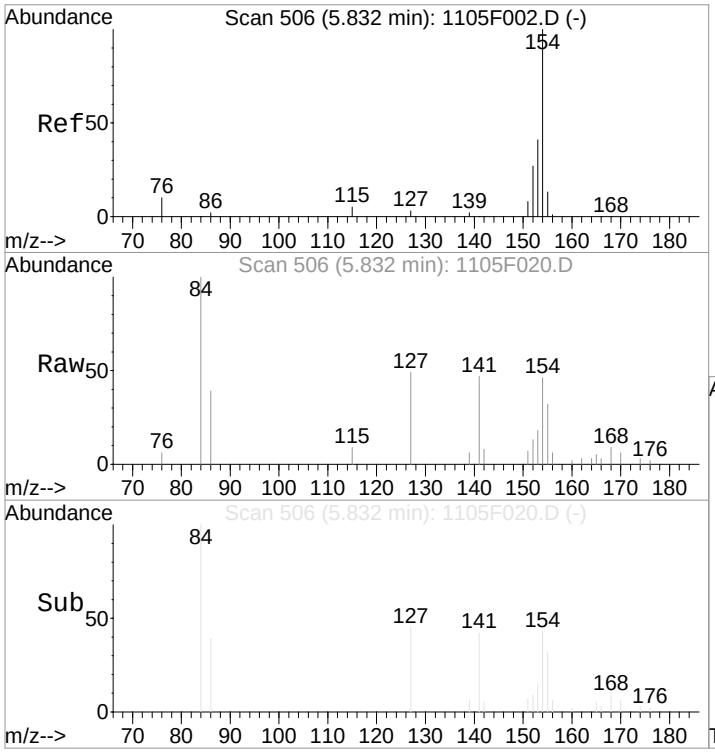


#5
1-Methylnaphthalene
Concen: 1.28 ng/ml m
RT: 5.51 min Scan# 419
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:142 Resp: 315

Ion	Ratio	Lower	Upper
142	100		
141	109.3	59.7	119.7
115	75.9	13.7	53.7#

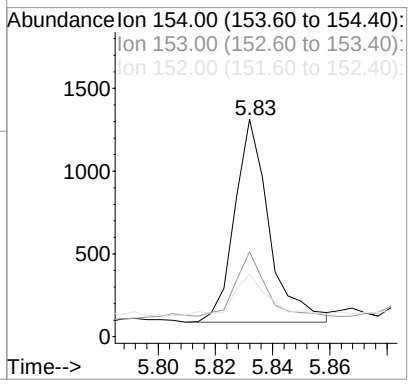




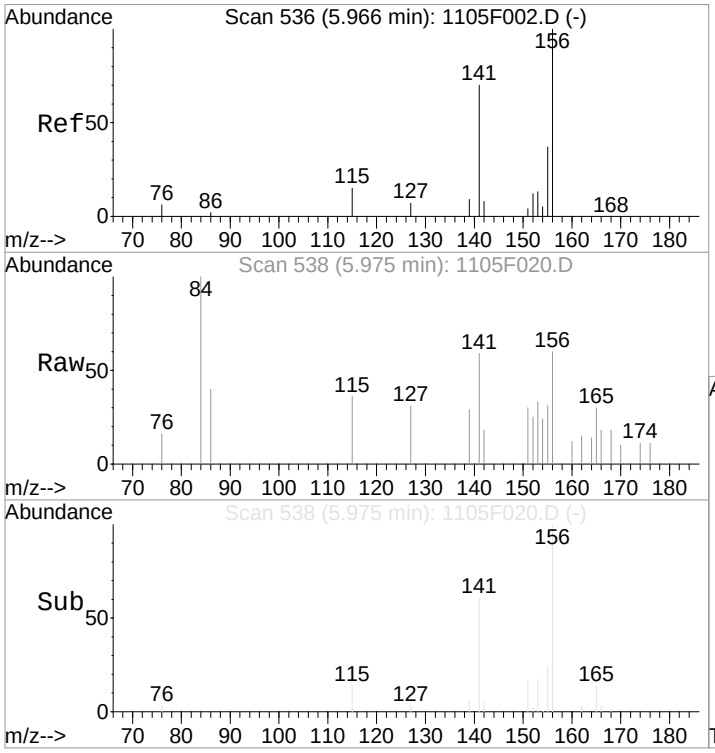
#6
Biphenyl
Concen: 3.25 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:154 Resp: 1035

Ion	Ratio	Lower	Upper
154	100		
153	31.4	11.4	71.4
152	20.0	7.1	47.1



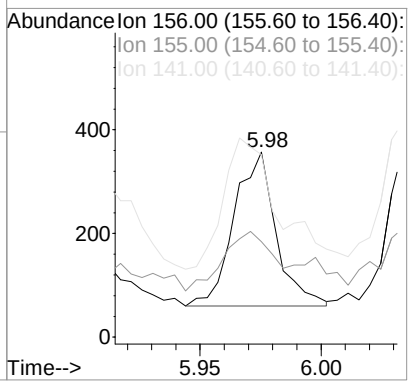
1st 11/16/18
2nd 11/27/18

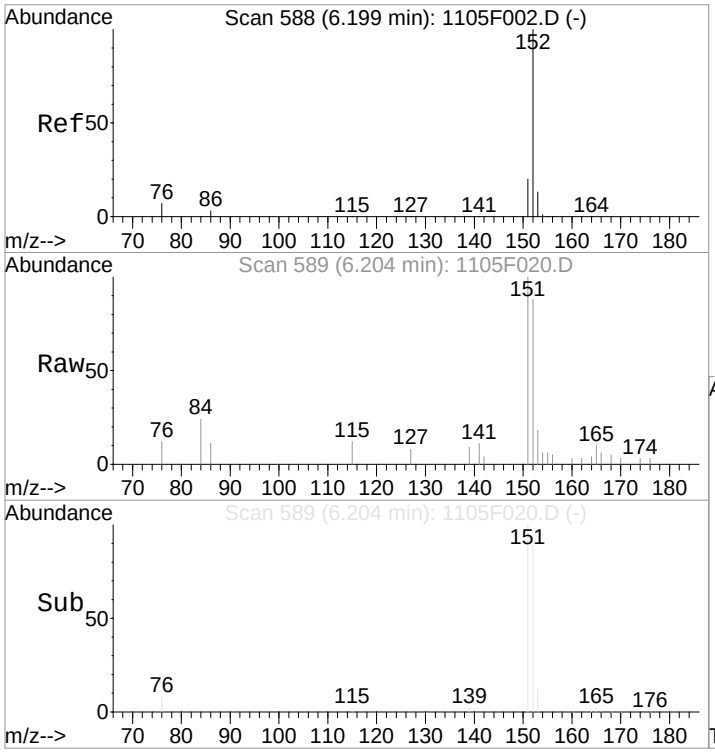


#7
2,6-Dimethylnaphthalene
Concen: 1.64 ng/ml
RT: 5.98 min Scan# 538
Delta R.T. 0.01 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:156 Resp: 359

Ion	Ratio	Lower	Upper
156	100		
155	32.0	7.0	67.0
141	74.4	47.9	87.9

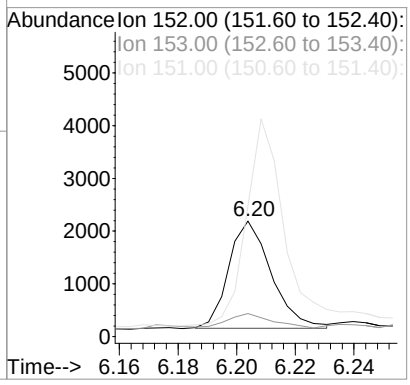




#9
Acenaphthylene
Concen: 5.24 ng/ml m
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

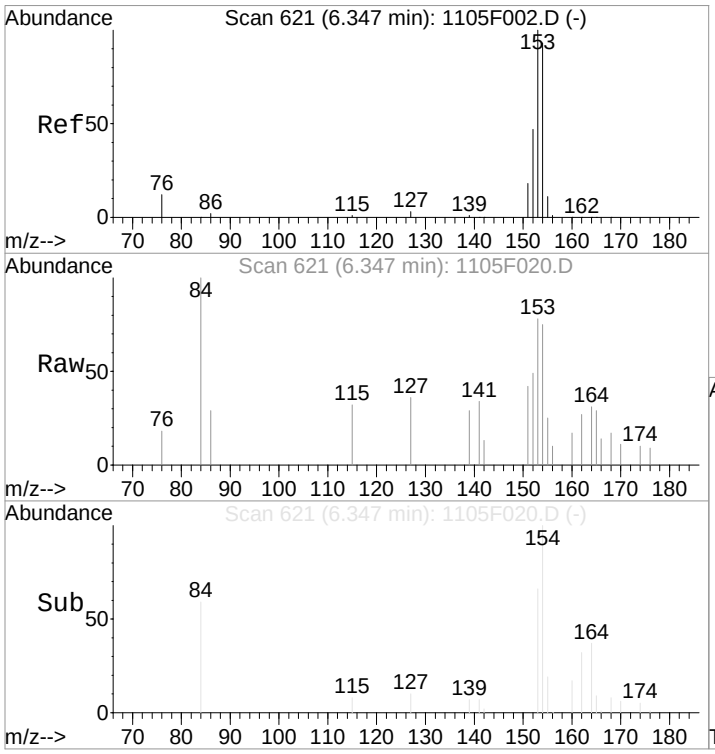
Tgt Ion:152 Resp: 2061

Ion	Ratio	Lower	Upper
152	100		
153	20.0	0.0	42.9
151	113.1	0.2	40.2#



X

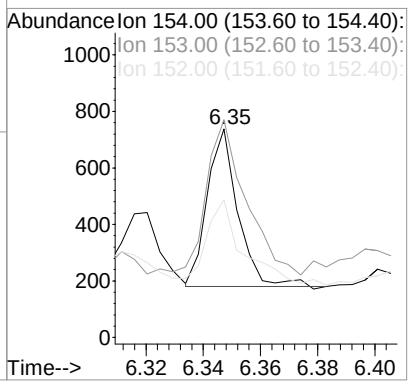
1st 11/16/18
2nd 11/27/18

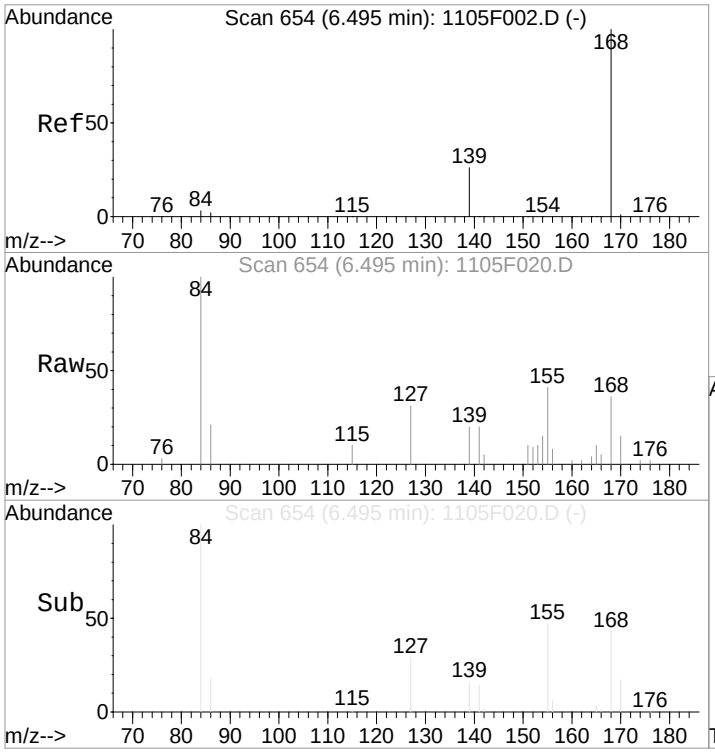


#10
Acenaphthene
Concen: 1.84 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:154 Resp: 415

Ion	Ratio	Lower	Upper
154	100		
153	93.4	77.1	137.1
152	54.1	19.7	79.7

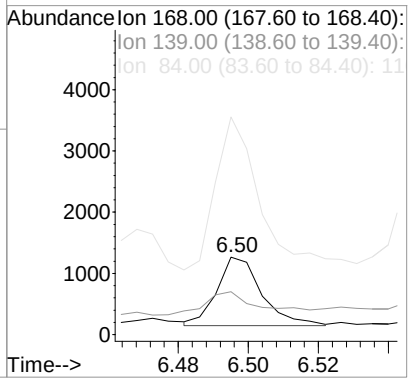




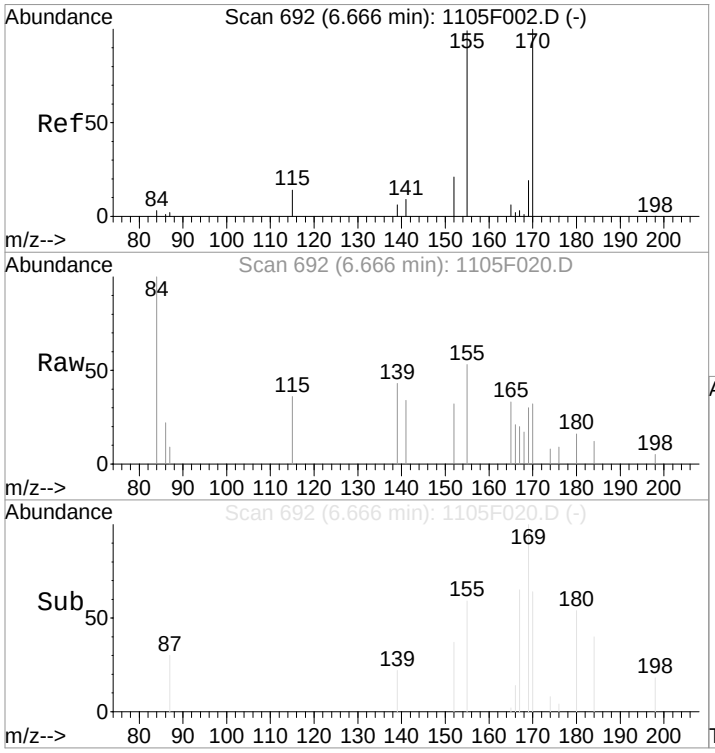
#11
Dibenzofuran
Concen: 2.73 ng/ml m
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:168 Resp: 990

Ion	Ratio	Lower	Upper
168	100		
139	55.4	0.0	55.8
84	281.3	0.0	23.5#



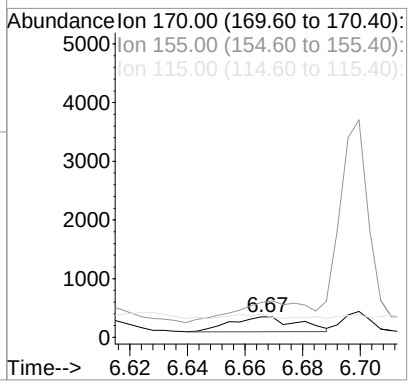
1st 11/16/18
2nd 11/27/18

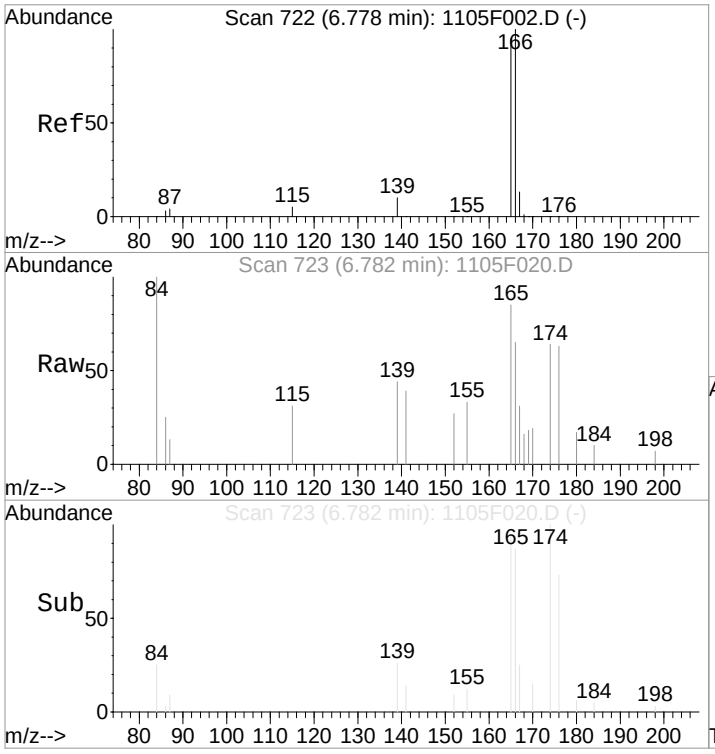


#12
2,3,5-Trimethylnaphthalene
Concen: 1.99 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:170 Resp: 416

Ion	Ratio	Lower	Upper
170	100		
155	135.6	59.2	119.2#
115	30.0	0.0	30.1

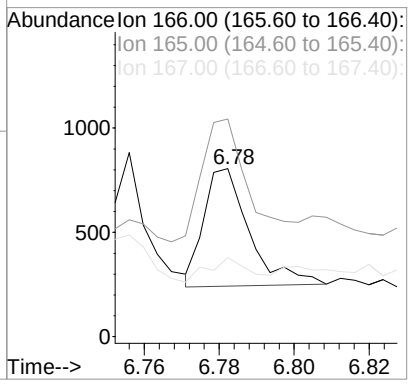




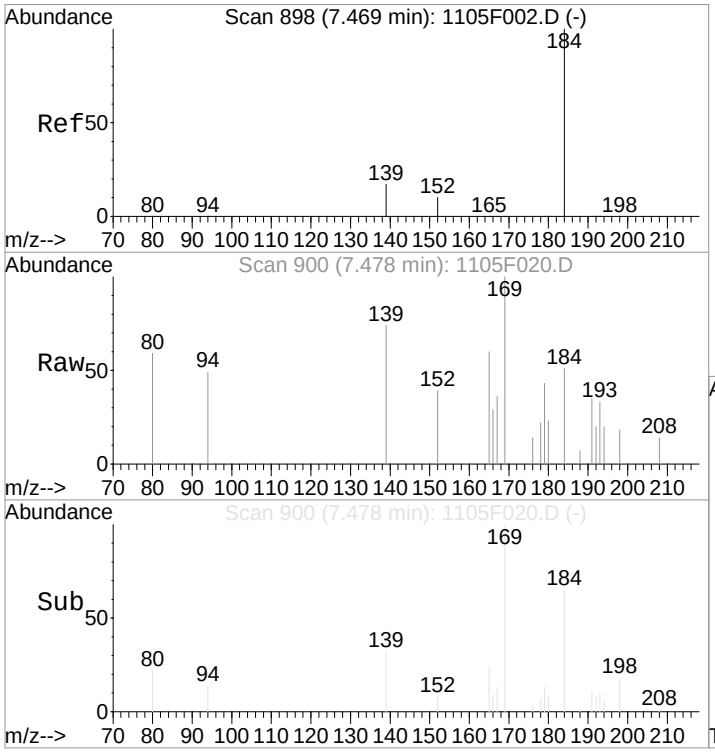
#14
Fluorene
Concen: 1.74 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:166 Resp: 475

Ion	Ratio	Lower	Upper
166	100		
165	101.1	63.4	123.4
167	21.1	0.0	33.1



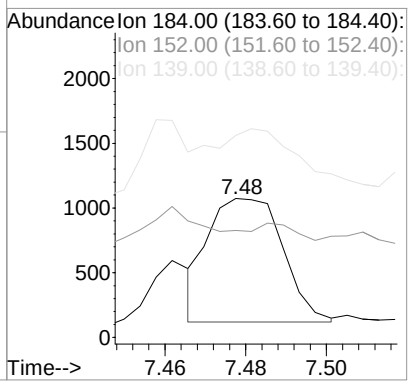
1st 11/16/18
2nd 11/27/18

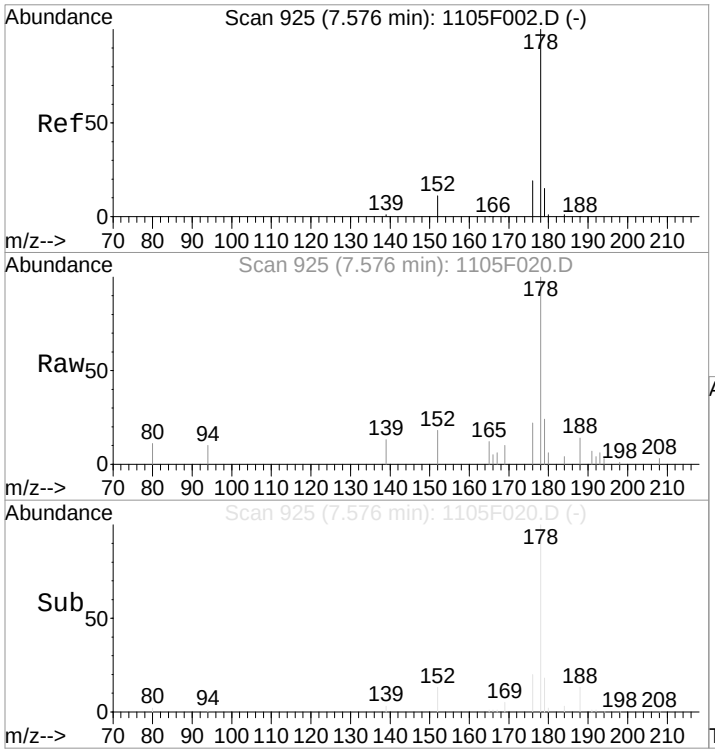


#16
Dibenzothiophene
Concen: 2.98 ng/ml m
RT: 7.48 min Scan# 900
Delta R.T. 0.01 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:184 Resp: 1224

Ion	Ratio	Lower	Upper
184	100		
152	76.9	0.0	37.8#
139	145.3	0.0	32.6#

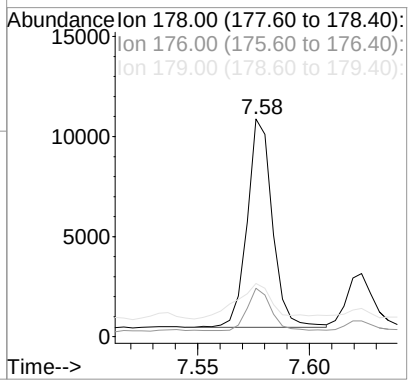




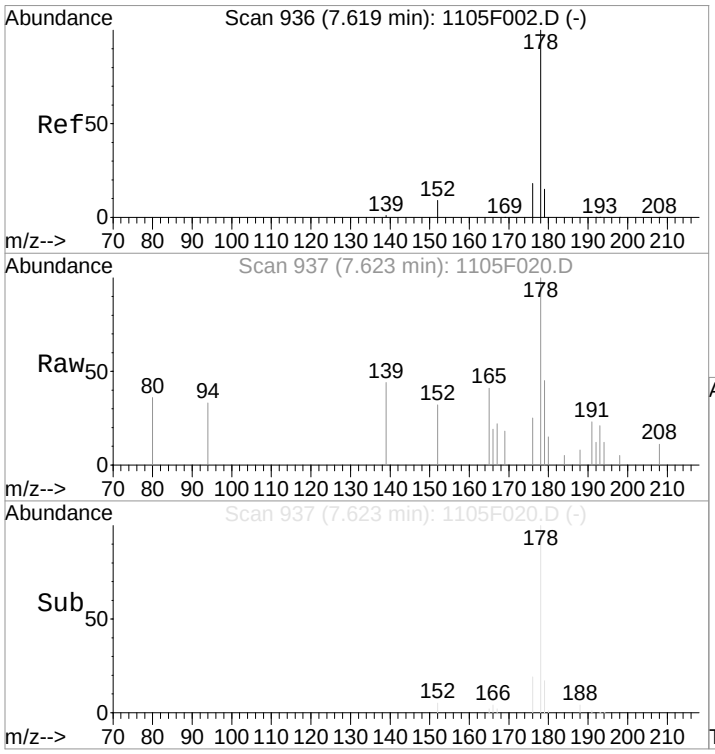
#17
Phenanthrene
Concen: 19.94 ng/ml
RT: 7.58 min Scan# 925
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:178 Resp: 8202

Ion	Ratio	Lower	Upper
178	100		
176	20.2	0.0	48.7
179	16.7	0.0	35.1



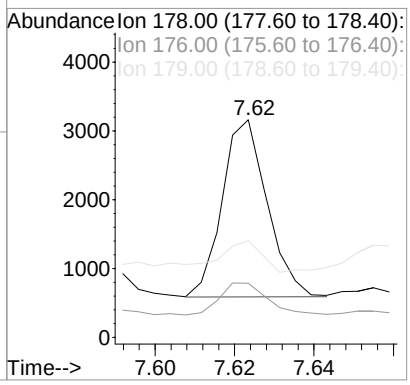
1st 11/16/18
2nd 11/27/18

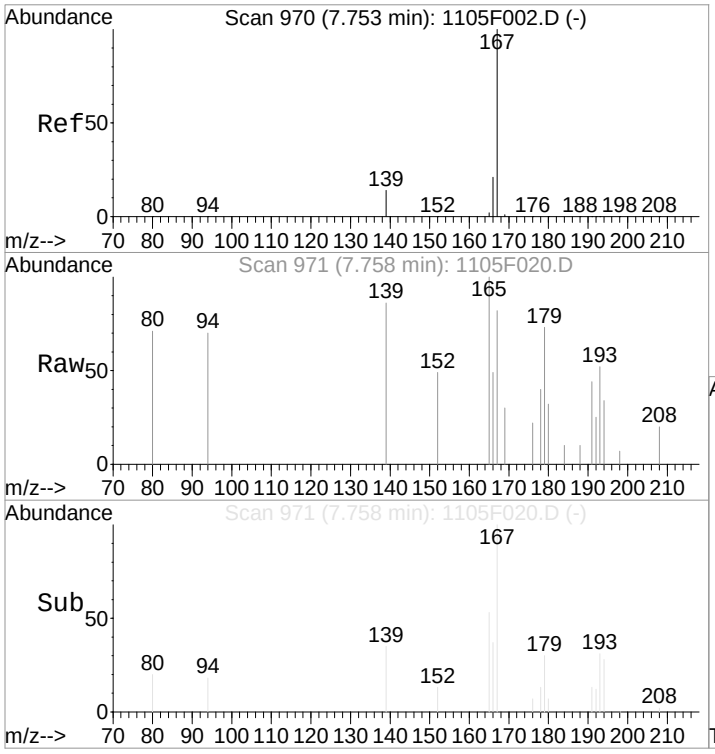


#18
Anthracene
Concen: 5.17 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:178 Resp: 2029

Ion	Ratio	Lower	Upper
178	100		
176	17.9	0.0	48.0
179	15.2	0.0	35.1

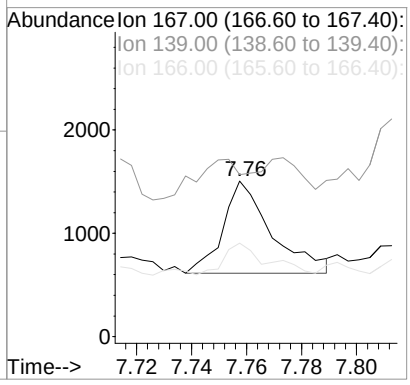




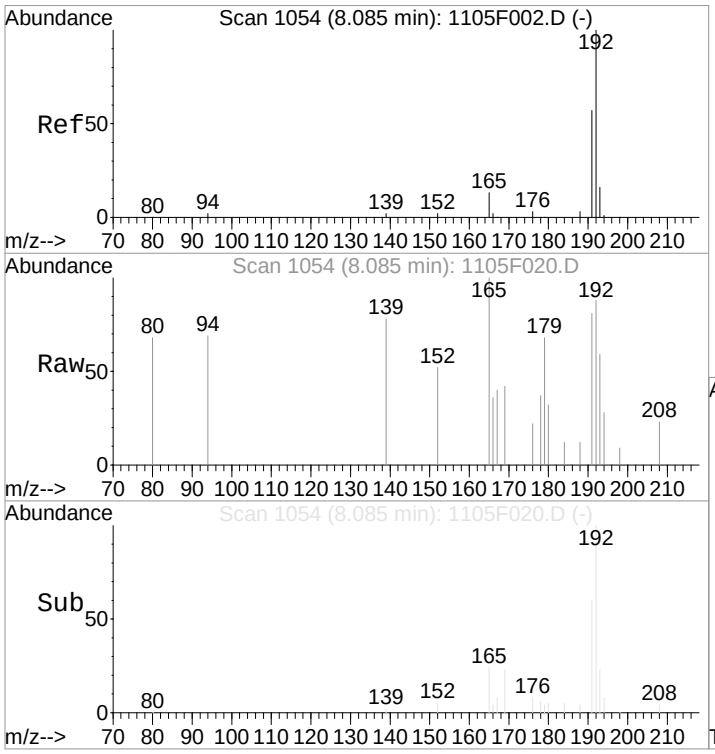
#19
Carbazole
Concen: 2.86 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:167 Resp: 1098

Ion	Ratio	Lower	Upper
167	100		
139	6.2	0.0	41.5
166	30.0	0.7	40.7



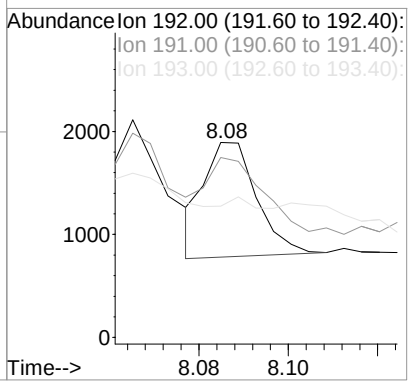
1st 11/16/18
2nd 11/27/18

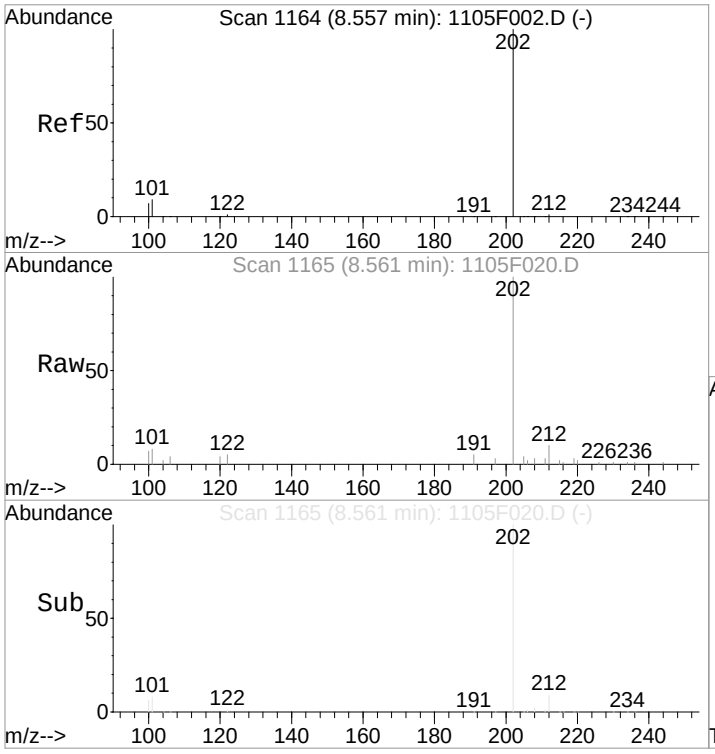


#20
1-Methylphenanthrene
Concen: 2.93 ng/ml
RT: 8.08 min Scan# 1054
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:192 Resp: 912

Ion	Ratio	Lower	Upper
192	100		
191	63.9	27.7	87.7
193	0.0	0.0	45.4

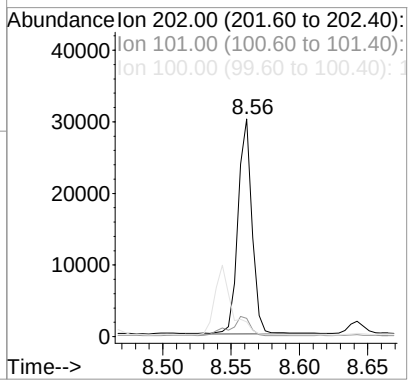




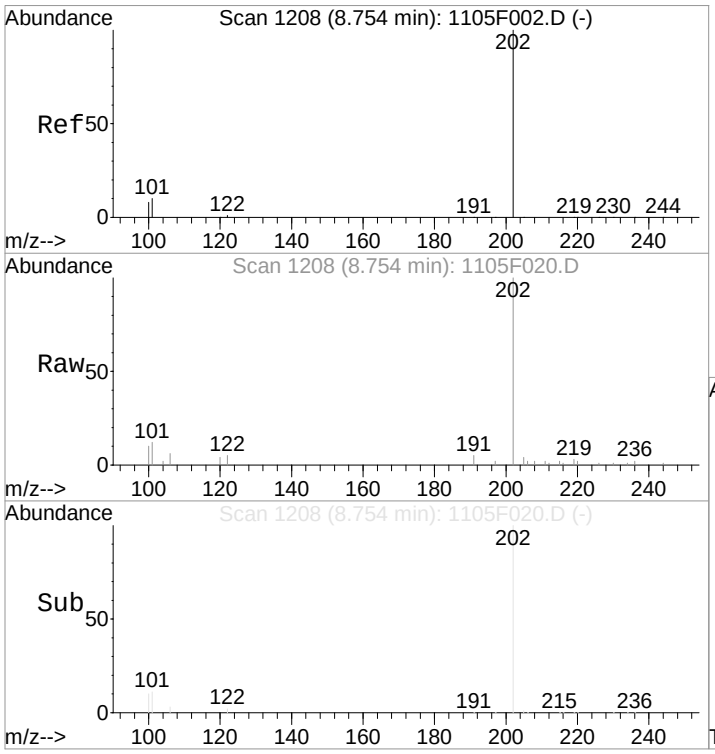
#21
Fluoranthene
Concen: 42.50 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:202 Resp: 21590

Ion	Ratio	Lower	Upper
202	100		
101	8.0	0.0	41.3
100	6.0	0.0	28.6



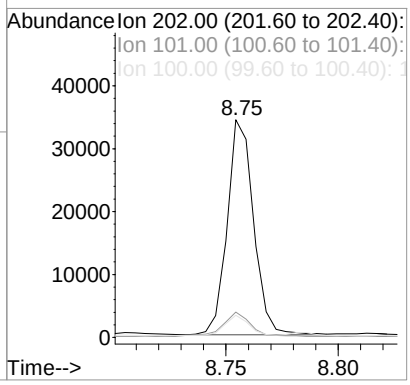
1st 11/16/18
2nd 11/27/18

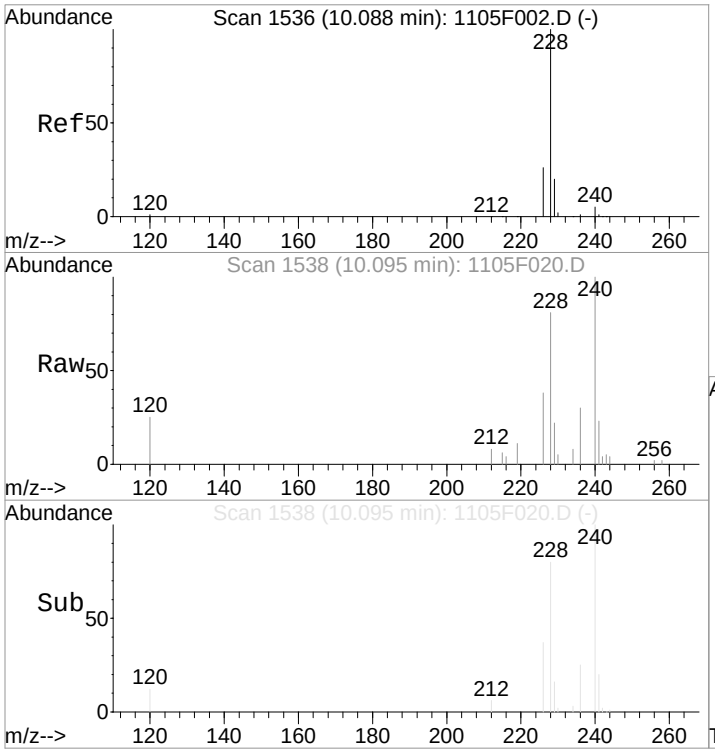


#24
Pyrene
Concen: 51.50 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:202 Resp: 27859

Ion	Ratio	Lower	Upper
202	100		
101	11.3	0.0	40.8
100	9.5	0.0	28.5

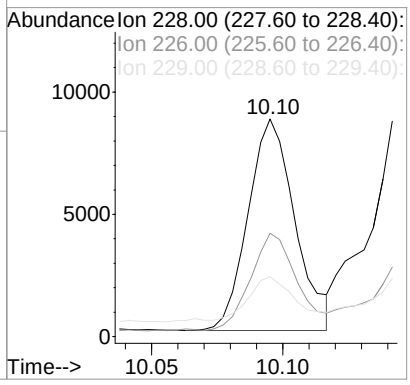




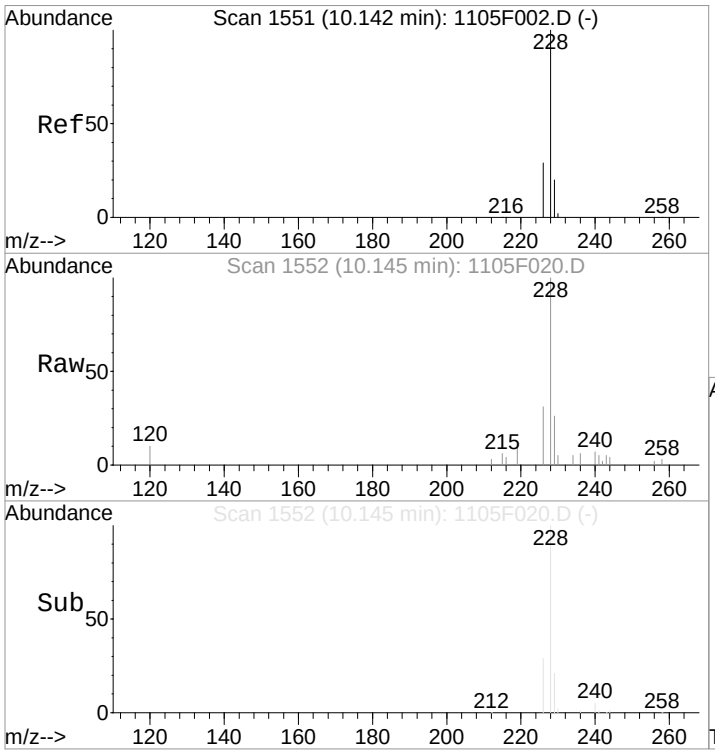
#26
Benz(a)anthracene
Concen: 21.13 ng/ml
RT: 10.10 min Scan# 1538
Delta R.T. 0.01 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:228 Resp: 10772

Ion	Ratio	Lower	Upper
228	100		
226	45.4	0.0	56.3
229	20.8	0.0	39.1



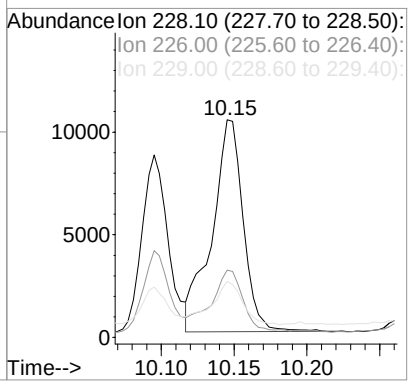
1st 11/16/18
2nd 11/27/18

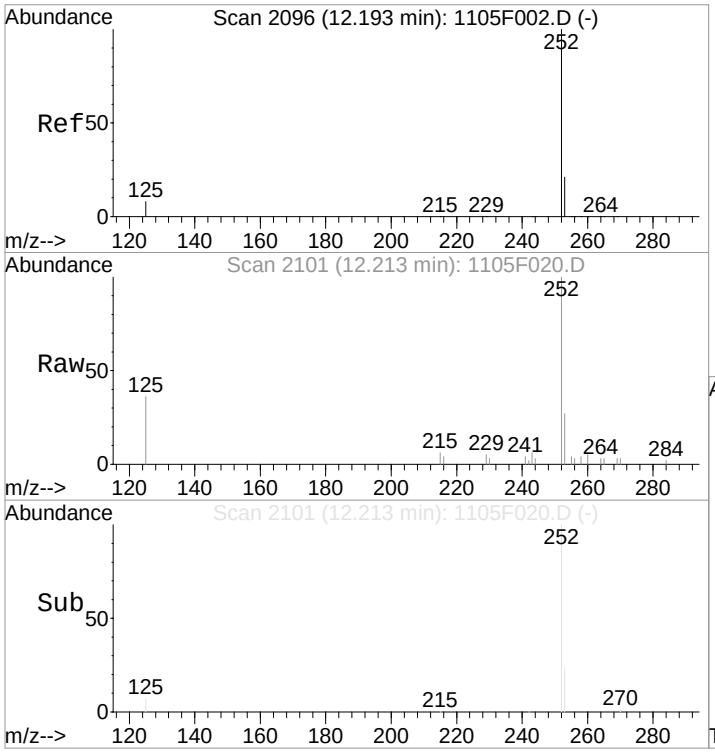


#27
Chrysene
Concen: 31.75 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. 0.00 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:228 Resp: 15505

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	58.7
229	20.2	0.0	39.2

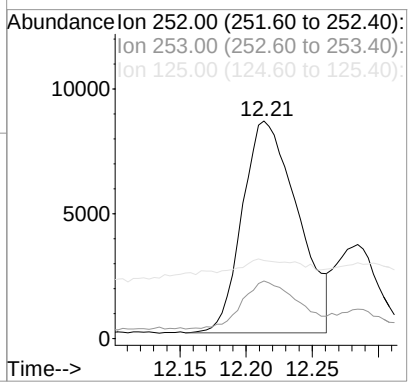




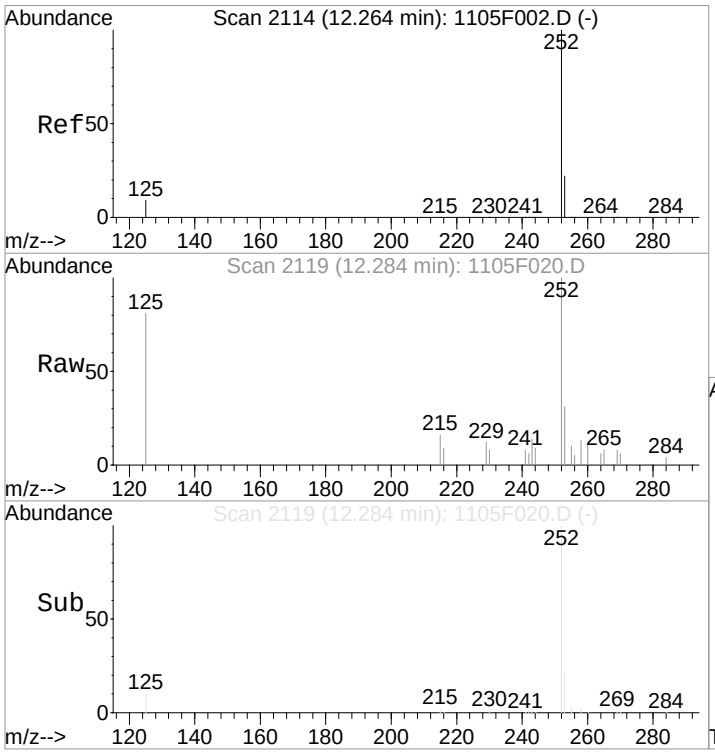
#29
Benzo(b)fluoranthene
Concen: 44.53 ng/ml
RT: 12.21 min Scan# 2101
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:252 Resp: 24830

Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	51.2
125	6.0	0.0	29.5



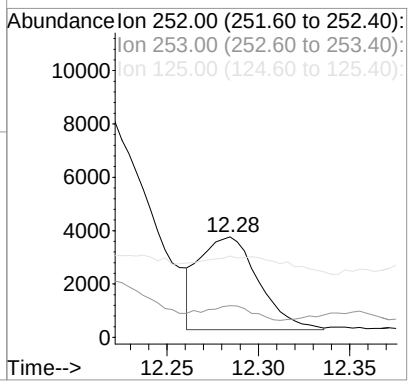
1st 11/16/18
2nd 11/27/18

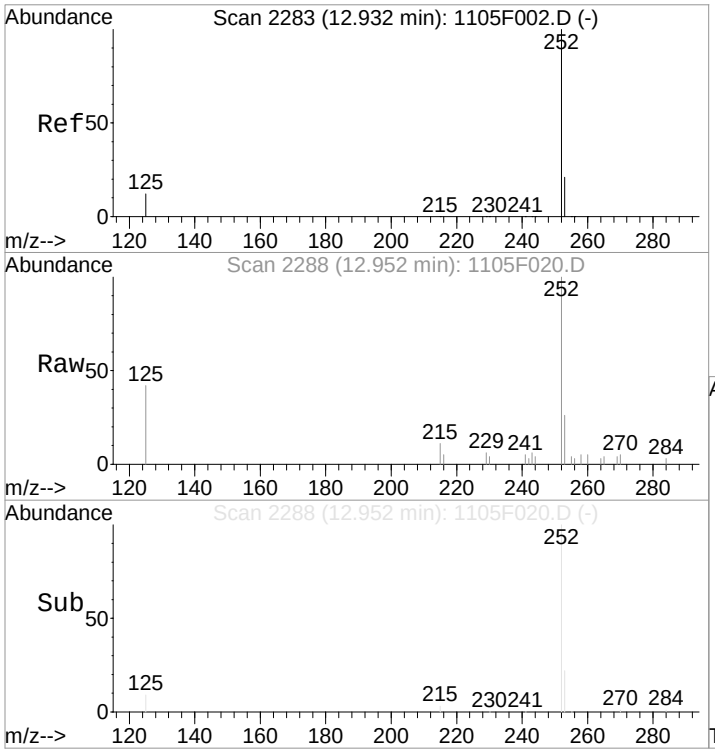


#30
Benzo(k)fluoranthene
Concen: 14.14 ng/ml m
RT: 12.28 min Scan# 2119
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:252 Resp: 7822

Ion	Ratio	Lower	Upper
252	100		
253	31.4	0.0	51.2
125	80.8	0.0	29.7#

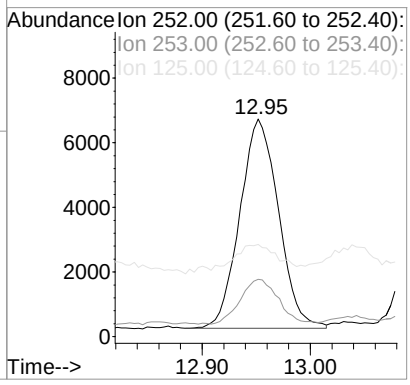


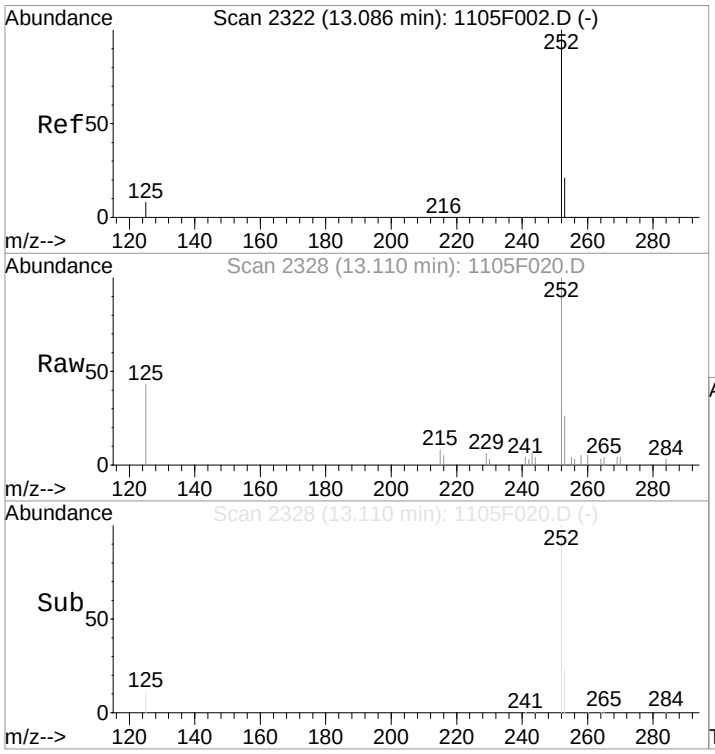


#31
Benzo(e)pyrene
Concen: 30.32 ng/ml
RT: 12.95 min Scan# 2288
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:252 Resp: 16117

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.3
125	14.1	0.0	33.5

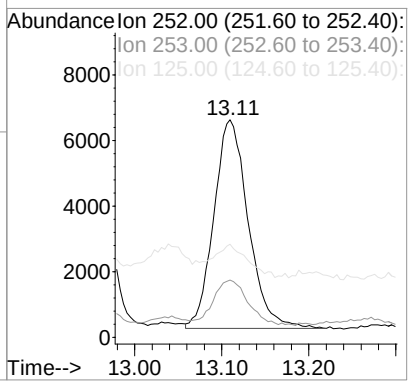


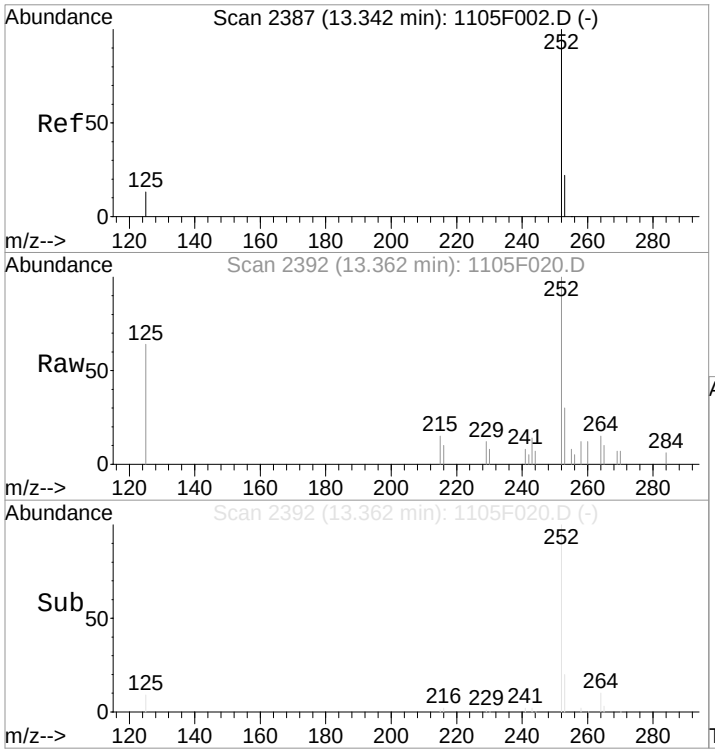


#32
Benzo(a)pyrene
Concen: 35.80 ng/ml
RT: 13.11 min Scan# 2328
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:252 Resp: 17509

Ion	Ratio	Lower	Upper
252	100		
253	19.8	0.0	50.9
125	14.9	0.0	30.3

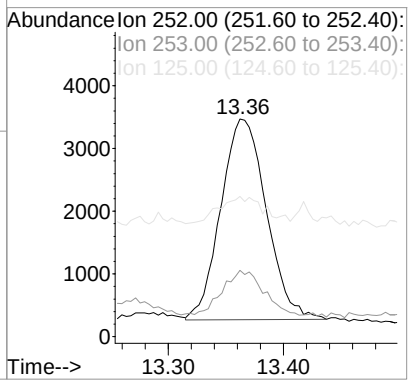




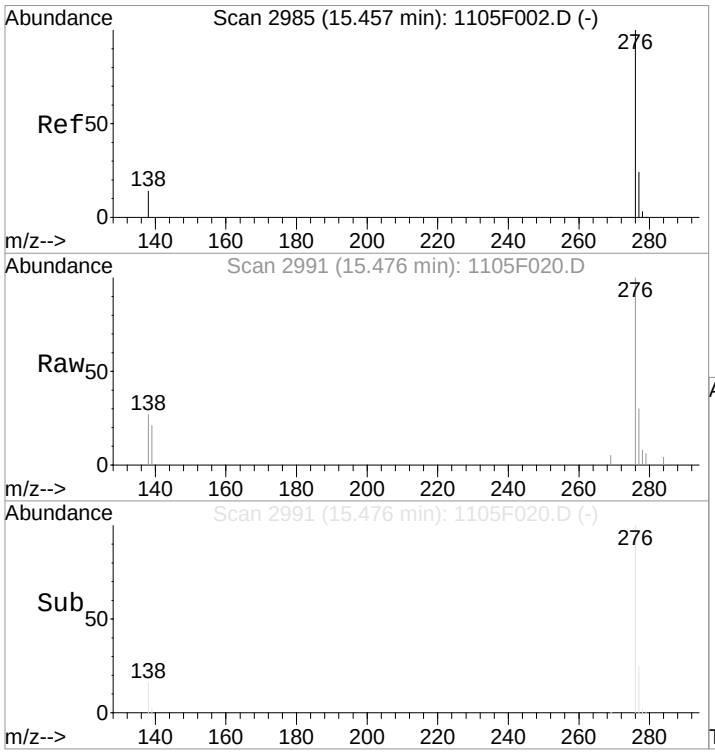
#33
Perylene
Concen: 17.18 ng/ml
RT: 13.36 min Scan# 2392
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:252 Resp: 8814

Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	51.2
125	13.6	0.0	33.8



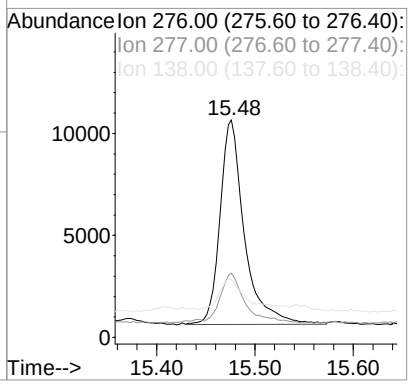
1st 11/16/18
2nd 11/27/18

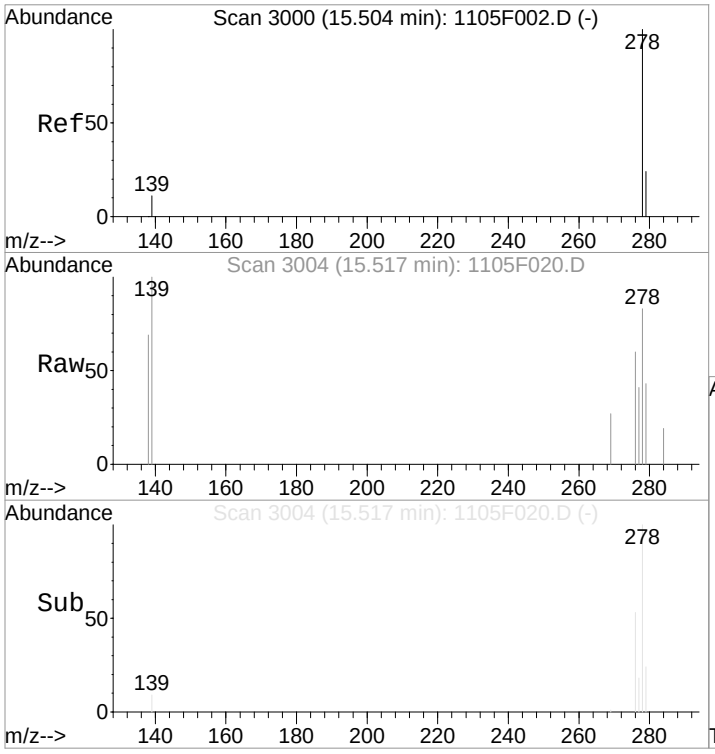


#34
Indeno(1,2,3-cd)pyrene
Concen: 36.26 ng/ml
RT: 15.48 min Scan# 2991
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:276 Resp: 17386

Ion	Ratio	Lower	Upper
276	100		
277	24.0	0.0	53.4
138	15.3	0.0	37.7

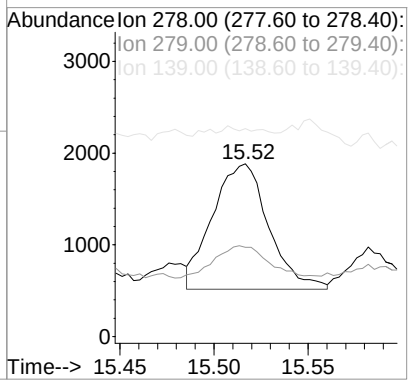




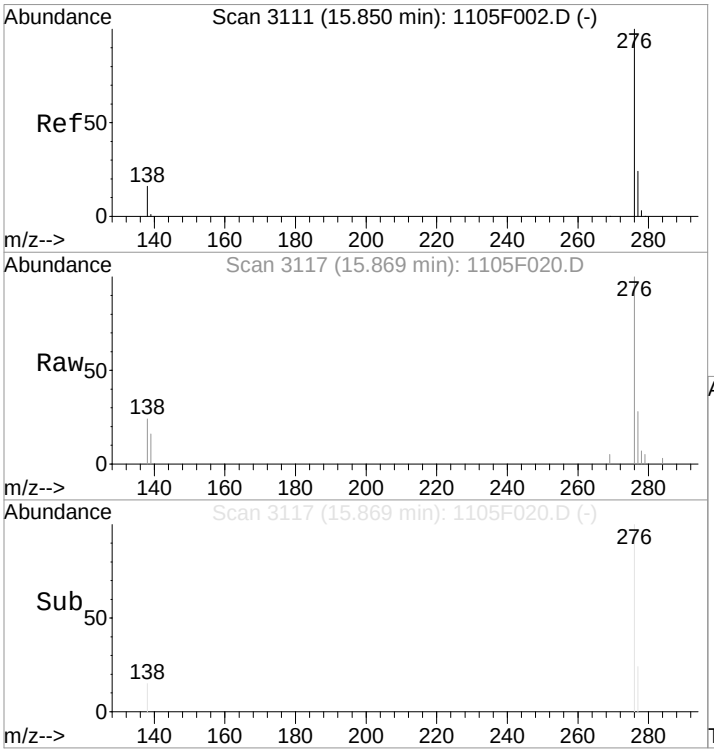
#35
Dibenz(a,h)anthracene
Concen: 5.85 ng/ml m
RT: 15.52 min Scan# 3004
Delta R.T. 0.01 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:278 Resp: 2842

Ion	Ratio	Lower	Upper
278	100		
279	51.7	0.0	53.5
139	120.5	0.0	35.0#



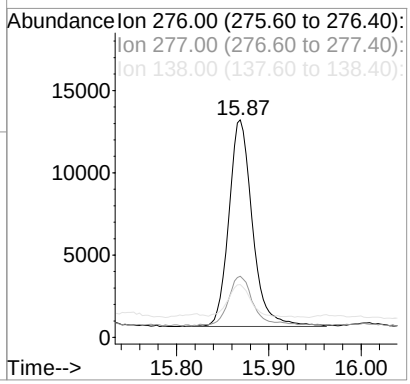
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 39.82 ng/ml
RT: 15.87 min Scan# 3117
Delta R.T. 0.02 min
Lab File: 1105F020.D
Acq: 5 Nov 2018 6:41 pm

Tgt Ion:276 Resp: 22363

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.1
138	14.7	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:12 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	73202	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	32934	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	65954	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	78844	200.00	ng/ml	0.00
28) Perylene-d12	13.28	264	90255	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	100481	491.77	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	49.18%		
13) Fluorene-d10	6.76	176	130221	618.39	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	61.84%		
22) Fluoranthene-d10	8.55	212	285269	686.28	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	68.63%		
25) Terphenyl-d14	8.89	244	252088	737.14	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	73.71%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	2109	4.99	ng/ml	90
4) 2-Methylnaphthalene	5.43	142	634	2.49	ng/ml	97
5) 1-Methylnaphthalene	5.51	142	315m	1.28	ng/ml	
6) Biphenyl	5.83	154	1035	3.25	ng/ml	85
7) 2,6-Dimethylnaphthalene	5.98	156	359	1.64	ng/ml	92
9) Acenaphthylene	6.20	152	2061m	5.24	ng/ml	
10) Acenaphthene	6.35	154	415	1.84	ng/ml	89
11) Dibenzofuran	6.50	168	990m	2.73	ng/ml	
12) 2,3,5-Trimethylnaphthalene	6.67	170	416	1.99	ng/ml#	50
14) Fluorene	6.78	166	475	1.74	ng/ml	91
16) Dibenzothiophene	7.48	184	1224m	2.98	ng/ml	
17) Phenanthrene	7.58	178	8202	19.94	ng/ml	96
18) Anthracene	7.62	178	2029	5.17	ng/ml	100
19) Carbazole	7.76	167	1098	2.86	ng/ml	82
20) 1-Methylphenanthrene	8.08	192	912	2.93	ng/ml	86
21) Fluoranthene	8.56	202	21590	42.50	ng/ml	92
24) Pyrene	8.75	202	27859	51.50	ng/ml	98
26) Benz(a)anthracene	10.10	228	10772	21.13	ng/ml	77
27) Chrysene	10.15	228	15505	31.75	ng/ml	99
29) Benzo(b)fluoranthene	12.21	252	24830	44.53	ng/ml	95
30) Benzo(k)fluoranthene	12.28	252	7822m	14.14	ng/ml	
31) Benzo(e)pyrene	12.95	252	16117	30.32	ng/ml	99
32) Benzo(a)pyrene	13.11	252	17509	35.80	ng/ml	94
33) Perylene	13.36	252	8814	17.18	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	17386	36.26	ng/ml	97
35) Dibenz(a,h)anthracene	15.52	278	2842m	5.85	ng/ml	
36) Benzo(g,h,i)perylene	15.87	276	22363	39.82	ng/ml	95

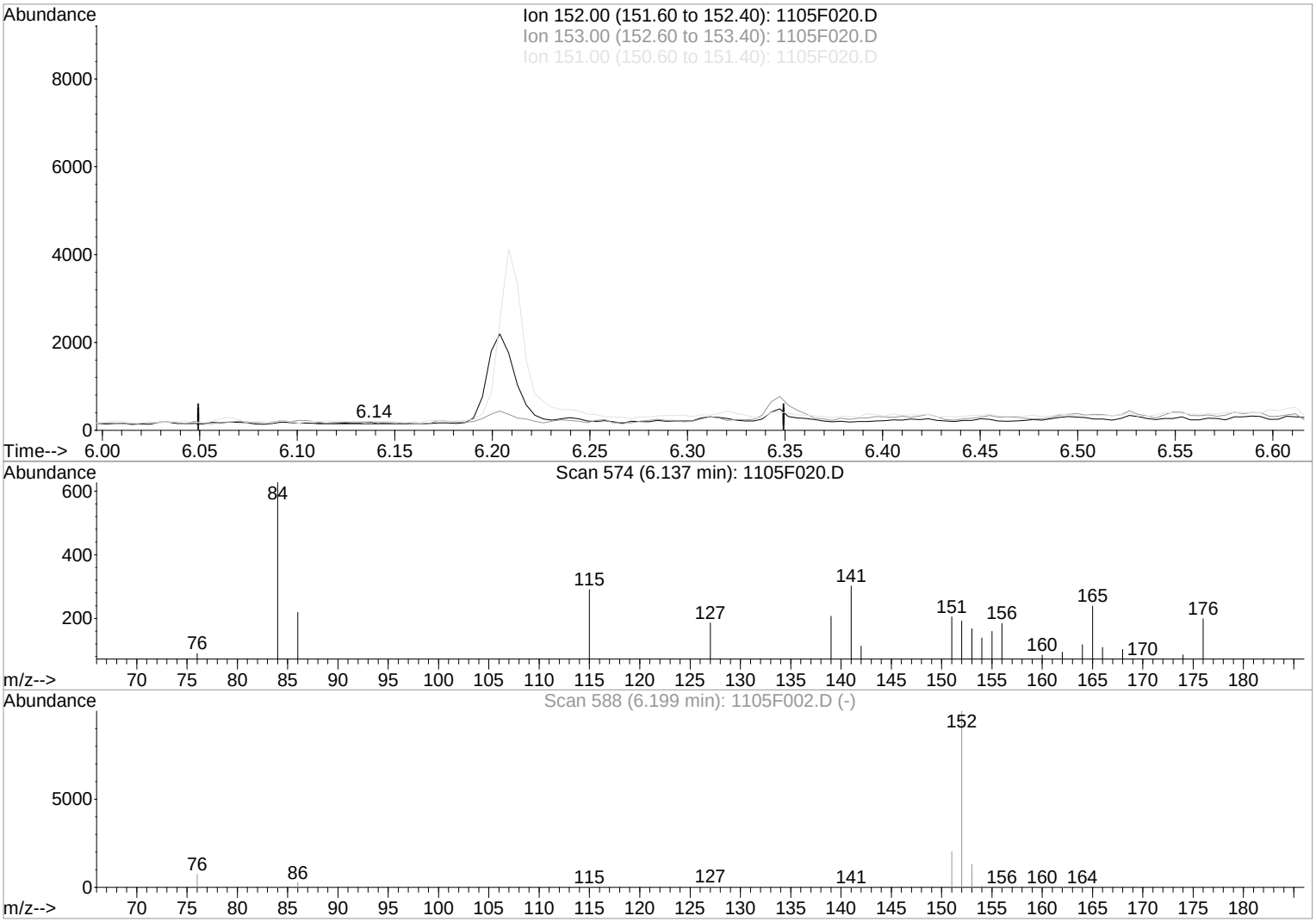
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:42 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F020.D

(9) Acenaphthylene (T)

6.14min 0.17ng/ml

response 67

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	33.96
151.00	20.20	33.96
0.00	0.00	0.00

Manual Integration:

Before

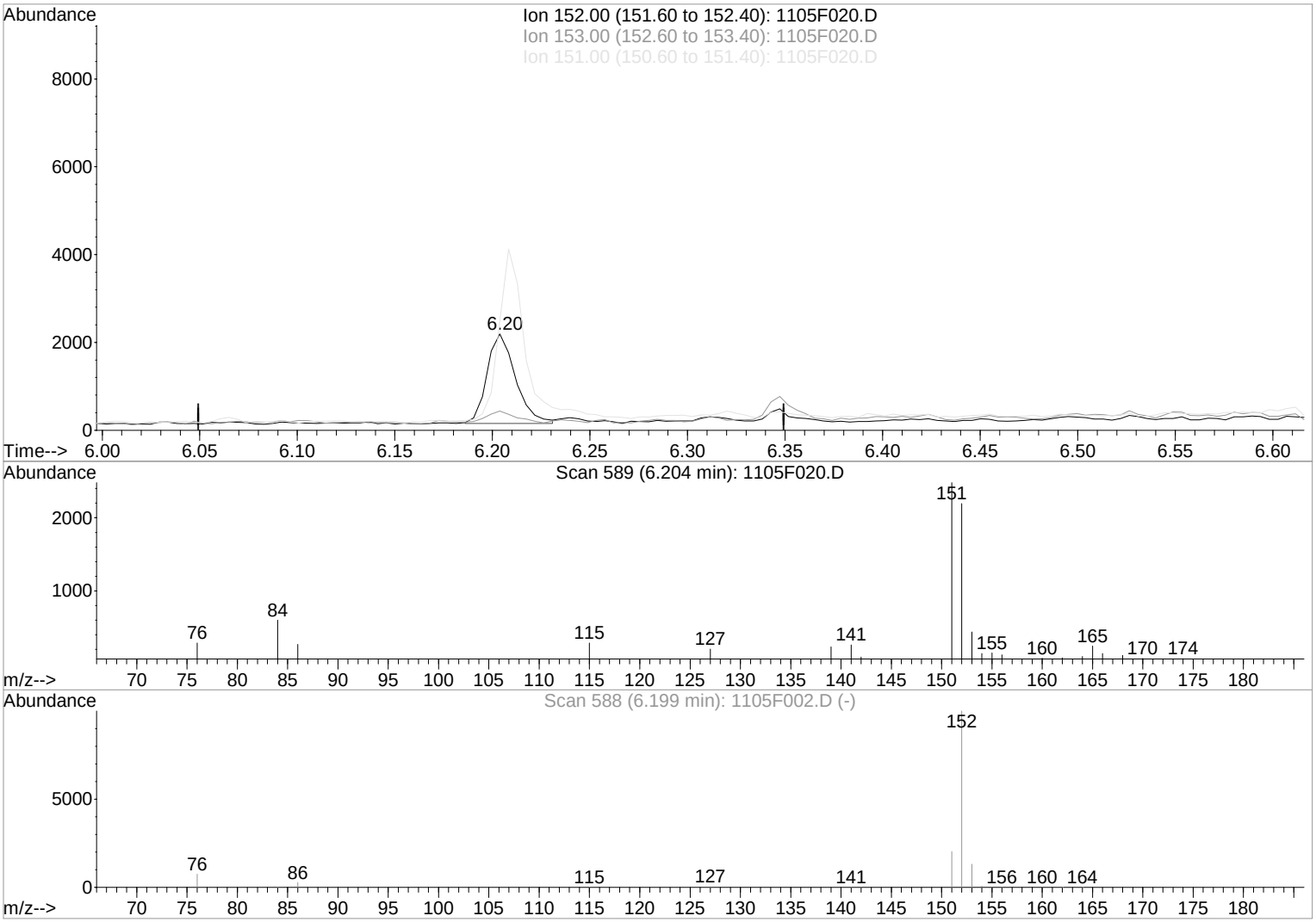
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:42 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F020.D

(9) Acenaphthylene (T)

6.20min 5.24ng/ml m

response 2061

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	20.01
151.00	20.20	113.13#
0.00	0.00	0.00

Manual Integration:

After

WP

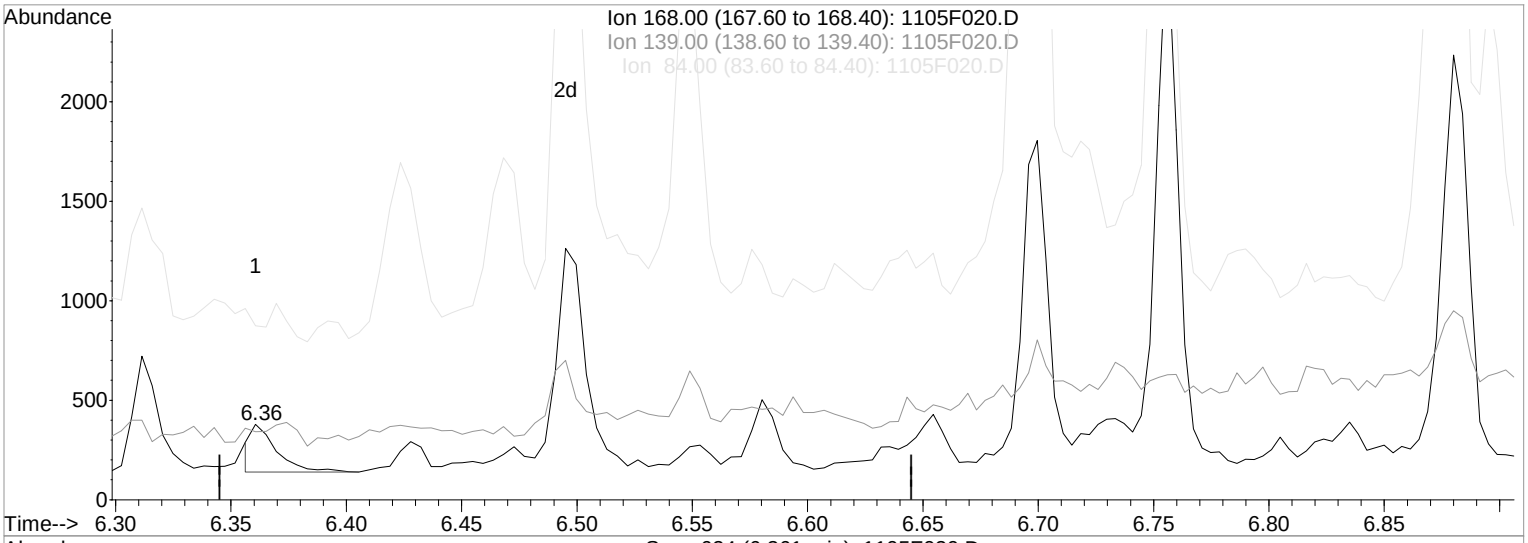
11/16/18

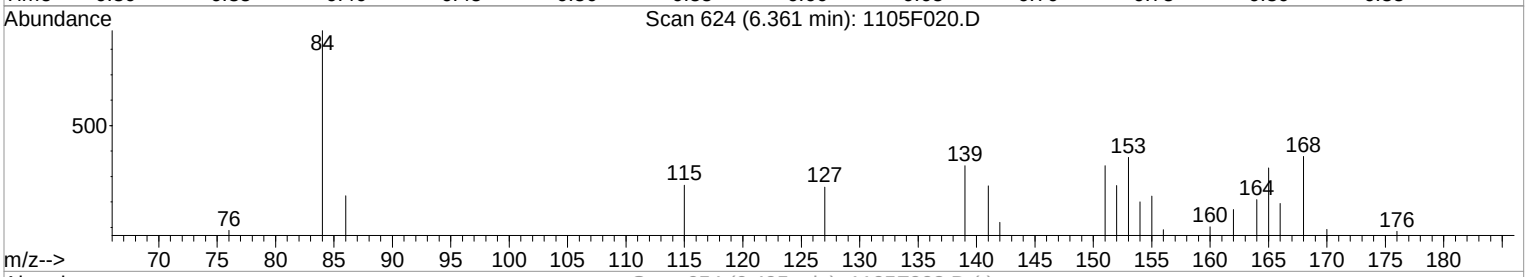
Quantitation Report (Qedit)

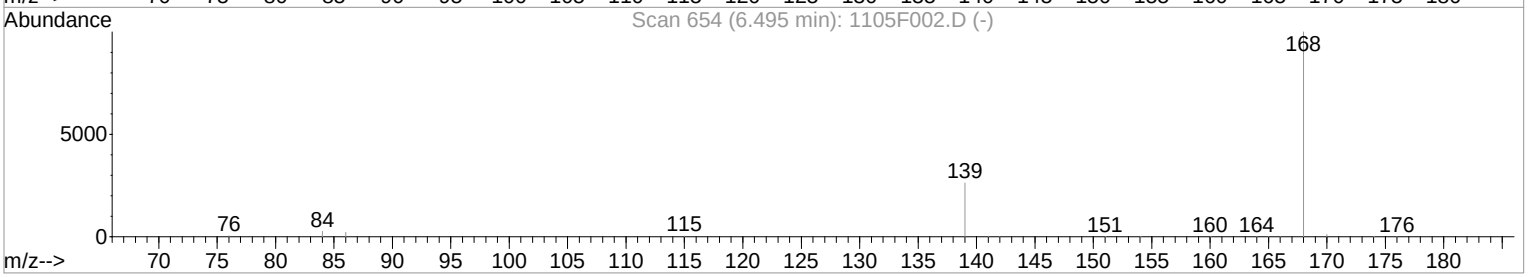
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:42 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration







TIC: 1105F020.D

(11) Dibenzofuran (T)

6.36min 0.51ng/ml

response 183

Ion	Exp%	Act%
168.00	100	100
139.00	25.80	10.42
84.00	3.50	15.00
0.00	0.00	0.00

Manual Integration:

Before

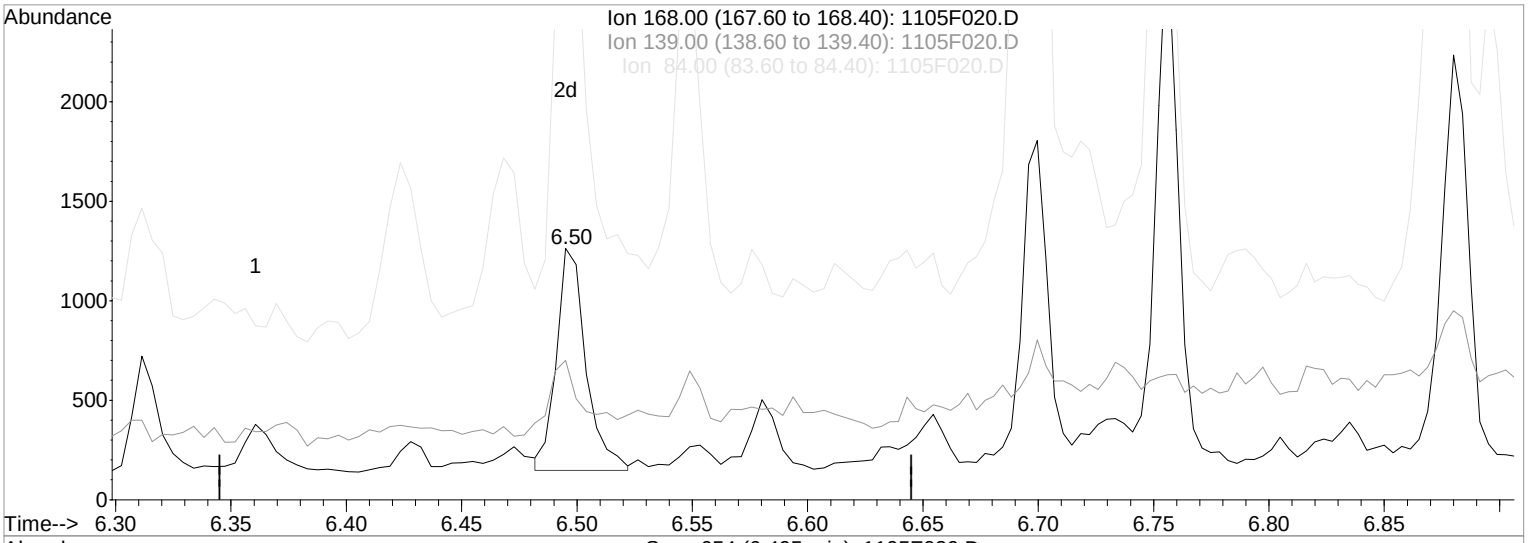
11/16/18

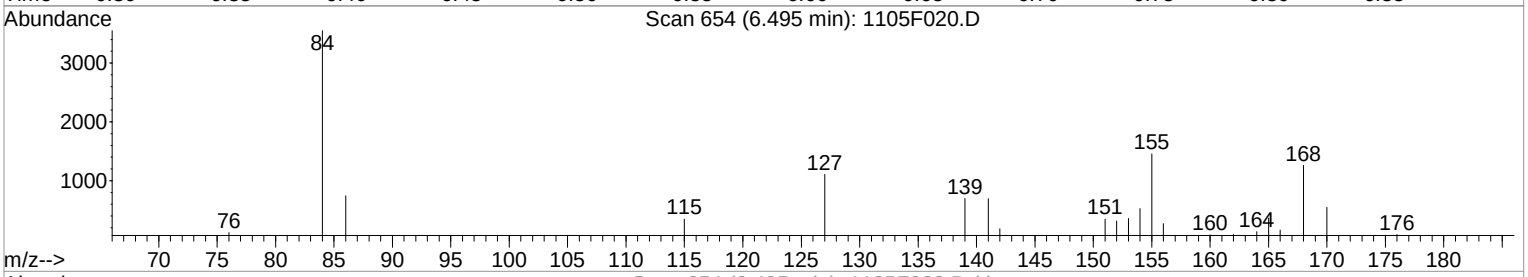
Quantitation Report (Qedit)

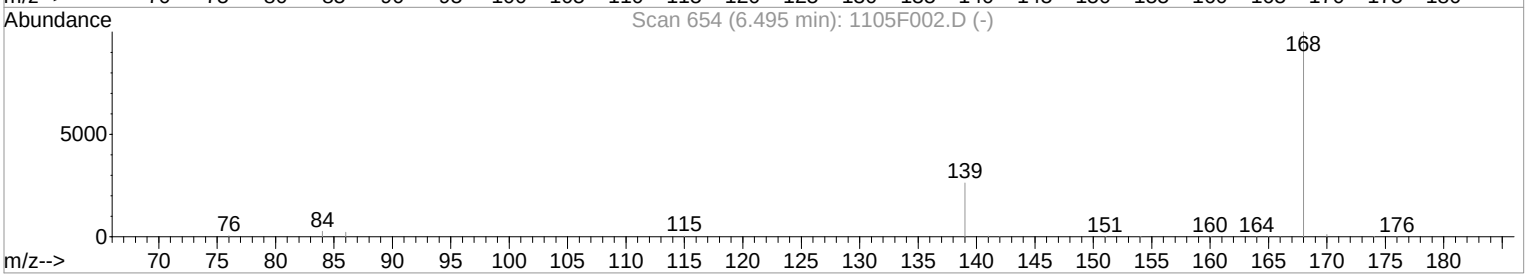
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:42 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration







TIC: 1105F020.D

(11) Dibenzofuran (T)

6.50min 2.73ng/ml m

response 990

Ion	Exp%	Act%
168.00	100	100
139.00	25.80	55.42
84.00	3.50	281.31#
0.00	0.00	0.00

Manual Integration:

After

WP

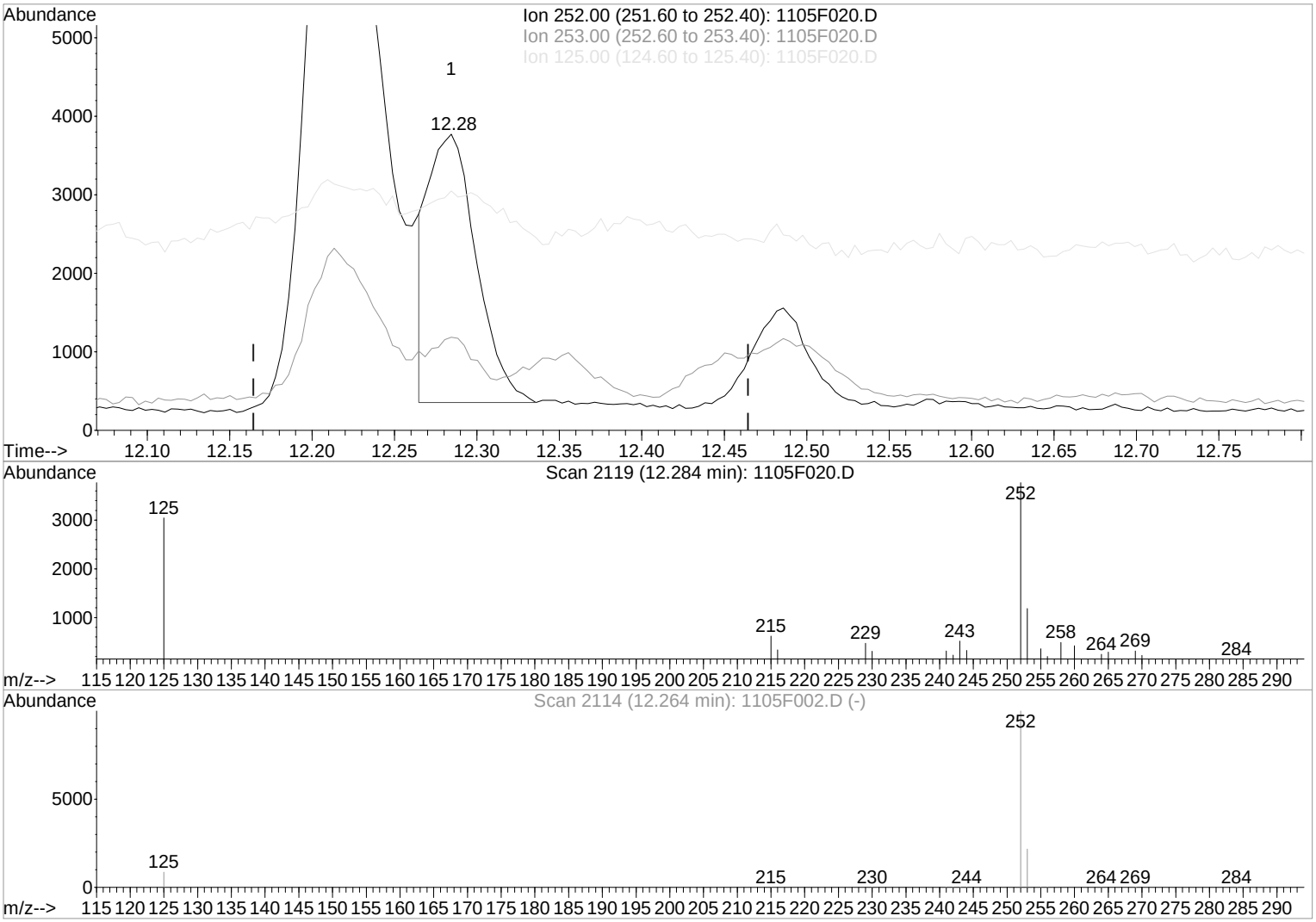
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:43 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F020.D

(30) Benzo(k)fluoranthene (T)

12.28min 12.64ng/ml

response 6991

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	9.94
125.00	9.70	17.28
0.00	0.00	0.00

Manual Integration:

Before

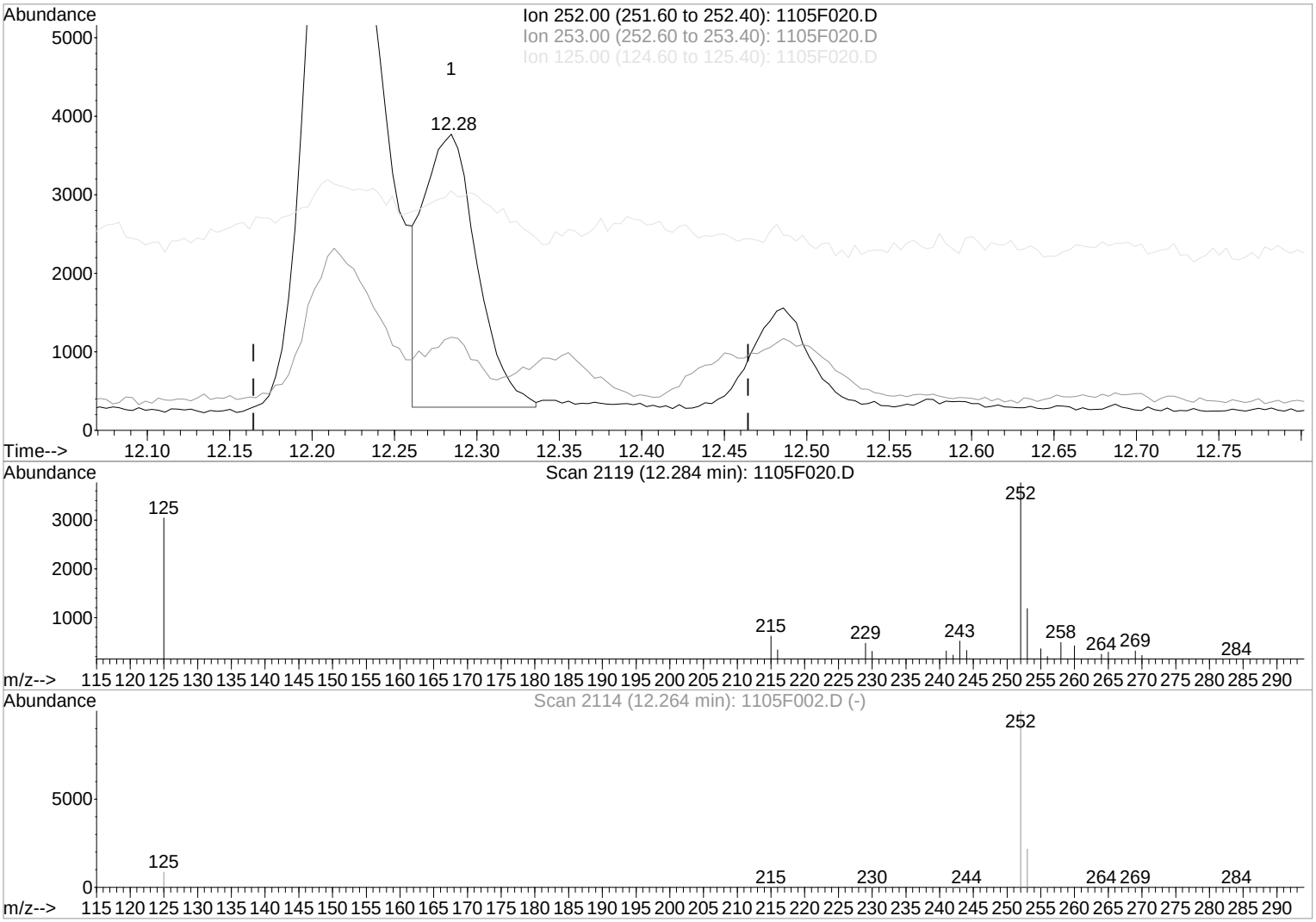
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:43 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F020.D

(30) Benzo(k)fluoranthene (T)

12.28min 14.14ng/ml m

response 7822

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	31.40
125.00	9.70	80.77#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

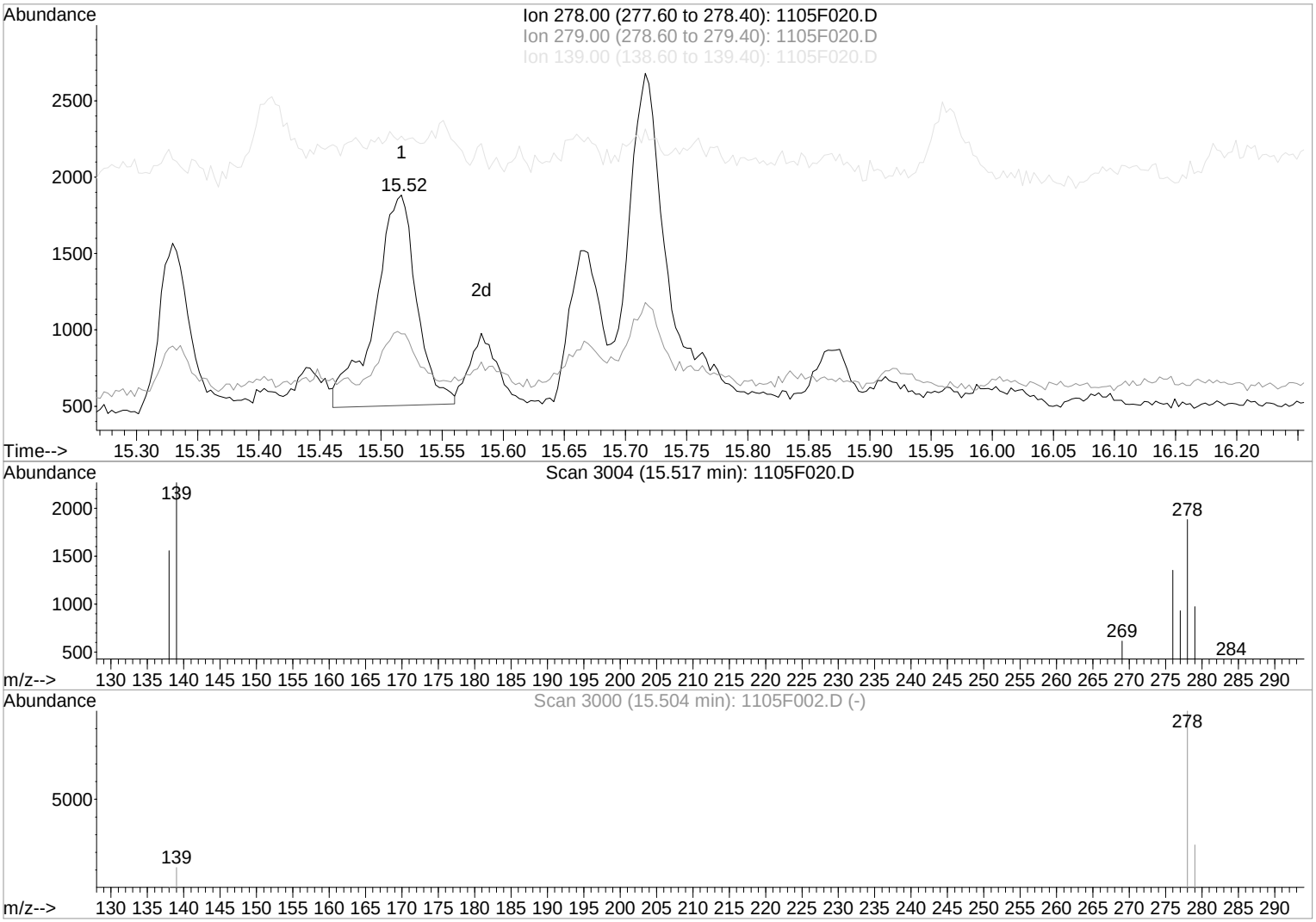
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:43 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F020.D

(35) Dibenz(a,h)anthracene (T)

15.52min 6.73ng/ml

response 3269

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	22.00
139.00	15.00	4.25
0.00	0.00	0.00

Manual Integration:

Before

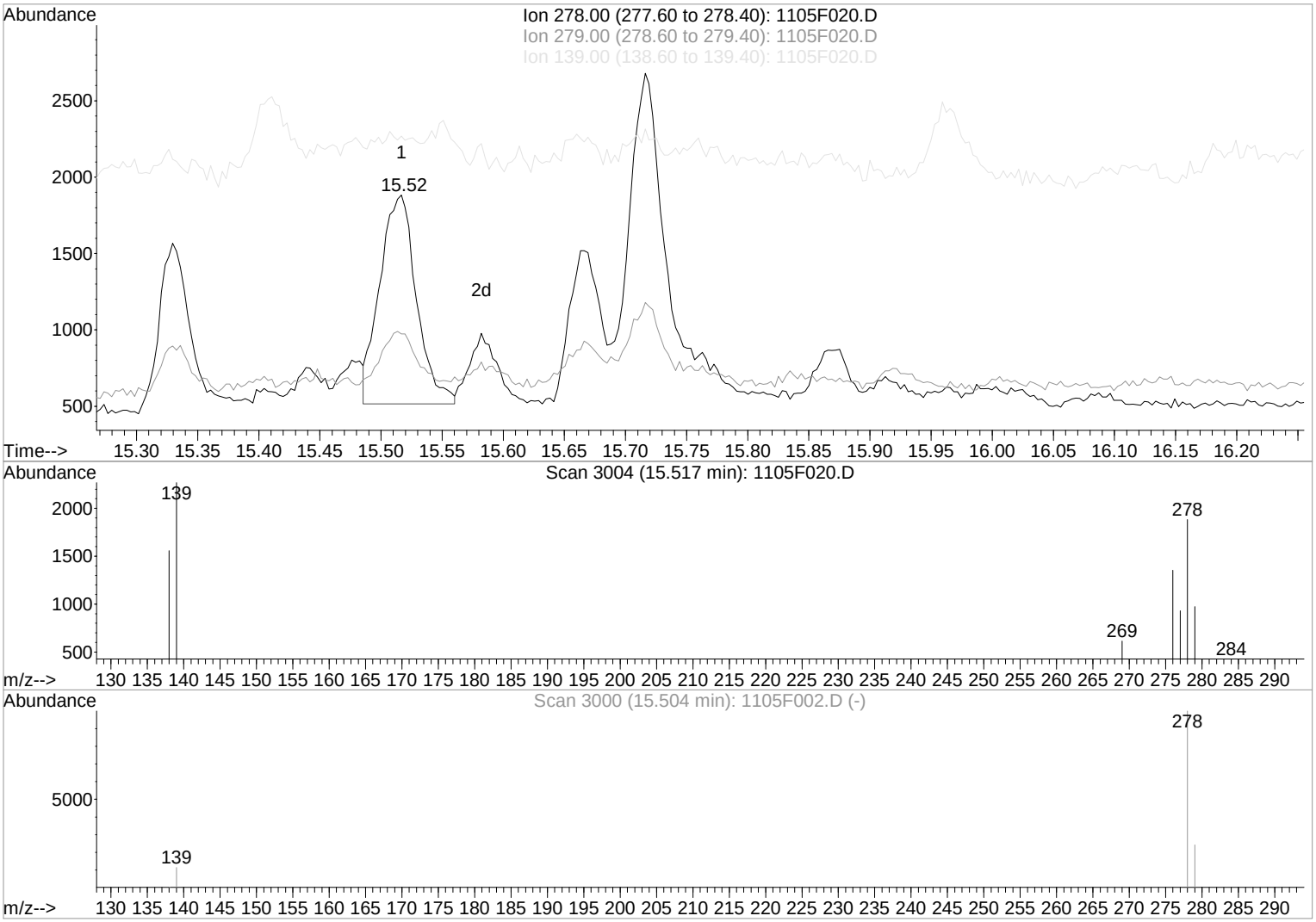
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F020.D Vial: 20
Acq On : 5 Nov 2018 6:41 pm Operator: LWeiskopf
Sample : K1810270-006 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:43 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F020.D

(35) Dibenz(a,h)anthracene (T)

15.52min 5.85ng/ml m

response 2842

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	51.67
139.00	15.00	120.50#
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F019.D
Lab ID: K1810270-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/05/2018 18:11
Date Quantitated: 11/16/2018 08:42
Batch ID: KWG1806019
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F019.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 18:11	**Quant Date:**	11/16/2018 08:42	**Vial:**	19
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-010			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/15/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700767	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	73964	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31751	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	59620	200.00	OK
4	Chrysene-d12	10.11	0.01	240	76034	200.00	OK
5	Perylene-d12	13.27	0.01	264	91548	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	125495	618.15	62	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	229107	609.73	61	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	205782	623.98	62	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	954	2.23	0.18	J	
1	2-Methylnaphthalene	5.42		0.00	142	287	1.11	0.088	J	
2	Acenaphthylene	6.21	0.01	0.00	152	652**m**	1.72	0.14	JX	
2	Acenaphthene	6.35		0.00	154	144	0.6600	0.052	J	
2	Dibenzofuran	6.50		0.00	168	332	0.9500	0.075	J	
2	Fluorene	6.78		0.00	166	225	0.8500	0.067	J	
3	Phenanthrene	7.58		0.00	178	1332	3.58	0.28	J	
3	Anthracene	7.62		0.00	178	509	1.43	0.11	J	
3	Fluoranthene	8.56		0.00	202	2486	5.41	0.43		
4	Pyrene	8.76	0.01	0.00	202	3070	5.88	0.47		
4	Benz(a)anthracene	10.10	0.01	0.00	228	2042	4.15	0.33	J	
4	Chrysene	10.15	0.01	0.00	228	3303**m**	7.01	0.56		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F019.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 18:11	**Quant Date:**	11/16/2018 08:42	**Vial:**	19
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-010			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.21	0.02	0.00	252	8573	15.16	1.2		
5	Benzo(k)fluoranthene	12.28	0.02	0.00	252	2390	4.26	0.34	J	
5	Benzo(a)pyrene	13.10	0.01	0.00	252	2698	5.44	0.43		
5	Indeno(1,2,3-cd)pyrene	15.47	0.01	0.00	276	4313	8.87	0.70		
5	Dibenz(a,h)anthracene	15.51	0.01	0.00	278	978	1.98	0.16	J	
5	Benzo(g,h,i)perylene	15.86	0.01	0.00	276	4586	8.05	0.64		

Prep Amount:	40.087 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	63 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

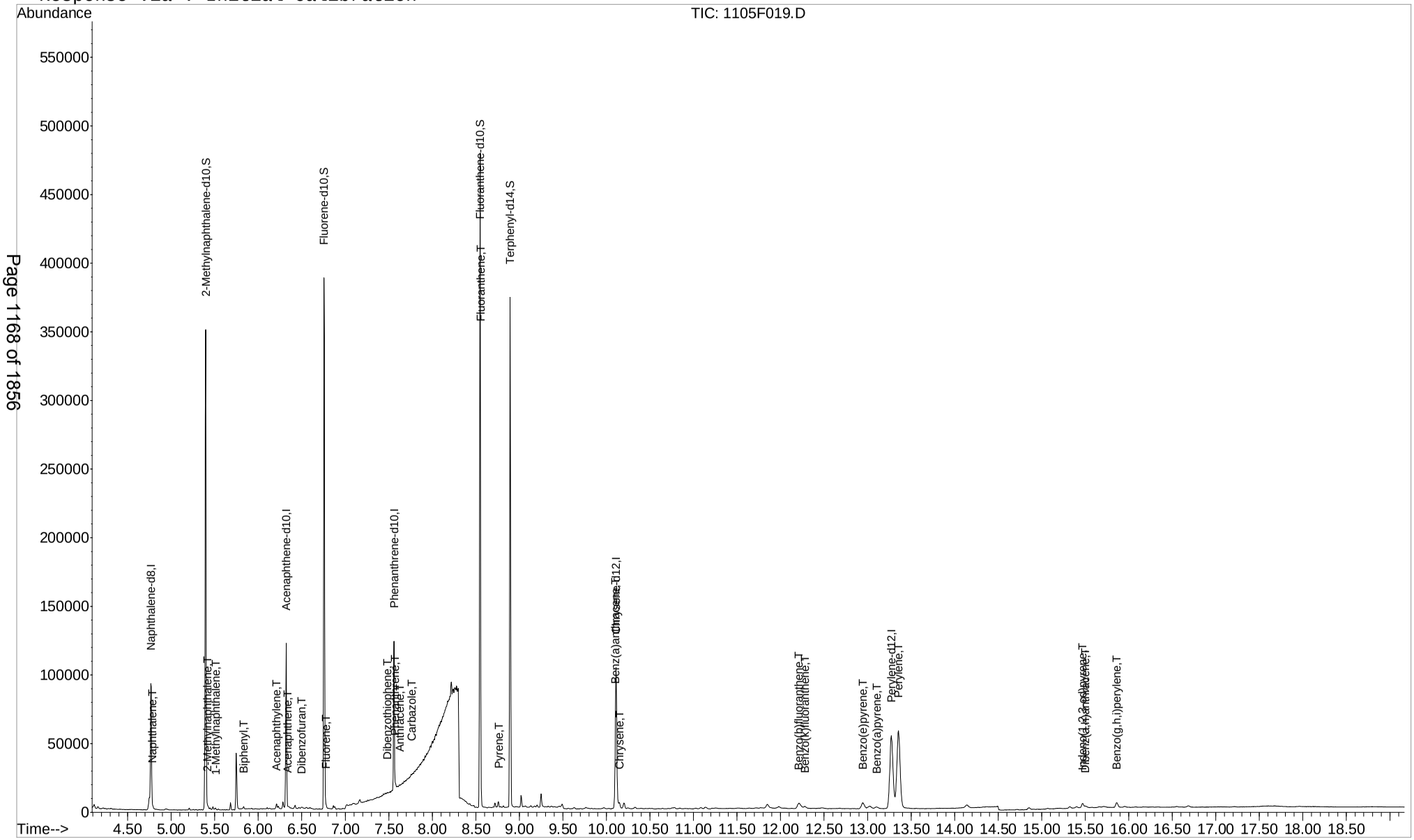
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

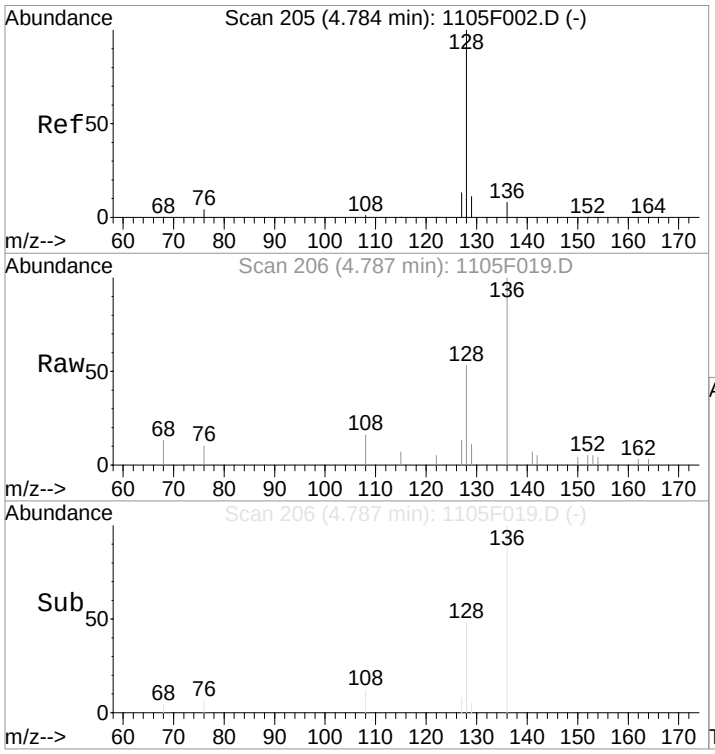
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F019.D Vial: 19
Acq On : 5 Nov 2018 6:11 pm Operator: LWeiskopf
Sample : K1810270-010 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:42 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



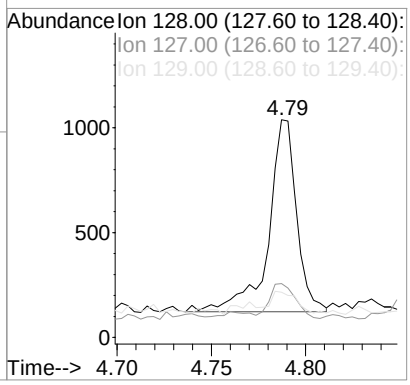
1st 11/16/18
2nd 11/27/18

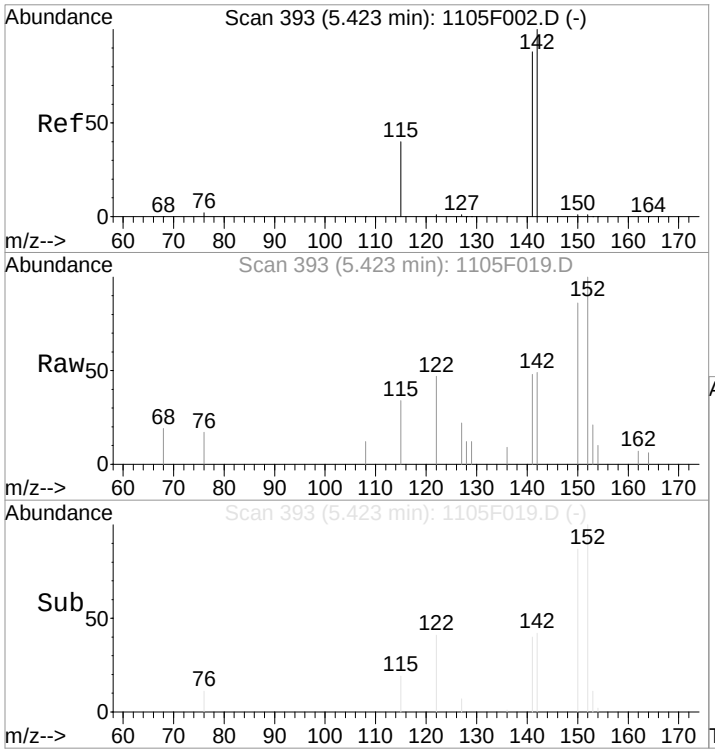


#2
Naphthalene
Concen: 2.23 ng/ml
RT: 4.79 min Scan# 206
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:128 Resp: 954

Ion	Ratio	Lower	Upper
128	100		
127	17.0	0.0	43.7
129	10.9	0.0	30.8

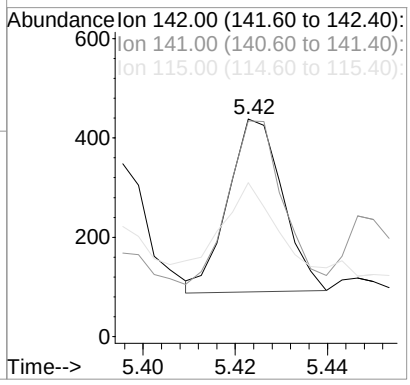




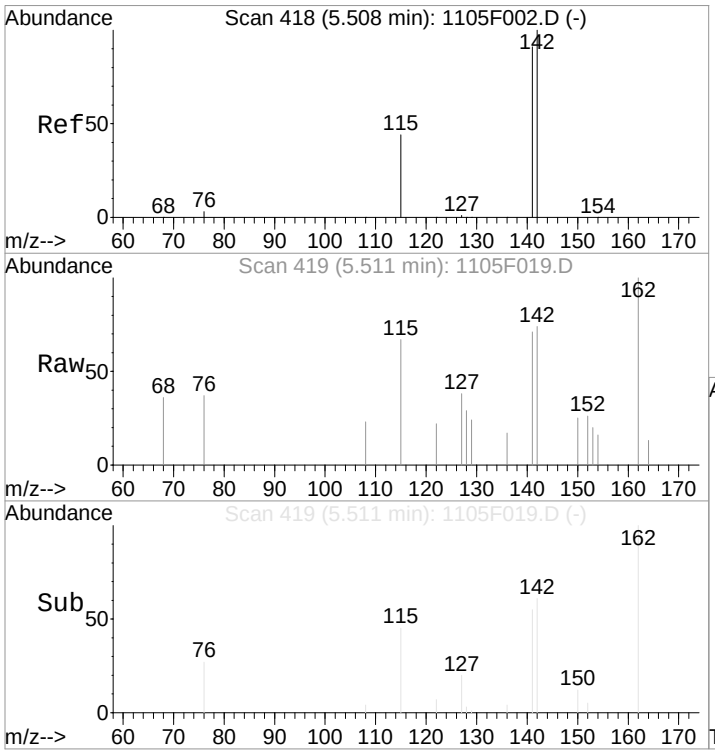
#4
2-Methylnaphthalene
Concen: 1.11 ng/ml
RT: 5.42 min Scan# 393
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:142 Resp: 287

Ion	Ratio	Lower	Upper
142	100		
141	95.4	56.8	116.8
115	49.6	13.3	53.3



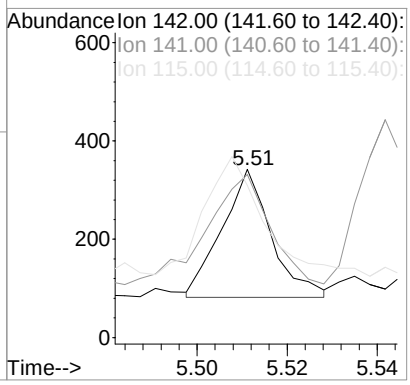
1st 11/16/18
2nd 11/27/18

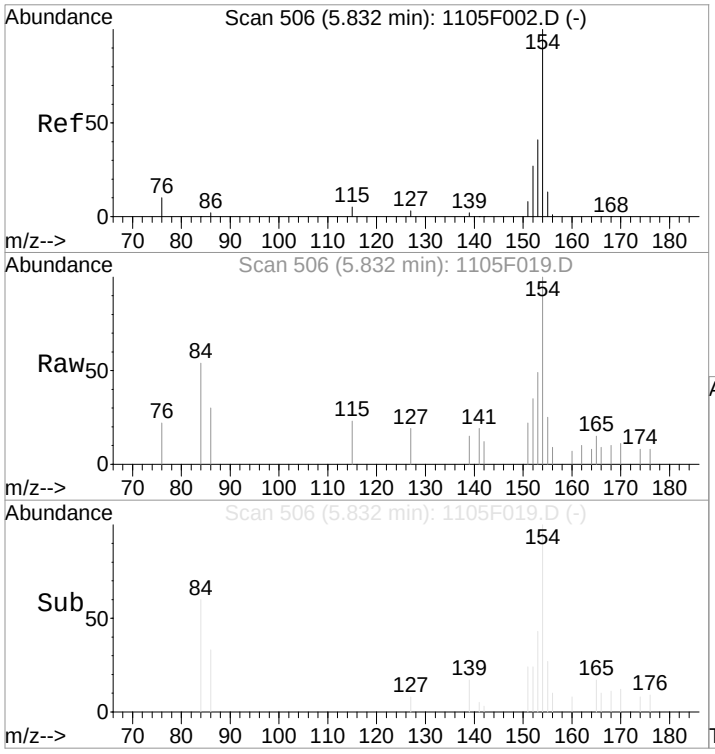


#5
1-Methylnaphthalene
Concen: 0.79 ng/ml m
RT: 5.51 min Scan# 419
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:142 Resp: 197

Ion	Ratio	Lower	Upper
142	100		
141	97.1	59.7	119.7
115	90.6	13.7	53.7#

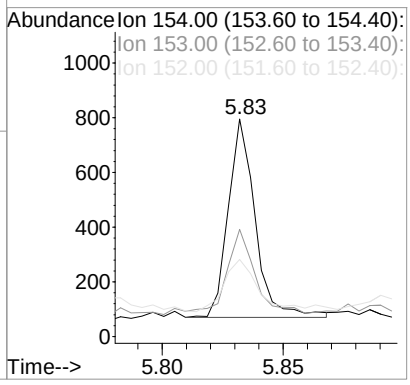




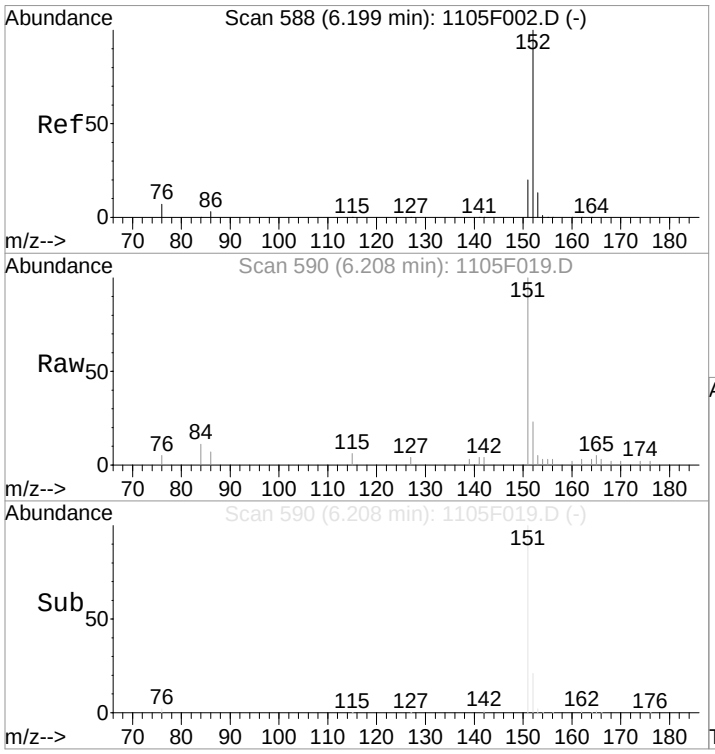
#6
Biphenyl
Concen: 1.75 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:154 Resp: 563

Ion	Ratio	Lower	Upper
154	100		
153	41.2	11.4	71.4
152	25.9	7.1	47.1



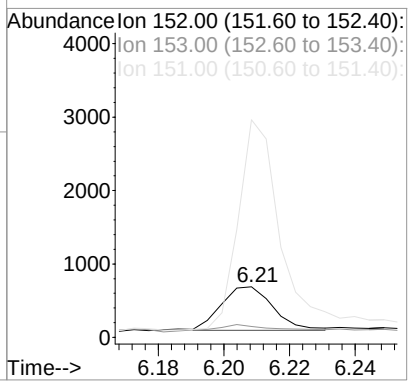
1st 11/16/18
2nd 11/27/18



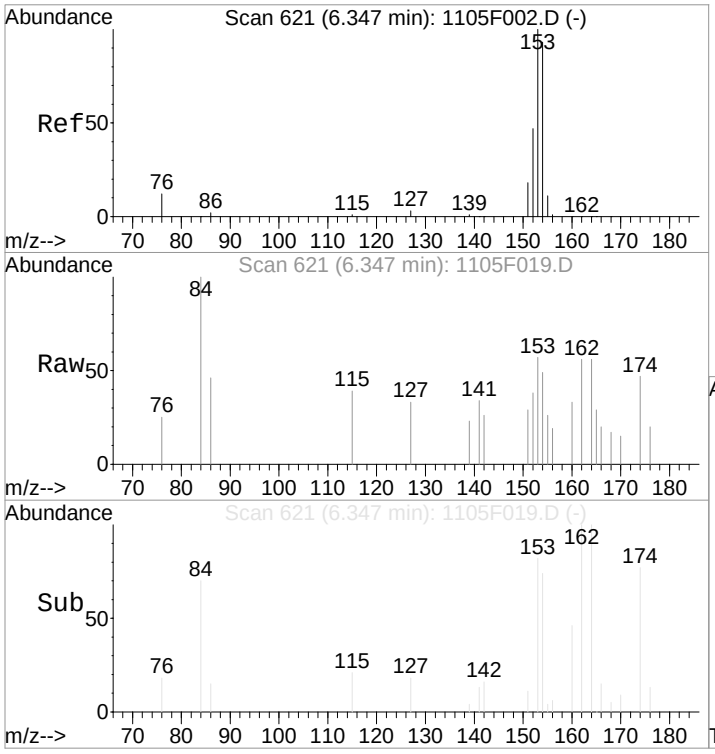
#9
Acenaphthylene
Concen: 1.72 ng/ml m
RT: 6.21 min Scan# 590
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:152 Resp: 652

Ion	Ratio	Lower	Upper
152	100		
153	21.8	0.0	42.9
151	430.0	0.2	40.2#



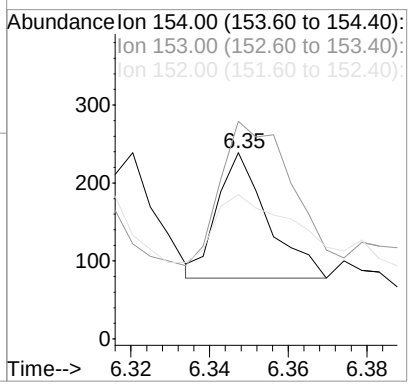
X



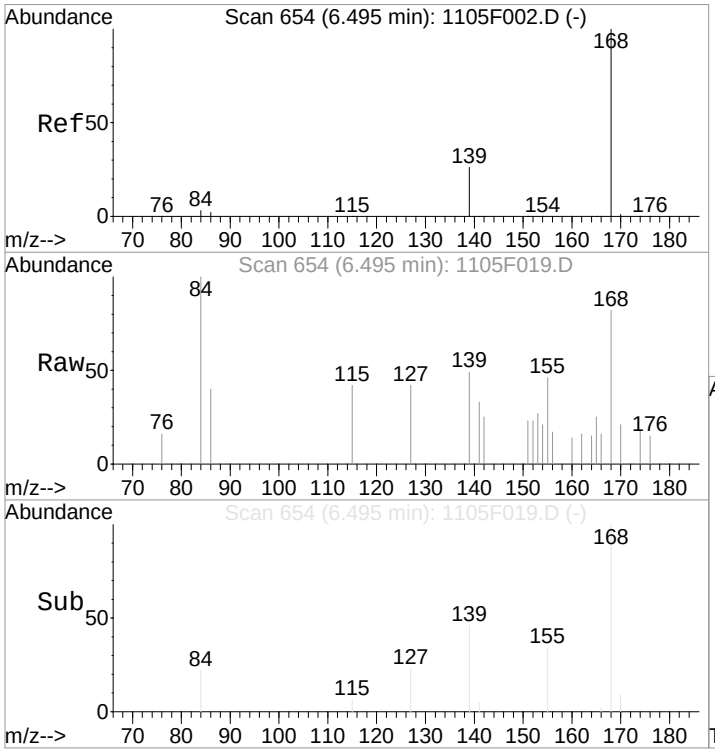
#10
Acenaphthene
Concen: 0.66 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:154 Resp: 144

Ion	Ratio	Lower	Upper
154	100		
153	114.9	77.1	137.1
152	54.0	19.7	79.7



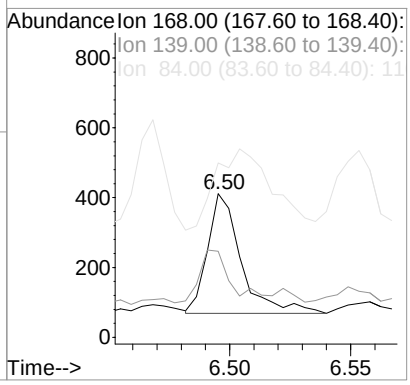
1st 11/16/18
2nd 11/27/18

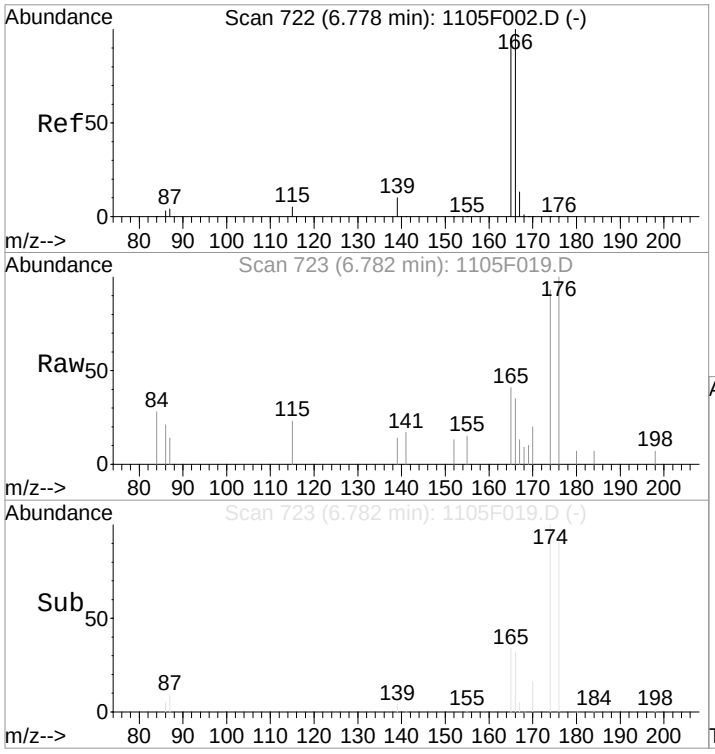


#11
Dibenzofuran
Concen: 0.95 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:168 Resp: 332

Ion	Ratio	Lower	Upper
168	100		
139	41.5	0.0	55.8
84	56.1	0.0	23.5#

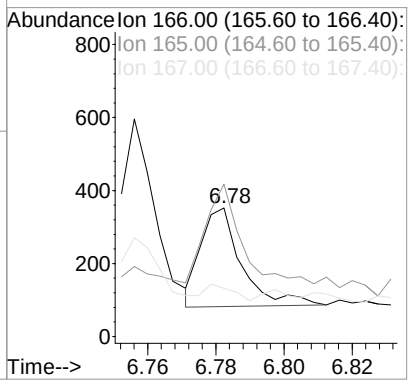


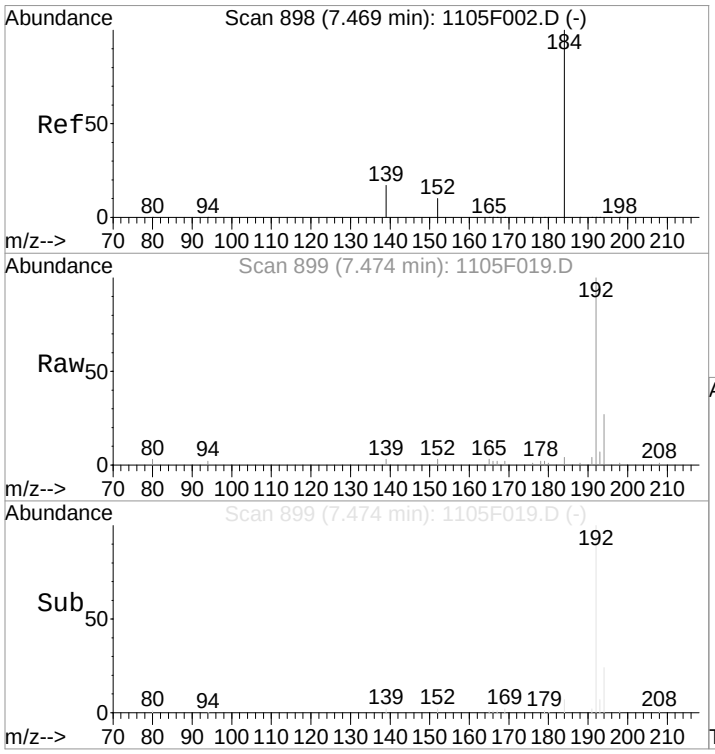


#14
Fluorene
Concen: 0.85 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:166 Resp: 225

Ion	Ratio	Lower	Upper
166	100		
165	101.9	63.4	123.4
167	7.5	0.0	33.1

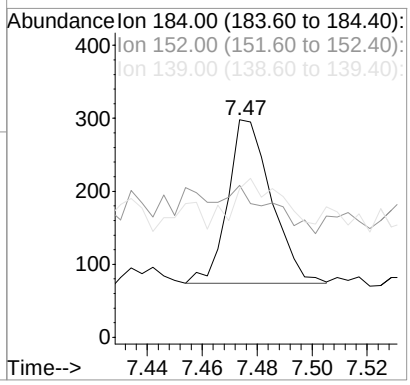


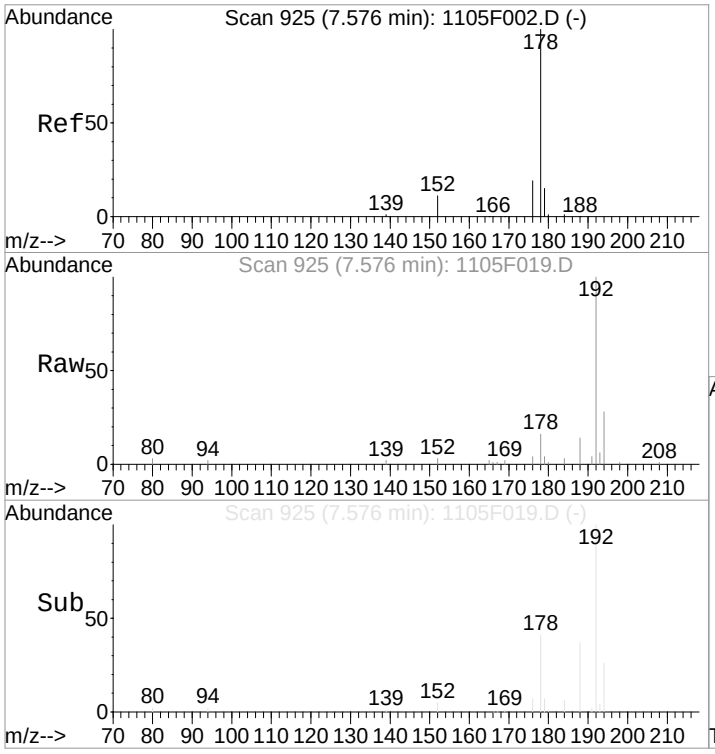


#16
Dibenzothiophene
Concen: 0.66 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:184 Resp: 247

Ion	Ratio	Lower	Upper
184	100		
152	18.8	0.0	37.8
139	11.2	0.0	32.6

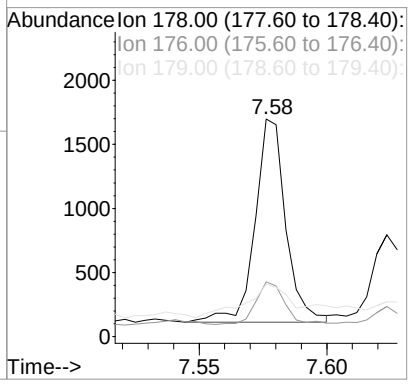




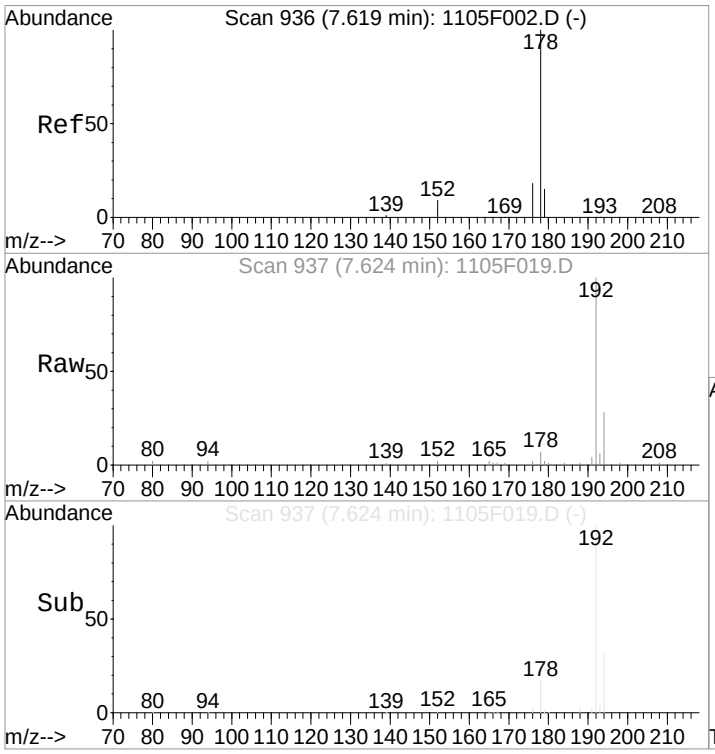
#17
Phenanthrene
Concen: 3.58 ng/ml
RT: 7.58 min Scan# 925
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:178 Resp: 1332

Ion	Ratio	Lower	Upper
178	100		
176	20.3	0.0	48.7
179	15.2	0.0	35.1



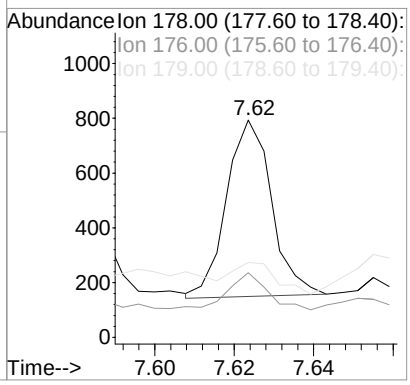
1st 11/16/18
2nd 11/27/18

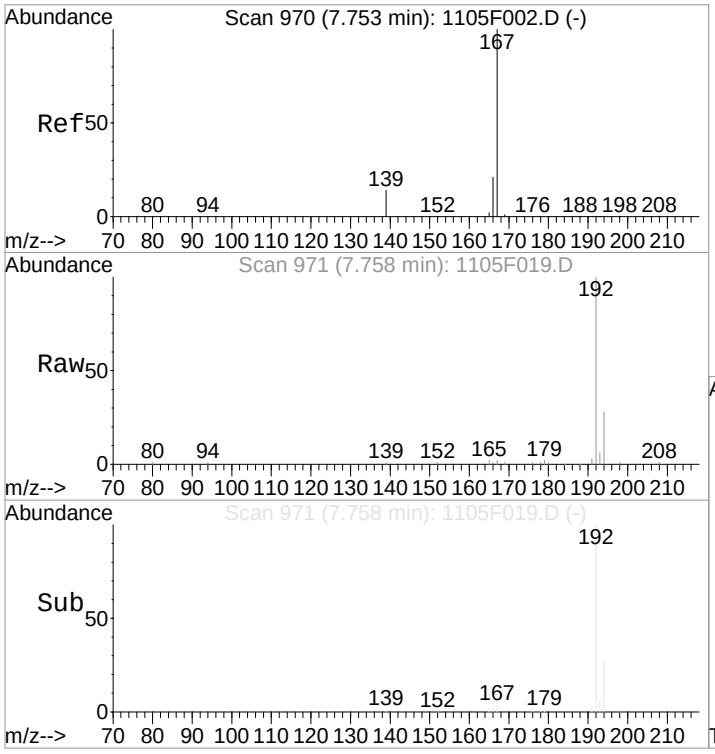


#18
Anthracene
Concen: 1.43 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:178 Resp: 509

Ion	Ratio	Lower	Upper
178	100		
176	19.5	0.0	48.0
179	13.8	0.0	35.1

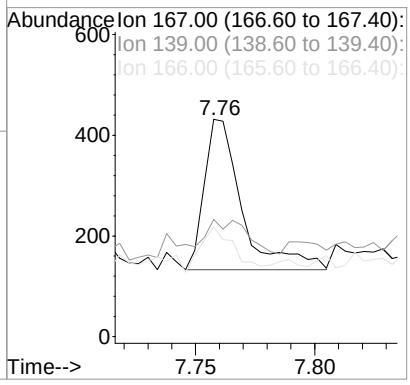




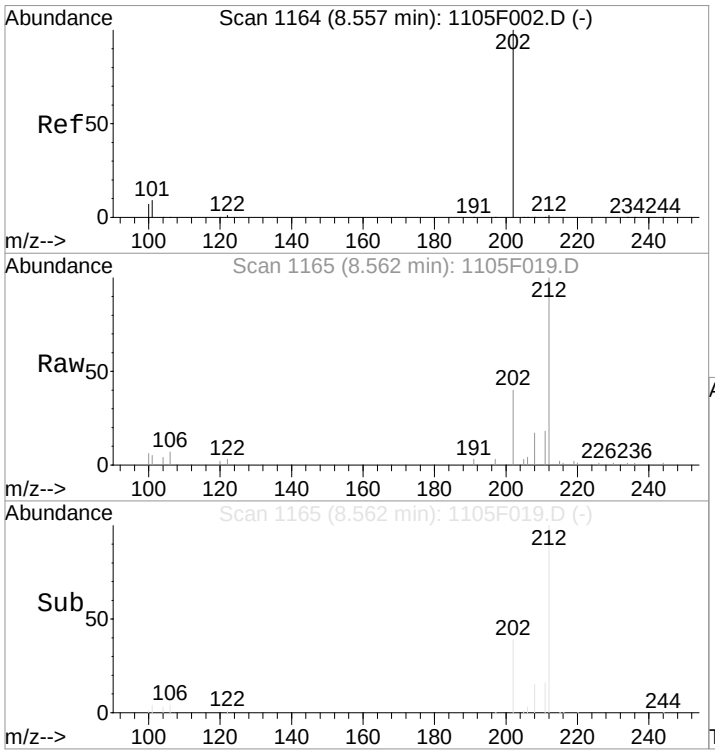
#19
Carbazole
Concen: 0.95 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:167 Resp: 329

Ion	Ratio	Lower	Upper
167	100		
139	20.4	0.0	41.5
166	30.1	0.7	40.7



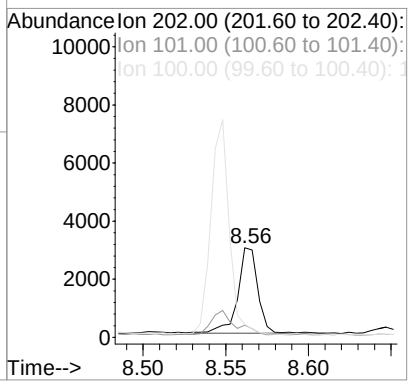
1st 11/16/18
2nd 11/27/18

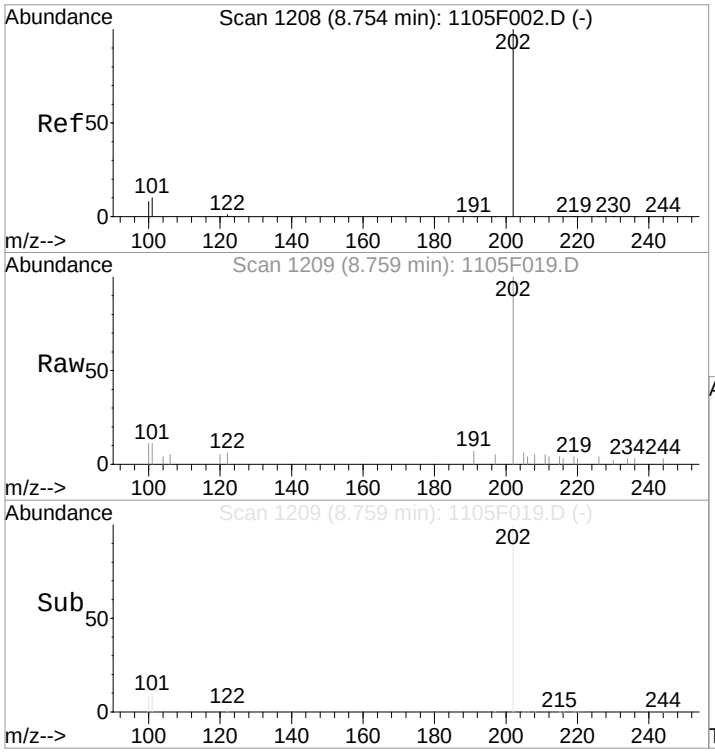


#21
Fluoranthene
Concen: 5.41 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:202 Resp: 2486

Ion	Ratio	Lower	Upper
202	100		
101	10.8	0.0	41.3
100	11.7	0.0	28.6

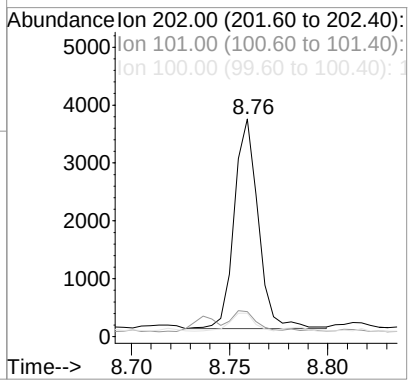


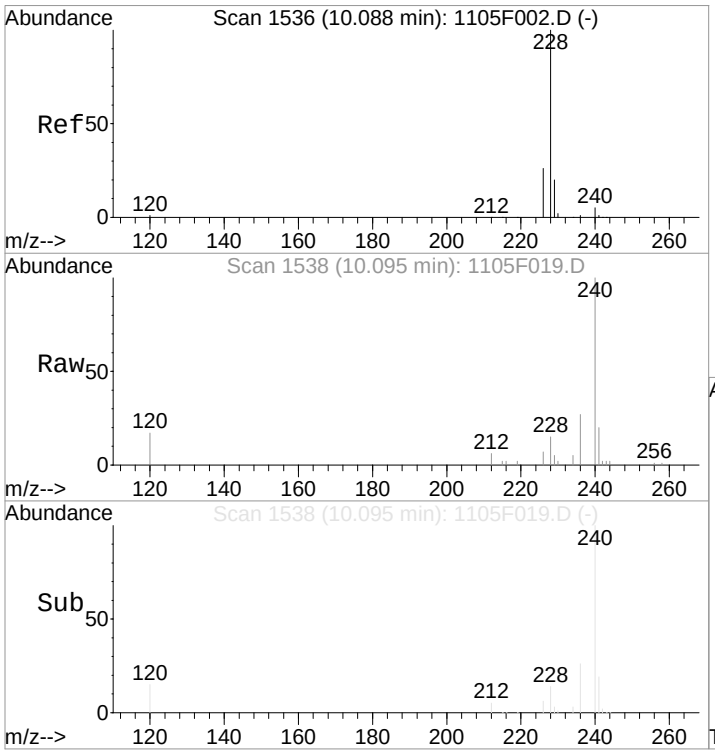


#24
Pyrene
Concen: 5.88 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:202 Resp: 3070

Ion	Ratio	Lower	Upper
202	100		
101	9.3	0.0	40.8
100	8.5	0.0	28.5

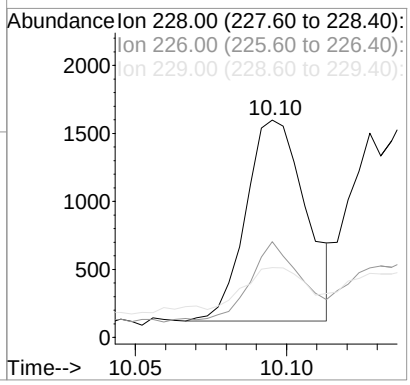


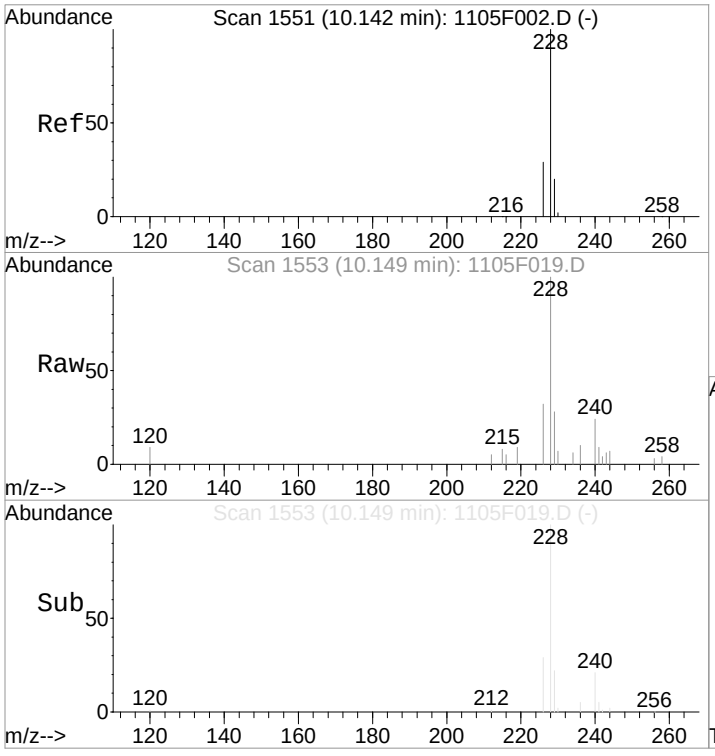


#26
Benz(a)anthracene
Concen: 4.15 ng/ml
RT: 10.10 min Scan# 1538
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:228 Resp: 2042

Ion	Ratio	Lower	Upper
228	100		
226	38.2	0.0	56.3
229	19.4	0.0	39.1

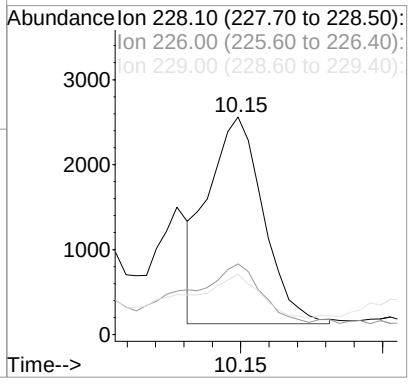




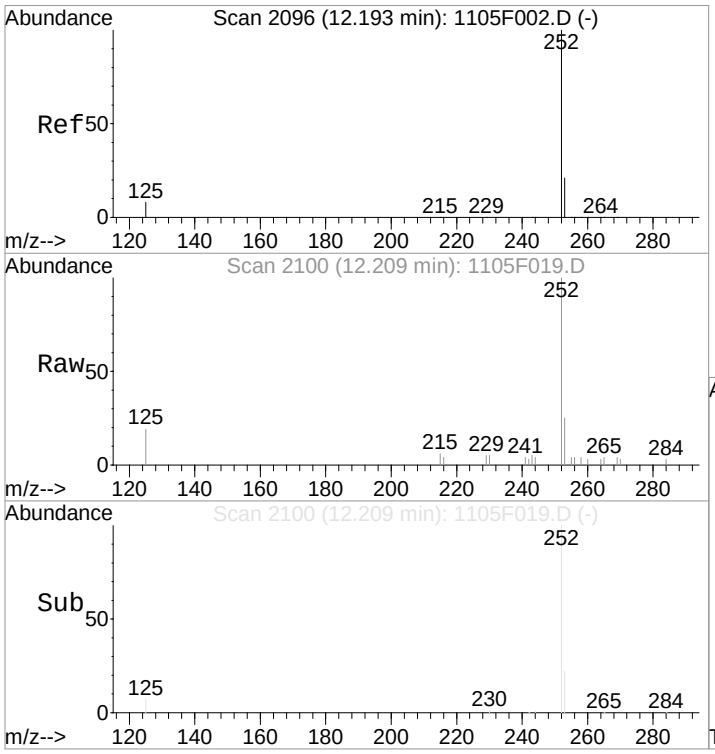
#27
Chrysene
Concen: 7.01 ng/ml m
RT: 10.15 min Scan# 1553
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:228 Resp: 3303

Ion	Ratio	Lower	Upper
228	100		
226	32.5	0.0	58.7
229	27.9	0.0	39.2



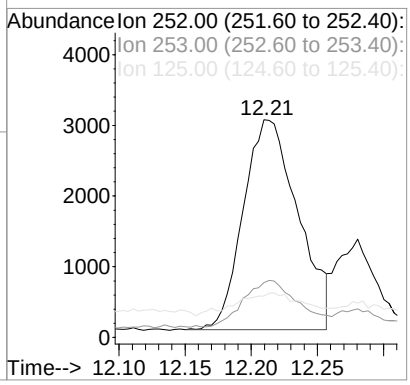
1st 11/16/18
2nd 11/27/18

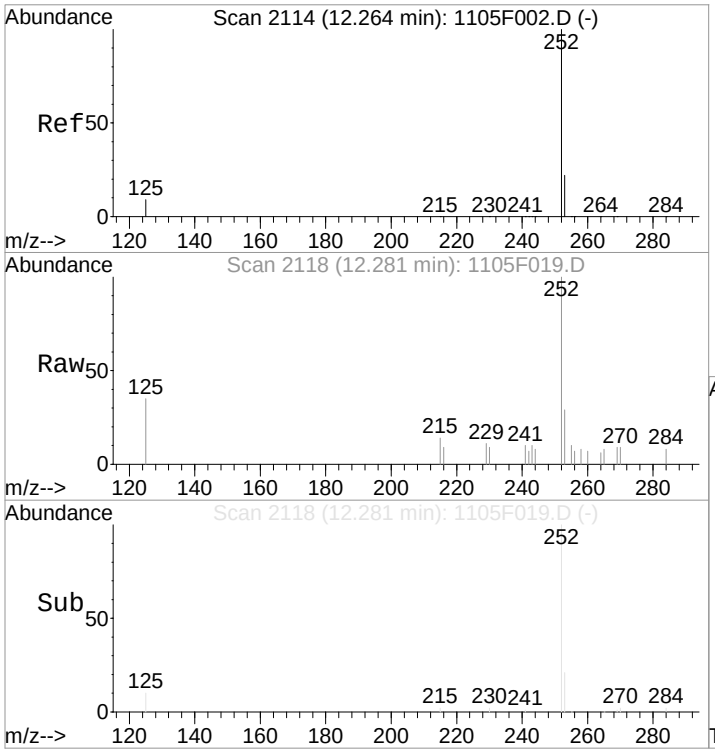


#29
Benzo(b)fluoranthene
Concen: 15.16 ng/ml
RT: 12.21 min Scan# 2100
Delta R.T. 0.02 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:252 Resp: 8573

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.2
125	7.1	0.0	29.5

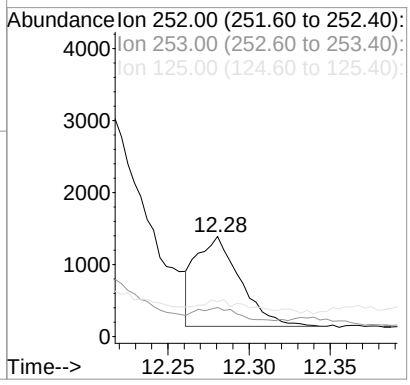




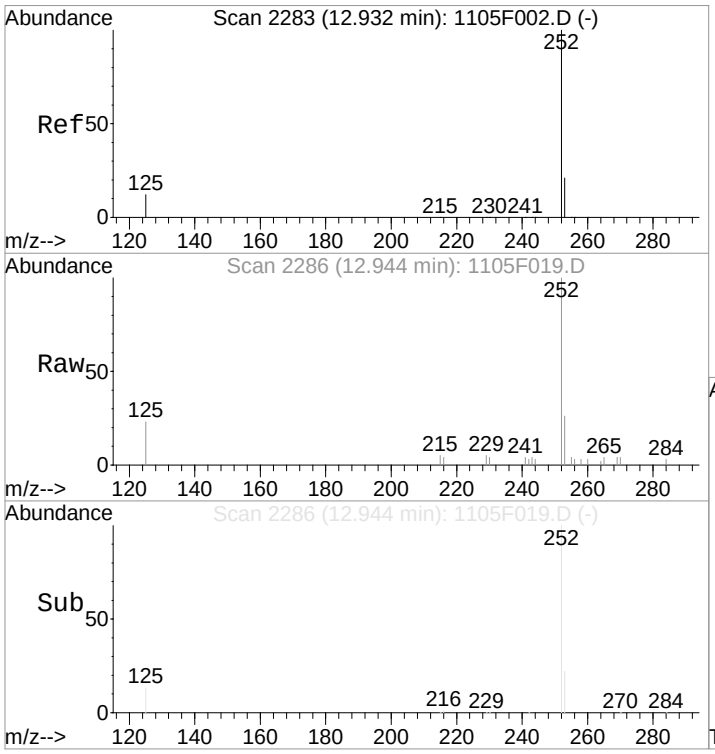
#30
Benzo(k)fluoranthene
Concen: 4.26 ng/ml
RT: 12.28 min Scan# 2118
Delta R.T. 0.02 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:252 Resp: 2390

Ion	Ratio	Lower	Upper
252	100		
253	12.8	0.0	51.2
125	11.2	0.0	29.7



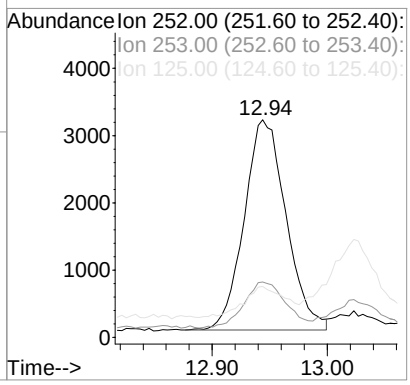
1st 11/16/18
2nd 11/27/18

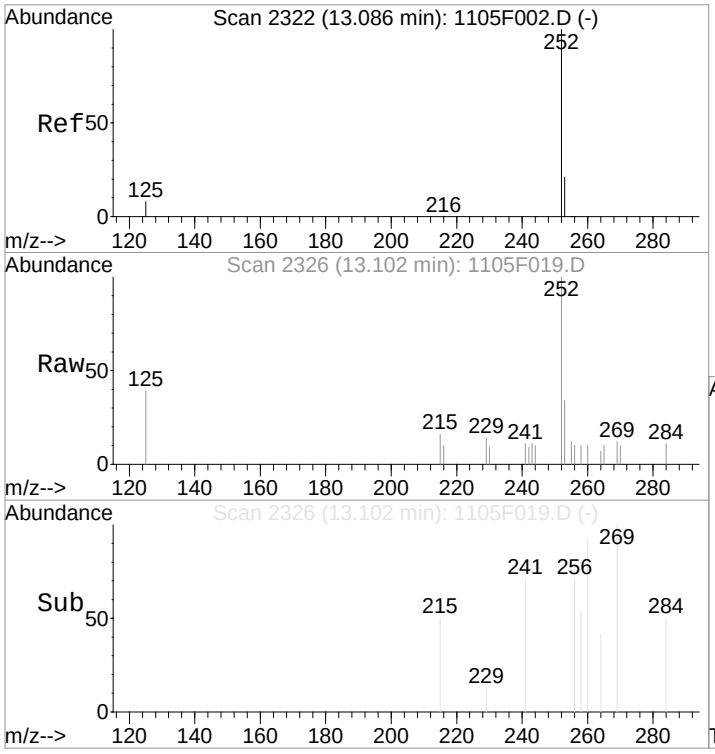


#31
Benzo(e)pyrene
Concen: 14.69 ng/ml
RT: 12.94 min Scan# 2286
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:252 Resp: 7919

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.3
125	14.2	0.0	33.5

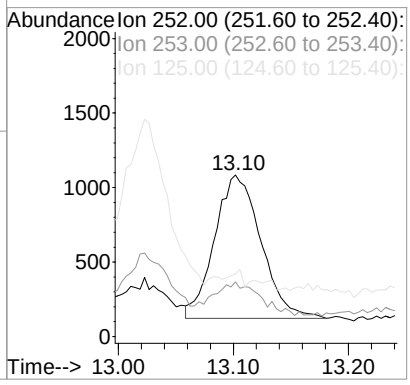




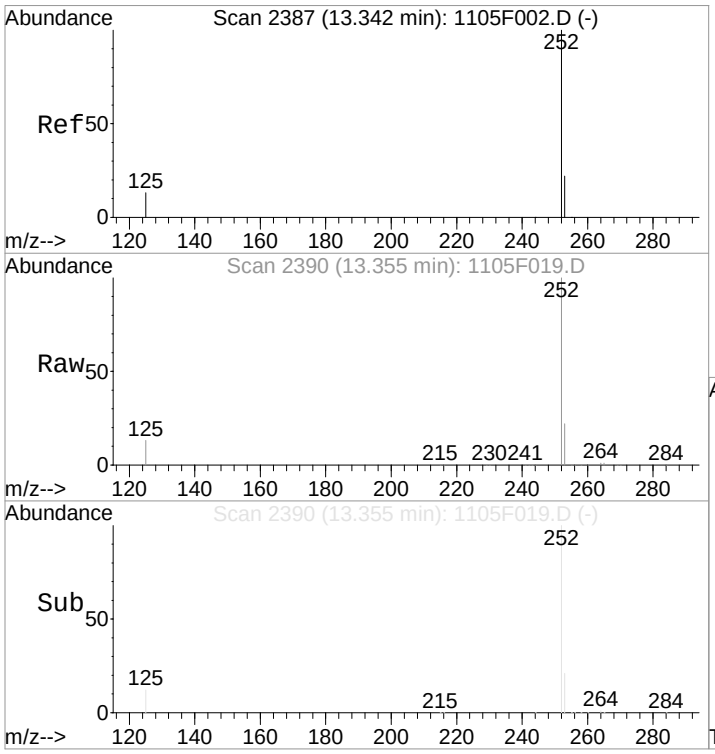
#32
Benzo(a)pyrene
Concen: 5.44 ng/ml
RT: 13.10 min Scan# 2326
Delta R.T. 0.02 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:252 Resp: 2698

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	50.9
125	10.8	0.0	30.3



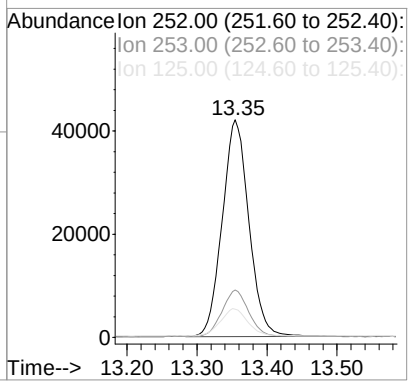
1st 11/16/18
2nd 11/27/18

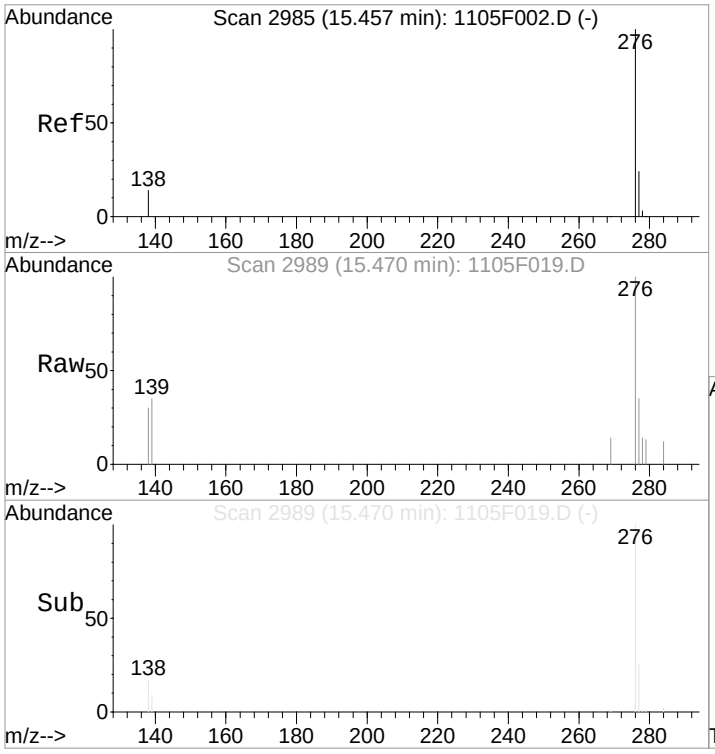


#33
Perylene
Concen: 213.48 ng/ml
RT: 13.35 min Scan# 2390
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:252 Resp: 111082

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.2
125	12.3	0.0	33.8

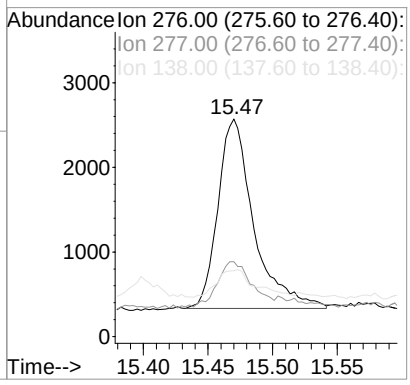




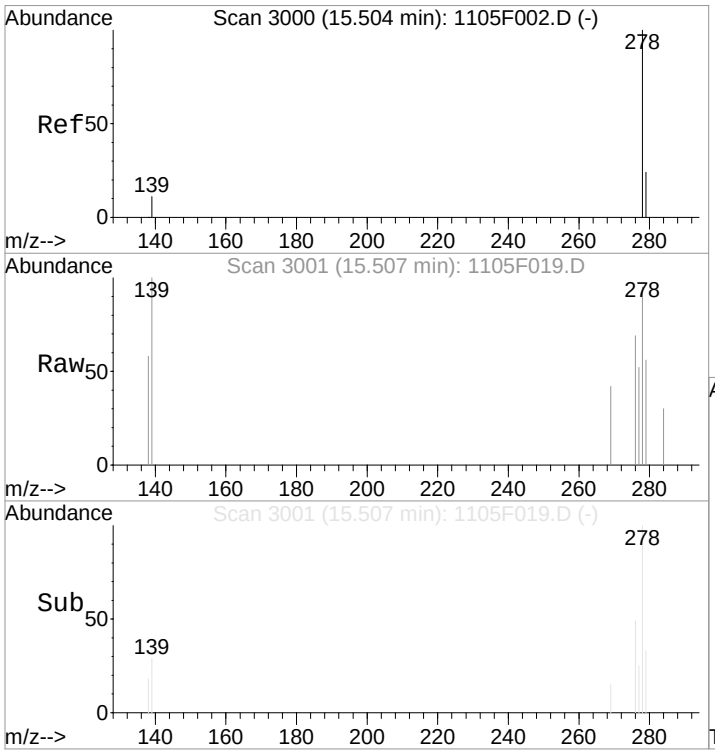
#34
Indeno(1,2,3-cd)pyrene
Concen: 8.87 ng/ml
RT: 15.47 min Scan# 2989
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:276 Resp: 4313

Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	53.4
138	13.9	0.0	37.7



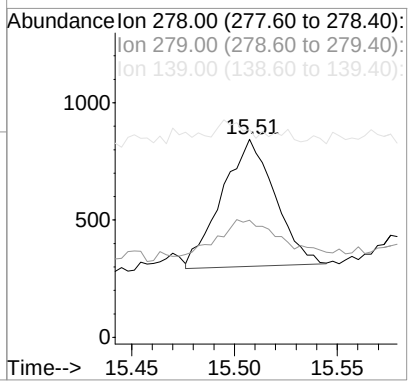
1st 11/16/18
2nd 11/27/18

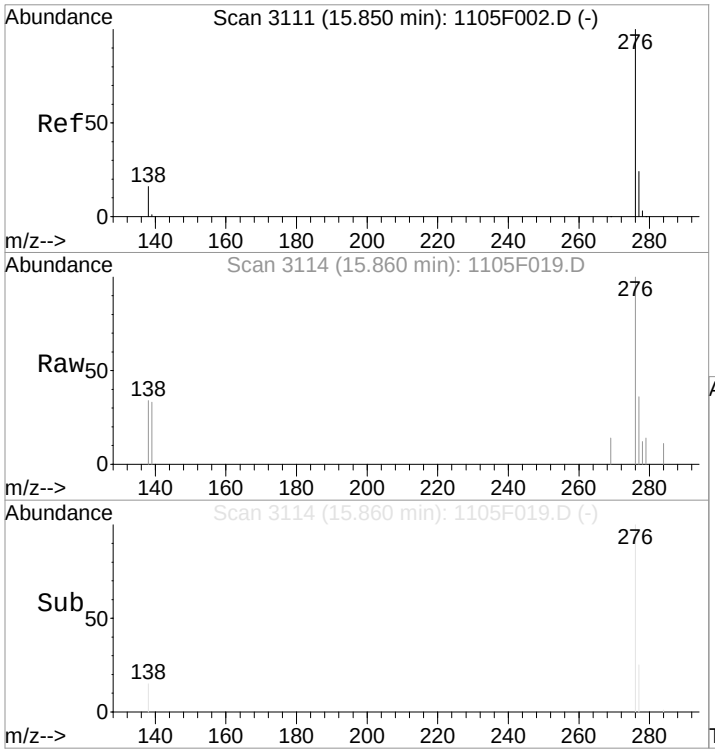


#35
Dibenz(a,h)anthracene
Concen: 1.98 ng/ml
RT: 15.51 min Scan# 3001
Delta R.T. 0.00 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:278 Resp: 978

Ion	Ratio	Lower	Upper
278	100		
279	27.3	0.0	53.5
139	11.5	0.0	35.0

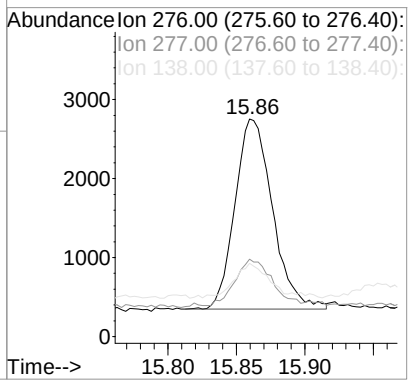




#36
Benzo(g,h,i)perylene
Concen: 8.05 ng/ml
RT: 15.86 min Scan# 3114
Delta R.T. 0.01 min
Lab File: 1105F019.D
Acq: 5 Nov 2018 6:11 pm

Tgt Ion:276 Resp: 4586

Ion	Ratio	Lower	Upper
276	100		
277	24.9	0.0	53.1
138	17.4	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F019.D Vial: 19
Acq On : 5 Nov 2018 6:11 pm Operator: LWeiskopf
Sample : K1810270-010 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:11 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	73964	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31751	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	59620	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	76034	200.00	ng/ml	0.00
28) Perylene-d12	13.27	264	91548	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	103011	498.96	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	49.90%		
13) Fluorene-d10	6.76	176	125495	618.15	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	61.81%		
22) Fluoranthene-d10	8.55	212	229107	609.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	60.97%		
25) Terphenyl-d14	8.89	244	205782	623.98	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	62.40%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	954	2.23	ng/ml	95
4) 2-Methylnaphthalene	5.42	142	287	1.11	ng/ml	85
5) 1-Methylnaphthalene	5.51	142	197m	0.79	ng/ml	
6) Biphenyl	5.83	154	563	1.75	ng/ml	99
9) Acenaphthylene	6.21	152	652m	1.72	ng/ml	
10) Acenaphthene	6.35	154	144	0.66	ng/ml	93
11) Dibenzofuran	6.50	168	332	0.95	ng/ml#	54
14) Fluorene	6.78	166	225	0.85	ng/ml	91
16) Dibenzothiophene	7.47	184	247	0.66	ng/ml	86
17) Phenanthrene	7.58	178	1332	3.58	ng/ml	98
18) Anthracene	7.62	178	509	1.43	ng/ml	97
19) Carbazole	7.76	167	329	0.95	ng/ml	79
21) Fluoranthene	8.56	202	2486	5.41	ng/ml	96
24) Pyrene	8.76	202	3070	5.88	ng/ml	98
26) Benz(a)anthracene	10.10	228	2042	4.15	ng/ml	86
27) Chrysene	10.15	228	3303m	7.01	ng/ml	
29) Benzo(b)fluoranthene	12.21	252	8573	15.16	ng/ml	98
30) Benzo(k)fluoranthene	12.28	252	2390	4.26	ng/ml	86
31) Benzo(e)pyrene	12.94	252	7919	14.69	ng/ml	99
32) Benzo(a)pyrene	13.10	252	2698	5.44	ng/ml	99
33) Perylene	13.35	252	111082	213.48	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.47	276	4313	8.87	ng/ml	96
35) Dibenz(a,h)anthracene	15.51	278	978	1.98	ng/ml	92
36) Benzo(g,h,i)perylene	15.86	276	4586	8.05	ng/ml	96

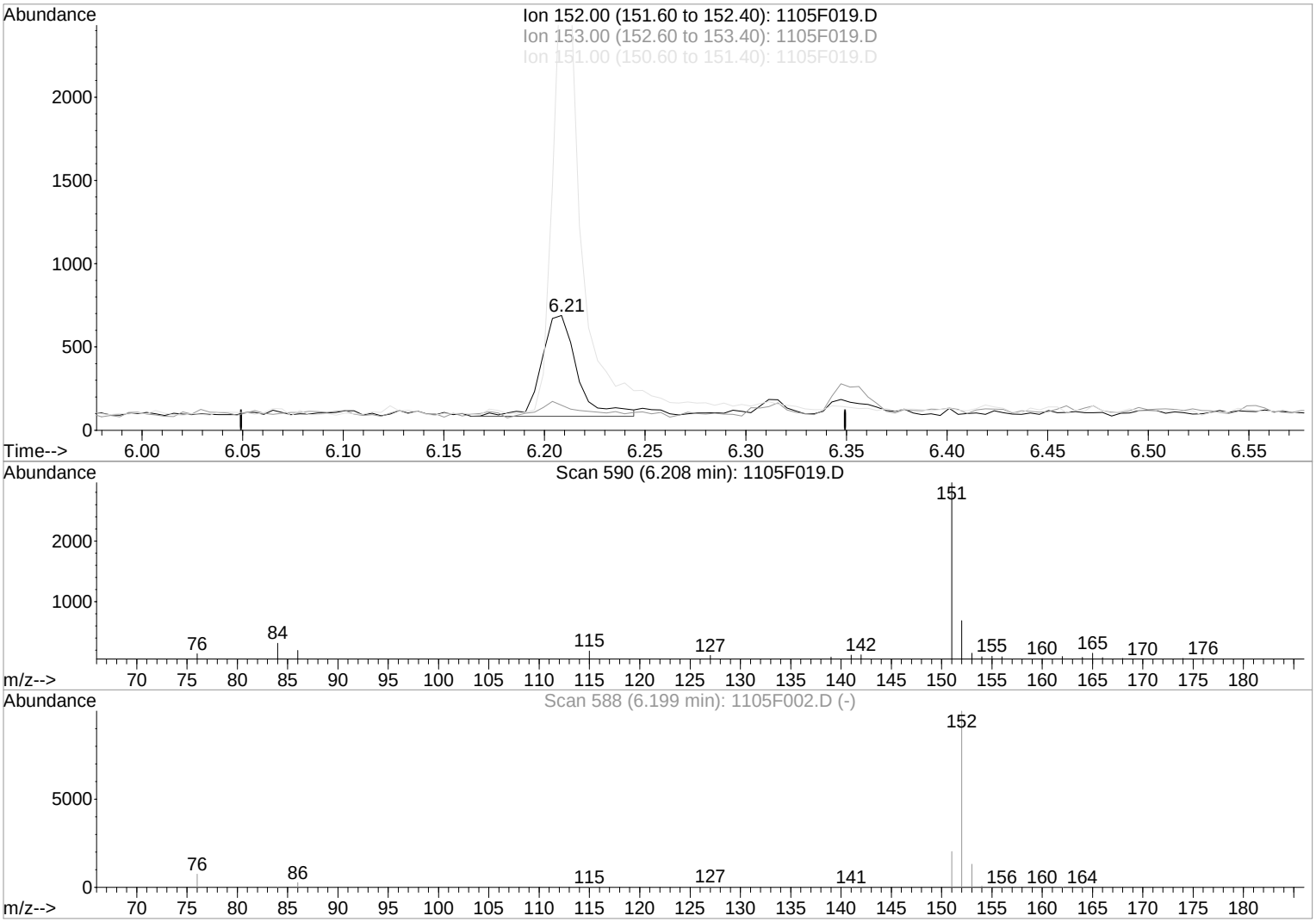
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F019.D Vial: 19
Acq On : 5 Nov 2018 6:11 pm Operator: LWeiskopf
Sample : K1810270-010 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:41 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F019.D

(9) Acenaphthylene (T)

6.21min 1.97ng/ml

response 747

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	8.76
151.00	20.20	473.72#
0.00	0.00	0.00

Manual Integration:

Before

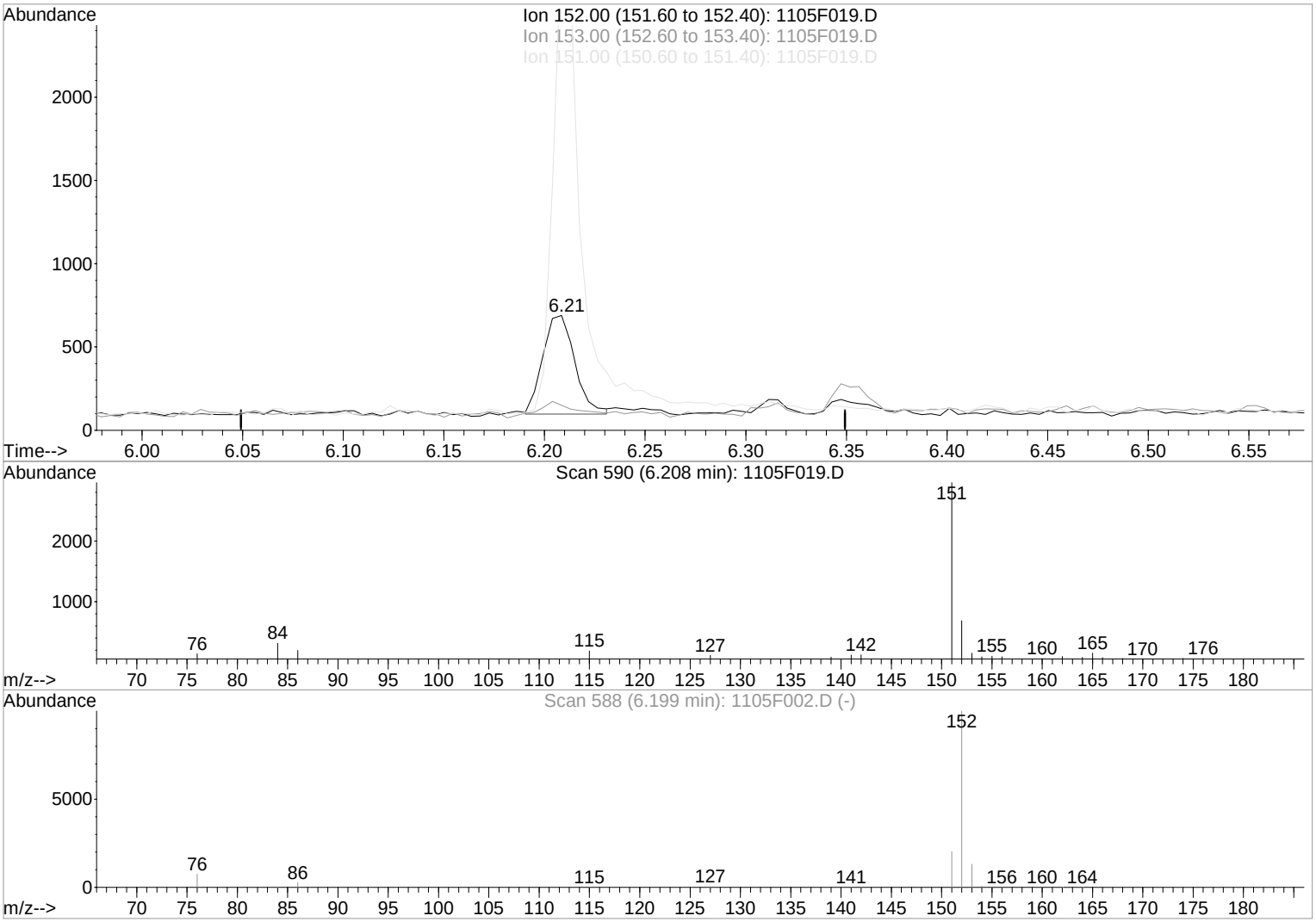
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F019.D Vial: 19
Acq On : 5 Nov 2018 6:11 pm Operator: LWeiskopf
Sample : K1810270-010 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:41 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F019.D

(9) Acenaphthylene (T)

6.21min 1.72ng/ml m

response 652

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	21.77
151.00	20.20	430.04#
0.00	0.00	0.00

Manual Integration:

After

BLC

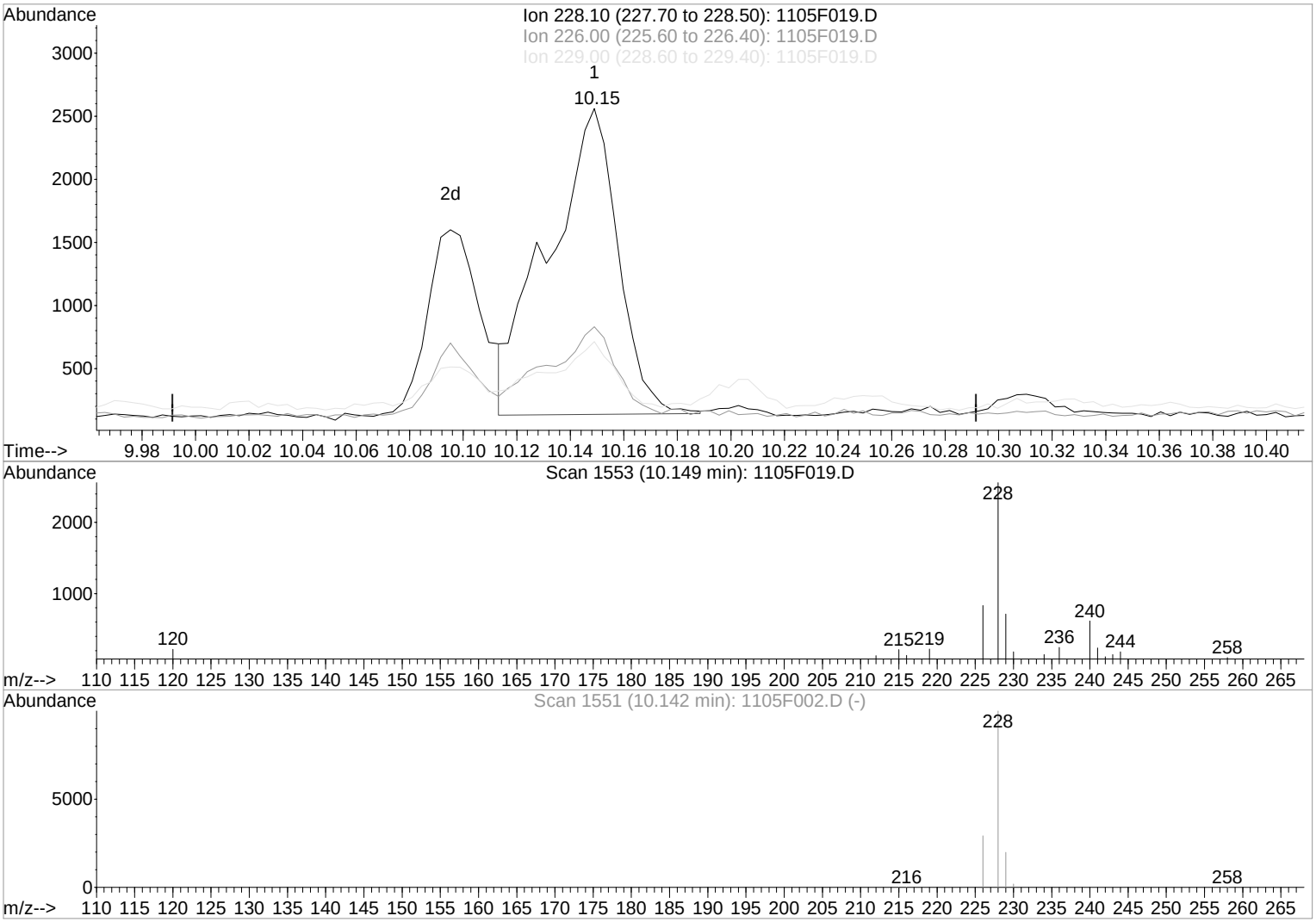
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F019.D Vial: 19
Acq On : 5 Nov 2018 6:11 pm Operator: LWeiskopf
Sample : K1810270-010 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:41 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F019.D

(27) Chrysene (T)

10.15min 9.32ng/ml

response 4390

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	27.98
229.00	19.20	18.93
0.00	0.00	0.00

Manual Integration:

Before

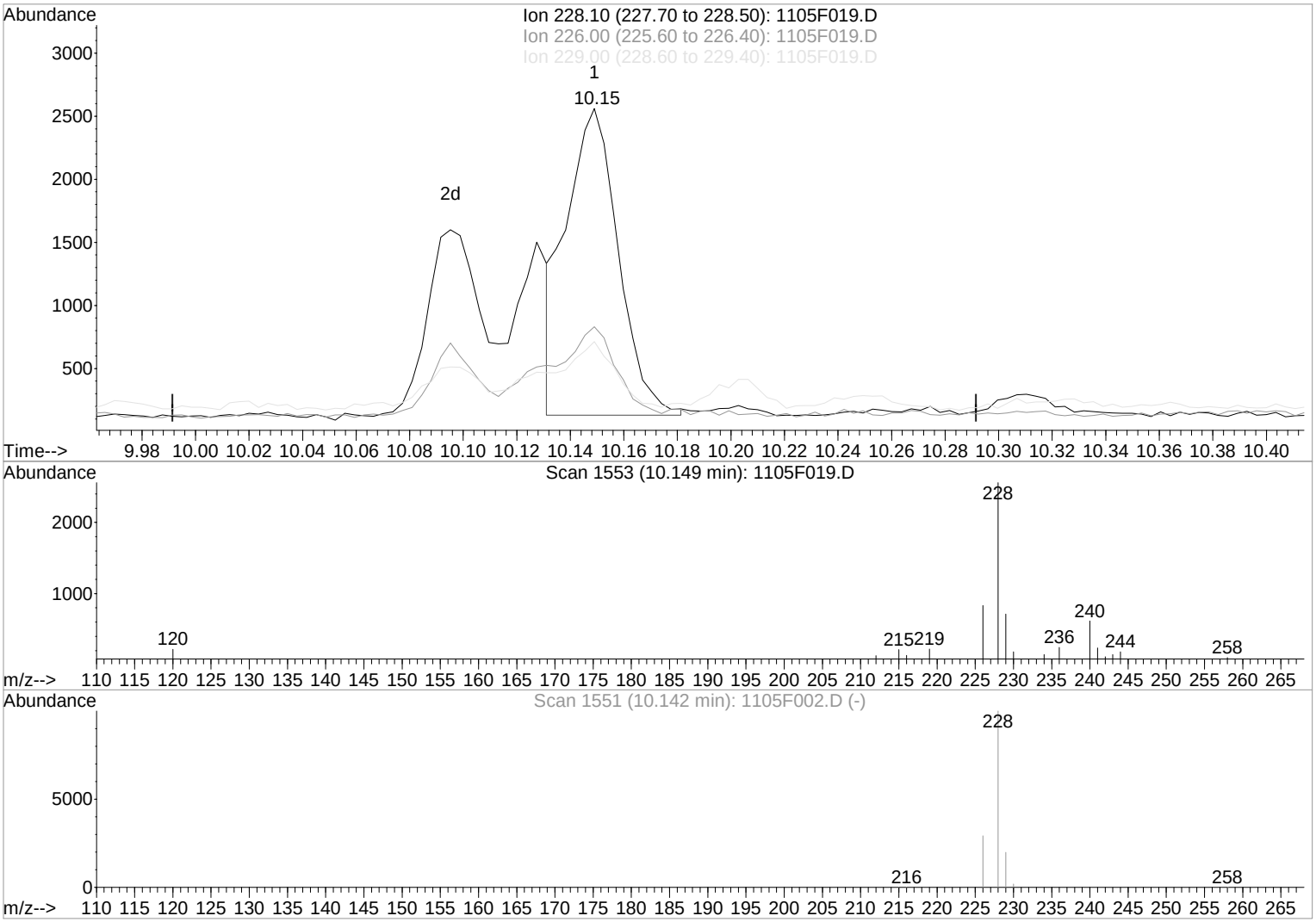
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F019.D Vial: 19
Acq On : 5 Nov 2018 6:11 pm Operator: LWeiskopf
Sample : K1810270-010 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:42 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F019.D

(27) Chrysene (T)

10.15min 7.01ng/ml m

response 3303

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	32.46
229.00	19.20	27.85
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

11/16/18

1st 11/19/18
2nd 12/05/18

Exception Report

Data File: J:\MS14\DATA\110718\1107F010.D
Lab ID: K1810270-011
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/07/2018 09:28
Date Quantitated: 11/16/2018 13:19
Batch ID: KWG1806028
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 11/19/18
2nd 12/05/18

Quantitation Report

Data File:	J:\MS14\DATA\110718\1107F010.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 09:28	**Quant Date:**	11/16/2018 13:19	**Vial:**	10
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	4.0
Lab ID:	K1810270-011			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/15/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806028	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700768	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110718\1107F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.01	136	64050	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31363	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	64105	200.00	OK
4	Chrysene-d12	10.11	0.00	240	77988	200.00	OK
5	Perylene-d12	13.29	0.01	264	88655	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	33278	165.95	66	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	69326	171.59	69	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	61590	182.08	73	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77	-0.01	0.00	128	8384	22.68	5.4	D	
1	2-Methylnaphthalene	5.42		0.00	142	3258	14.61	3.5	D	
2	Acenaphthylene	6.20		0.00	152	3530	9.43	2.2	D	
2	Acenaphthene	6.34	-0.01	0.00	154	4233	19.69	4.7	D	
2	Dibenzofuran	6.49	-0.01	0.00	168	8144	23.61	5.6	D	
2	Fluorene	6.78		0.00	166	8767	33.72	8.0	D	
3	Phenanthrene	7.58		0.00	178	112387	281.04	67	D	
3	Anthracene	7.62		0.00	178	25978	68.05	16	D	
3	Fluoranthene	8.57	0.01	0.00	202	171158	346.62	82	D	
4	Pyrene	8.76	0.01	0.00	202	176656	330.15	78	D	
4	Benz(a)anthracene	10.09	-0.01	0.00	228	76960	152.63	36	D	
4	Chrysene	10.15		0.00	228	85963	177.99	42	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/19/18
2nd 12/05/18

Data File:	J:\MS14\DATA\110718\1107F010.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 09:28	**Quant Date:**	11/16/2018 13:19	**Vial:**	10
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	4.0
Lab ID:	K1810270-011			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.23	0.02	0.00	252	93994	171.61	41	D	
5	Benzo(k)fluoranthene	12.29	0.01	0.00	252	36641**m**	67.43	16	D	
5	Benzo(a)pyrene	13.13	0.02	0.00	252	64178	133.61	32	D	
5	Indeno(1,2,3-cd)pyrene	15.49	0.01	0.00	276	43770	92.93	22	D	
5	Dibenz(a,h)anthracene	15.53	0.01	0.00	278	12098	25.34	6.0	D	
5	Benzo(g,h,i)perylene	15.89	0.02	0.00	276	45248	82.03	19	D	

Prep Amount:	40.247 g	**Dilution:**	4.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	83.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

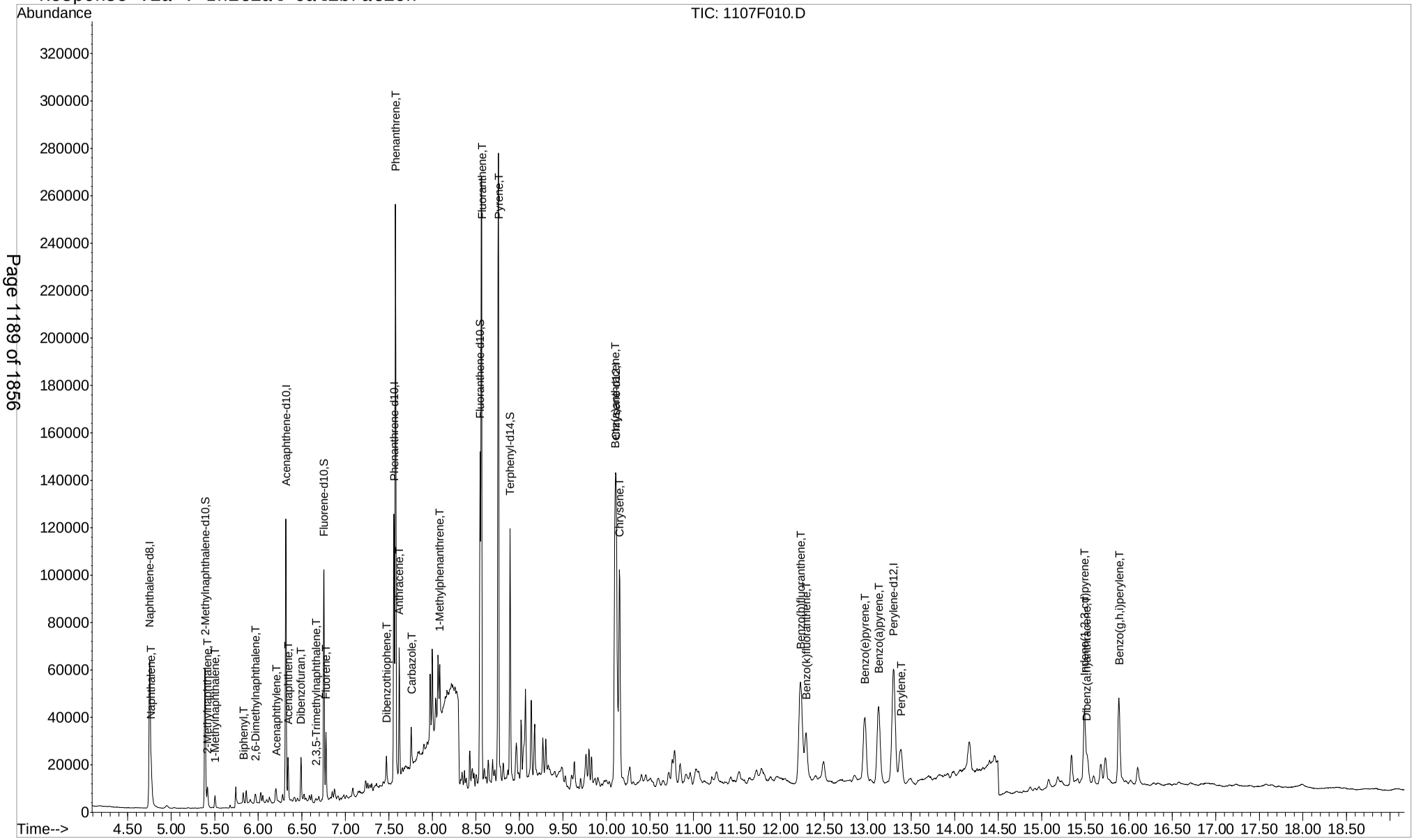
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

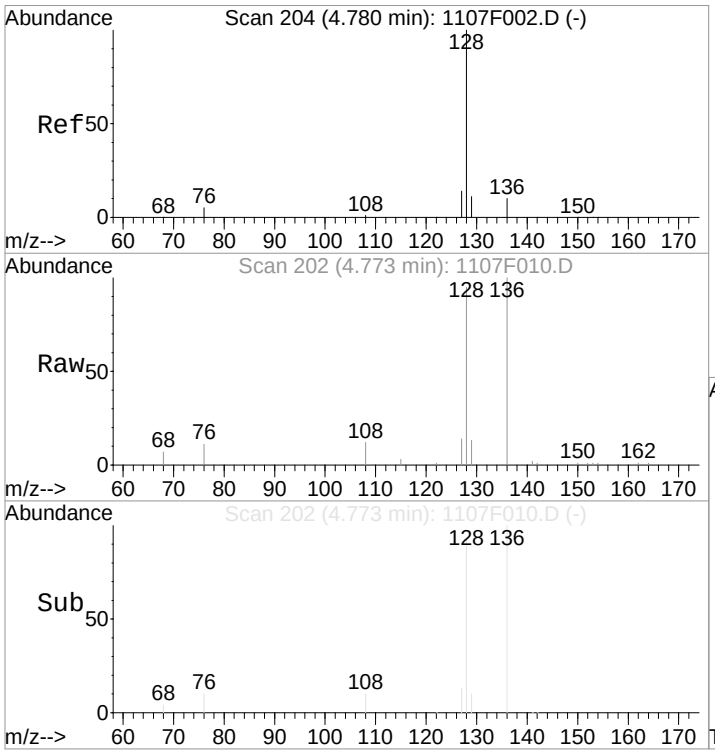
Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F010.D Vial: 10
Acq On : 7 Nov 2018 9:28 am Operator: LWeiskopf
Sample : K1810270-011DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 13:19 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration

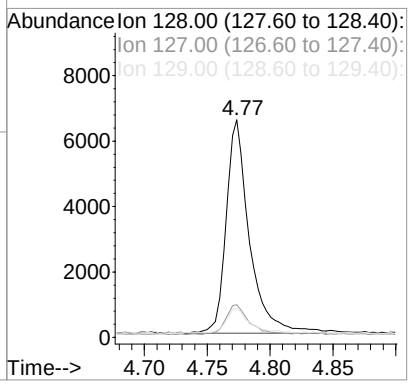


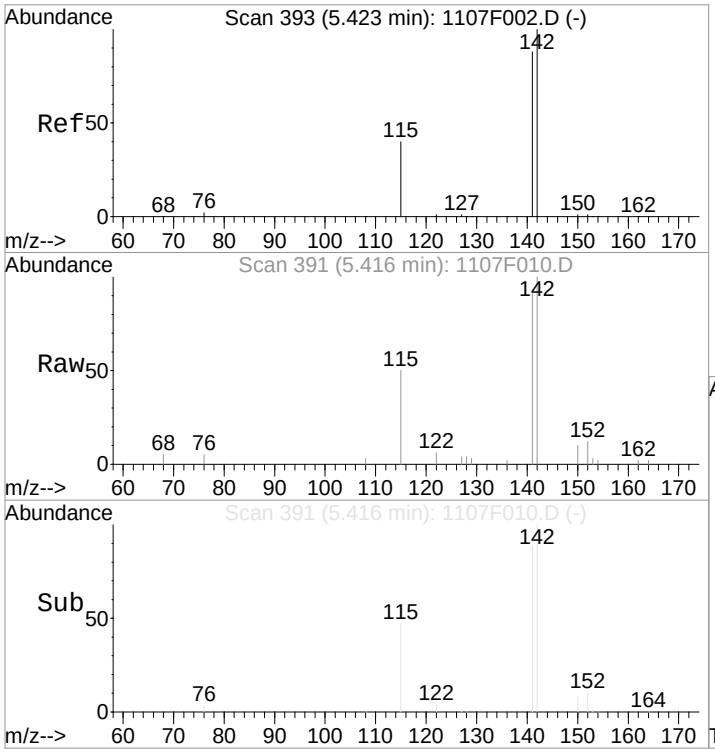


#2
Naphthalene
Concen: 22.68 ng/ml
RT: 4.77 min Scan# 202
Delta R.T. -0.01 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:128 Resp: 8384

Ion	Ratio	Lower	Upper
128	100		
127	14.0	0.0	43.7
129	11.3	0.0	30.8

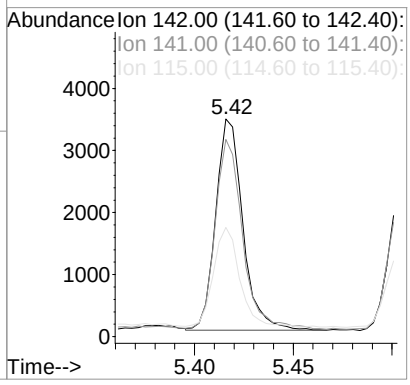


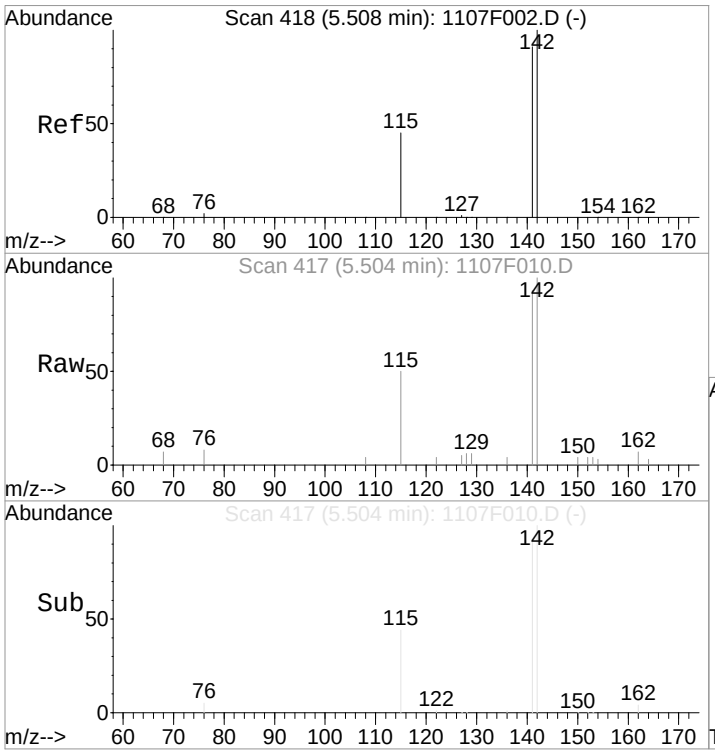


#4
2-Methylnaphthalene
Concen: 14.61 ng/ml
RT: 5.42 min Scan# 391
Delta R.T. -0.01 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:142 Resp: 3258

Ion	Ratio	Lower	Upper
142	100		
141	89.9	56.8	116.8
115	47.1	13.3	53.3

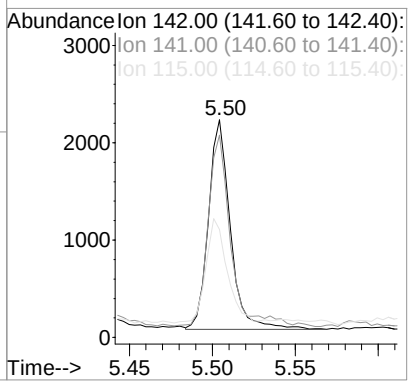


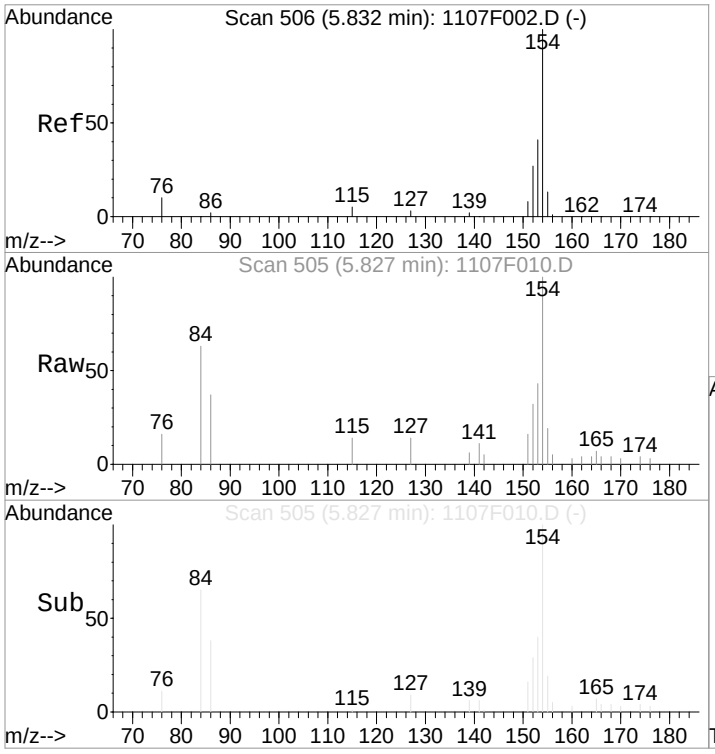


#5
1-Methylnaphthalene
Concen: 9.19 ng/ml
RT: 5.50 min Scan# 417
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:142 Resp: 1972

Ion	Ratio	Lower	Upper
142	100		
141	90.7	59.7	119.7
115	43.9	13.7	53.7

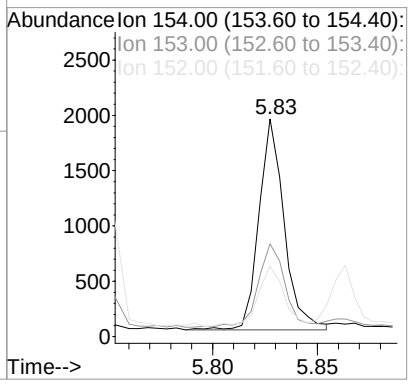


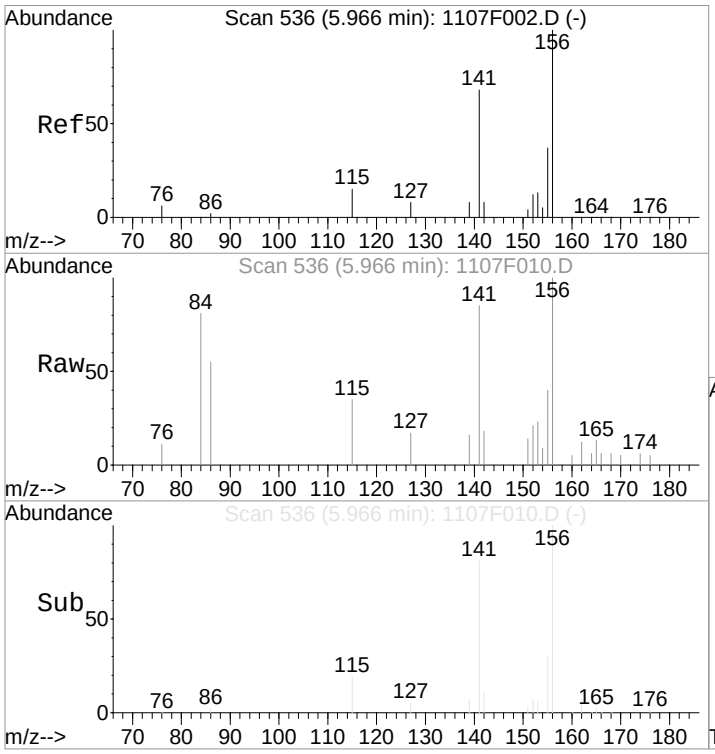


#6
Biphenyl
Concen: 5.75 ng/ml
RT: 5.83 min Scan# 505
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:154 Resp: 1600

Ion	Ratio	Lower	Upper
154	100		
153	39.6	11.4	71.4
152	28.1	7.1	47.1

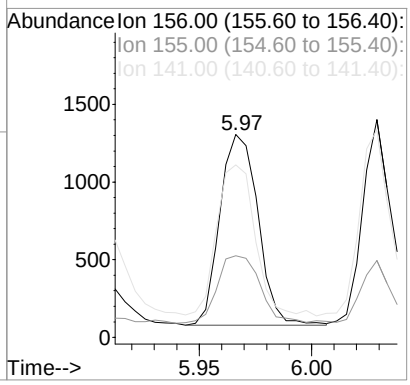


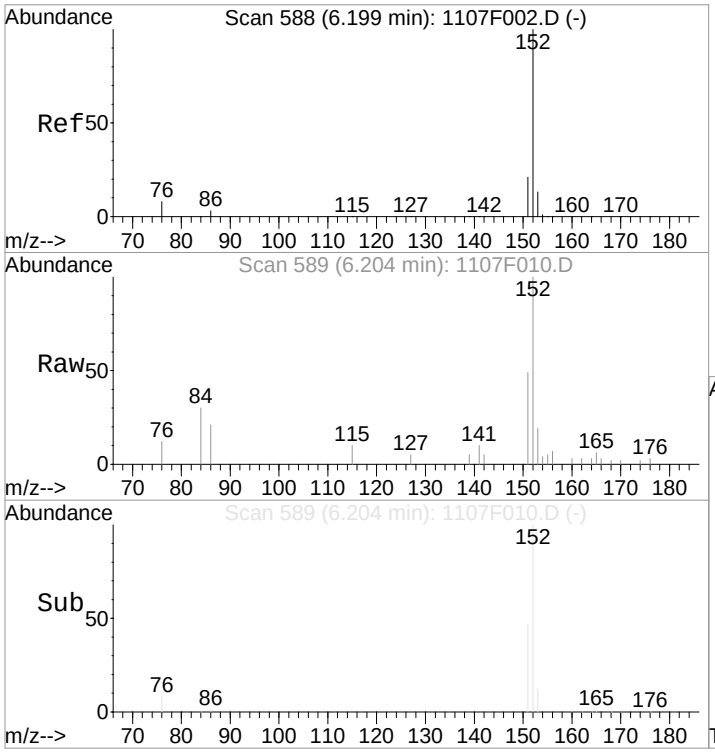


#7
2,6-Dimethylnaphthalene
Concen: 7.57 ng/ml
RT: 5.97 min Scan# 536
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:156 Resp: 1449

Ion	Ratio	Lower	Upper
156	100		
155	35.1	7.0	67.0
141	78.7	47.9	87.9

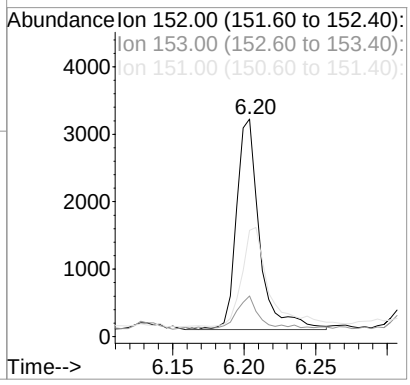




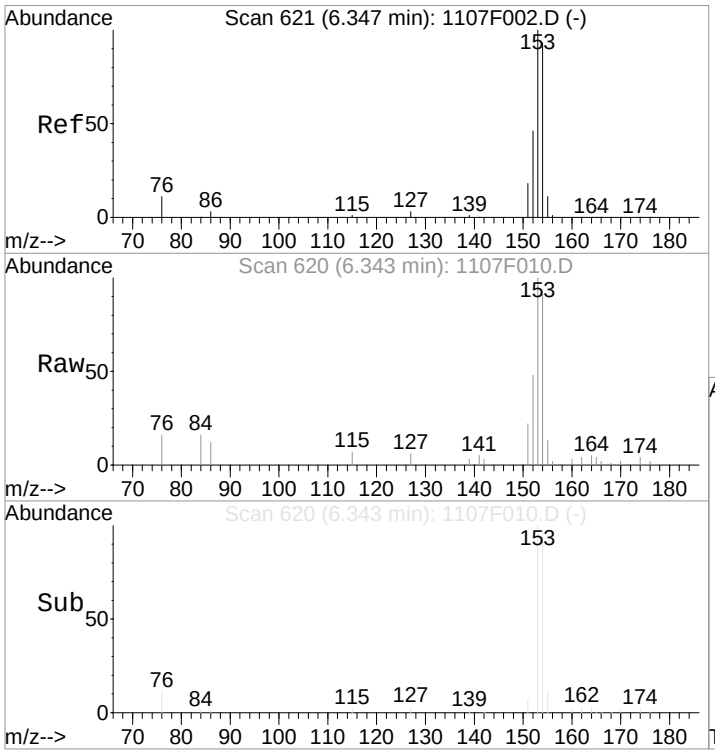
#9
Acenaphthylene
Concen: 9.43 ng/ml
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:152 Resp: 3530

Ion	Ratio	Lower	Upper
152	100		
153	14.9	0.0	42.9
151	45.7	0.2	40.2#



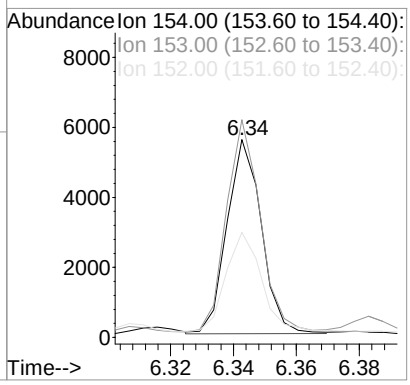
1st 11/19/18
2nd 12/05/18

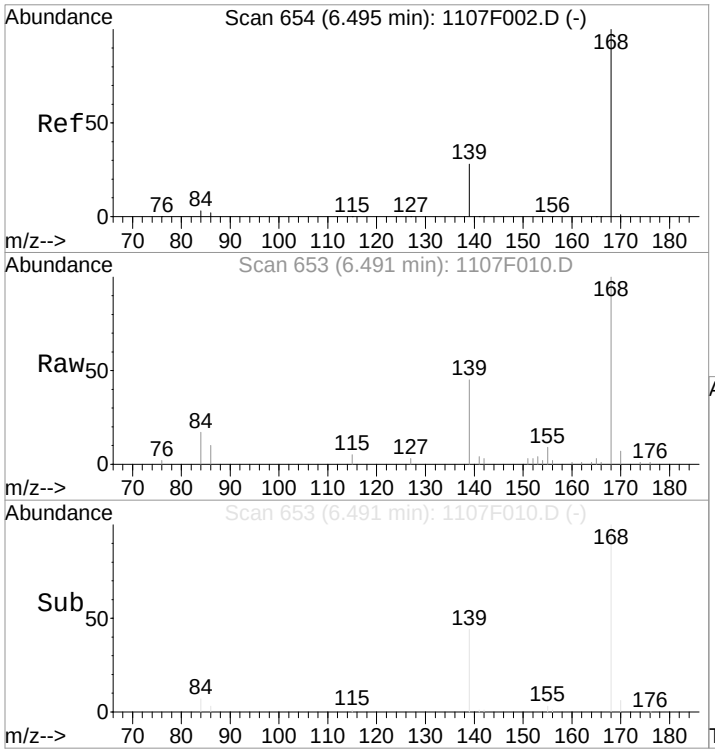


#10
Acenaphthene
Concen: 19.69 ng/ml
RT: 6.34 min Scan# 620
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:154 Resp: 4233

Ion	Ratio	Lower	Upper
154	100		
153	110.2	77.1	137.1
152	51.4	19.7	79.7

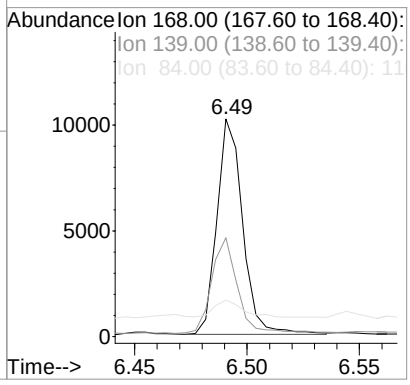




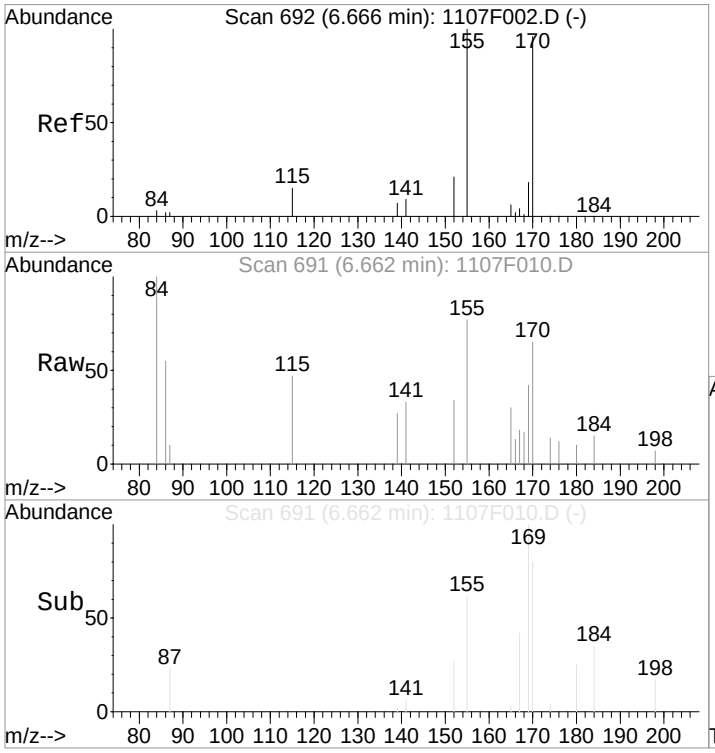
#11
Dibenzofuran
Concen: 23.61 ng/ml
RT: 6.49 min Scan# 653
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:168 Resp: 8144

Ion	Ratio	Lower	Upper
168	100		
139	44.1	0.0	55.8
84	8.0	0.0	23.5



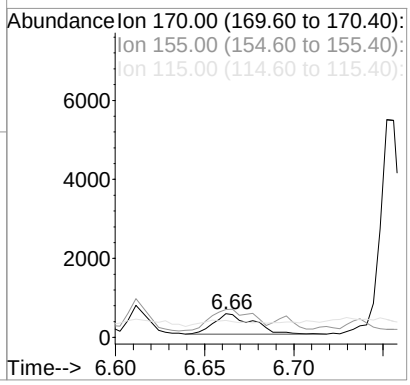
1st 11/19/18
2nd 12/05/18

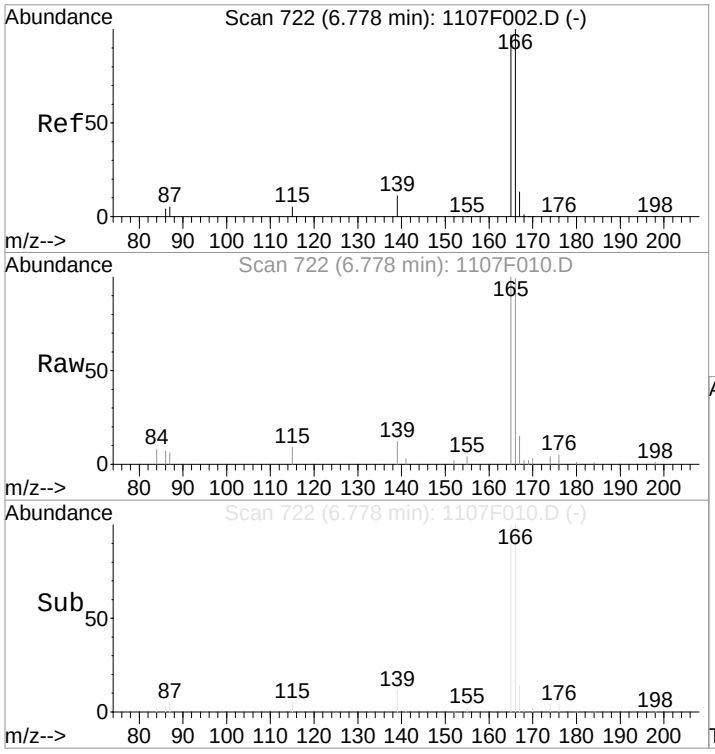


#12
2,3,5-Trimethylnaphthalene
Concen: 4.01 ng/ml
RT: 6.66 min Scan# 691
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:170 Resp: 798

Ion	Ratio	Lower	Upper
170	100		
155	102.3	59.2	119.2
115	28.5	0.0	30.1

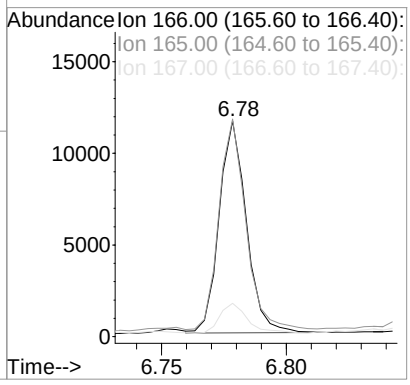




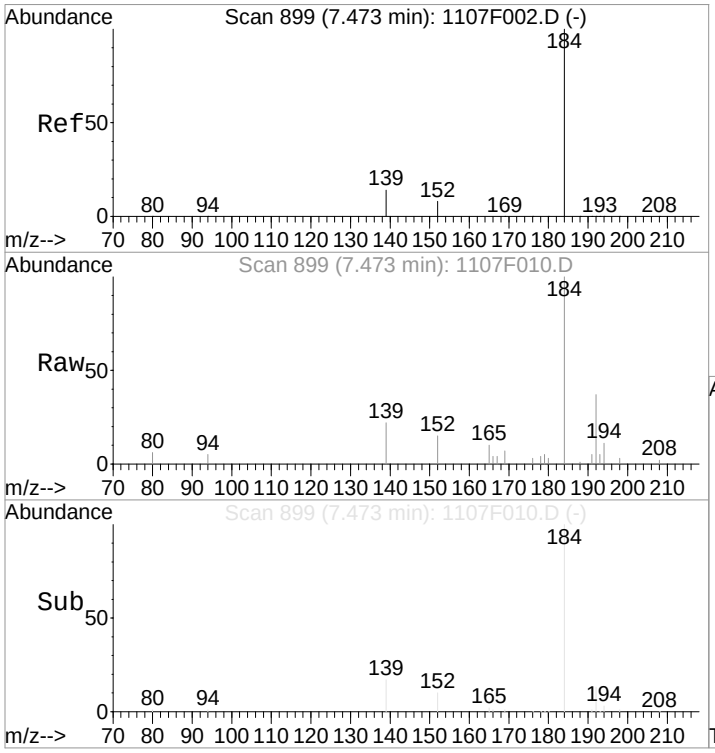
#14
Fluorene
Concen: 33.72 ng/ml
RT: 6.78 min Scan# 722
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:166 Resp: 8767

Ion	Ratio	Lower	Upper
166	100		
165	99.5	63.4	123.4
167	13.9	0.0	33.1



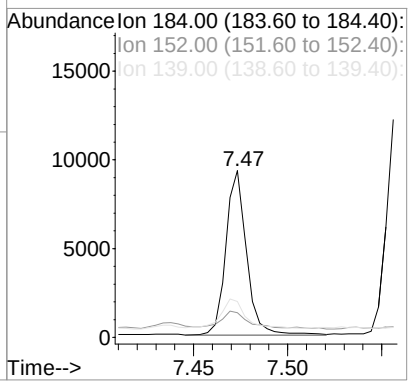
1st 11/19/18
2nd 12/05/18

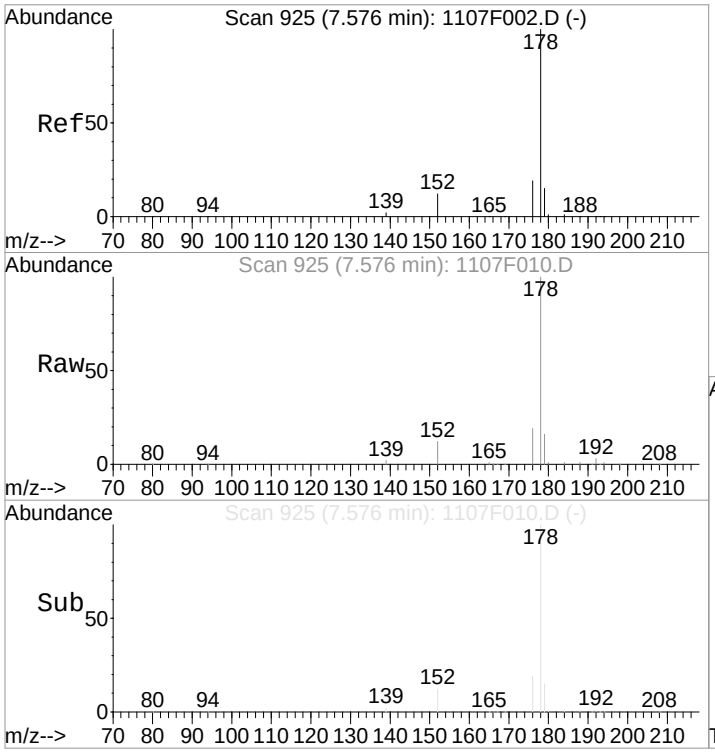


#16
Dibenzothiophene
Concen: 17.72 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:184 Resp: 7085

Ion	Ratio	Lower	Upper
184	100		
152	9.9	0.0	37.8
139	15.9	0.0	32.6

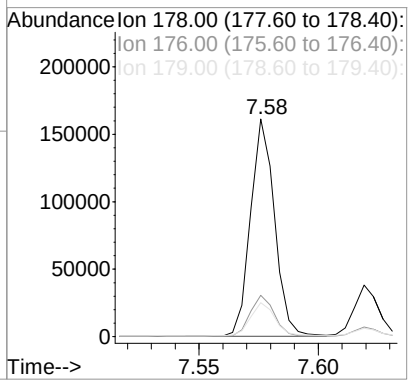




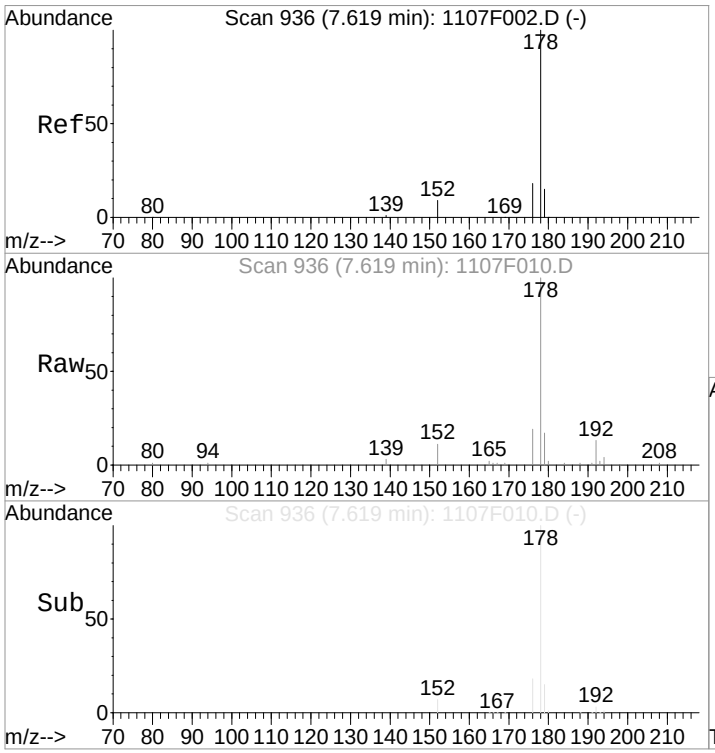
#17
Phenanthrene
Concen: 281.04 ng/ml
RT: 7.58 min Scan# 925
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:178 Resp: 112387

Ion	Ratio	Lower	Upper
178	100		
176	18.9	0.0	48.7
179	15.3	0.0	35.1



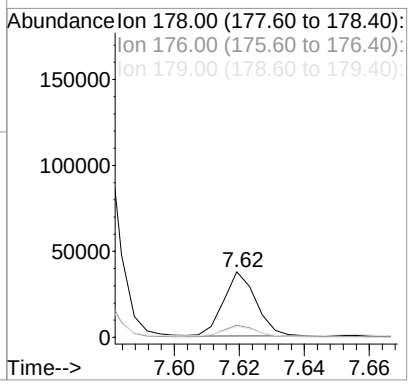
1st 11/19/18
2nd 12/05/18

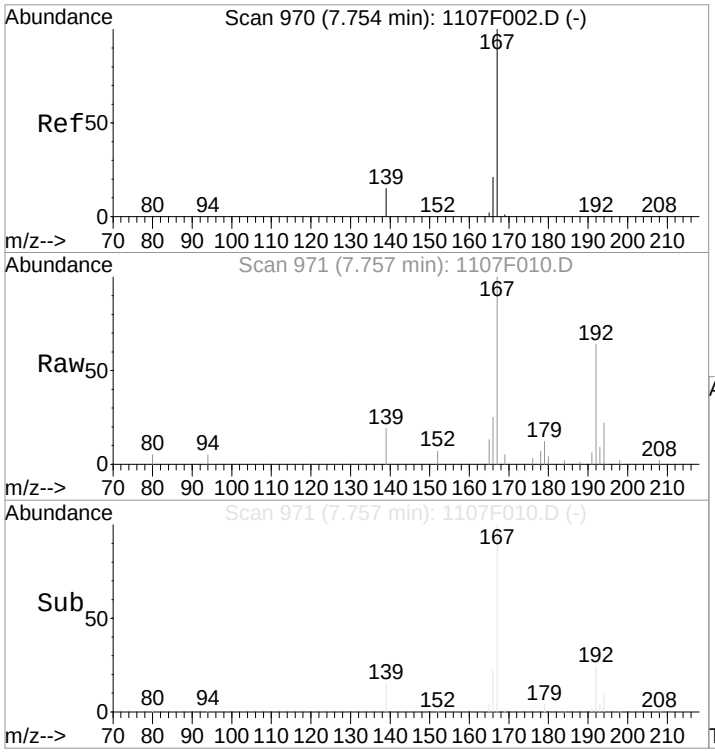


#18
Anthracene
Concen: 68.05 ng/ml
RT: 7.62 min Scan# 936
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:178 Resp: 25978

Ion	Ratio	Lower	Upper
178	100		
176	18.3	0.0	48.0
179	14.5	0.0	35.1

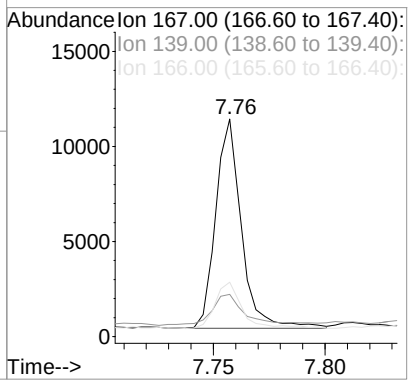


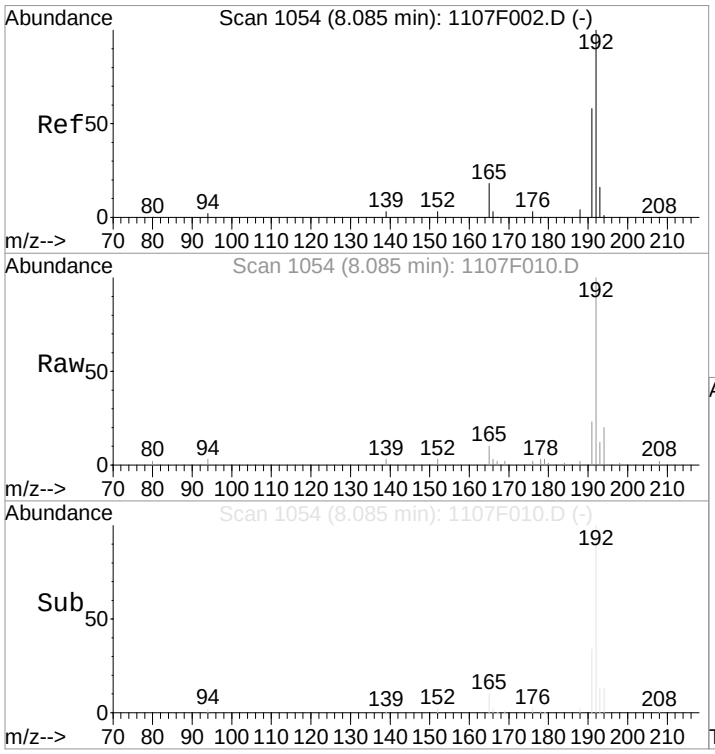


#19
Carbazole
Concen: 23.62 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:167 Resp: 8798

Ion	Ratio	Lower	Upper
167	100		
139	14.1	0.0	41.5
166	22.2	0.7	40.7

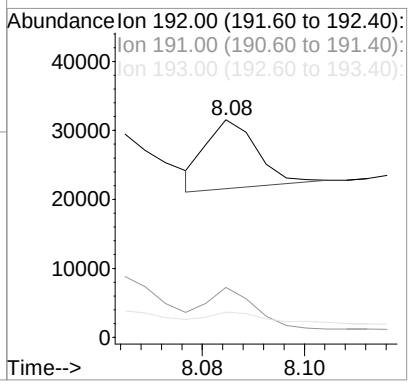


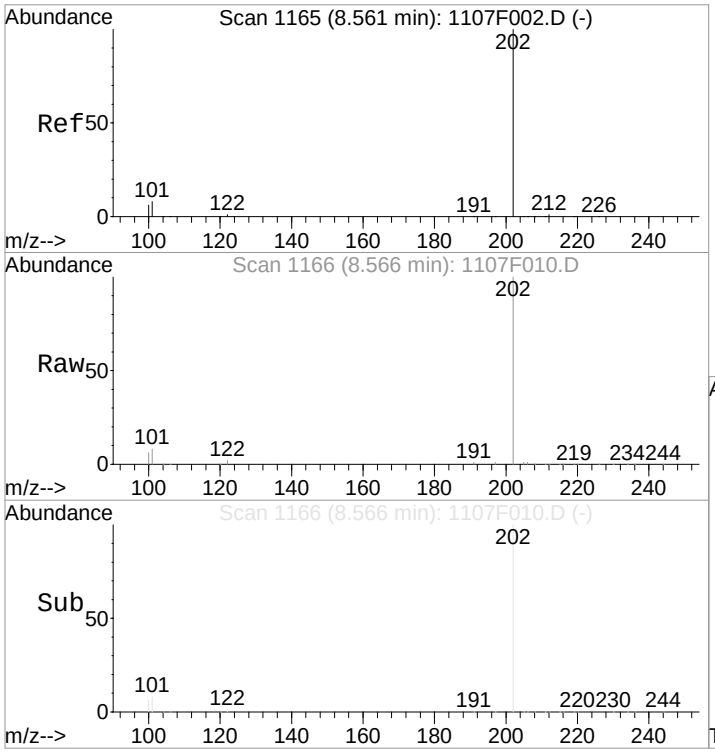


#20
1-Methylphenanthrene
Concen: 23.20 ng/ml
RT: 8.08 min Scan# 1054
Delta R.T. -0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:192 Resp: 7026

Ion	Ratio	Lower	Upper
192	100		
191	68.7	27.7	87.7
193	16.9	0.0	45.4

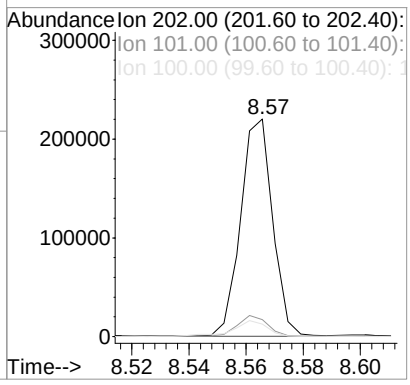


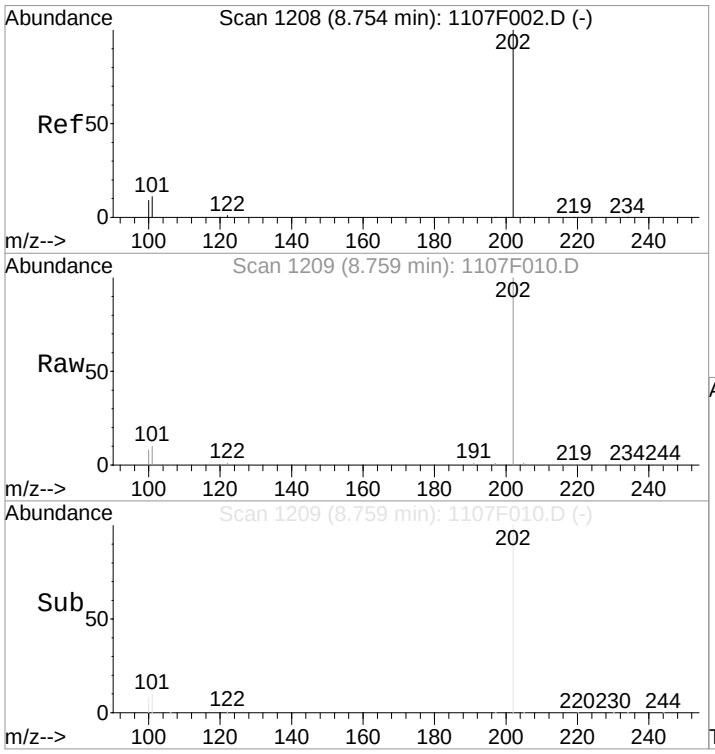


#21
Fluoranthene
Concen: 346.62 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.01 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:202 Resp: 171158

Ion	Ratio	Lower	Upper
202	100		
101	7.7	0.0	41.3
100	5.7	0.0	28.6

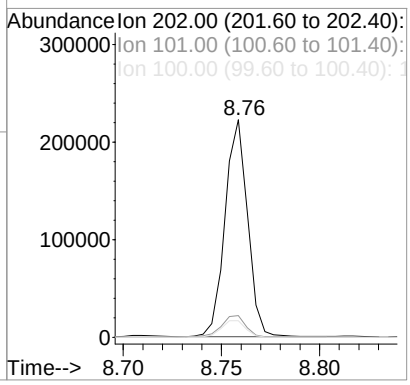


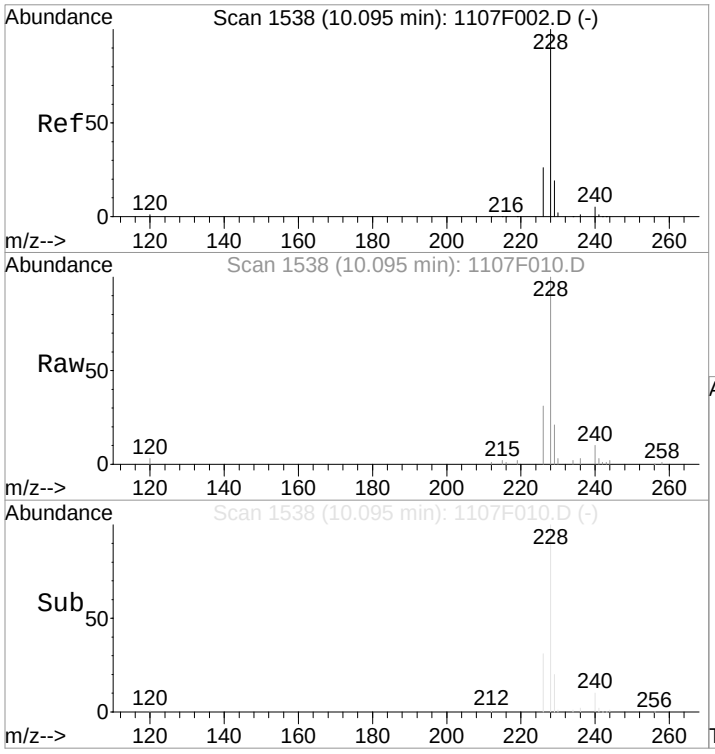


#24
Pyrene
Concen: 330.15 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. 0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:202 Resp: 176656

Ion	Ratio	Lower	Upper
202	100		
101	9.9	0.0	40.8
100	7.7	0.0	28.5

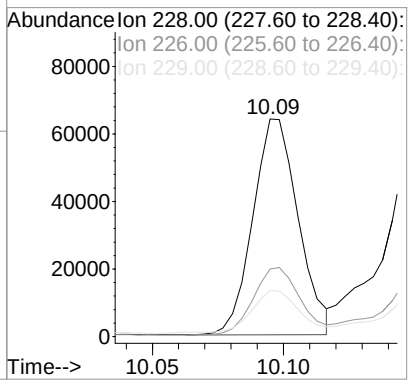


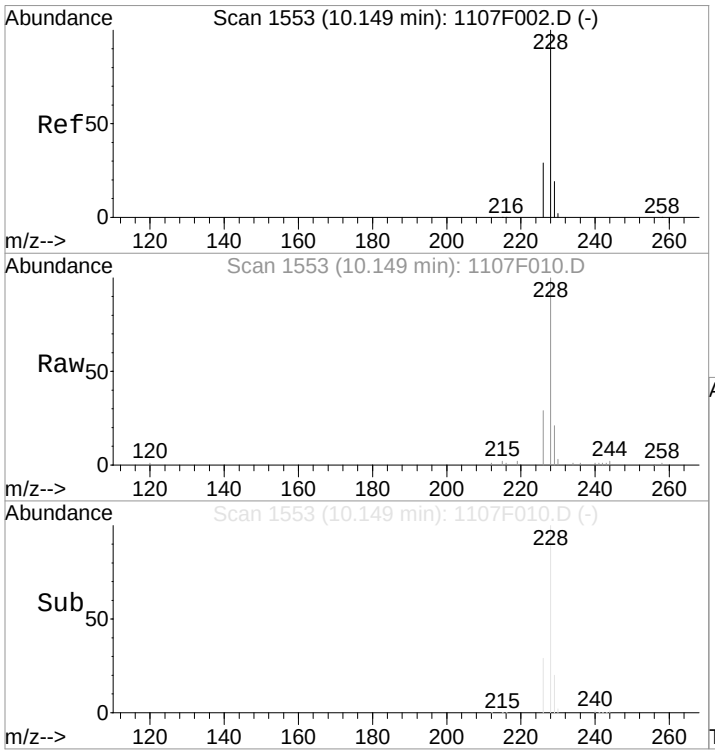


#26
Benz(a)anthracene
Concen: 152.63 ng/ml
RT: 10.09 min Scan# 1538
Delta R.T. 0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:228 Resp: 76960

Ion	Ratio	Lower	Upper
228	100		
226	30.6	0.0	56.3
229	19.4	0.0	39.1

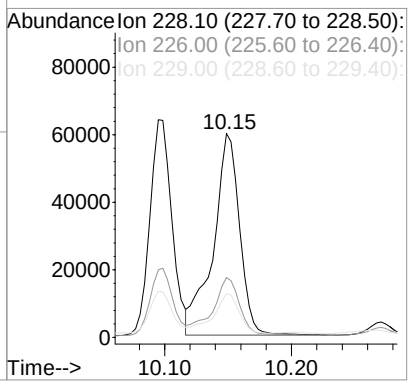


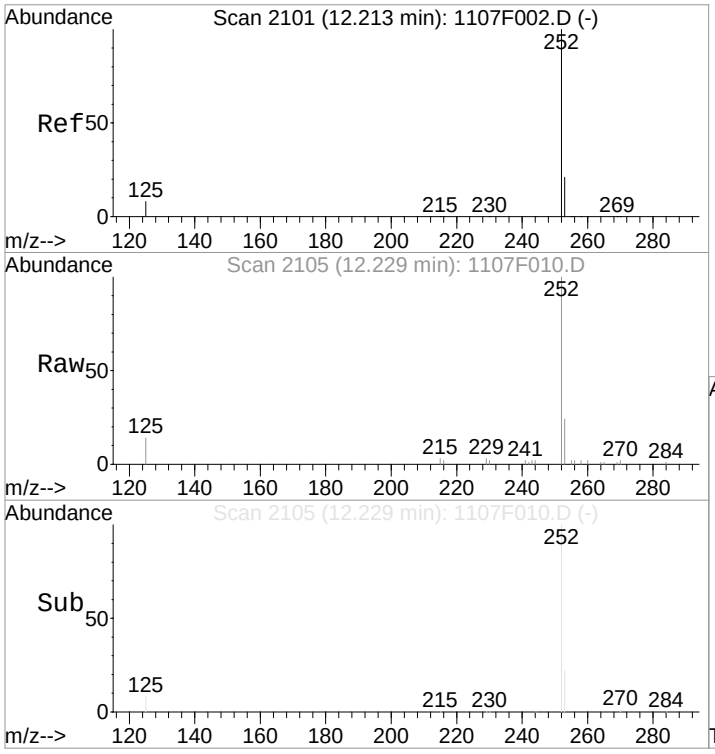


#27
Chrysene
Concen: 177.99 ng/ml
RT: 10.15 min Scan# 1553
Delta R.T. 0.00 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:228 Resp: 85963

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.7
229	19.7	0.0	39.2

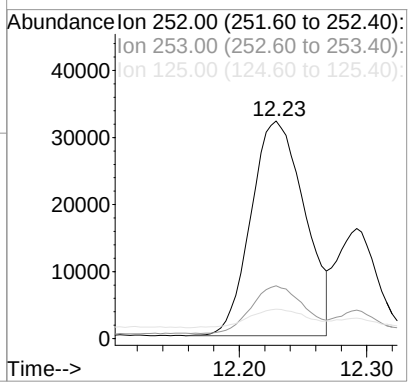




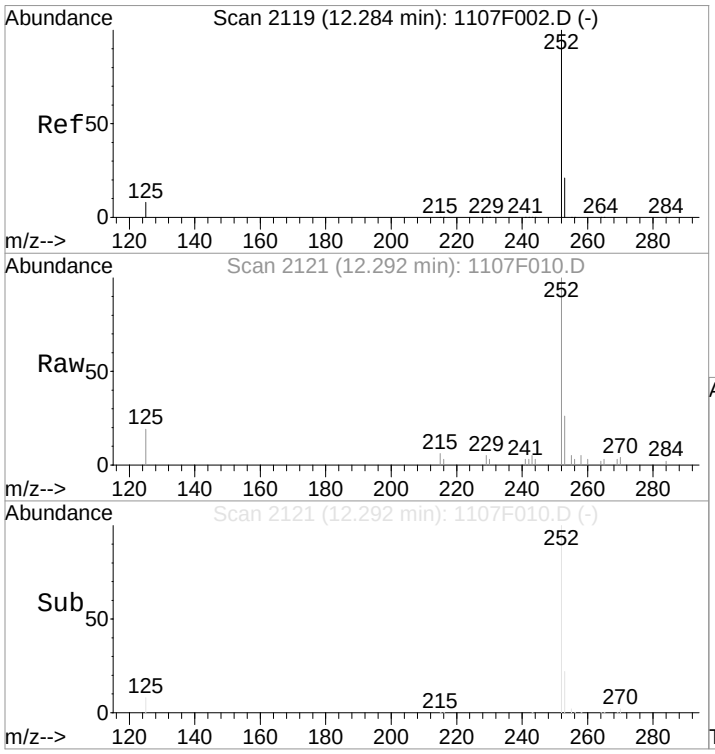
#29
Benzo(b)fluoranthene
Concen: 171.61 ng/ml
RT: 12.23 min Scan# 2105
Delta R.T. 0.02 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:252 Resp: 93994

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.2
125	8.6	0.0	29.5



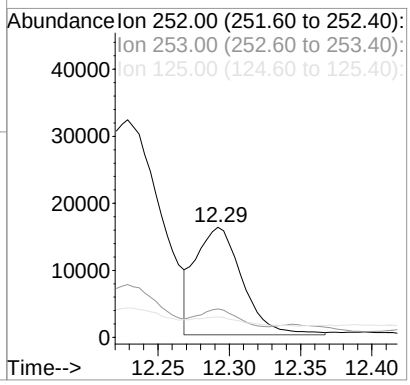
1st 11/19/18
2nd 12/05/18

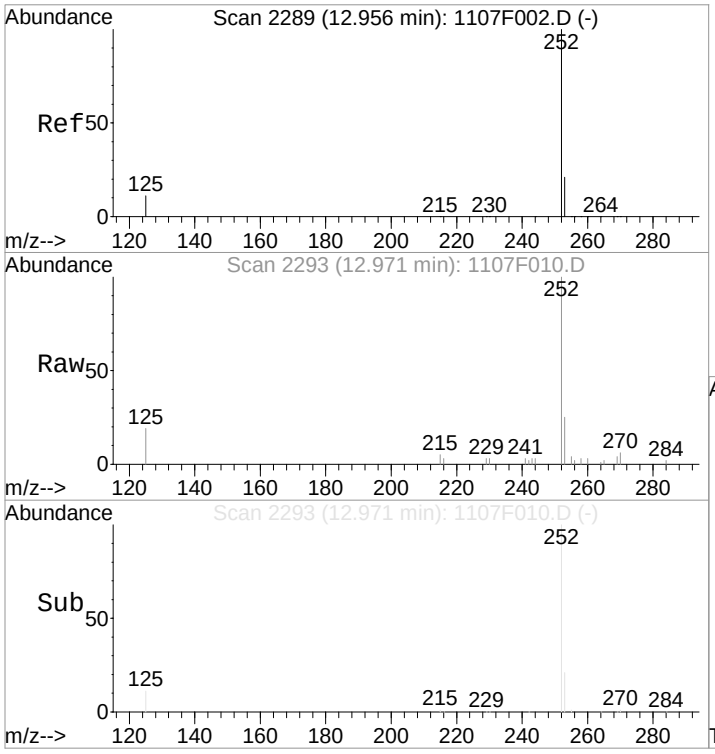


#30
Benzo(k)fluoranthene
Concen: 67.43 ng/ml m
RT: 12.29 min Scan# 2121
Delta R.T. 0.02 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:252 Resp: 36641

Ion	Ratio	Lower	Upper
252	100		
253	25.9	0.0	51.2
125	18.6	0.0	29.7

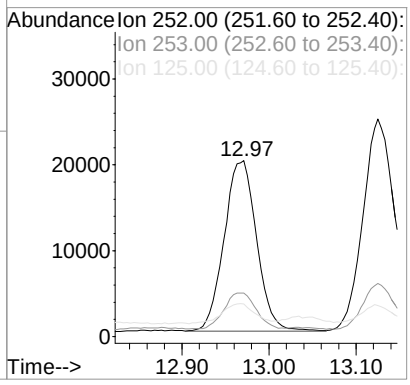


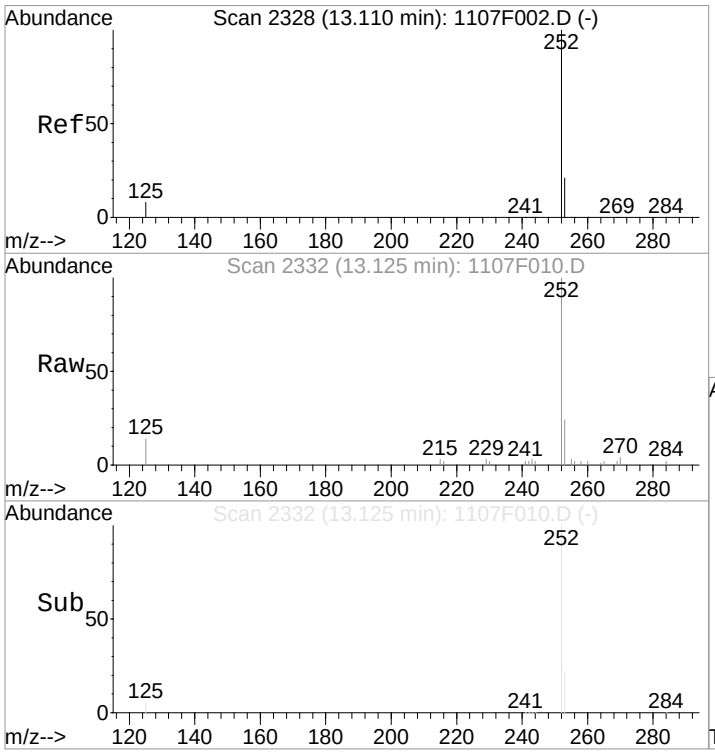


#31
Benzo(e)pyrene
Concen: 98.32 ng/ml
RT: 12.97 min Scan# 2293
Delta R.T. 0.03 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:252 Resp: 51330

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.3
125	11.2	0.0	33.5

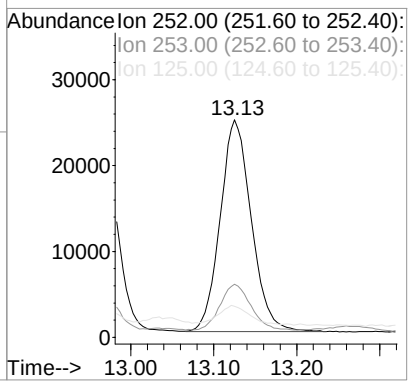


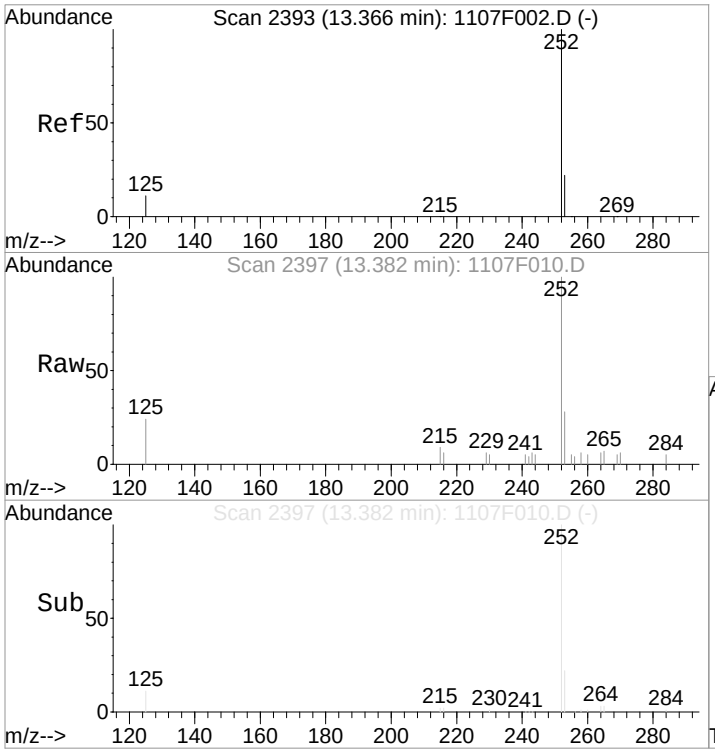


#32
Benzo(a)pyrene
Concen: 133.61 ng/ml
RT: 13.13 min Scan# 2332
Delta R.T. 0.03 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:252 Resp: 64178

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	50.9
125	9.0	0.0	30.3

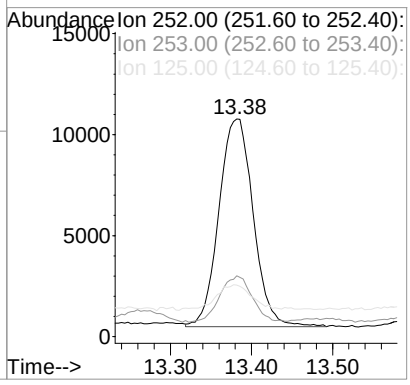




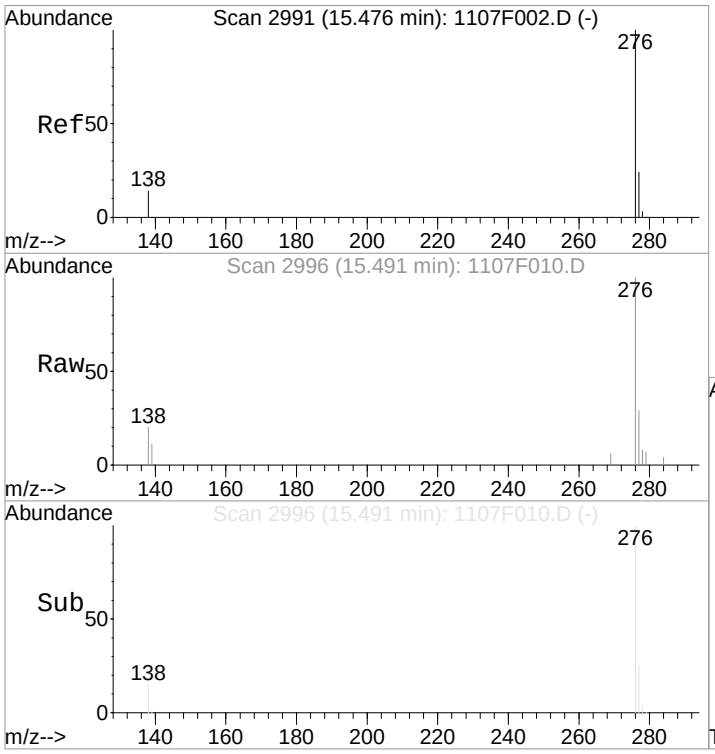
#33
Perylene
Concen: 60.05 ng/ml
RT: 13.38 min Scan# 2397
Delta R.T. 0.03 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:252 Resp: 30256

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.2
125	11.5	0.0	33.8



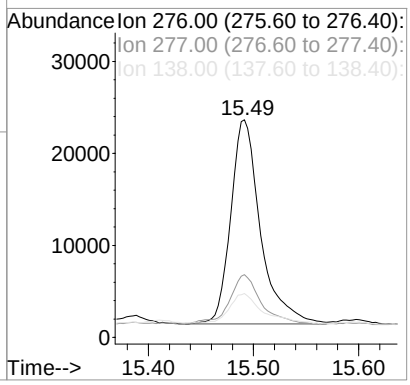
1st 11/19/18
2nd 12/05/18

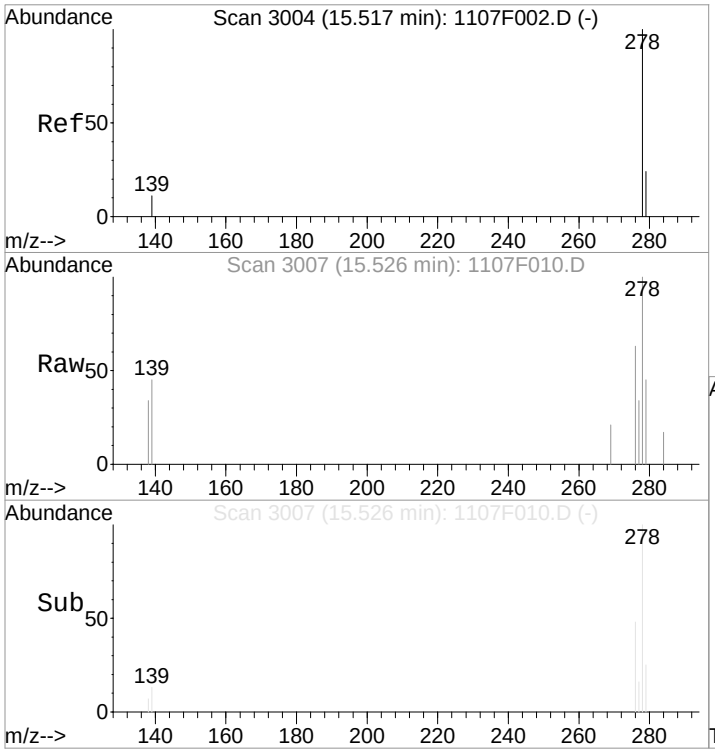


#34
Indeno(1,2,3-cd)pyrene
Concen: 92.93 ng/ml
RT: 15.49 min Scan# 2996
Delta R.T. 0.02 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:276 Resp: 43770

Ion	Ratio	Lower	Upper
276	100		
277	24.2	0.0	53.4
138	14.4	0.0	37.7

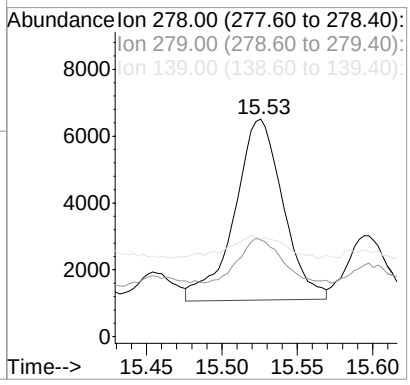




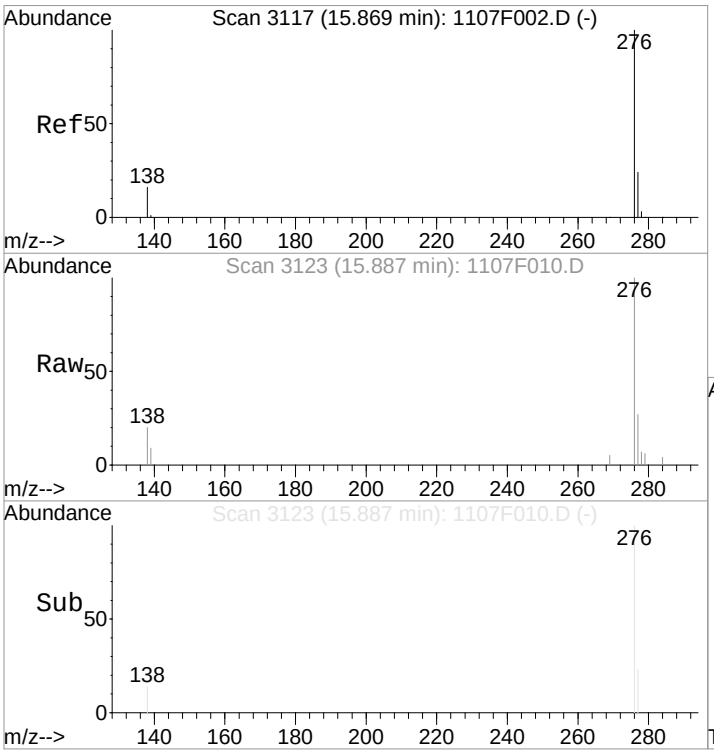
#35
Dibenz(a,h)anthracene
Concen: 25.34 ng/ml
RT: 15.53 min Scan# 3007
Delta R.T. 0.02 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:278 Resp: 12098

Ion	Ratio	Lower	Upper
278	100		
279	24.0	0.0	53.5
139	10.5	0.0	35.0



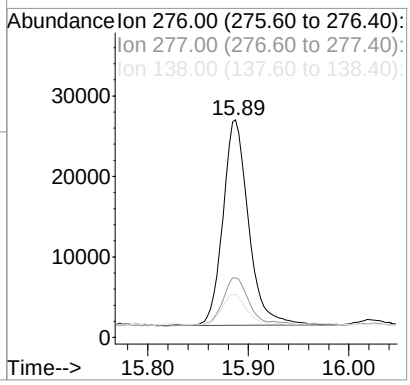
1st 11/19/18
2nd 12/05/18



#36
Benzo(g,h,i)perylene
Concen: 82.03 ng/ml
RT: 15.89 min Scan# 3123
Delta R.T. 0.03 min
Lab File: 1107F010.D
Acq: 7 Nov 2018 9:28 am

Tgt Ion:276 Resp: 45248

Ion	Ratio	Lower	Upper
276	100		
277	23.2	0.0	53.1
138	14.6	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F010.D Vial: 10
Acq On : 7 Nov 2018 9:28 am Operator: LWeiskopf
Sample : K1810270-011DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:56:06 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	64050	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31363	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	64105	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	77988	200.00	ng/ml	0.00
28) Perylene-d12	13.29	264	88655	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	21109	118.07	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	11.81%		
13) Fluorene-d10	6.76	176	33278	165.95	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.59%		
22) Fluoranthene-d10	8.55	212	69326	171.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	17.16%		
25) Terphenyl-d14	8.89	244	61590	182.08	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	18.21%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	8384	22.68	ng/ml	99
4) 2-Methylnaphthalene	5.42	142	3258	14.61	ng/ml	91
5) 1-Methylnaphthalene	5.50	142	1972	9.19	ng/ml	94
6) Biphenyl	5.83	154	1600	5.75	ng/ml	97
7) 2,6-Dimethylnaphthalene	5.97	156	1449	7.57	ng/ml	90
9) Acenaphthylene	6.20	152	3530	9.43	ng/ml#	64
10) Acenaphthene	6.34	154	4233	19.69	ng/ml	97
11) Dibenzofuran	6.49	168	8144	23.61	ng/ml	67
12) 2,3,5-Trimethylnaphthalene	6.66	170	798	4.01	ng/ml	82
14) Fluorene	6.78	166	8767	33.72	ng/ml	94
16) Dibenzothiophene	7.47	184	7085	17.72	ng/ml	92
17) Phenanthrene	7.58	178	112387	281.04	ng/ml	100
18) Anthracene	7.62	178	25978	68.05	ng/ml	99
19) Carbazole	7.76	167	8798	23.62	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	7026	23.20	ng/ml	87
21) Fluoranthene	8.57	202	171158	346.62	ng/ml	91
24) Pyrene	8.76	202	176656	330.15	ng/ml	98
26) Benz(a)anthracene	10.09	228	76960	152.63	ng/ml	95
27) Chrysene	10.15	228	85963	177.99	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	93994	171.61	ng/ml	98
30) Benzo(k)fluoranthene	12.29	252	36641m	67.43	ng/ml	
31) Benzo(e)pyrene	12.97	252	51330	98.32	ng/ml	98
32) Benzo(a)pyrene	13.13	252	64178	133.61	ng/ml	98
33) Perylene	13.38	252	30256	60.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.49	276	43770	92.93	ng/ml	96
35) Dibenz(a,h)anthracene	15.53	278	12098	25.34	ng/ml	95
36) Benzo(g,h,i)perylene	15.89	276	45248	82.03	ng/ml	95

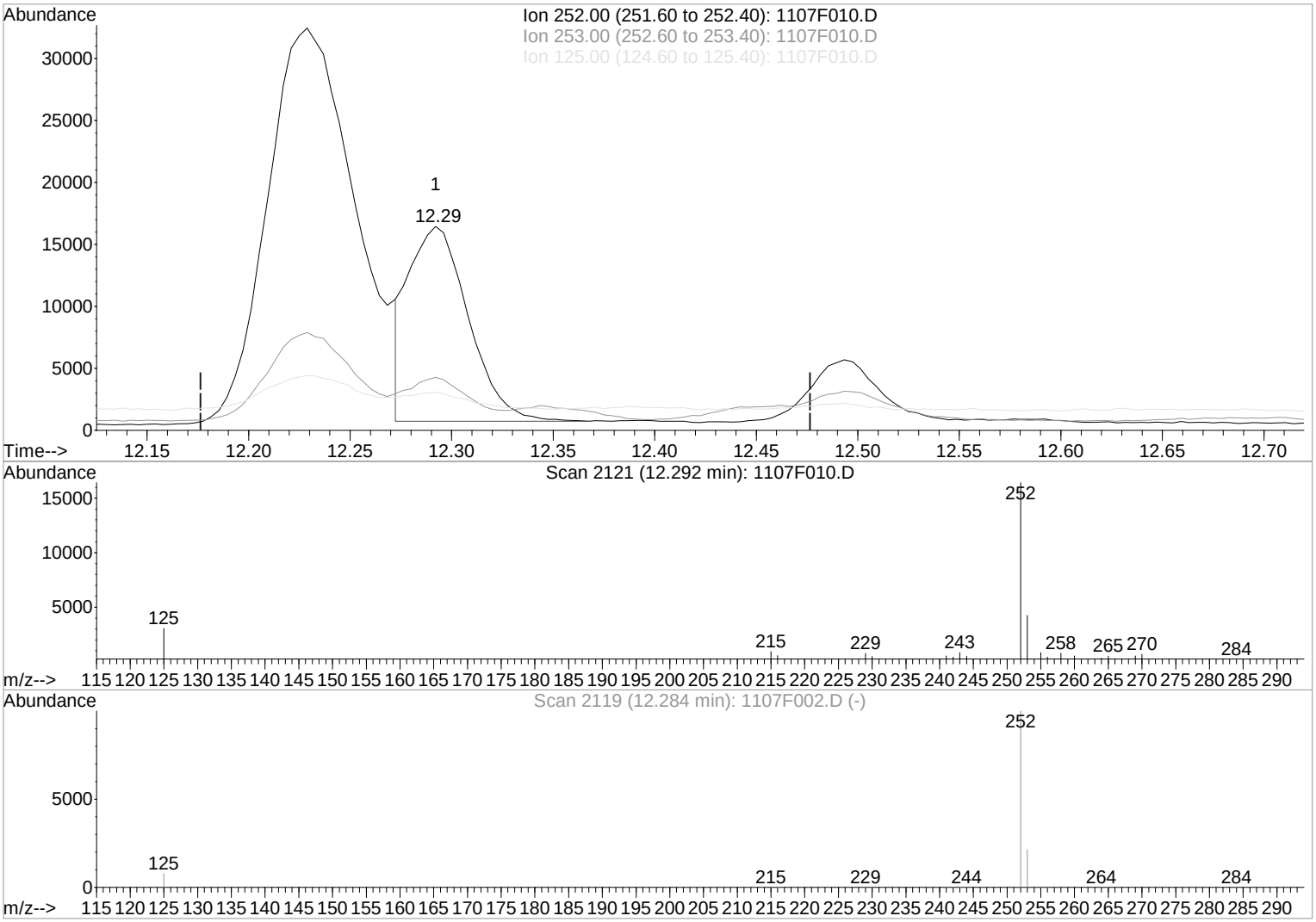
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F010.D Vial: 10
Acq On : 7 Nov 2018 9:28 am Operator: LWeiskopf
Sample : K1810270-011DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:56 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Multiple Level Calibration



TIC: 1107F010.D

(30) Benzo(k)fluoranthene (T)

12.29min 59.32ng/ml

response 32234

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	17.16
125.00	9.70	8.10
0.00	0.00	0.00

Manual Integration:

Before

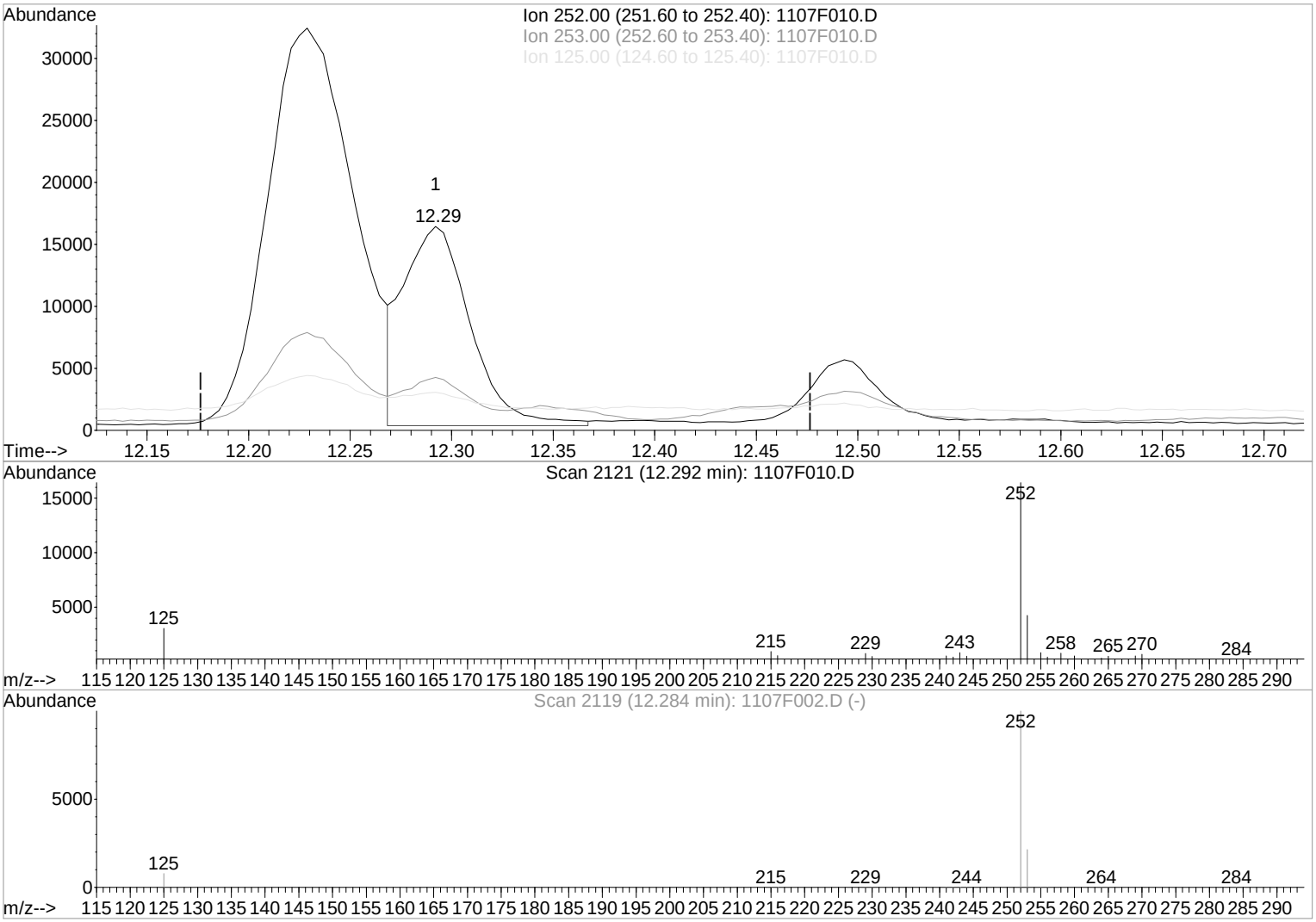
11/16/18

Quantitation Report (Qedit)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F010.D Vial: 10
Acq On : 7 Nov 2018 9:28 am Operator: LWeiskopf
Sample : K1810270-011DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 13:19 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Multiple Level Calibration



TIC: 1107F010.D

(30) Benzo(k)fluoranthene (T)

12.29min 67.43ng/ml m

response 36641

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	25.88
125.00	9.70	18.60
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/16/18

1st 11/19/18
2nd 12/05/18

Exception Report

Data File: J:\MS14\DATA\110718\1107F011.D
Lab ID: K1810270-012
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/07/2018 09:59
Date Quantitated: 11/16/2018 13:20
Batch ID: KWG1806028
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/19/18
2nd 12/05/18

Quantitation Report

Data File:	J:\MS14\DATA\110718\1107F011.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 09:59	**Quant Date:**	11/16/2018 13:20	**Vial:**	11
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	4.0
Lab ID:	K1810270-012			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/15/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806028	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700769	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110718\1107F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.01	136	63426	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	30950	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	64665	200.00	OK
4	Chrysene-d12	10.11	0.00	240	75545	200.00	OK
5	Perylene-d12	13.32	0.04	264	87616	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	32112	162.27	65	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	65373	160.41	64	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	57121	174.32	70	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77	-0.01	0.00	128	1583	4.32	1.1	JD	
1	2-Methylnaphthalene	5.42		0.00	142	506	2.29	0.59	JD	
2	Acenaphthylene	6.20		0.00	152	3330	9.02	2.3	D	
2	Acenaphthene	6.34	-0.01	0.00	154	3198	15.08	3.9	D	
2	Dibenzofuran	6.50		0.00	168	4964	14.58	3.8	D	
2	Fluorene	6.78		0.00	166	4101	15.98	4.1	D	
3	Phenanthrene	7.58		0.00	178	271448	672.91	170	D	
3	Anthracene	7.62		0.00	178	22381	58.12	15	D	
3	Fluoranthene	8.57	0.01	0.00	202	531996	1,068	280	D	
4	Pyrene	8.76	0.01	0.00	202	416142	802.88	210	D	
4	Benz(a)anthracene	10.10		0.00	228	203770	417.20	110	D	
4	Chrysene	10.15		0.00	228	282928	604.75	160	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110718\1107F011.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 09:59	**Quant Date:**	11/16/2018 13:20	**Vial:**	11
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	4.0
Lab ID:	K1810270-012			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	347471	641.91	170	D	
5	Benzo(k)fluoranthene	12.30	0.02	0.00	252	125120	233.00	60	D	
5	Benzo(a)pyrene	13.14	0.03	0.00	252	163594	344.62	89	D	
5	Indeno(1,2,3-cd)pyrene	15.50	0.02	0.00	276	136834	293.95	76	D	
5	Dibenz(a,h)anthracene	15.54	0.02	0.00	278	36952	78.31	20	D	
5	Benzo(g,h,i)perylene	15.90	0.03	0.00	276	132511	243.08	63	D	

Prep Amount:	40.385 g	**Dilution:**	4.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	76.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

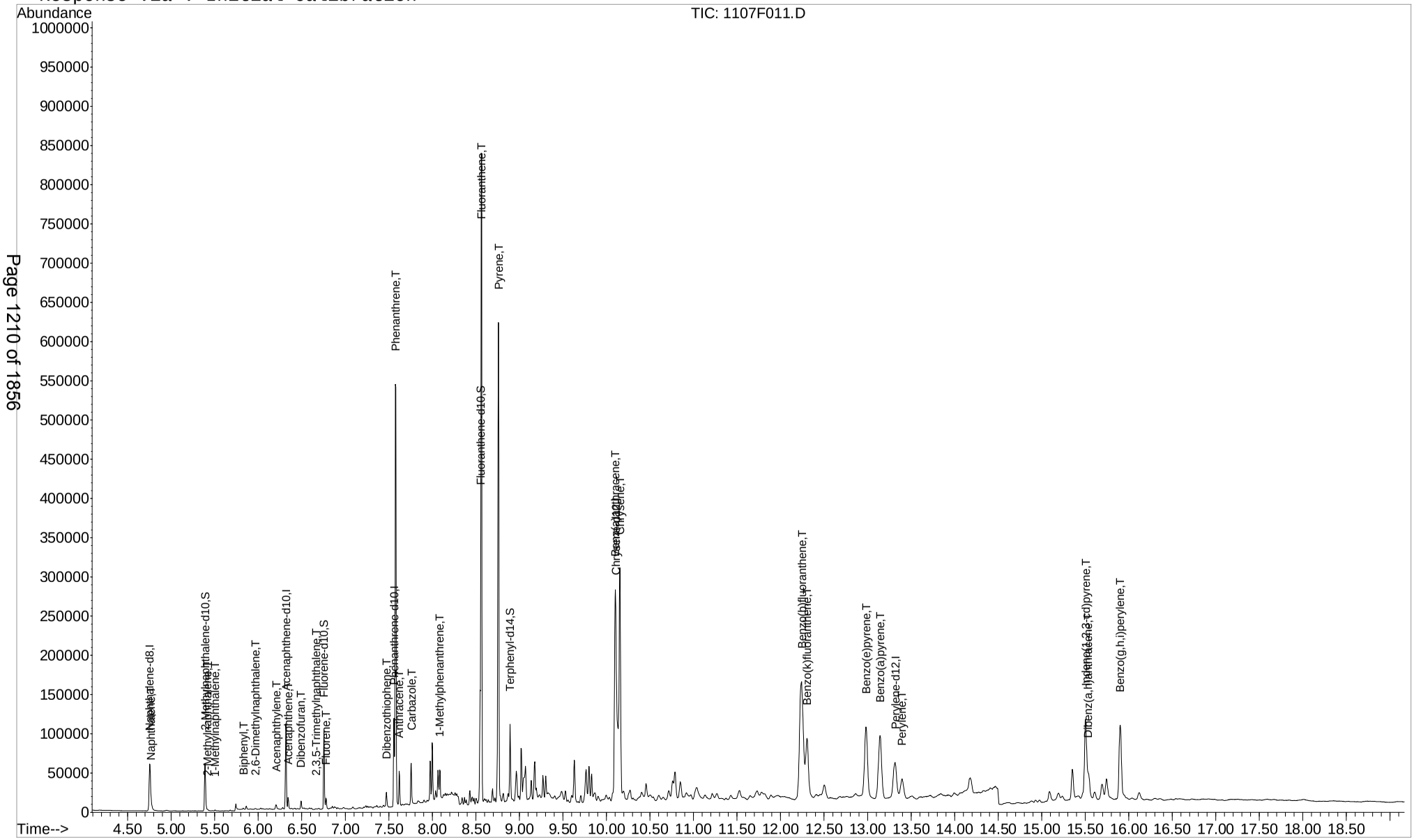
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

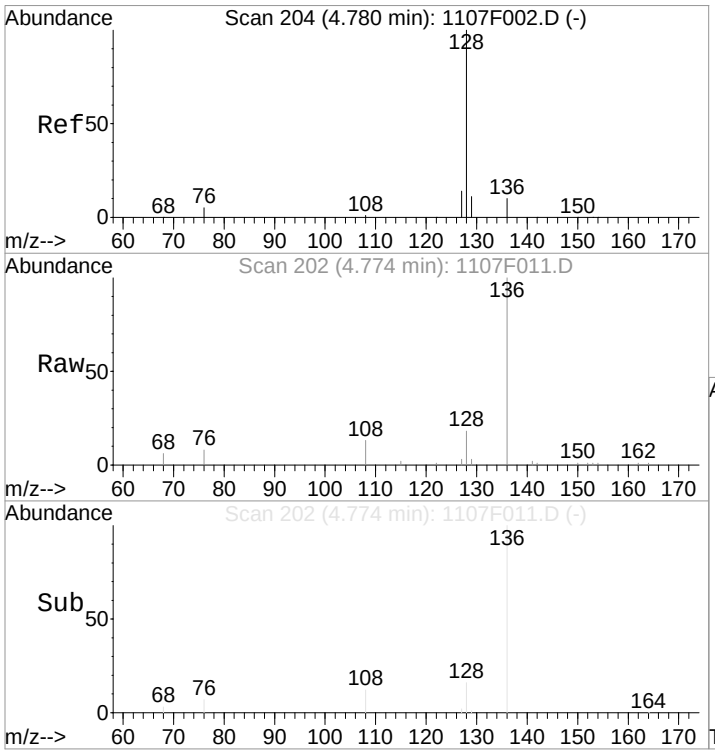
Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F011.D Vial: 11
Acq On : 7 Nov 2018 9:59 am Operator: LWeiskopf
Sample : K1810270-012DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 13:20 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration

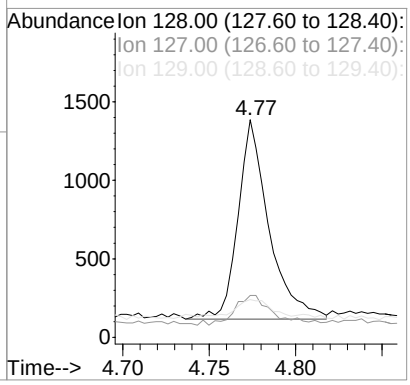


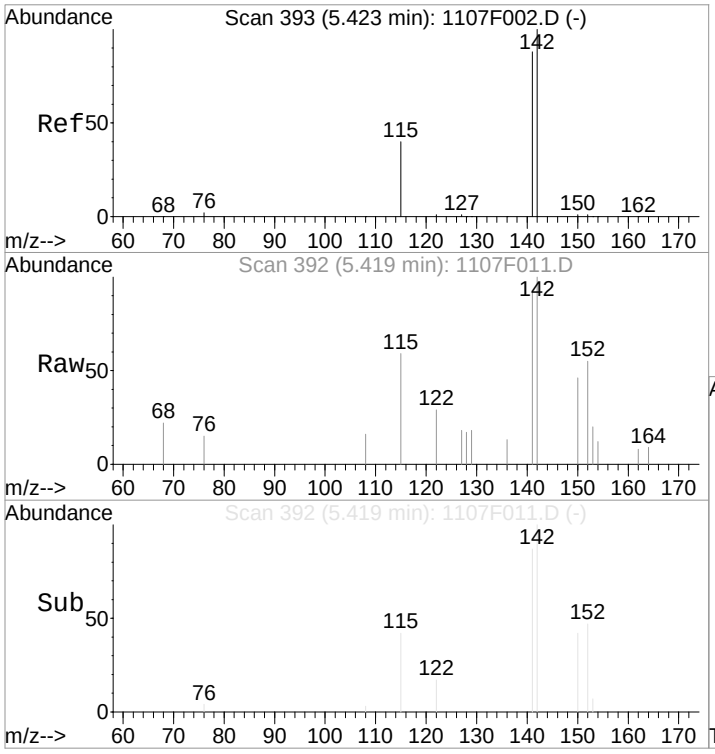


#2
Naphthalene
Concen: 4.32 ng/ml
RT: 4.77 min Scan# 202
Delta R.T. -0.01 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:128 Resp: 1583

Ion	Ratio	Lower	Upper
128	100		
127	14.2	0.0	43.7
129	9.3	0.0	30.8

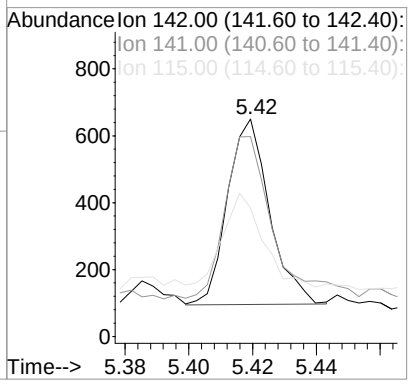


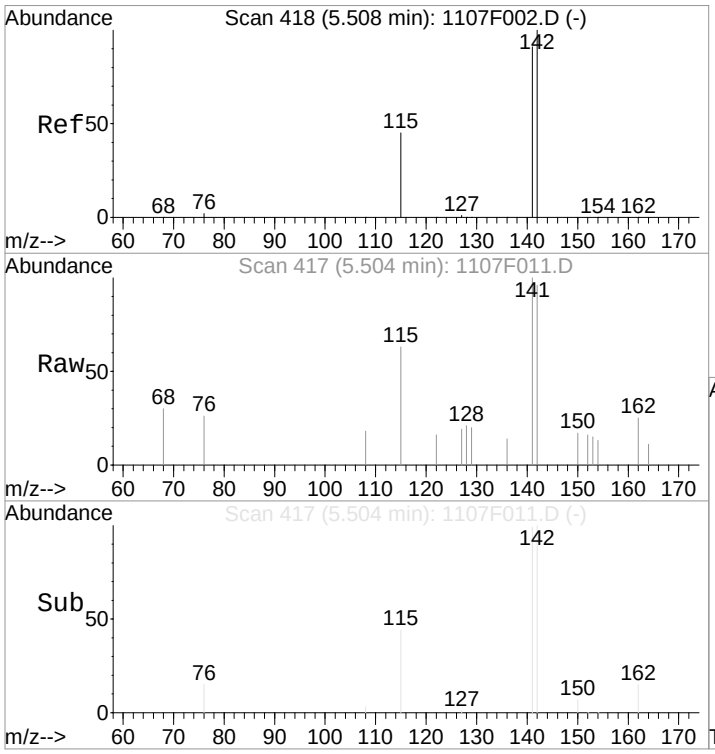


#4
2-Methylnaphthalene
Concen: 2.29 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:142 Resp: 506

Ion	Ratio	Lower	Upper
142	100		
141	87.5	56.8	116.8
115	41.6	13.3	53.3

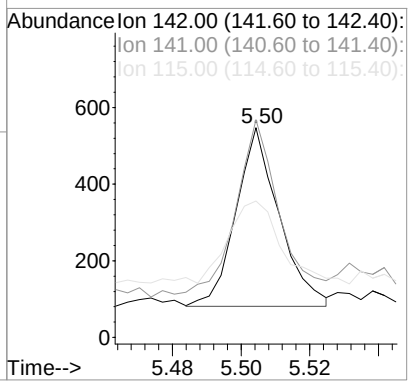


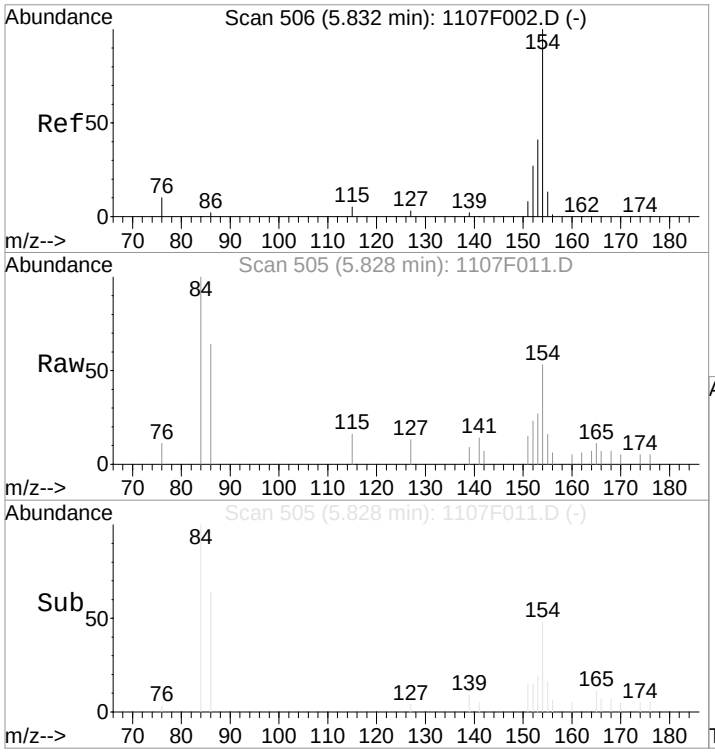


#5
1-Methylnaphthalene
Concen: 1.92 ng/ml m
RT: 5.50 min Scan# 417
Delta R.T. -0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:142 Resp: 408

Ion	Ratio	Lower	Upper
142	100		
141	103.8	59.7	119.7
115	65.1	13.7	53.7#

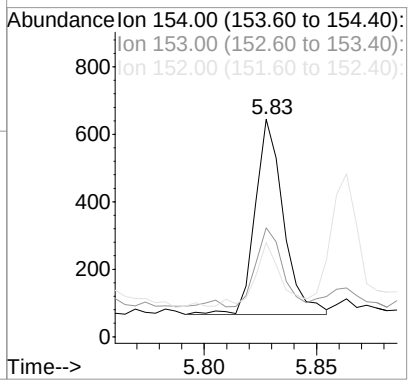




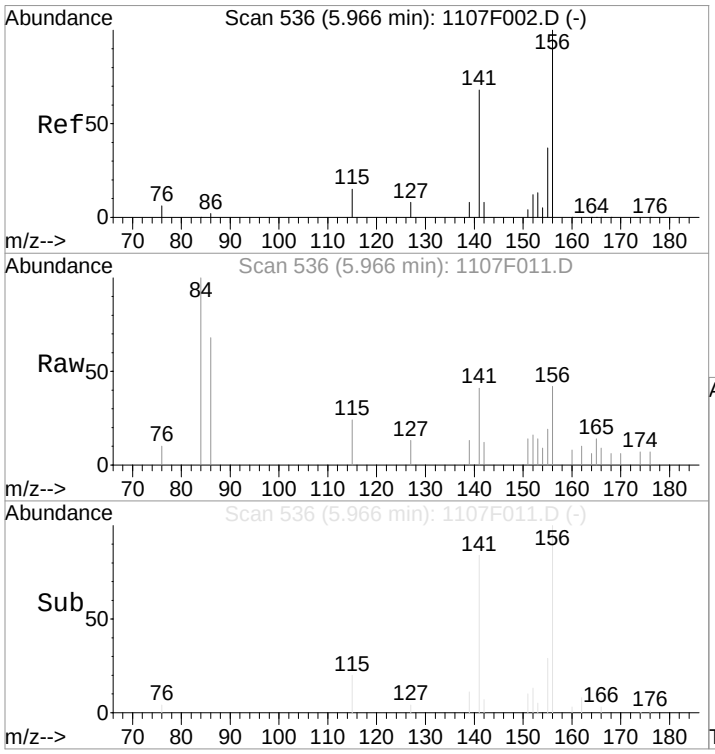
#6
Biphenyl
Concen: 1.84 ng/ml
RT: 5.83 min Scan# 505
Delta R.T. -0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:154 Resp: 508

Ion	Ratio	Lower	Upper
154	100		
153	40.1	11.4	71.4
152	32.5	7.1	47.1



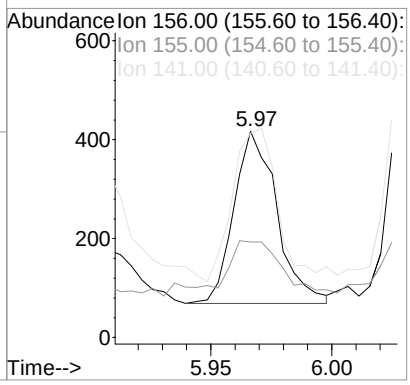
1st 11/19/18
2nd 12/05/18

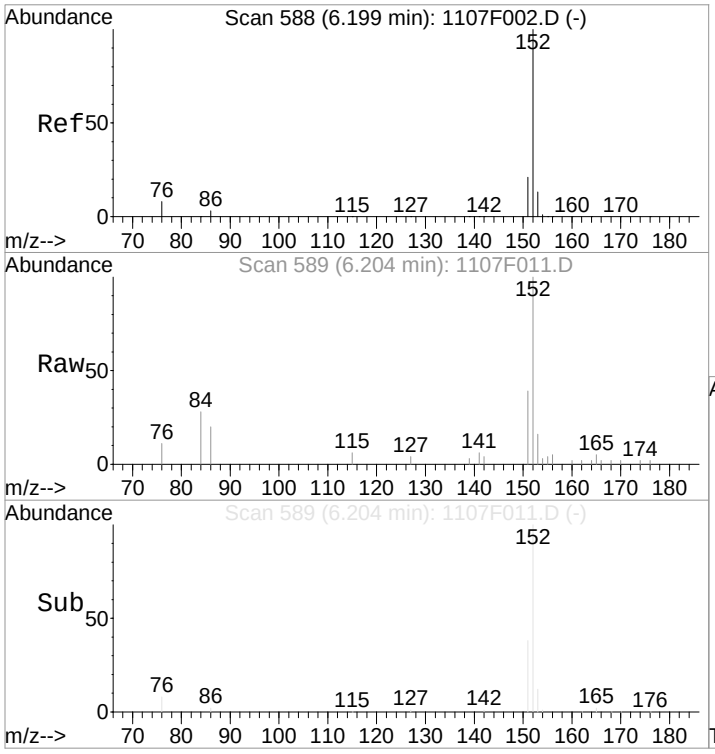


#7
2,6-Dimethylnaphthalene
Concen: 2.26 ng/ml
RT: 5.97 min Scan# 536
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:156 Resp: 429

Ion	Ratio	Lower	Upper
156	100		
155	27.6	7.0	67.0
141	77.6	47.9	87.9

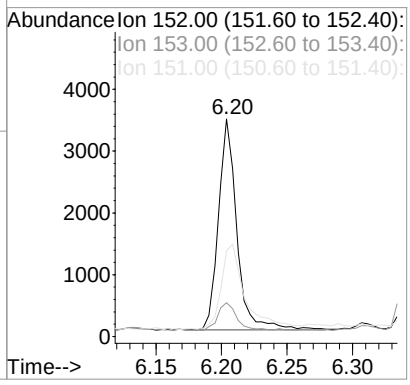


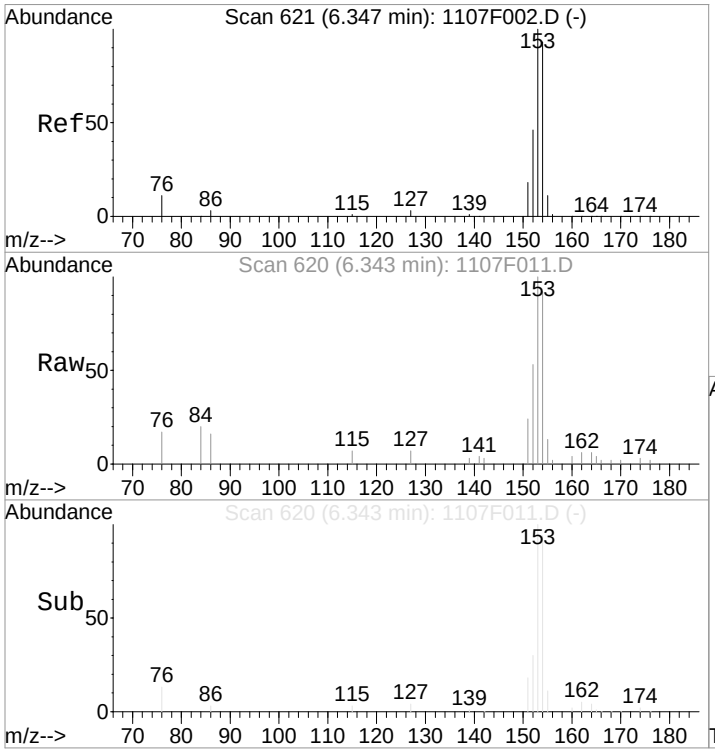


#9
Acenaphthylene
Concen: 9.02 ng/ml
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:152 Resp: 3330

Ion	Ratio	Lower	Upper
152	100		
153	13.1	0.0	42.9
151	37.1	0.2	40.2

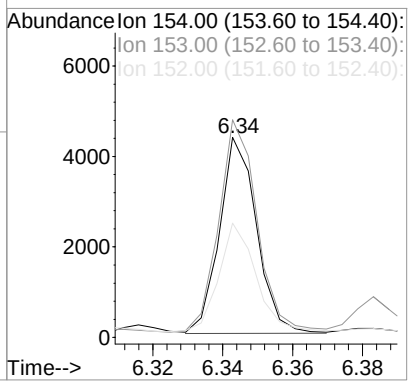


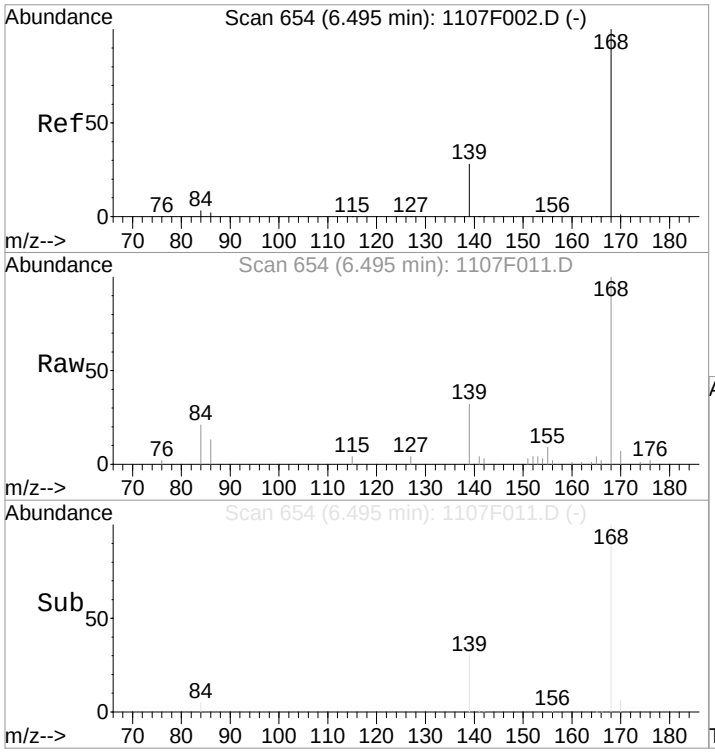


#10
Acenaphthene
Concen: 15.08 ng/ml
RT: 6.34 min Scan# 620
Delta R.T. -0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:154 Resp: 3198

Ion	Ratio	Lower	Upper
154	100		
153	108.0	77.1	137.1
152	55.1	19.7	79.7

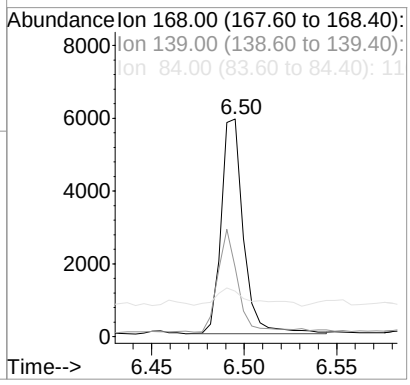




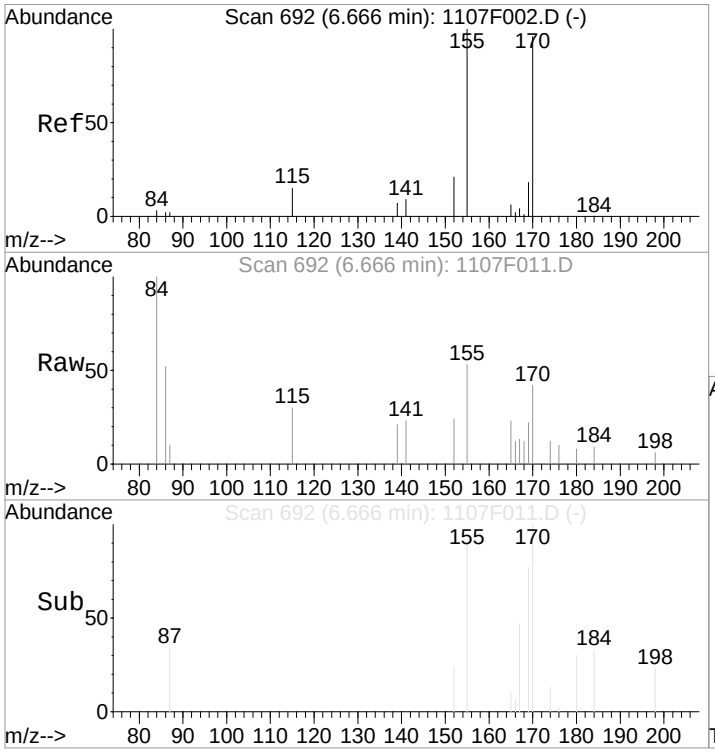
#11
Dibenzofuran
Concen: 14.58 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:168 Resp: 4964

Ion	Ratio	Lower	Upper
168	100		
139	29.8	0.0	55.8
84	5.8	0.0	23.5



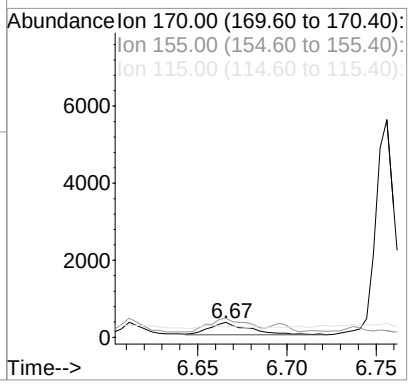
1st 11/19/18
2nd 11/05/18

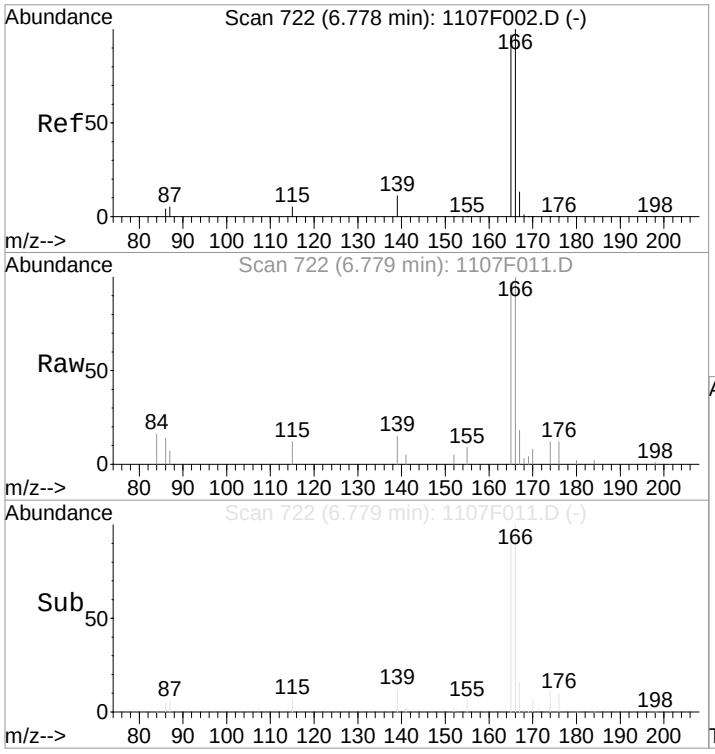


#12
2,3,5-Trimethylnaphthalene
Concen: 2.52 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:170 Resp: 494

Ion	Ratio	Lower	Upper
170	100		
155	109.8	59.2	119.2
115	13.8	0.0	30.1

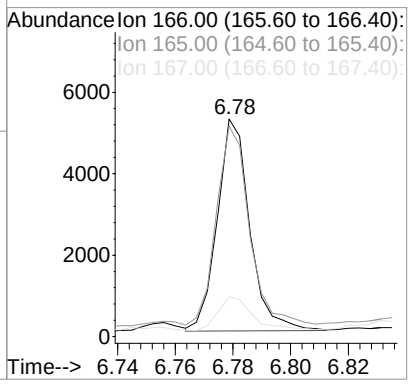


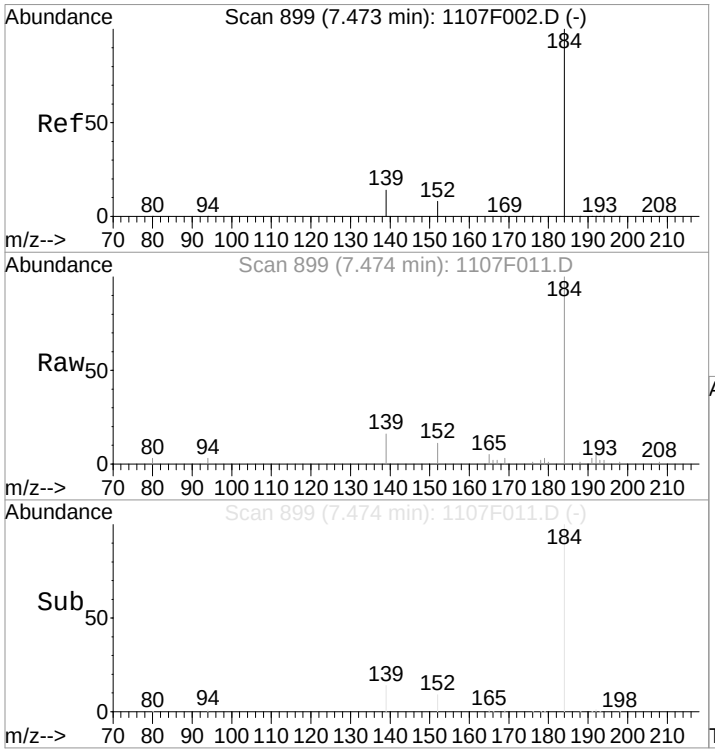


#14
Fluorene
Concen: 15.98 ng/ml
RT: 6.78 min Scan# 722
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:166 Resp: 4101

Ion	Ratio	Lower	Upper
166	100		
165	94.4	63.4	123.4
167	15.9	0.0	33.1

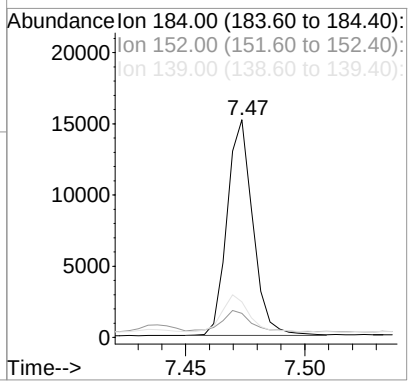


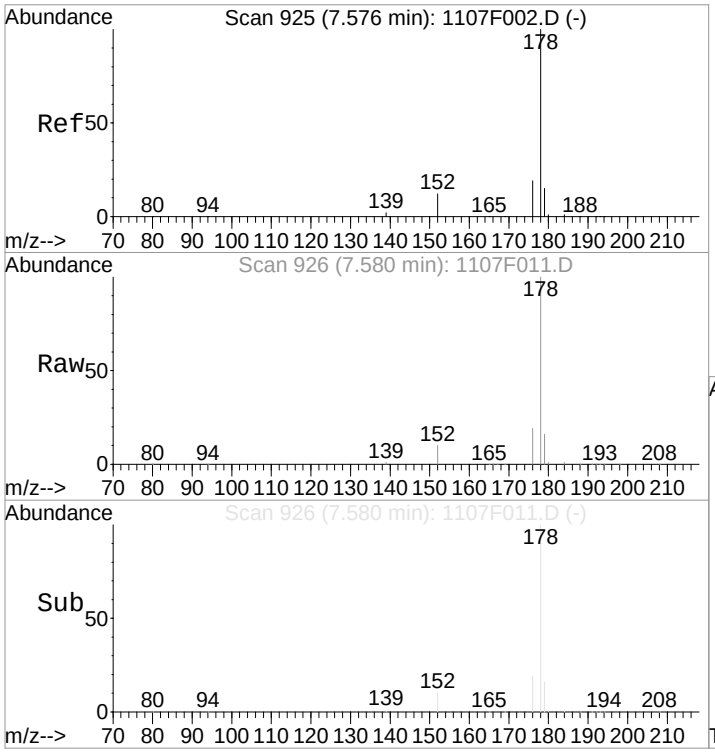


#16
Dibenzothiophene
Concen: 28.25 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:184 Resp: 11395

Ion	Ratio	Lower	Upper
184	100		
152	8.3	0.0	37.8
139	13.8	0.0	32.6

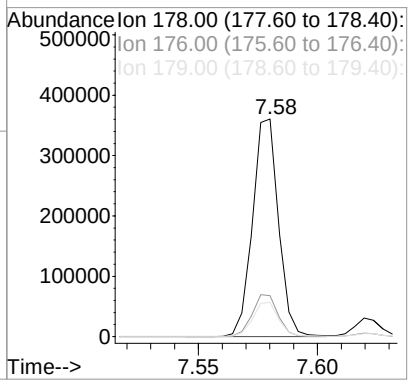




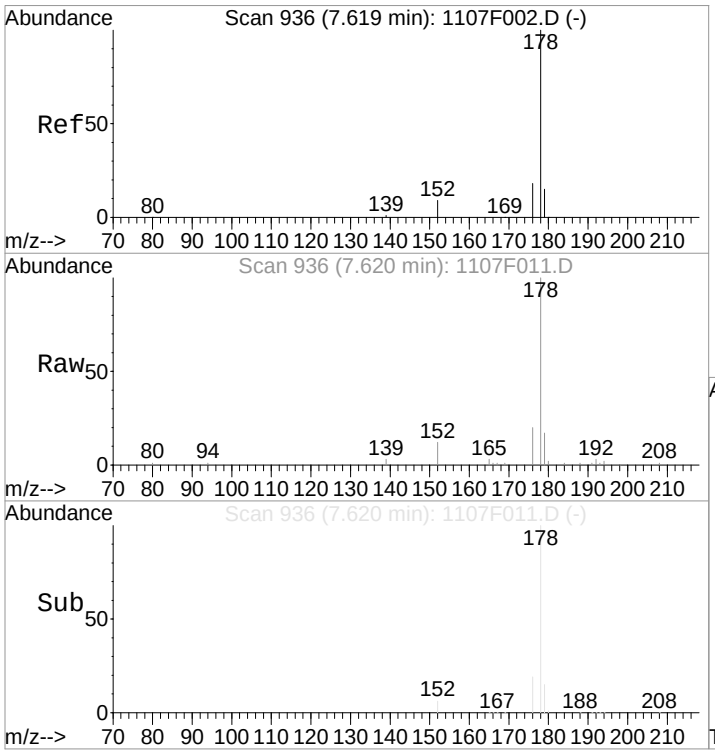
#17
Phenanthrene
Concen: 672.91 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:178 Resp: 271448

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.7
179	15.7	0.0	35.1



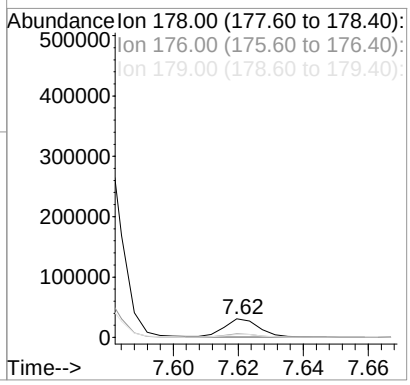
1st 11/19/18
2nd 12/05/18

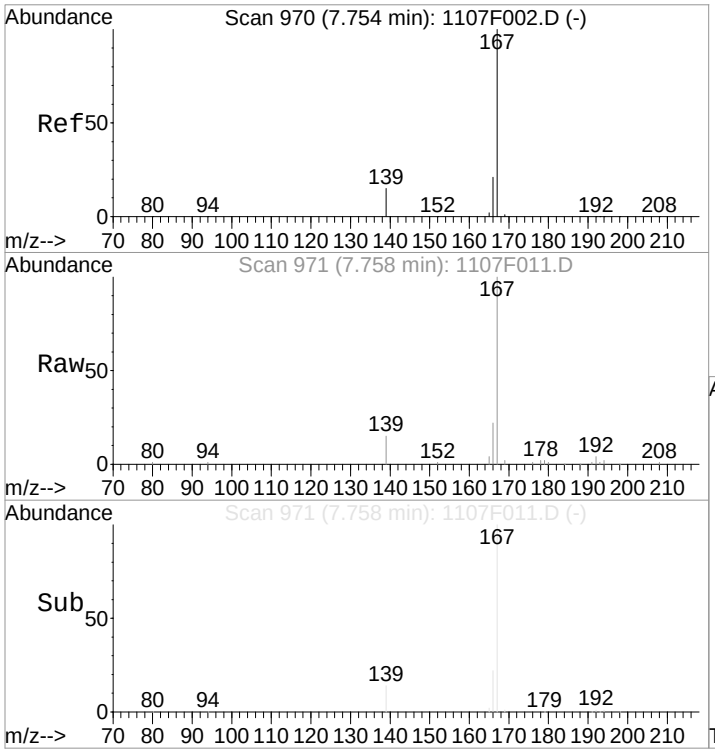


#18
Anthracene
Concen: 58.12 ng/ml
RT: 7.62 min Scan# 936
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:178 Resp: 22381

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.0
179	14.6	0.0	35.1

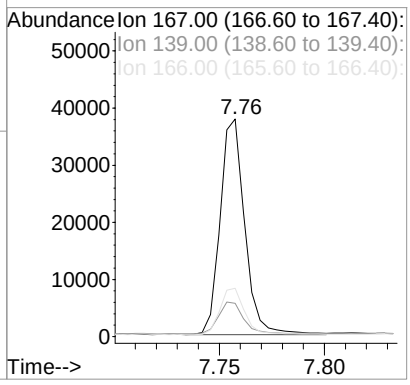




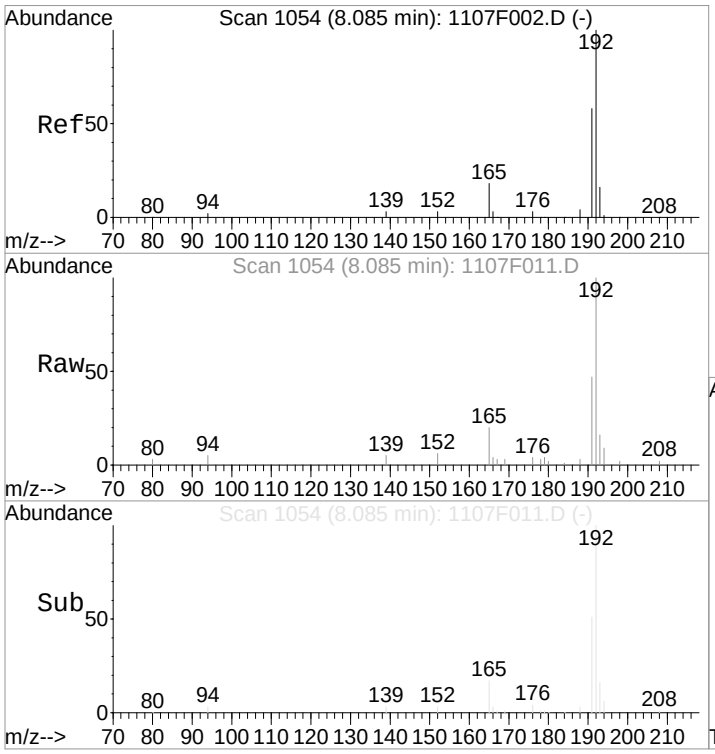
#19
Carbazole
Concen: 81.97 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:167 Resp: 30805

Ion	Ratio	Lower	Upper
167	100		
139	14.2	0.0	41.5
166	21.5	0.7	40.7



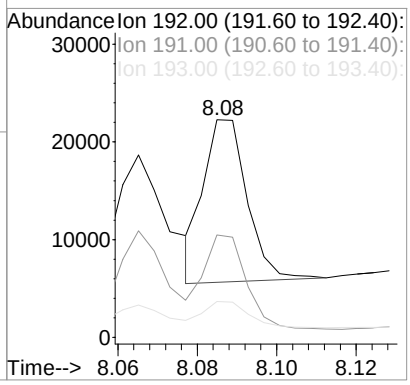
1st 11/19/18
2nd 12/05/18

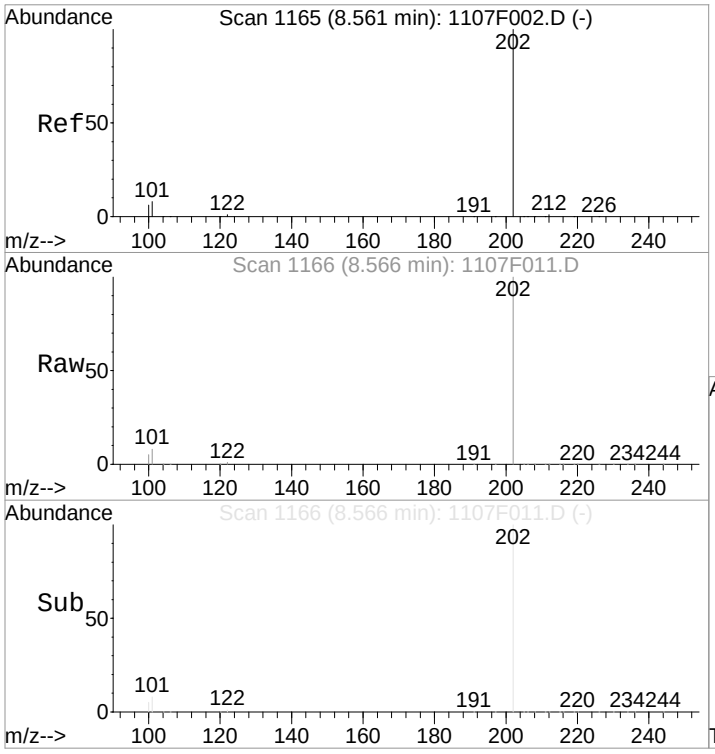


#20
1-Methylphenanthrene
Concen: 41.62 ng/ml
RT: 8.08 min Scan# 1054
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:192 Resp: 12716

Ion	Ratio	Lower	Upper
192	100		
191	59.6	27.7	87.7
193	16.7	0.0	45.4

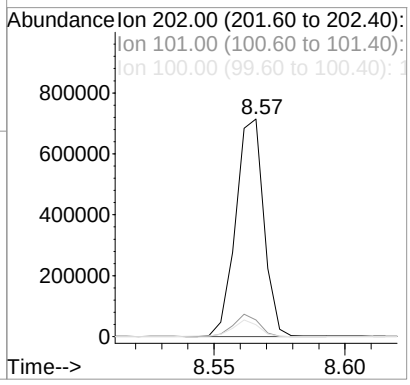


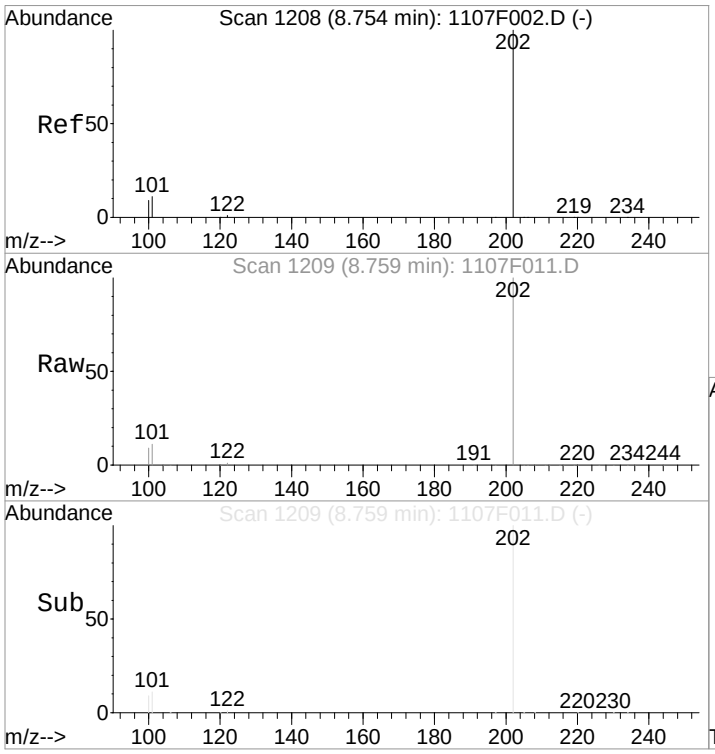


#21
Fluoranthene
Concen: 1068.03 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.01 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:202 Resp: 531996

Ion	Ratio	Lower	Upper
202	100		
101	7.6	0.0	41.3
100	5.4	0.0	28.6

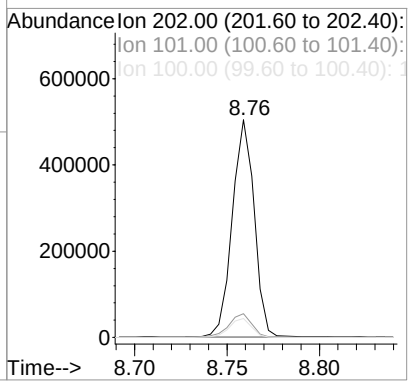


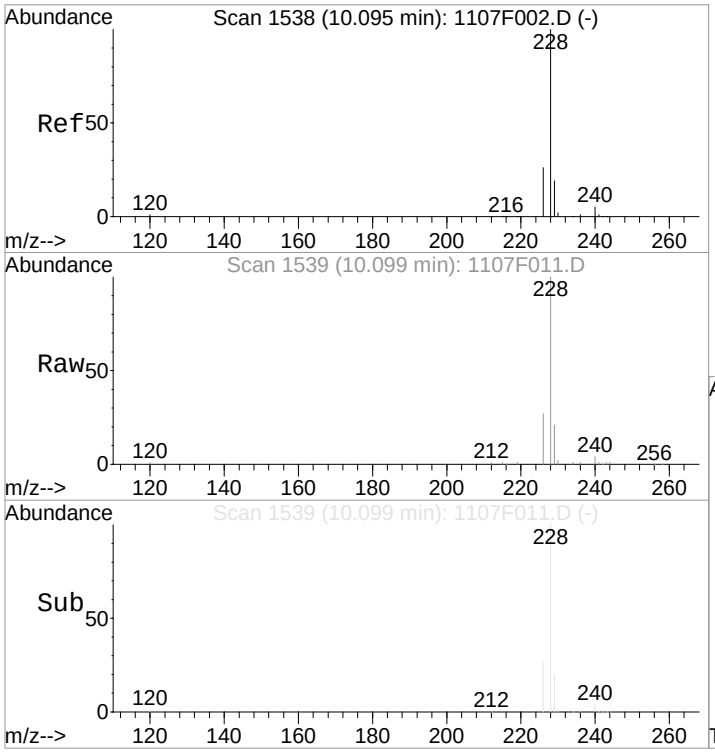


#24
Pyrene
Concen: 802.88 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. 0.00 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:202 Resp: 416142

Ion	Ratio	Lower	Upper
202	100		
101	10.9	0.0	40.8
100	8.7	0.0	28.5

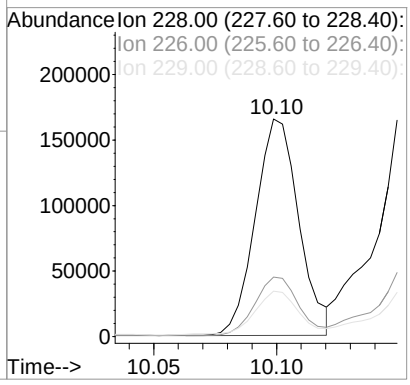




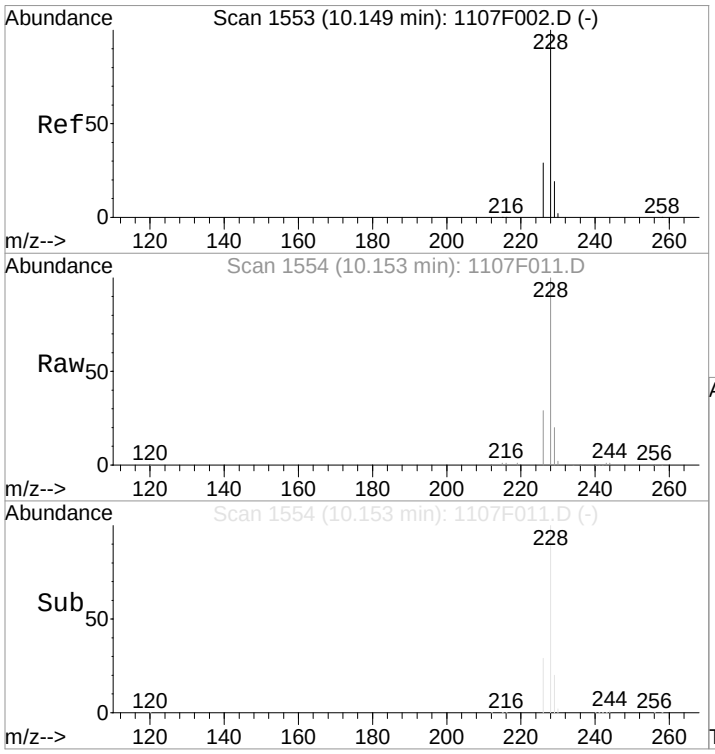
#26
Benz(a)anthracene
Concen: 417.20 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. 0.01 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:228 Resp: 203770

Ion	Ratio	Lower	Upper
228	100		
226	27.1	0.0	56.3
229	19.9	0.0	39.1



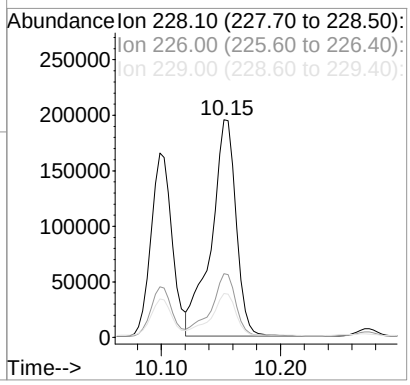
1st 11/19/18
2nd 12/05/18

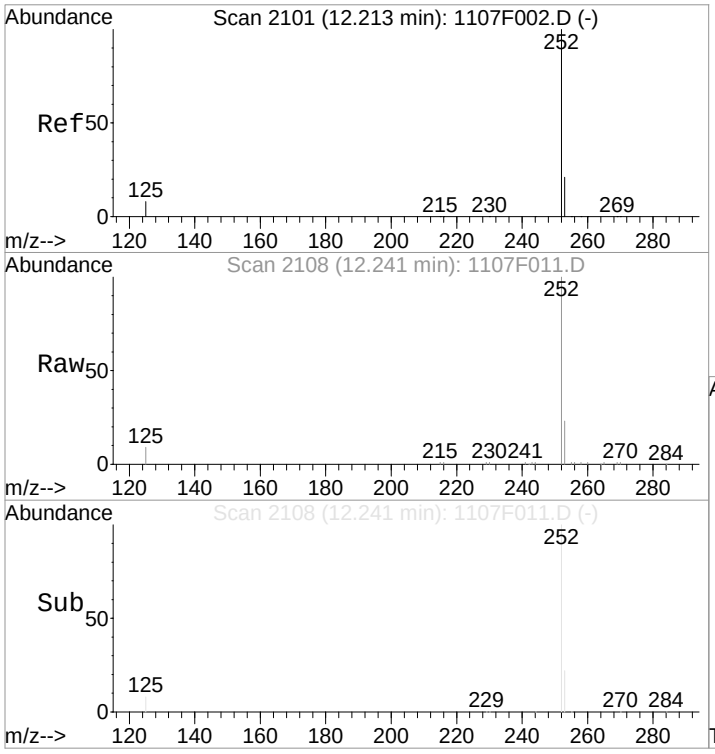


#27
Chrysene
Concen: 604.75 ng/ml
RT: 10.15 min Scan# 1554
Delta R.T. 0.01 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:228 Resp: 282928

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	58.7
229	19.5	0.0	39.2

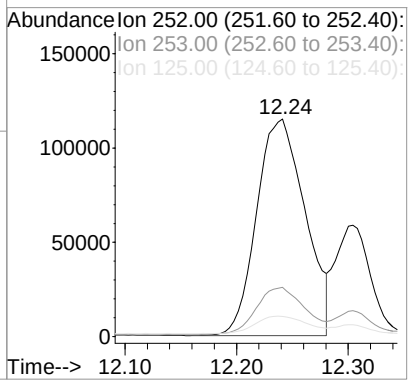




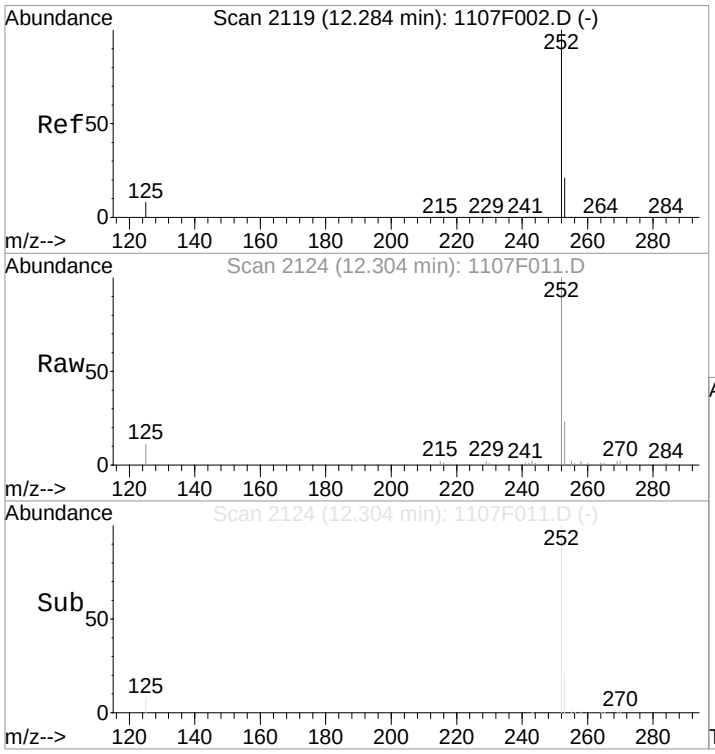
#29
Benzo(b)fluoranthene
Concen: 641.91 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. 0.04 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:252 Resp: 347471

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.2
125	8.0	0.0	29.5



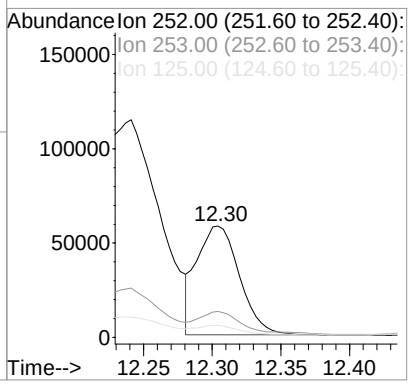
1st 11/19/18
2nd 12/05/18

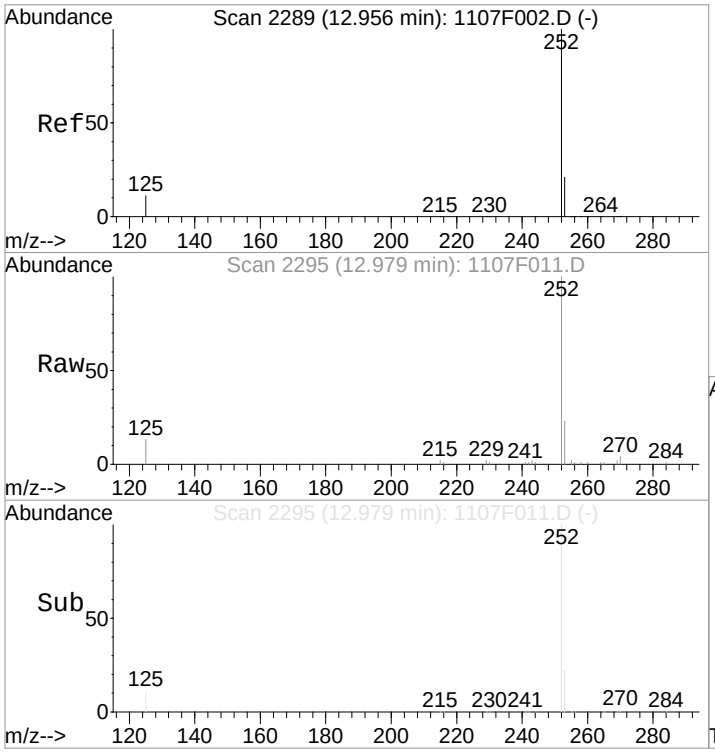


#30
Benzo(k)fluoranthene
Concen: 233.00 ng/ml
RT: 12.30 min Scan# 2124
Delta R.T. 0.03 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:252 Resp: 125120

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.2
125	7.8	0.0	29.7

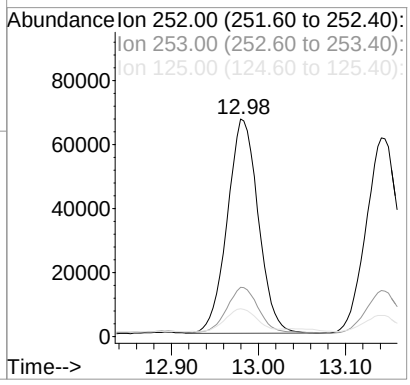




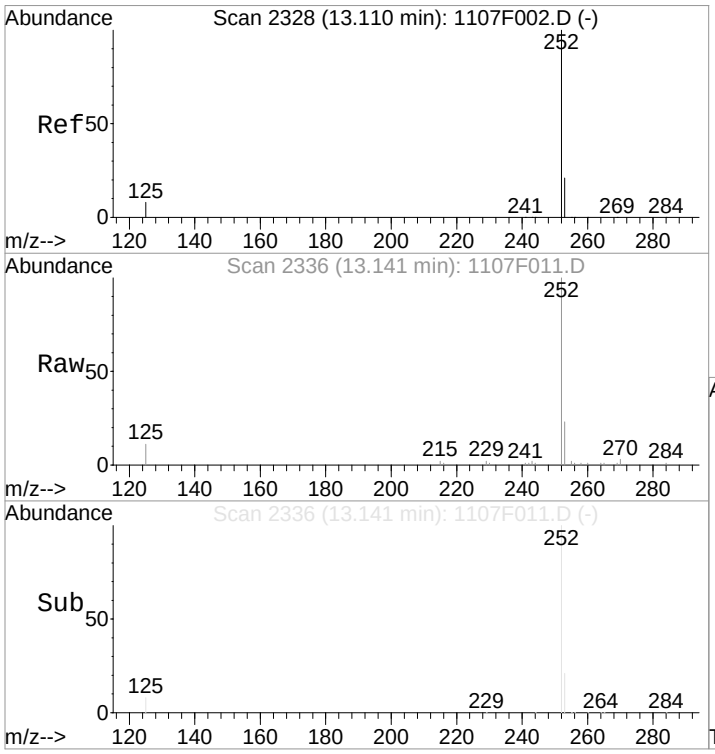
#31
Benzo(e)pyrene
Concen: 321.81 ng/ml
RT: 12.98 min Scan# 2295
Delta R.T. 0.04 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:252 Resp: 166046

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.3
125	10.6	0.0	33.5



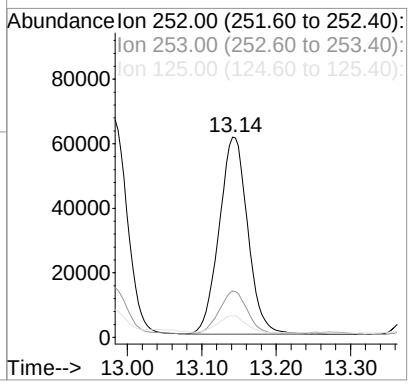
1st 11/19/18
2nd 12/05/18

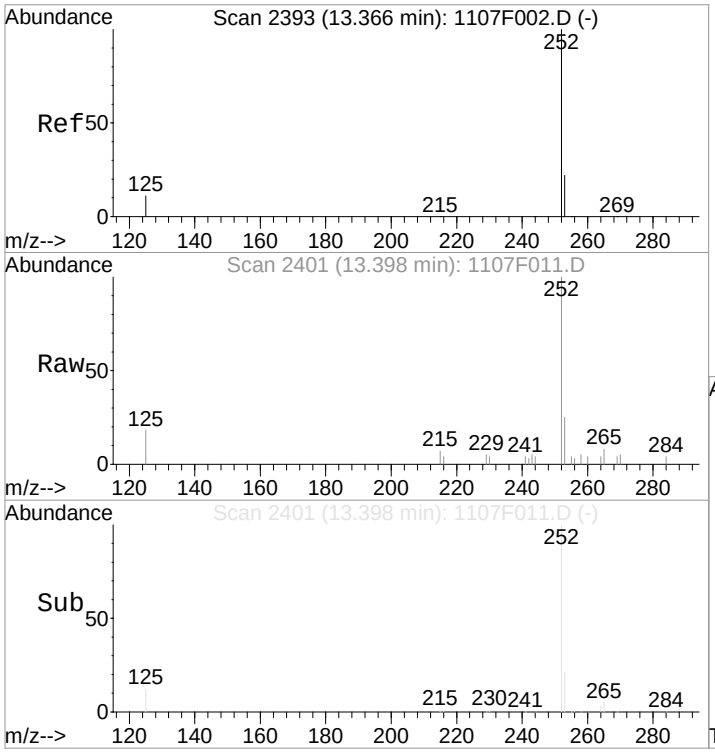


#32
Benzo(a)pyrene
Concen: 344.62 ng/ml
RT: 13.14 min Scan# 2336
Delta R.T. 0.04 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:252 Resp: 163594

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	50.9
125	8.5	0.0	30.3

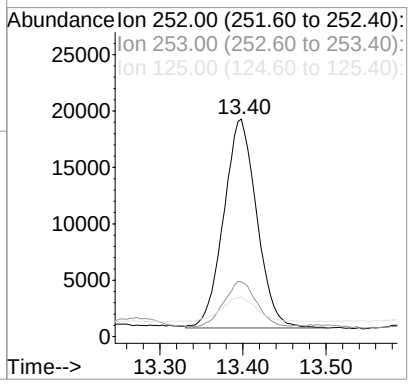




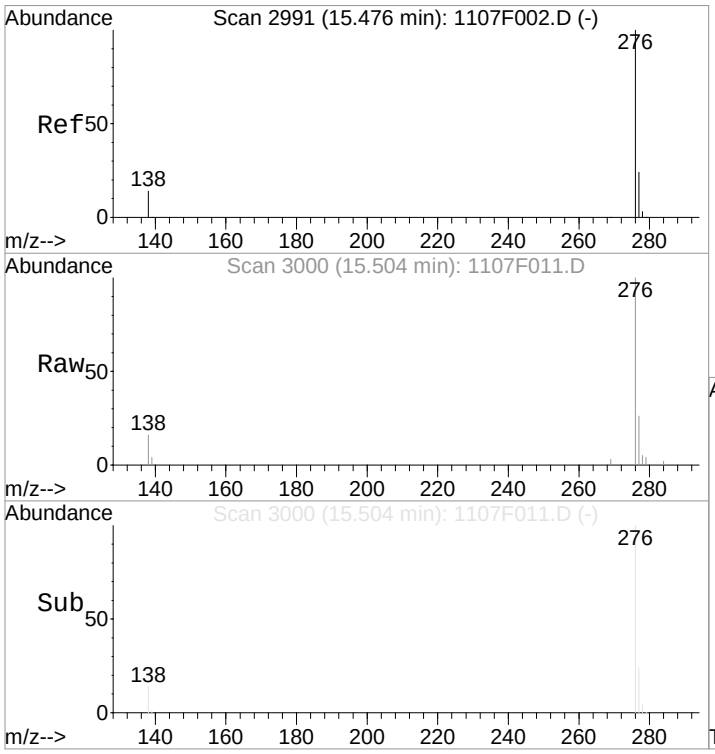
#33
Perylene
Concen: 102.98 ng/ml
RT: 13.40 min Scan# 2401
Delta R.T. 0.05 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:252 Resp: 51281

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.2
125	11.8	0.0	33.8



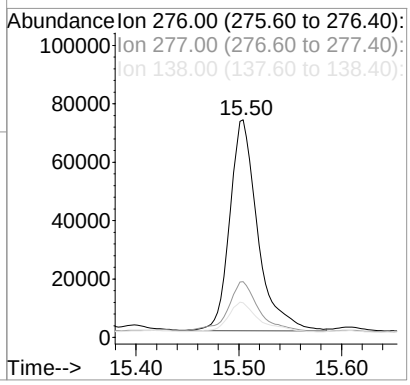
1st 11/19/18
2nd 11/05/18

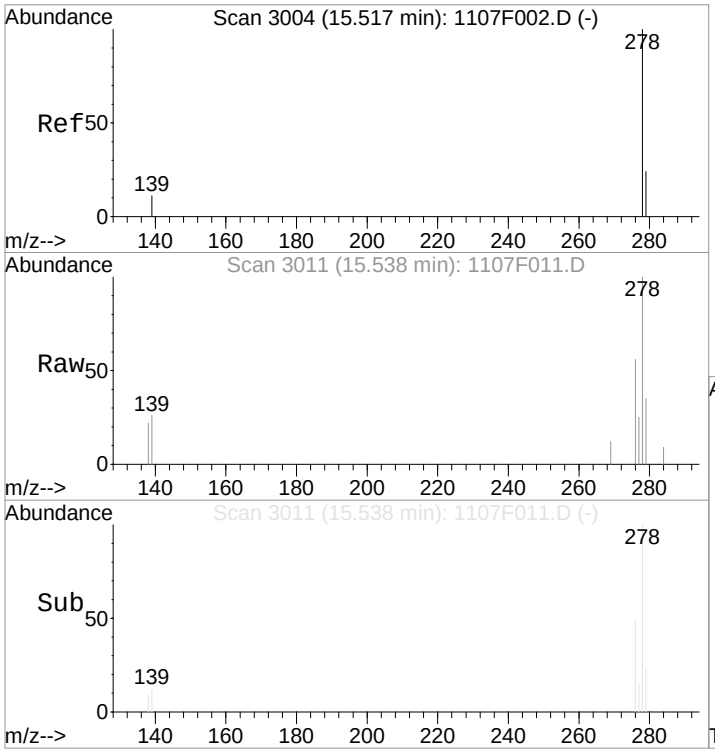


#34
Indeno(1,2,3-cd)pyrene
Concen: 293.95 ng/ml
RT: 15.50 min Scan# 3000
Delta R.T. 0.04 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:276 Resp: 136834

Ion	Ratio	Lower	Upper
276	100		
277	23.5	0.0	53.4
138	13.6	0.0	37.7

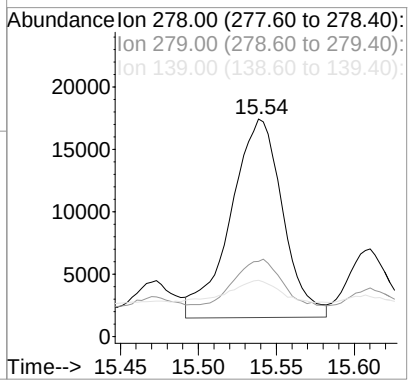




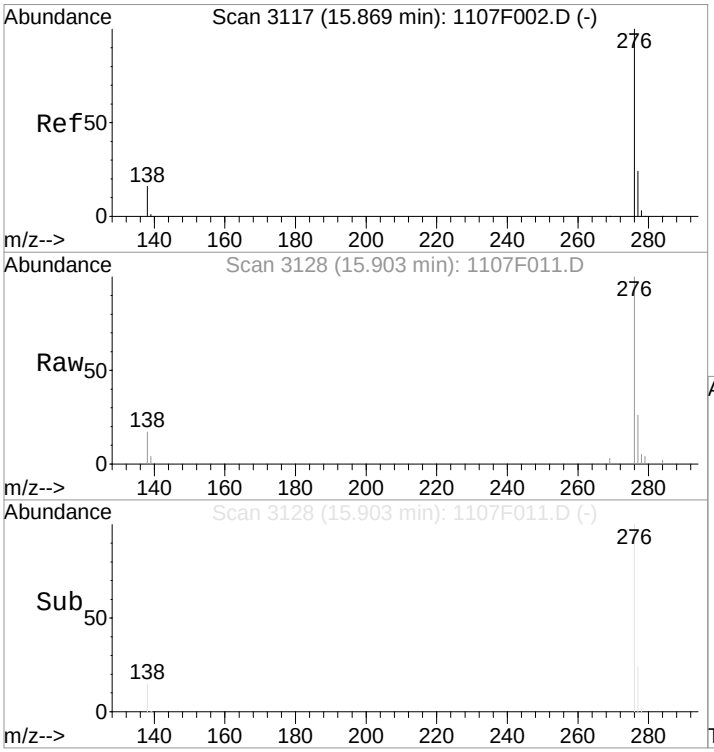
#35
Dibenz(a,h)anthracene
Concen: 78.31 ng/ml
RT: 15.54 min Scan# 3011
Delta R.T. 0.03 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:278 Resp: 36952

Ion	Ratio	Lower	Upper
278	100		
279	24.0	0.0	53.5
139	11.8	0.0	35.0



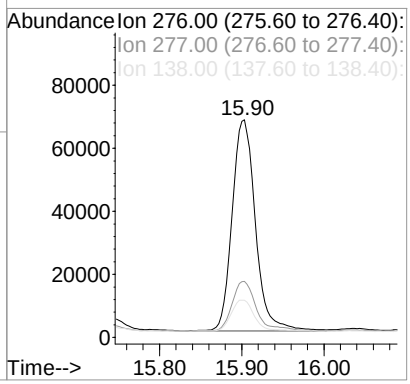
1st 11/19/18
2nd 12/05/18



#36
Benzo(g,h,i)perylene
Concen: 243.08 ng/ml
RT: 15.90 min Scan# 3128
Delta R.T. 0.04 min
Lab File: 1107F011.D
Acq: 7 Nov 2018 9:59 am

Tgt Ion:276 Resp: 132511

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.1
138	14.6	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F011.D Vial: 11
Acq On : 7 Nov 2018 9:59 am Operator: LWeiskopf
Sample : K1810270-012DIL 4X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:56:06 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	63426	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	30950	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	64665	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	75545	200.00	ng/ml	0.00
28) Perylene-d12	13.32	264	87616	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	21315	120.40	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	12.04%		
13) Fluorene-d10	6.76	176	32112	162.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.23%		
22) Fluoranthene-d10	8.55	212	65373	160.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.04%		
25) Terphenyl-d14	8.89	244	57121	174.32	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	17.43%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	1583	4.32	ng/ml	98
4) 2-Methylnaphthalene	5.42	142	506	2.29	ng/ml	95
5) 1-Methylnaphthalene	5.50	142	408m	1.92	ng/ml	
6) Biphenyl	5.83	154	508	1.84	ng/ml	95
7) 2,6-Dimethylnaphthalene	5.97	156	429	2.26	ng/ml	87
9) Acenaphthylene	6.20	152	3330	9.02	ng/ml	78
10) Acenaphthene	6.34	154	3198	15.08	ng/ml	97
11) Dibenzofuran	6.50	168	4964	14.58	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.67	170	494	2.52	ng/ml	79
14) Fluorene	6.78	166	4101	15.98	ng/ml	98
16) Dibenzothiophene	7.47	184	11395	28.25	ng/ml	98
17) Phenanthrene	7.58	178	271448	672.91	ng/ml	99
18) Anthracene	7.62	178	22381	58.12	ng/ml	98
19) Carbazole	7.76	167	30805	81.97	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	12716	41.62	ng/ml	97
21) Fluoranthene	8.57	202	531996	1068.03	ng/ml	91
24) Pyrene	8.76	202	416142	802.88	ng/ml	100
26) Benz(a)anthracene	10.10	228	203770	417.20	ng/ml	98
27) Chrysene	10.15	228	282928	604.75	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	347471	641.91	ng/ml	98
30) Benzo(k)fluoranthene	12.30	252	125120	233.00	ng/ml	98
31) Benzo(e)pyrene	12.98	252	166046	321.81	ng/ml	97
32) Benzo(a)pyrene	13.14	252	163594	344.62	ng/ml	97
33) Perylene	13.40	252	51281	102.98	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.50	276	136834	293.95	ng/ml	96
35) Dibenz(a,h)anthracene	15.54	278	36952	78.31	ng/ml	96
36) Benzo(g,h,i)perylene	15.90	276	132511	243.08	ng/ml	95

(#) = qualifier out of range (m) = manual integration

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F016.D
Lab ID: K1810270-013
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/06/2018 12:18
Date Quantitated: 11/16/2018 10:20
Batch ID: KWG1806026
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F016.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 12:18	**Quant Date:**	11/16/2018 10:20	**Vial:**	16
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-013			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700770	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	0.00	136	65459	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31384	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	63553	200.00	OK
4	Chrysene-d12	10.11	0.00	240	80827	200.00	OK
5	Perylene-d12	13.30	0.03	264	95678	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	24458	121.88	61	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	50645	126.44	63	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	45795	130.63	65	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	11174	29.57	17	D	
1	2-Methylnaphthalene	5.42		0.00	142	3400	14.92	8.5	D	
2	Acenaphthylene	6.20		0.00	152	4660	12.44	7.0	D	
2	Acenaphthene	6.35		0.00	154	2660	12.37	7.0	D	
2	Dibenzofuran	6.50		0.00	168	3113	9.02	5.1	D	
2	Fluorene	6.78		0.00	166	4259	16.37	9.3	D	
3	Phenanthrene	7.58		0.00	178	49213	124.13	70	D	
3	Anthracene	7.62		0.00	178	9977	26.36	15	D	
3	Fluoranthene	8.57	0.01	0.00	202	142137	290.35	160	D	
4	Pyrene	8.76	0.01	0.00	202	147626	266.21	150	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	53769	102.89	58	D	
4	Chrysene	10.15		0.00	228	99472	198.72	110	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110618\1106F016.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 12:18	**Quant Date:**	11/16/2018 10:20	**Vial:**	16
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-013			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.23	0.02	0.00	252	125047	211.54	120	D	
5	Benzo(k)fluoranthene	12.29	0.01	0.00	252	44752**m**	76.32	43	D	
5	Benzo(a)pyrene	13.13	0.03	0.00	252	64602	124.62	71	D	
5	Indeno(1,2,3-cd)pyrene	15.49	0.02	0.00	276	57869	113.84	65	D	
5	Dibenz(a,h)anthracene	15.53	0.02	0.00	278	14081**m**	27.33	15	D	
5	Benzo(g,h,i)perylene	15.89	0.03	0.00	276	71760	120.55	68	D	

Prep Amount:	40.290 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	43.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

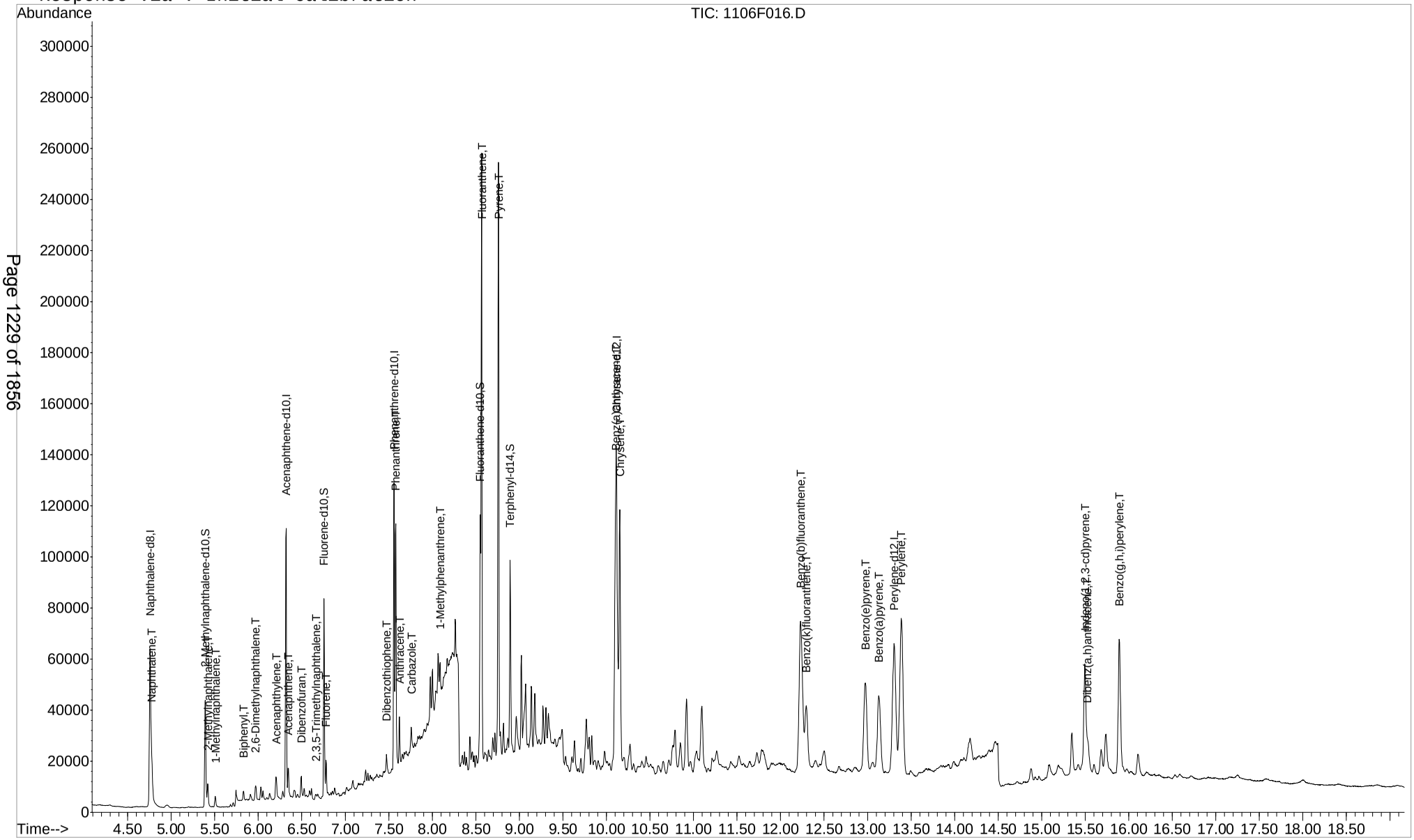
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

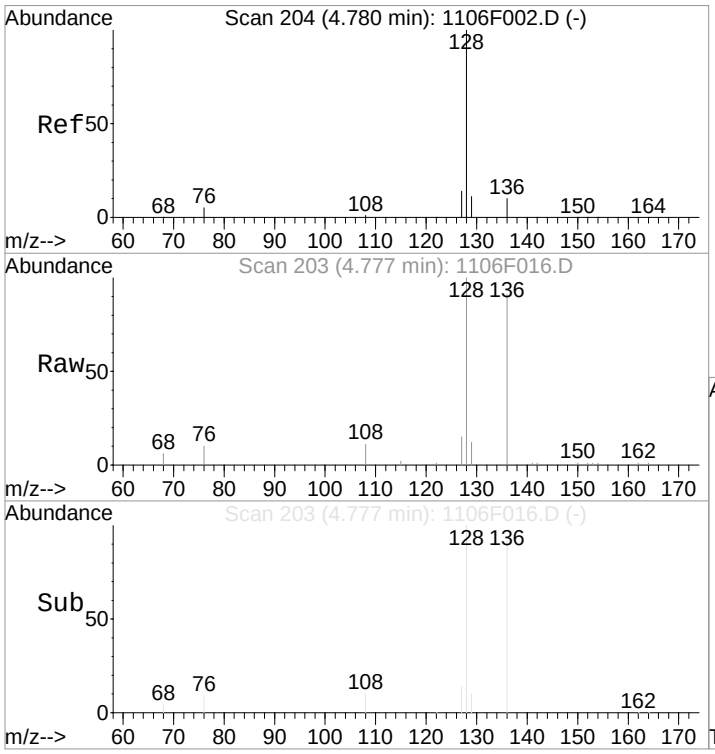
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F016.D Vial: 16
Acq On : 6 Nov 2018 12:18 pm Operator: LWeiskopf
Sample : K1810270-013DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:20 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



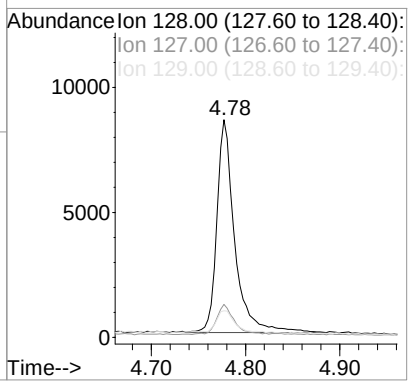
1st 11/16/18
2nd 11/27/18

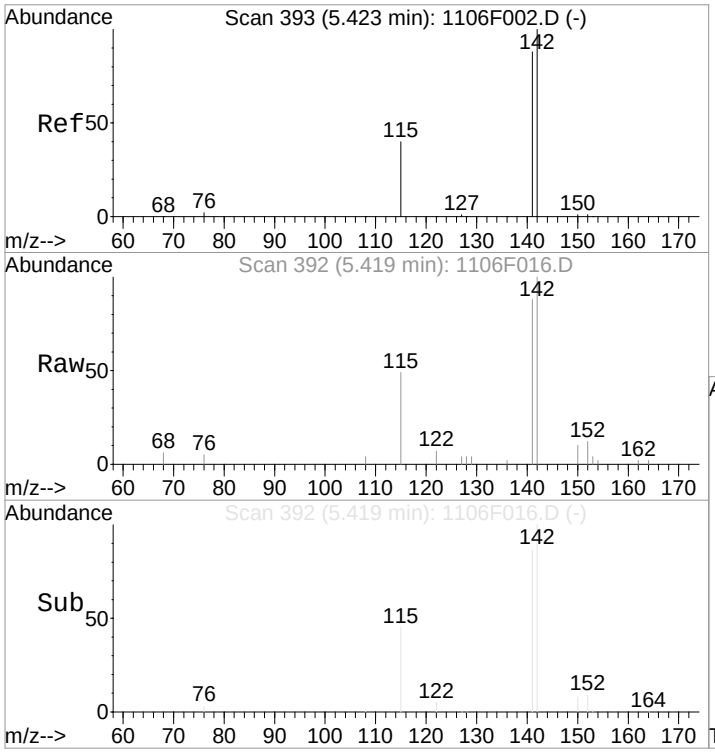


#2
Naphthalene
Concen: 29.57 ng/ml
RT: 4.78 min Scan# 203
Delta R.T. -0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:128 Resp: 11174

Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	43.7
129	10.6	0.0	30.8

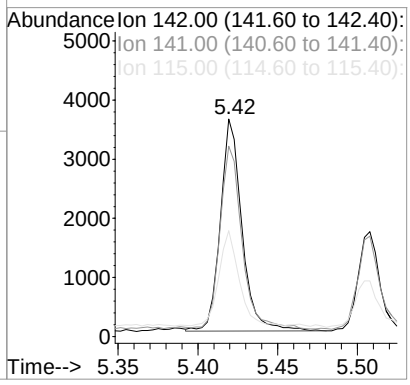




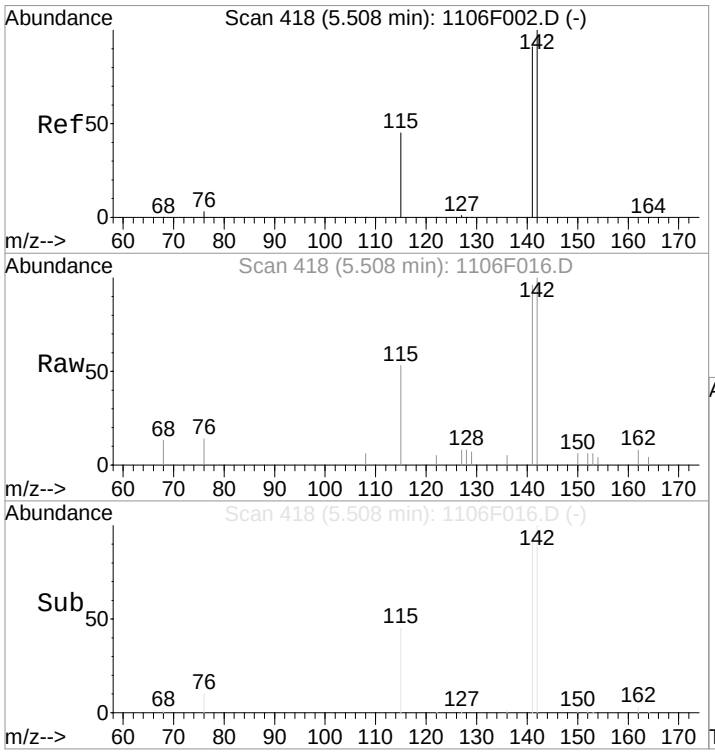
#4
2-Methylnaphthalene
Concen: 14.92 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:142 Resp: 3400

Ion	Ratio	Lower	Upper
142	100		
141	86.2	56.8	116.8
115	45.6	13.3	53.3



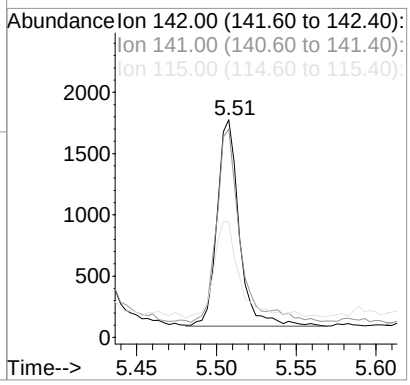
1st 11/16/18
2nd 11/27/18

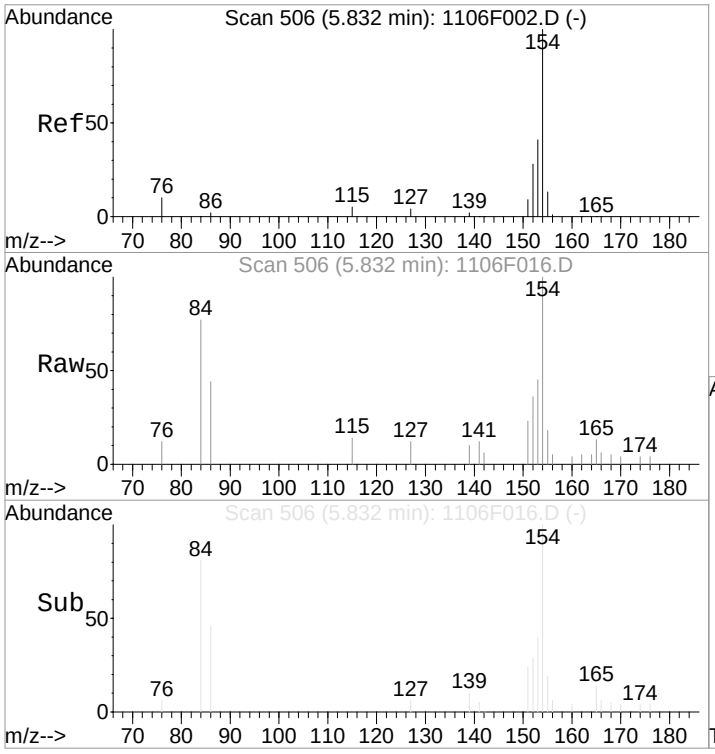


#5
1-Methylnaphthalene
Concen: 7.50 ng/ml
RT: 5.51 min Scan# 418
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:142 Resp: 1644

Ion	Ratio	Lower	Upper
142	100		
141	93.2	59.7	119.7
115	46.6	13.7	53.7

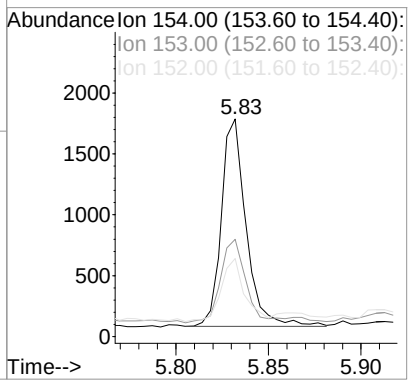




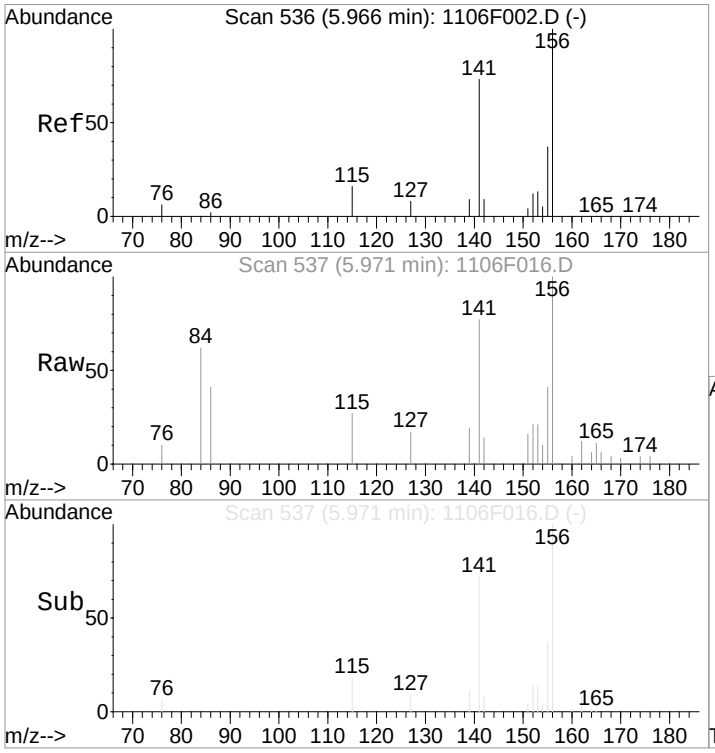
#6
Biphenyl
Concen: 5.59 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:154 Resp: 1589

Ion	Ratio	Lower	Upper
154	100		
153	40.2	11.4	71.4
152	30.4	7.1	47.1



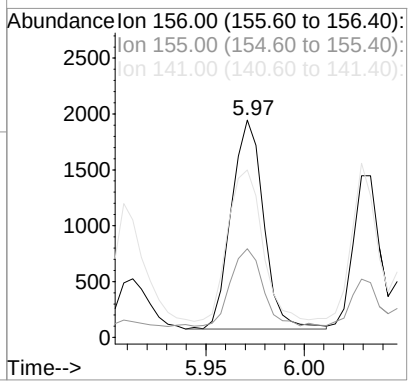
1st 11/16/18
2nd 11/27/18

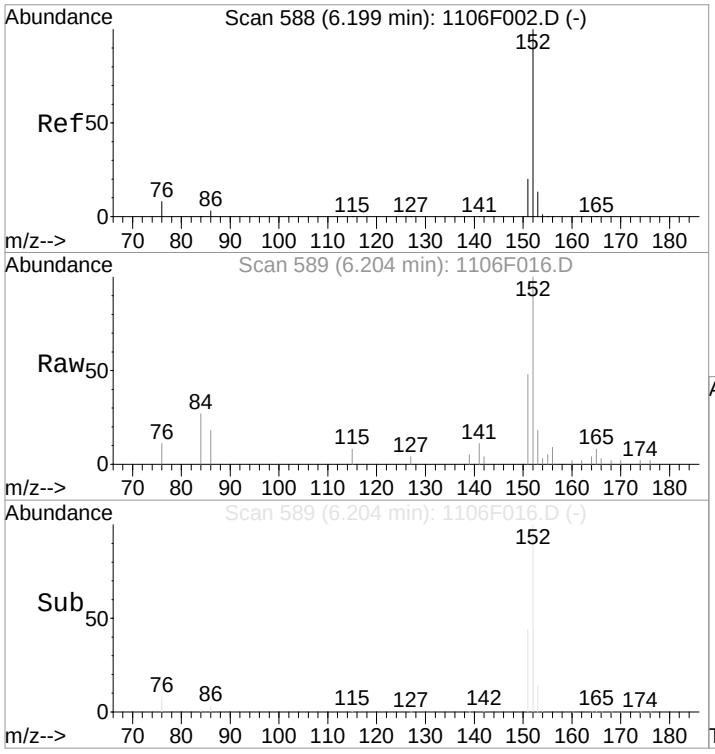


#7
2,6-Dimethylnaphthalene
Concen: 11.05 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:156 Resp: 2161

Ion	Ratio	Lower	Upper
156	100		
155	36.6	7.0	67.0
141	71.5	47.9	87.9

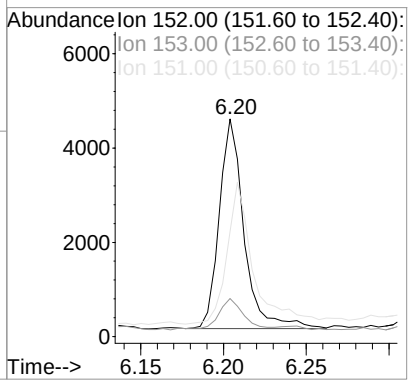




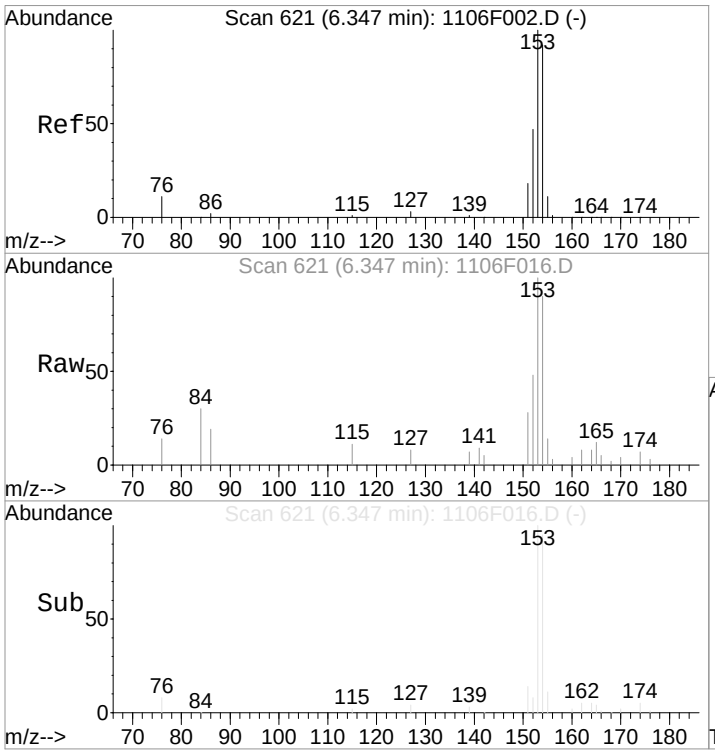
#9
Acenaphthylene
Concen: 12.44 ng/ml
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:152 Resp: 4660

Ion	Ratio	Lower	Upper
152	100		
153	14.8	0.0	42.9
151	44.1	0.2	40.2#



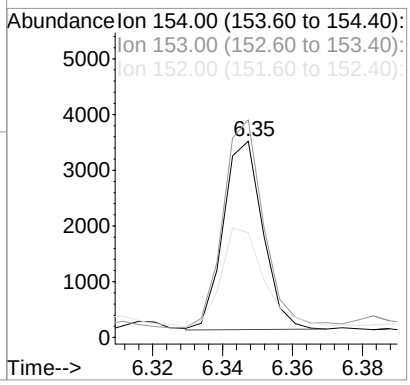
1st 11/16/18
2nd 11/27/18

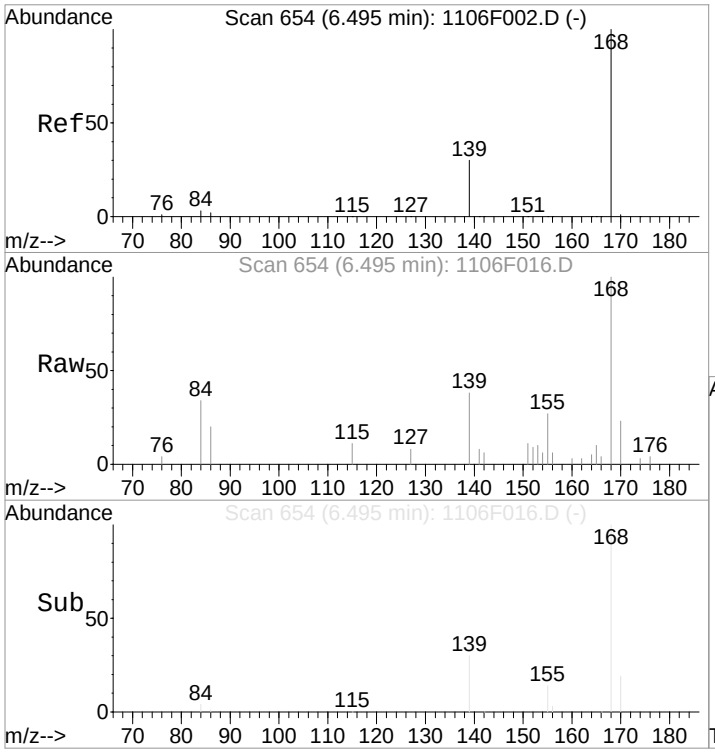


#10
Acenaphthene
Concen: 12.37 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:154 Resp: 2660

Ion	Ratio	Lower	Upper
154	100		
153	110.4	77.1	137.1
152	50.3	19.7	79.7

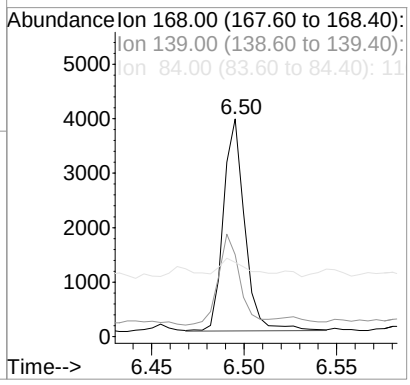




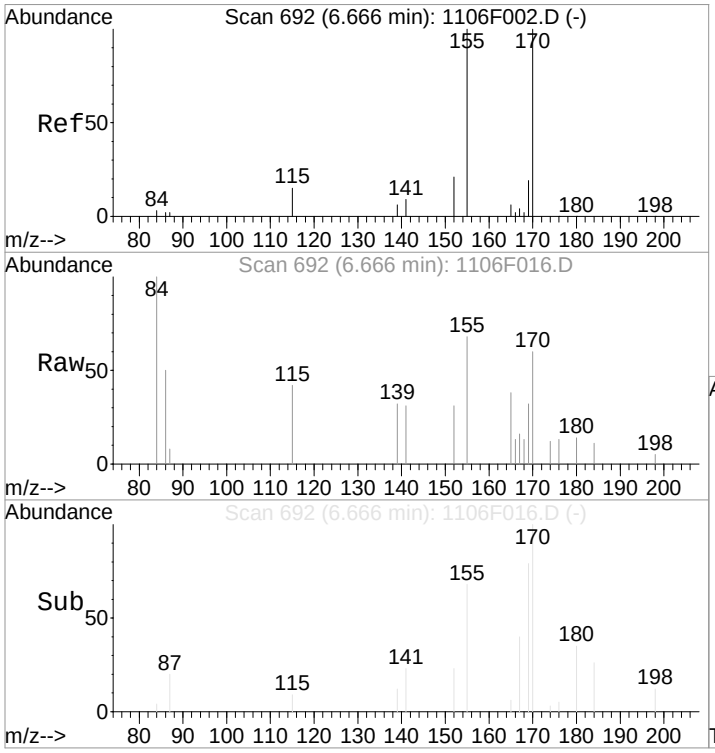
#11
Dibenzofuran
Concen: 9.02 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:168 Resp: 3113

Ion	Ratio	Lower	Upper
168	100		
139	33.3	0.0	55.8
84	3.2	0.0	23.5



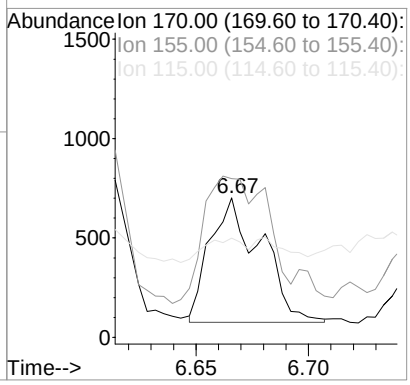
1st 11/16/18
2nd 11/27/18

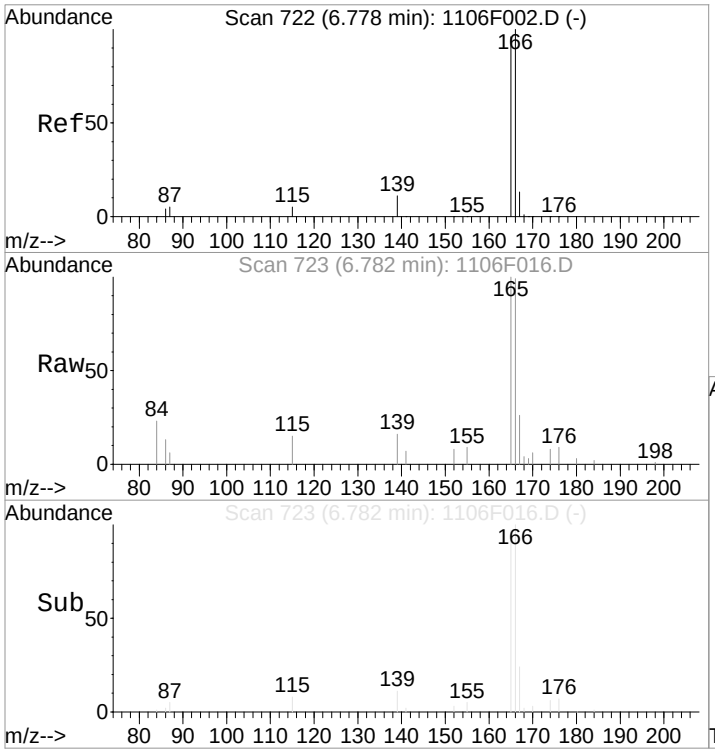


#12
2,3,5-Trimethylnaphthalene
Concen: 5.04 ng/ml m
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:170 Resp: 1003

Ion	Ratio	Lower	Upper
170	100		
155	113.7	59.2	119.2
115	71.1	0.0	30.1#

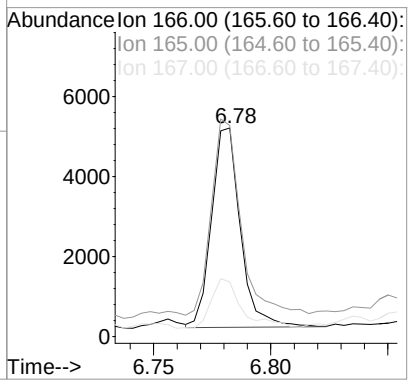




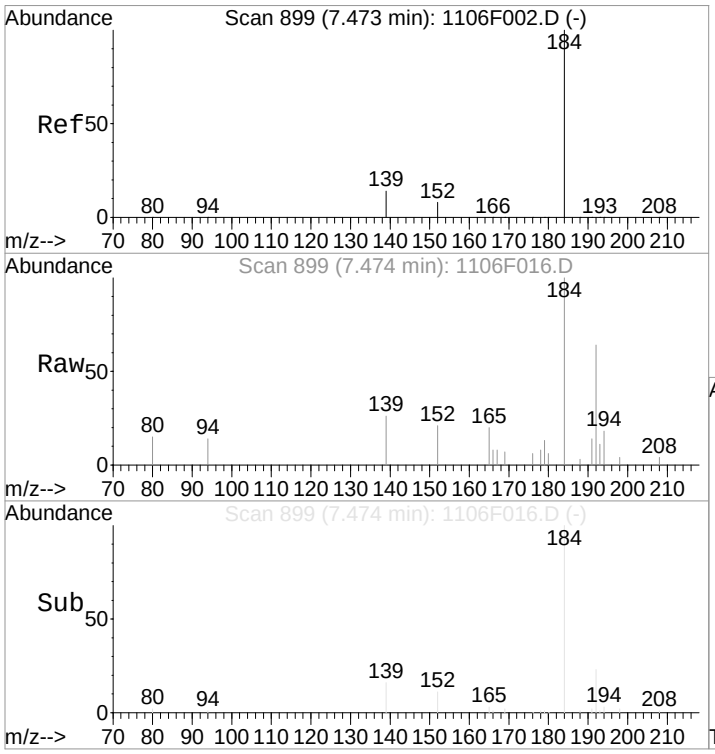
#14
Fluorene
Concen: 16.37 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:166 Resp: 4259

Ion	Ratio	Lower	Upper
166	100		
165	95.7	63.4	123.4
167	23.1	0.0	33.1



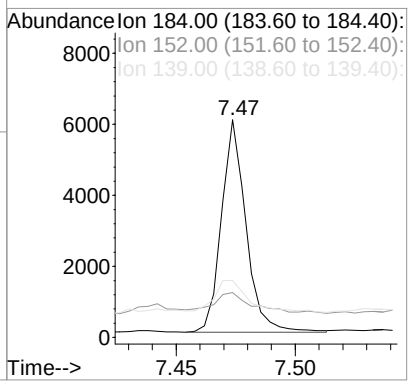
1st 11/16/18
2nd 11/27/18

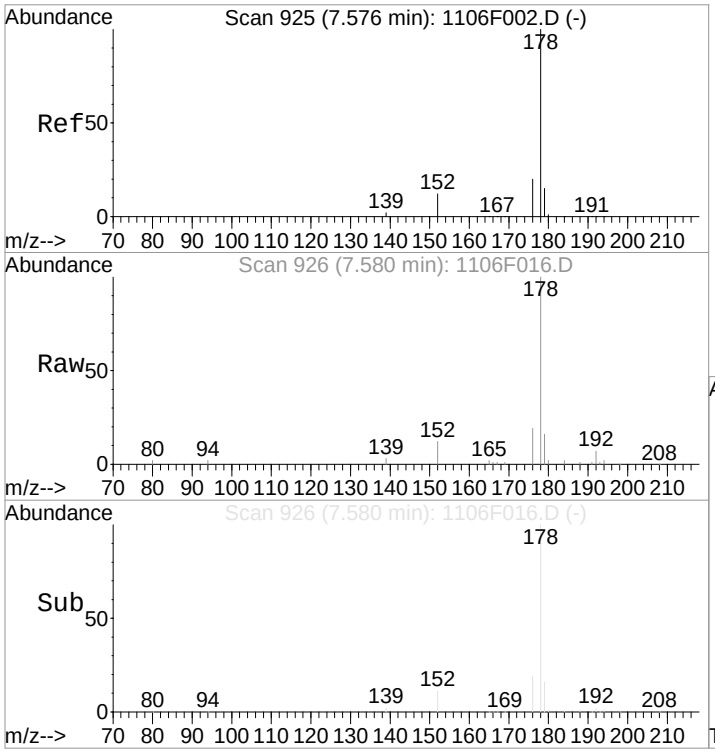


#16
Dibenzothiophene
Concen: 10.78 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:184 Resp: 4275

Ion	Ratio	Lower	Upper
184	100		
152	9.8	0.0	37.8
139	14.9	0.0	32.6

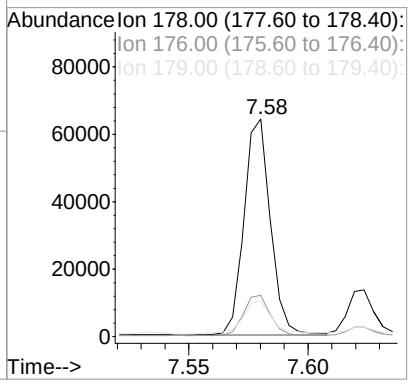




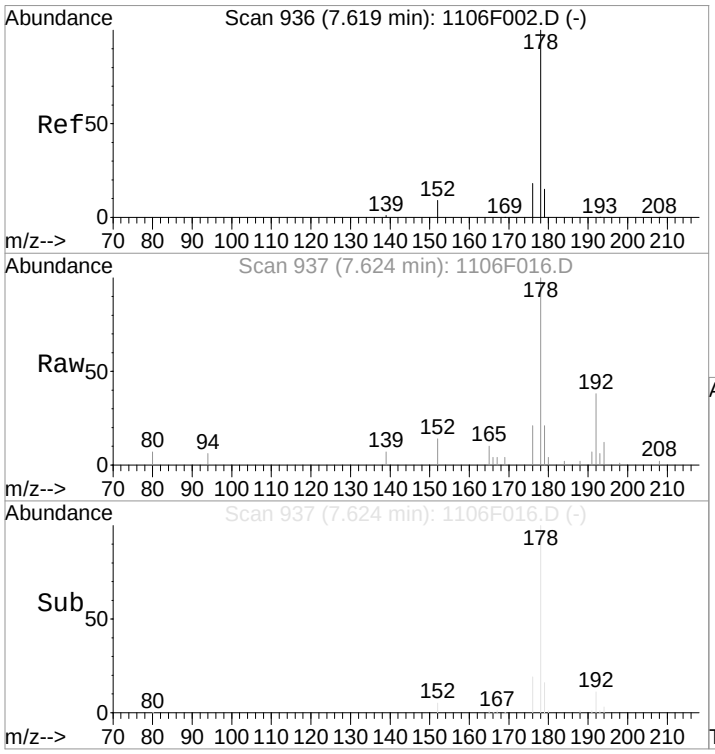
#17
Phenanthrene
Concen: 124.13 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:178 Resp: 49213

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	48.7
179	15.4	0.0	35.1



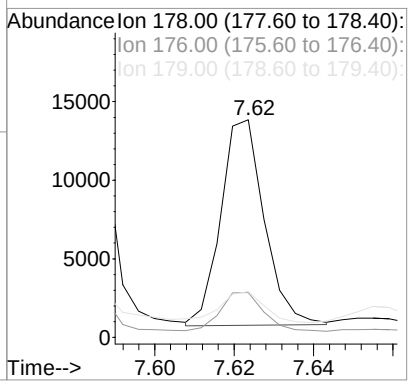
1st 11/16/18
2nd 11/27/18

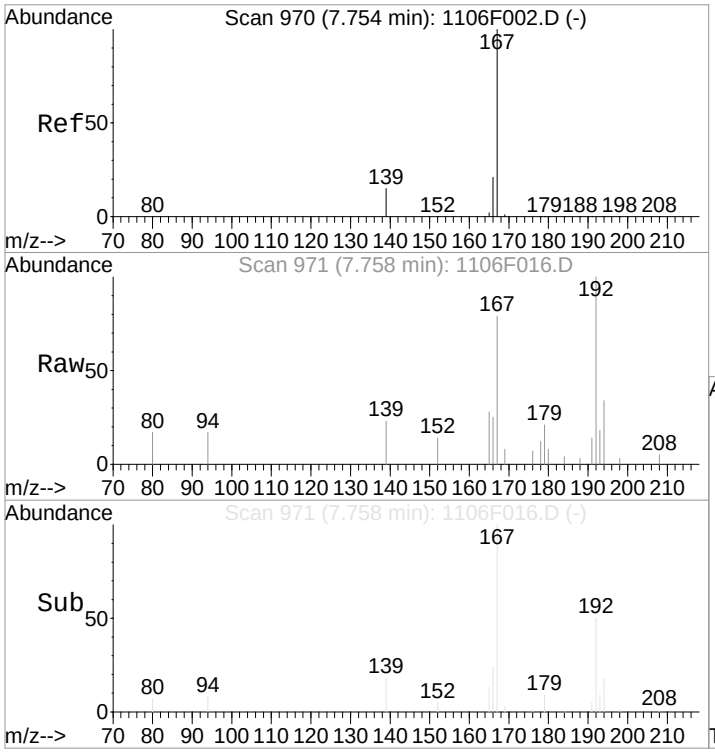


#18
Anthracene
Concen: 26.36 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:178 Resp: 9977

Ion	Ratio	Lower	Upper
178	100		
176	19.2	0.0	48.0
179	14.5	0.0	35.1

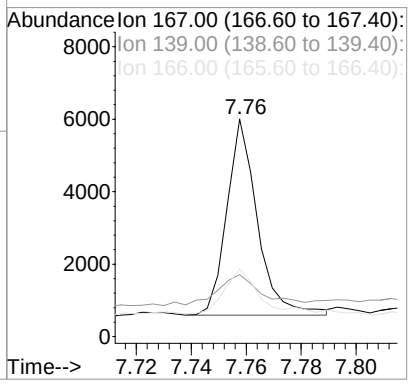




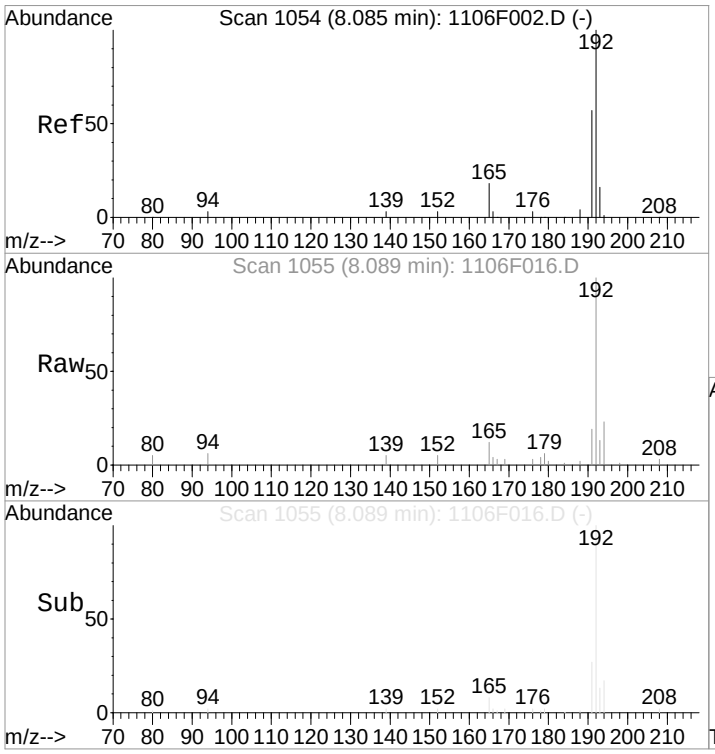
#19
Carbazole
Concen: 11.32 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:167 Resp: 4182

Ion	Ratio	Lower	Upper
167	100		
139	15.5	0.0	41.5
166	22.8	0.7	40.7



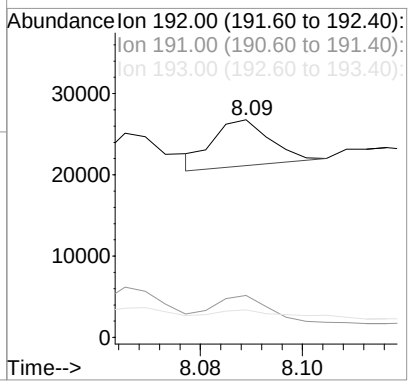
1st 11/16/18
2nd 11/27/18

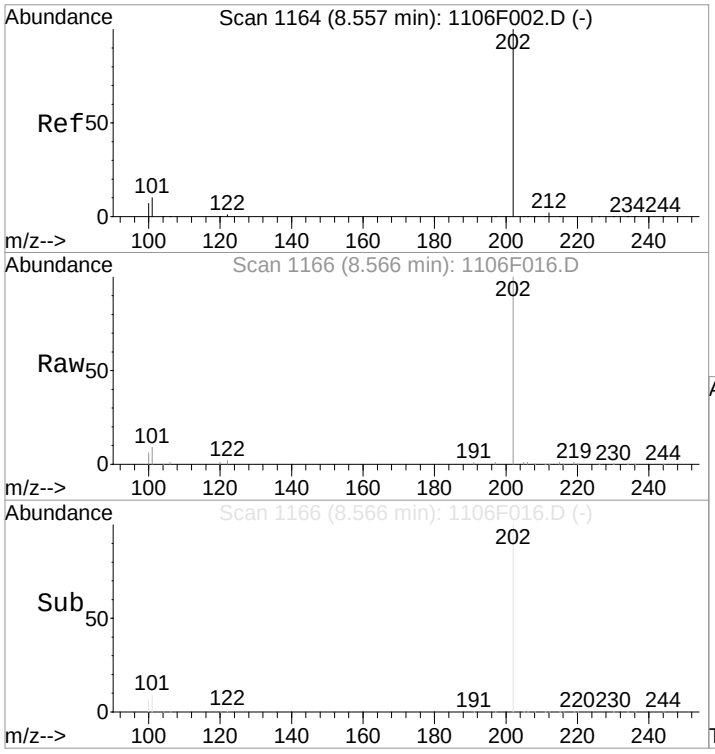


#20
1-Methylphenanthrene
Concen: 15.15 ng/ml
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:192 Resp: 4550

Ion	Ratio	Lower	Upper
192	100		
191	69.7	27.7	87.7
193	15.2	0.0	45.4

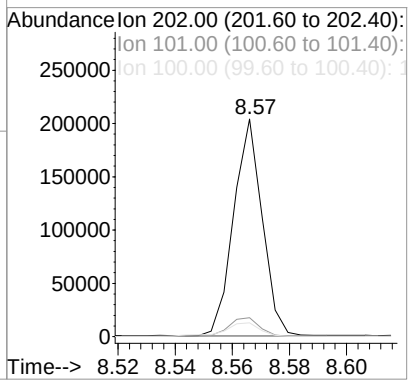




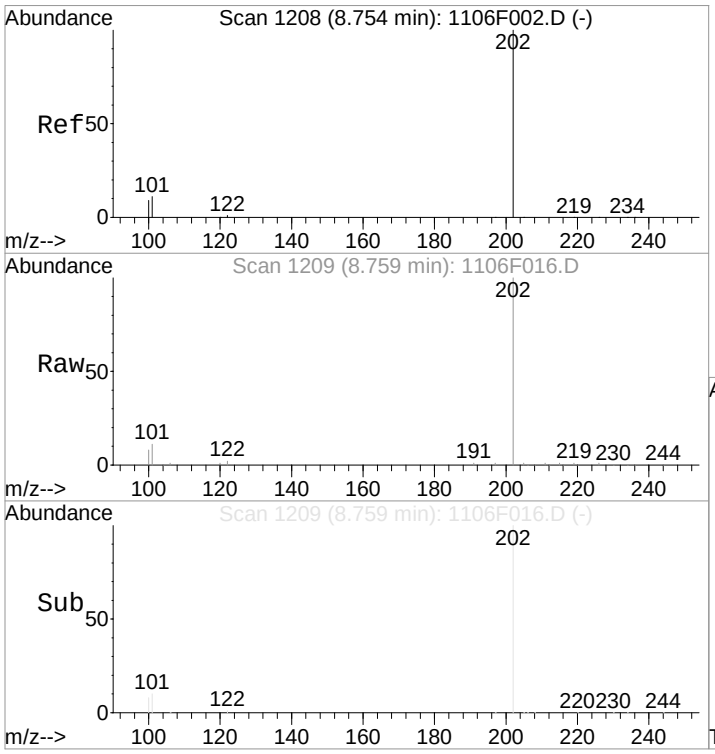
#21
Fluoranthene
Concen: 290.35 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.01 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:202 Resp: 142137

Ion	Ratio	Lower	Upper
202	100		
101	8.5	0.0	41.3
100	6.3	0.0	28.6



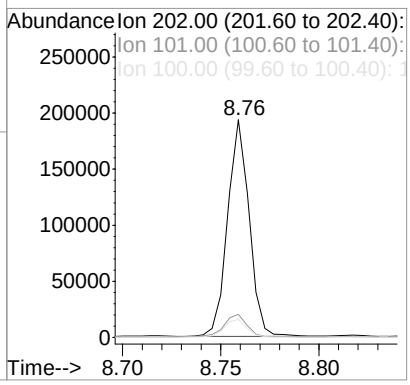
1st 11/16/18
2nd 11/27/18

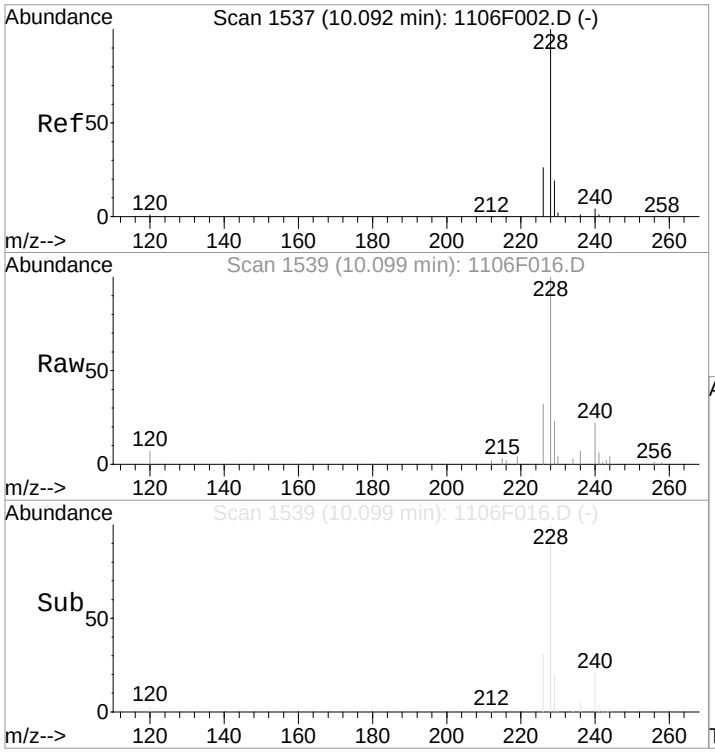


#24
Pyrene
Concen: 266.21 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. 0.00 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:202 Resp: 147626

Ion	Ratio	Lower	Upper
202	100		
101	10.4	0.0	40.8
100	8.2	0.0	28.5

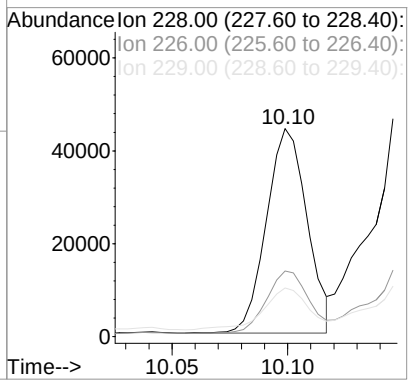


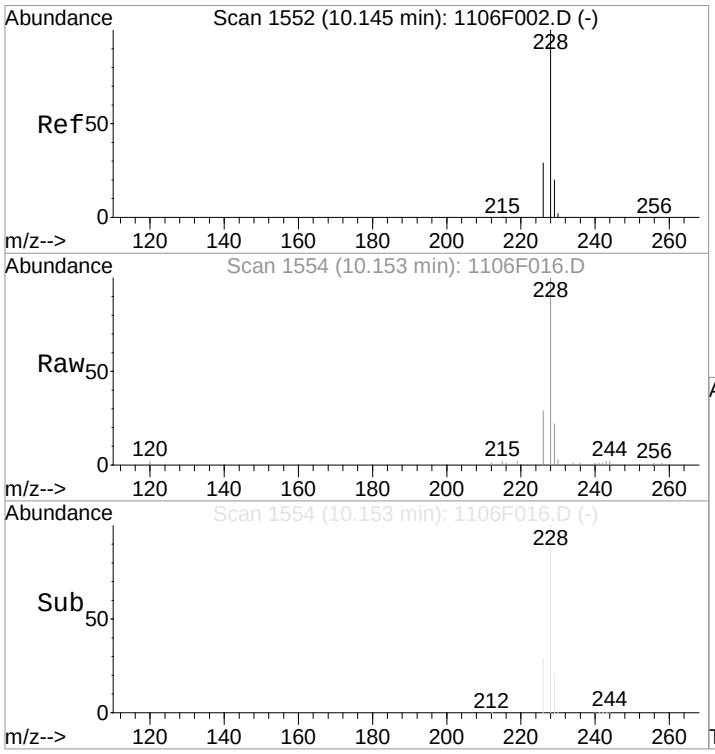


#26
Benz(a)anthracene
Concen: 102.89 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. 0.01 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:228 Resp: 53769

Ion	Ratio	Lower	Upper
228	100		
226	30.4	0.0	56.3
229	20.6	0.0	39.1

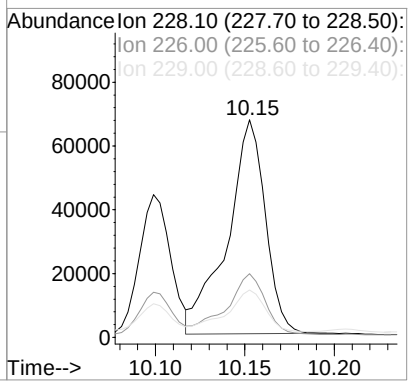


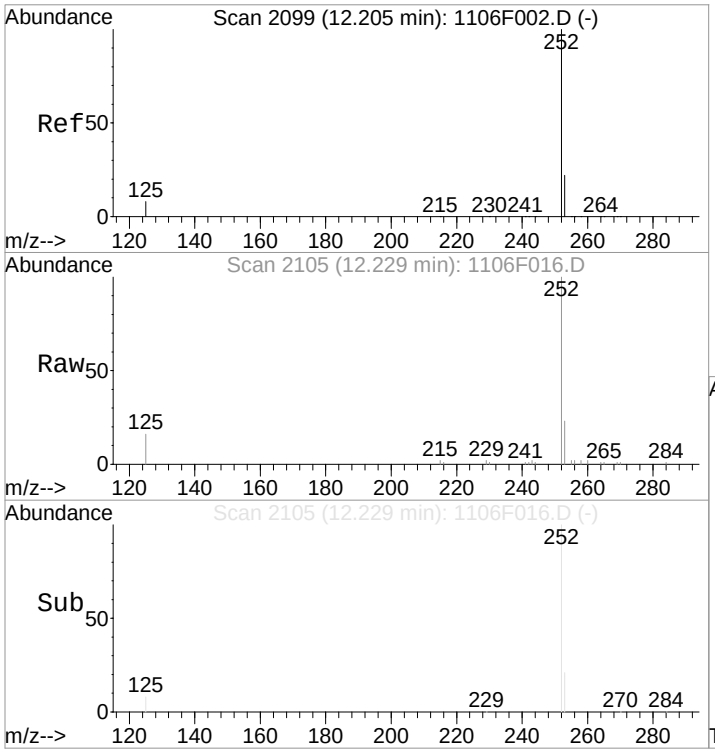


#27
Chrysene
Concen: 198.72 ng/ml
RT: 10.15 min Scan# 1554
Delta R.T. 0.01 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:228 Resp: 99472

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.7
229	19.1	0.0	39.2

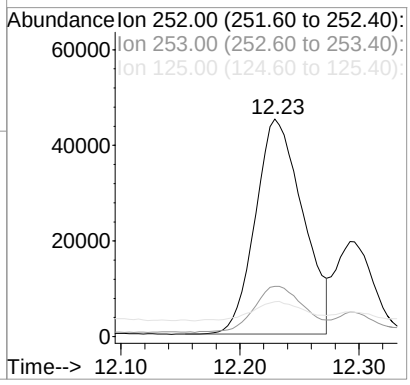




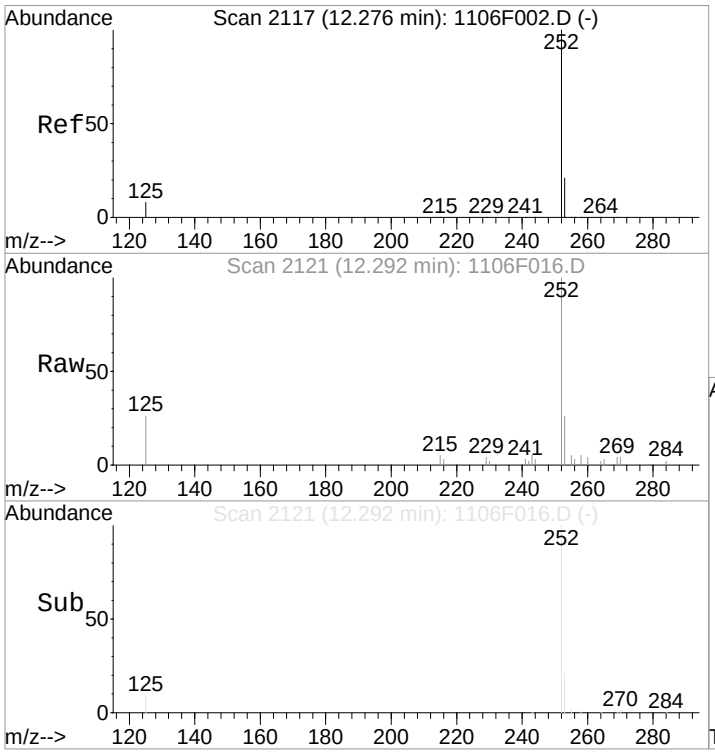
#29
Benzo(b)fluoranthene
Concen: 211.54 ng/ml
RT: 12.23 min Scan# 2105
Delta R.T. 0.02 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:252 Resp: 125047

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.2
125	8.5	0.0	29.5



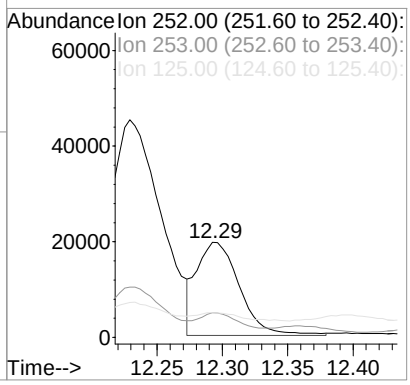
1st 11/16/18
2nd 11/27/18

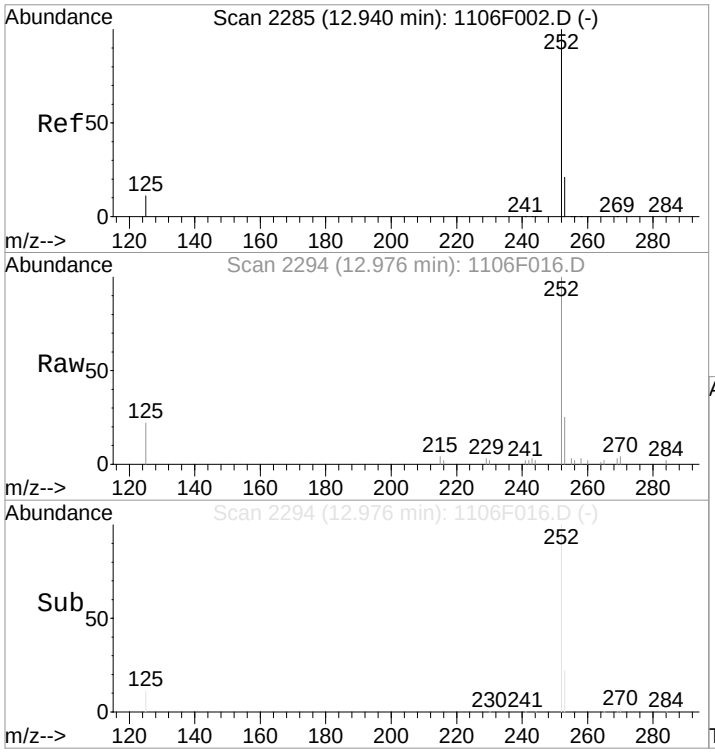


#30
Benzo(k)fluoranthene
Concen: 76.32 ng/ml m
RT: 12.29 min Scan# 2121
Delta R.T. 0.02 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:252 Resp: 44752

Ion	Ratio	Lower	Upper
252	100		
253	26.1	0.0	51.2
125	26.2	0.0	29.7

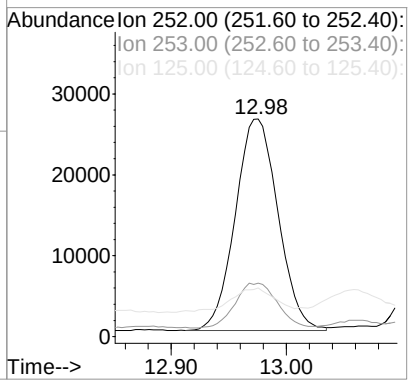




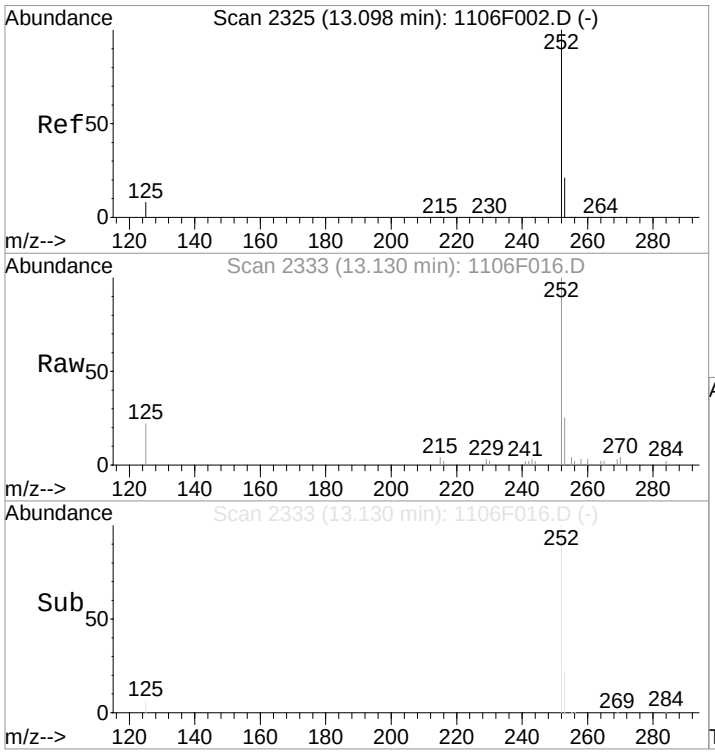
#31
Benzo(e)pyrene
Concen: 120.02 ng/ml
RT: 12.98 min Scan# 2294
Delta R.T. 0.04 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:252 Resp: 67623

Ion	Ratio	Lower	Upper
252	100		
253	21.0	0.0	51.3
125	10.7	0.0	33.5



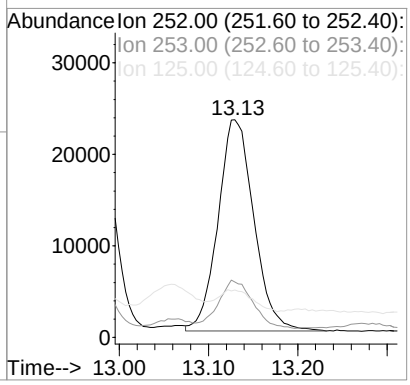
1st 11/16/18
2nd 11/27/18

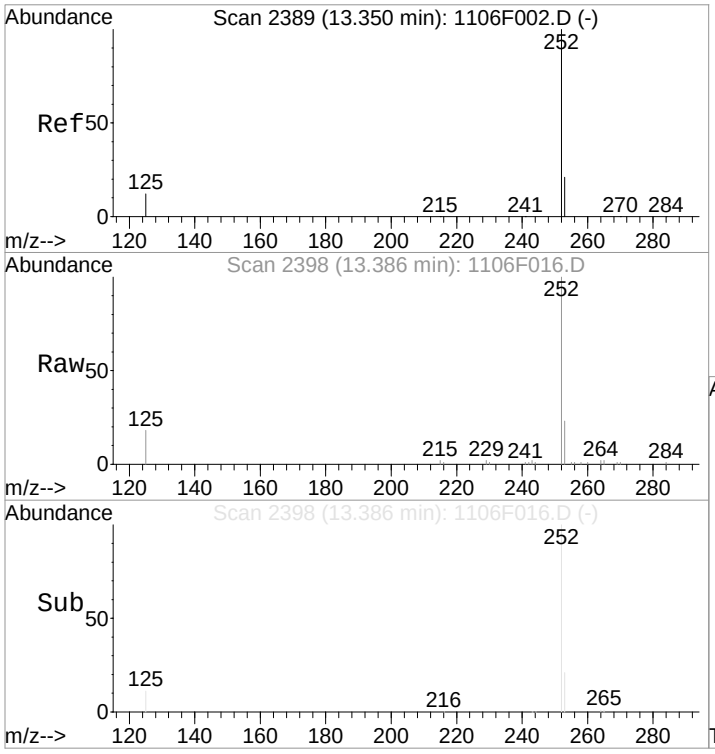


#32
Benzo(a)pyrene
Concen: 124.62 ng/ml
RT: 13.13 min Scan# 2333
Delta R.T. 0.03 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:252 Resp: 64602

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	50.9
125	9.7	0.0	30.3

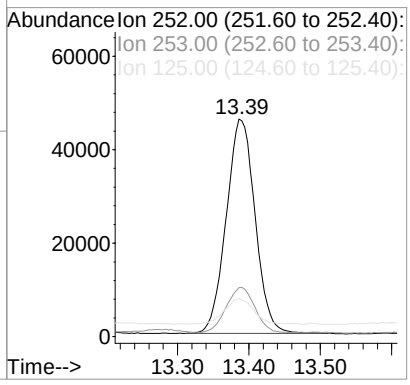




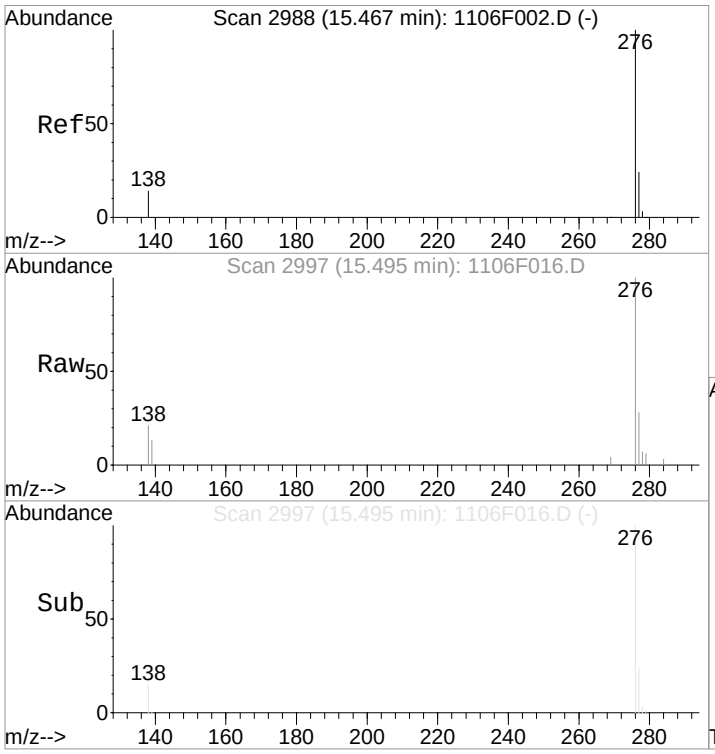
#33
Perylene
Concen: 236.75 ng/ml
RT: 13.39 min Scan# 2398
Delta R.T. 0.04 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:252 Resp: 128745

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.2
125	12.2	0.0	33.8



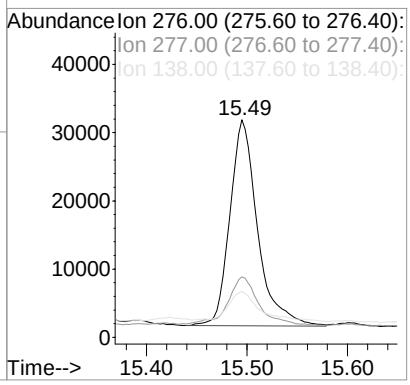
1st 11/16/18
2nd 11/27/18

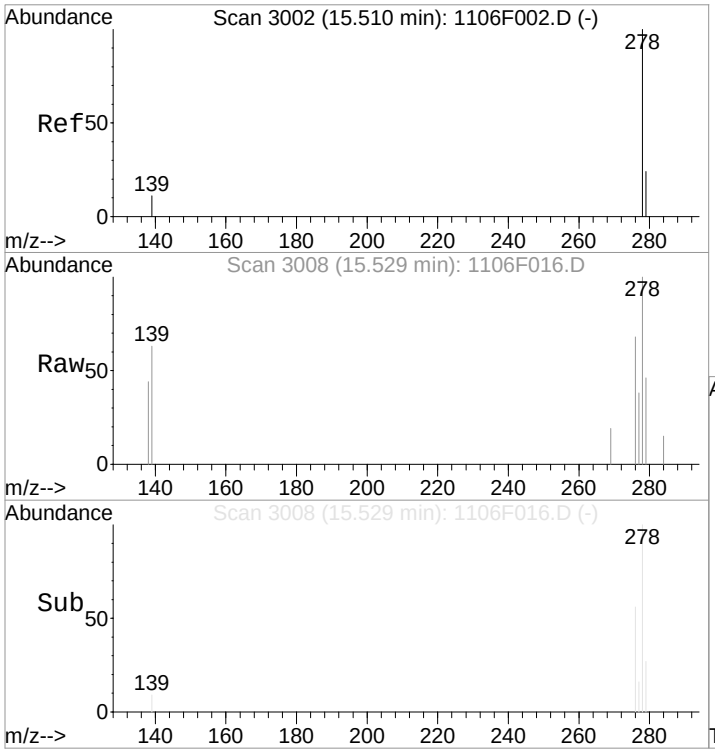


#34
Indeno(1,2,3-cd)pyrene
Concen: 113.84 ng/ml
RT: 15.49 min Scan# 2997
Delta R.T. 0.03 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:276 Resp: 57869

Ion	Ratio	Lower	Upper
276	100		
277	23.5	0.0	53.4
138	14.6	0.0	37.7

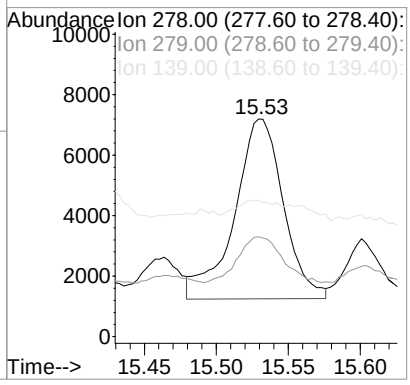




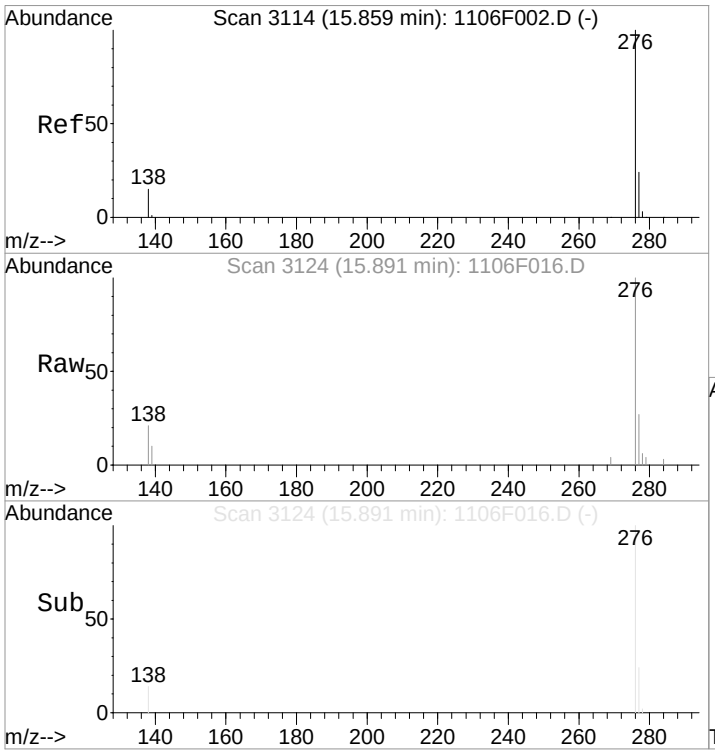
#35
Dibenz(a,h)anthracene
Concen: 27.33 ng/ml m
RT: 15.53 min Scan# 3008
Delta R.T. 0.02 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:278 Resp: 14081

Ion	Ratio	Lower	Upper
278	100		
279	45.9	0.0	53.5
139	62.7	0.0	35.0#



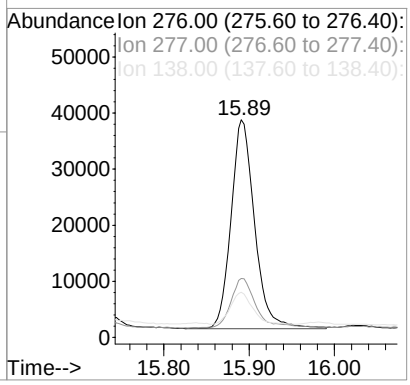
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 120.55 ng/ml
RT: 15.89 min Scan# 3124
Delta R.T. 0.03 min
Lab File: 1106F016.D
Acq: 6 Nov 2018 12:18 pm

Tgt Ion:276 Resp: 71760

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.1
138	14.9	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F016.D Vial: 16
Acq On : 6 Nov 2018 12:18 pm Operator: LWeiskopf
Sample : K1810270-013DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:50 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	65459	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31384	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	63553	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	80827	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	95678	200.00	ng/ml	0.03
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	15834	86.66	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.67%		
13) Fluorene-d10	6.76	176	24458	121.88	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	12.19%		
22) Fluoranthene-d10	8.55	212	50645	126.44	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	12.64%		
25) Terphenyl-d14	8.89	244	45795	130.63	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.06%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	11174	29.57	ng/ml	99
4) 2-Methylnaphthalene	5.42	142	3400	14.92	ng/ml	94
5) 1-Methylnaphthalene	5.51	142	1644	7.50	ng/ml	91
6) Biphenyl	5.83	154	1589	5.59	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.97	156	2161	11.05	ng/ml	97
9) Acenaphthylene	6.20	152	4660	12.44	ng/ml#	66
10) Acenaphthene	6.35	154	2660	12.37	ng/ml	98
11) Dibenzofuran	6.50	168	3113	9.02	ng/ml	87
12) 2,3,5-Trimethylnaphthalene	6.67	170	1003m	5.04	ng/ml	
14) Fluorene	6.78	166	4259	16.37	ng/ml	95
16) Dibenzothiophene	7.47	184	4275	10.78	ng/ml	94
17) Phenanthrene	7.58	178	49213	124.13	ng/ml	100
18) Anthracene	7.62	178	9977	26.36	ng/ml	98
19) Carbazole	7.76	167	4182	11.32	ng/ml	93
20) 1-Methylphenanthrene	8.09	192	4550	15.15	ng/ml	87
21) Fluoranthene	8.57	202	142137	290.35	ng/ml	93
24) Pyrene	8.76	202	147626	266.21	ng/ml	99
26) Benz(a)anthracene	10.10	228	53769	102.89	ng/ml	94
27) Chrysene	10.15	228	99472	198.72	ng/ml	100
29) Benzo(b)fluoranthene	12.23	252	125047	211.54	ng/ml	99
30) Benzo(k)fluoranthene	12.29	252	44752m	76.32	ng/ml	
31) Benzo(e)pyrene	12.98	252	67623	120.02	ng/ml	97
32) Benzo(a)pyrene	13.13	252	64602	124.62	ng/ml	98
33) Perylene	13.39	252	128745	236.75	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.49	276	57869	113.84	ng/ml	97
35) Dibenz(a,h)anthracene	15.53	278	14081m	27.33	ng/ml	
36) Benzo(g,h,i)perylene	15.89	276	71760	120.55	ng/ml	95

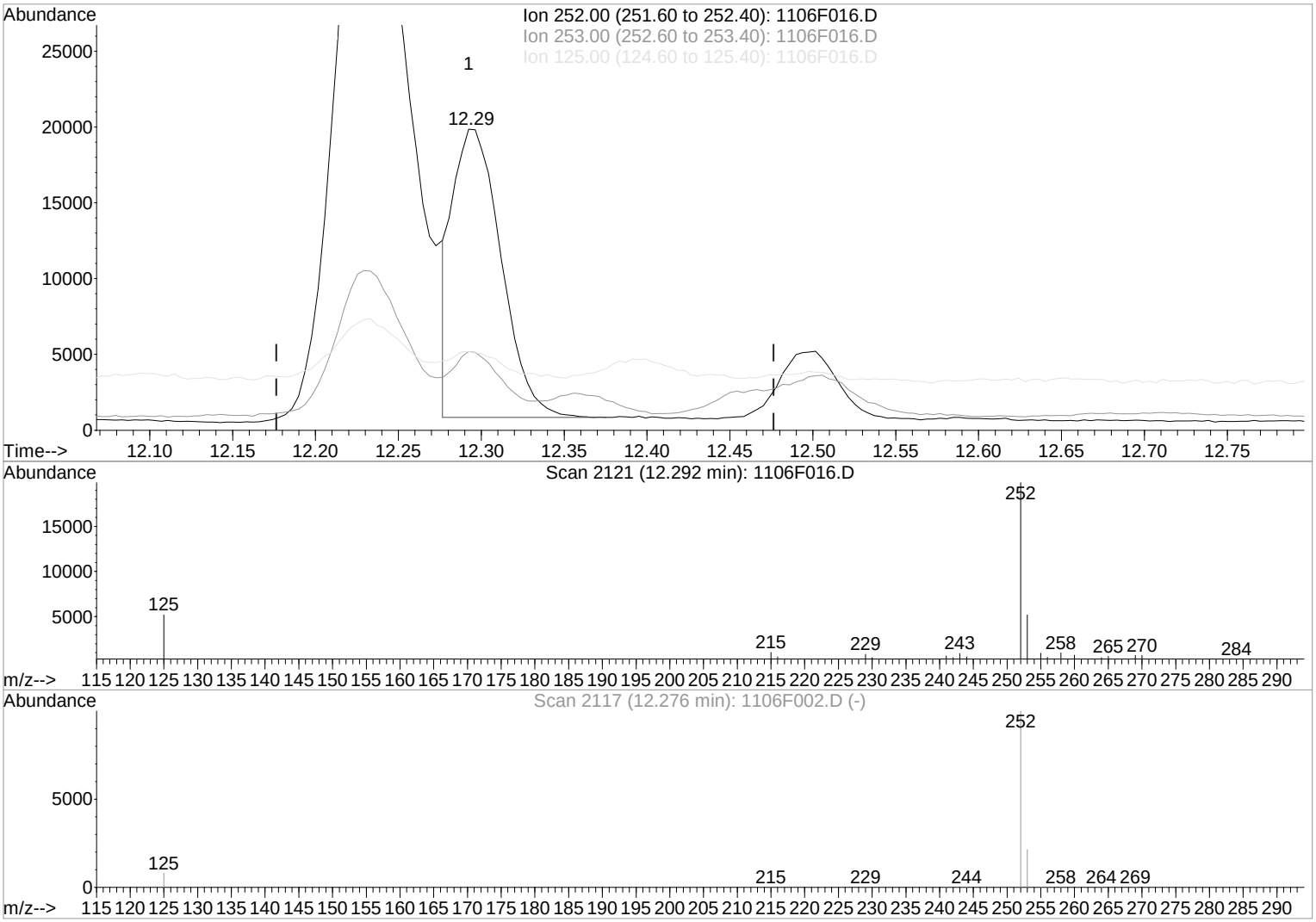
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F016.D Vial: 16
Acq On : 6 Nov 2018 12:18 pm Operator: LWeiskopf
Sample : K1810270-013DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F016.D

(30) Benzo(k)fluoranthene (T)

12.29min 66.55ng/ml

response 39025

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	16.96
125.00	9.70	5.93
0.00	0.00	0.00

Manual Integration:

Before

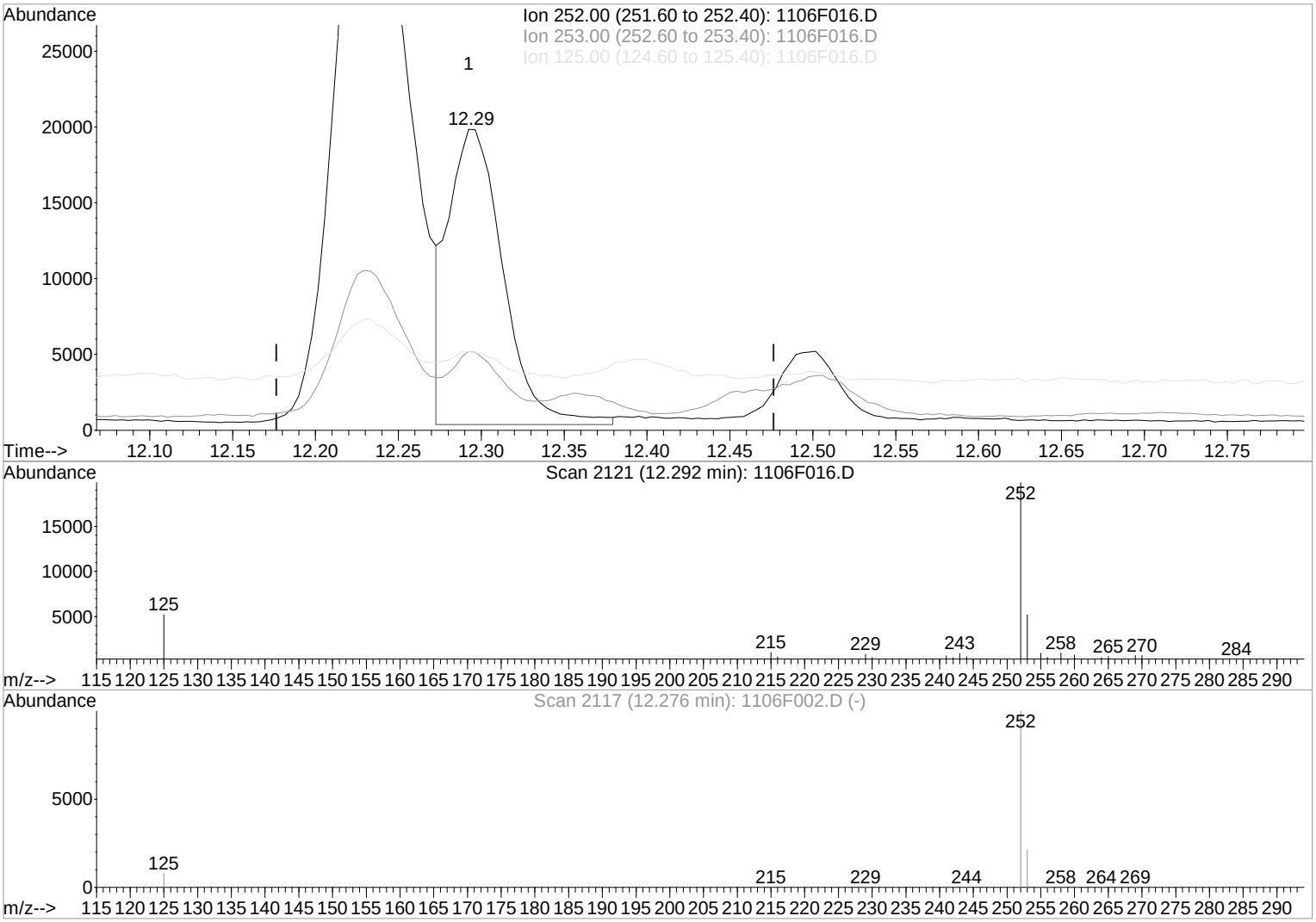
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F016.D Vial: 16
Acq On : 6 Nov 2018 12:18 pm Operator: LWeiskopf
Sample : K1810270-013DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F016.D

(30) Benzo(k)fluoranthene (T)

12.29min 76.32ng/ml m

response 44752

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	26.11
125.00	9.70	26.16
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

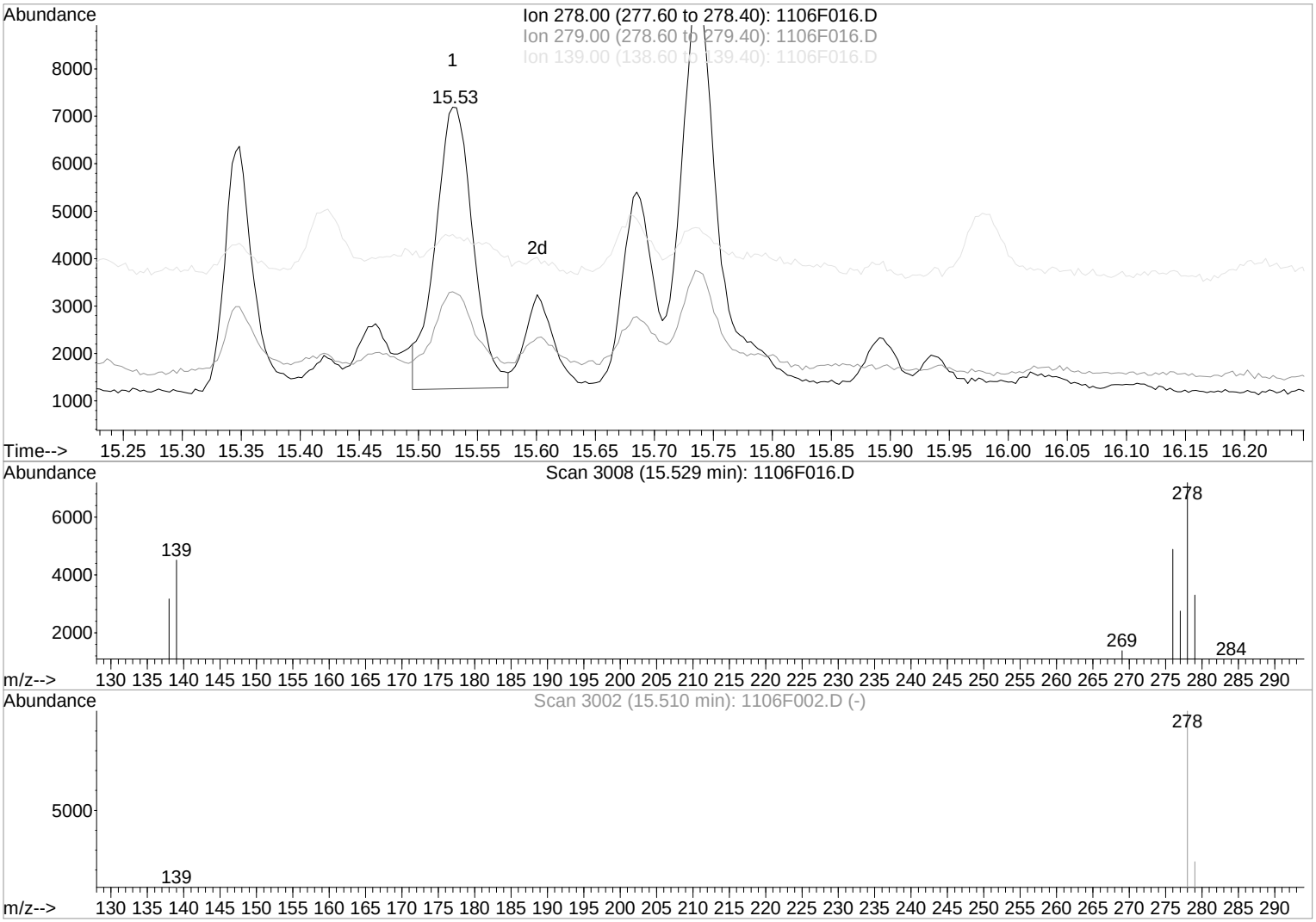
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F016.D Vial: 16
Acq On : 6 Nov 2018 12:18 pm Operator: LWeiskopf
Sample : K1810270-013DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F016.D

(35) Dibenz(a,h)anthracene (T)

15.53min 25.69ng/ml

response 13240

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	26.73
139.00	15.00	8.00
0.00	0.00	0.00

Manual Integration:

Before

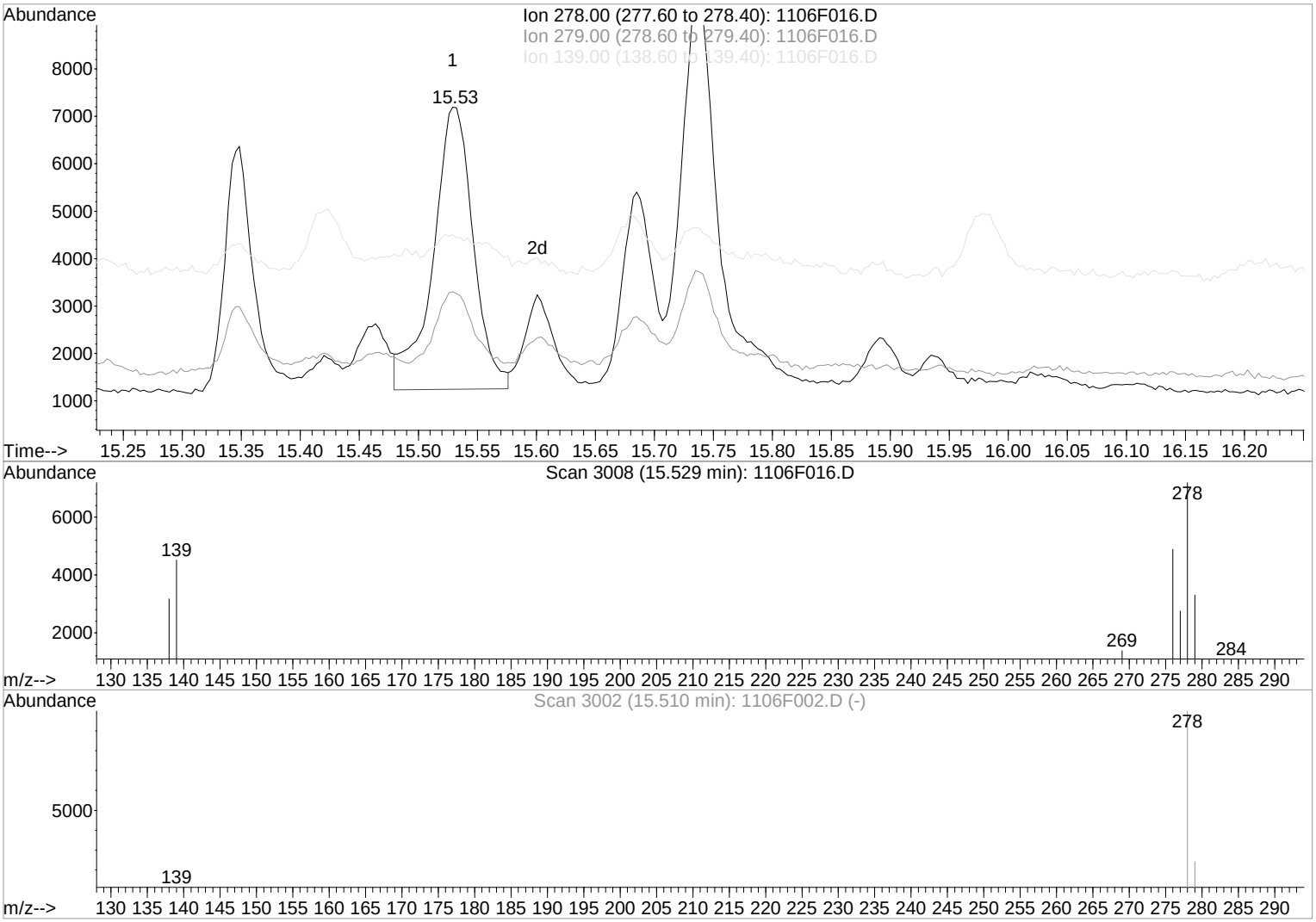
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F016.D Vial: 16
Acq On : 6 Nov 2018 12:18 pm Operator: LWeiskopf
Sample : K1810270-013DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F016.D

(35) Dibenz(a,h)anthracene (T)

15.53min 27.33ng/ml m

response 14081

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	45.93
139.00	15.00	62.74#
0.00	0.00	0.00

Manual Integration:

After

BLC

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F017.D
Lab ID: K1810270-015
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/06/2018 12:46
Date Quantitated: 11/16/2018 10:21
Batch ID: KWG1806026
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F017.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 12:46	**Quant Date:**	11/16/2018 10:21	**Vial:**	17
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-015			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700771	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	0.00	136	65576	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31057	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	62927	200.00	OK
4	Chrysene-d12	10.12	0.01	240	81131	200.00	OK
5	Perylene-d12	13.31	0.04	264	94792	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	26689	134.40	67	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	54862	138.33	69	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	50345	143.07	72	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	4586	12.12	7.7	D	
1	2-Methylnaphthalene	5.42		0.00	142	1473	6.45	4.1	JD	
2	Acenaphthylene	6.20		0.00	152	5565	15.02	9.5	D	
2	Acenaphthene	6.35		0.00	154	2738	12.86	8.1	D	
2	Dibenzofuran	6.50		0.00	168	3457	10.12	6.4	D	
2	Fluorene	6.78		0.00	166	4738	18.40	12	D	
3	Phenanthrene	7.58		0.00	178	61042	155.50	98	D	
3	Anthracene	7.62		0.00	178	13225	35.29	22	D	
3	Fluoranthene	8.57	0.01	0.00	202	196683	405.77	260	D	
4	Pyrene	8.76	0.01	0.00	202	197470	354.76	220	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	82082	156.48	99	D	
4	Chrysene	10.16	0.01	0.00	228	130770	260.27	160	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110618\1106F017.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 12:46	**Quant Date:**	11/16/2018 10:21	**Vial:**	17
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-015			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	154842	264.39	170	D	
5	Benzo(k)fluoranthene	12.30	0.02	0.00	252	55713**m**	95.90	61	D	
5	Benzo(a)pyrene	13.14	0.04	0.00	252	87786	170.93	110	D	
5	Indeno(1,2,3-cd)pyrene	15.50	0.03	0.00	276	70612	140.21	89	D	
5	Dibenz(a,h)anthracene	15.54	0.03	0.00	278	17102	33.50	21	D	
5	Benzo(g,h,i)perylene	15.89	0.03	0.00	276	83444	141.49	90	D	

Prep Amount:	40.183 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	39.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

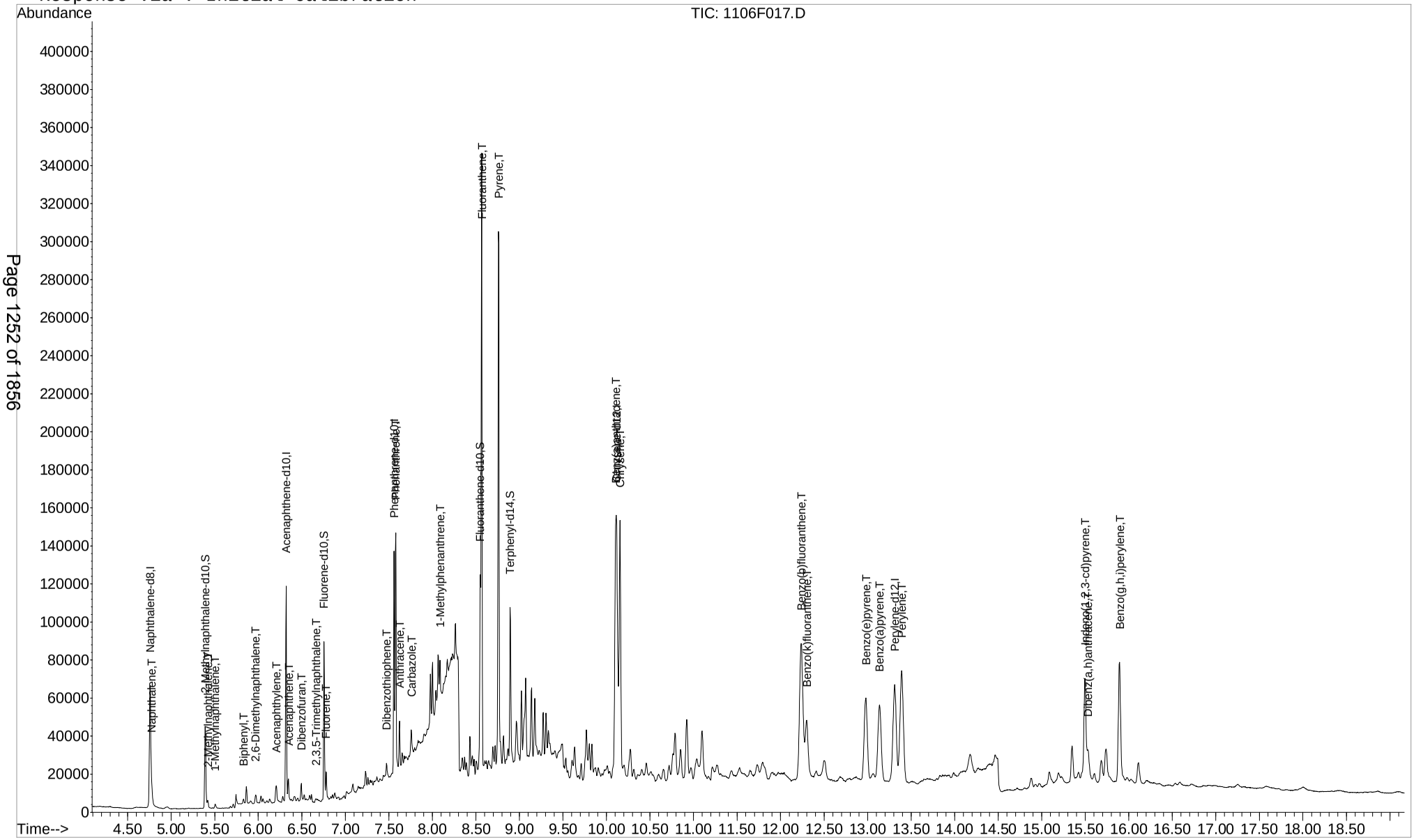
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

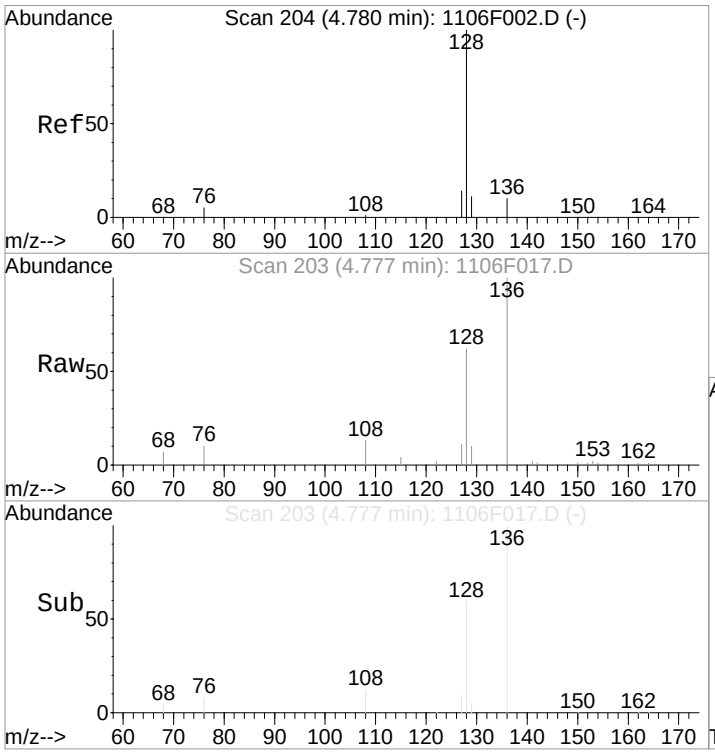
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F017.D Vial: 17
Acq On : 6 Nov 2018 12:46 pm Operator: LWeiskopf
Sample : K1810270-015DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:21 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



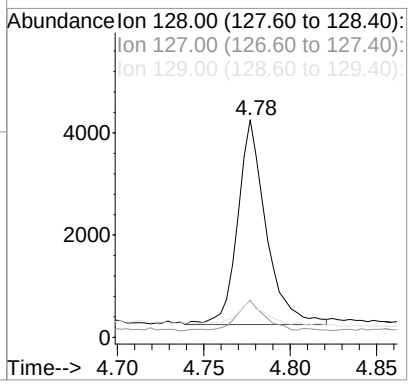
1st 11/16/18
2nd 11/27/18

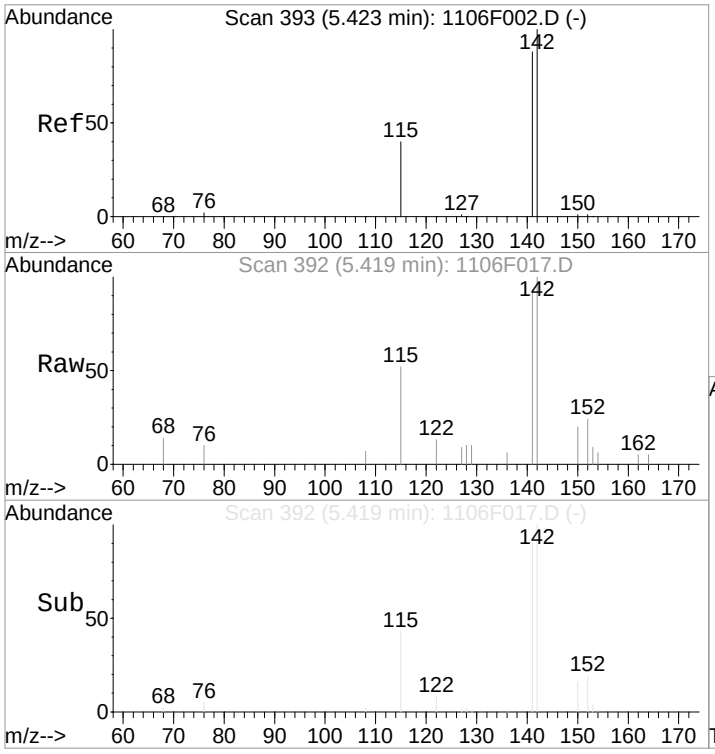


#2
Naphthalene
Concen: 12.12 ng/ml
RT: 4.78 min Scan# 203
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:128 Resp: 4586

Ion	Ratio	Lower	Upper
128	100		
127	14.6	0.0	43.7
129	11.5	0.0	30.8

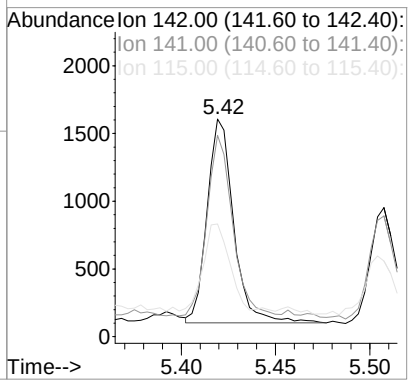




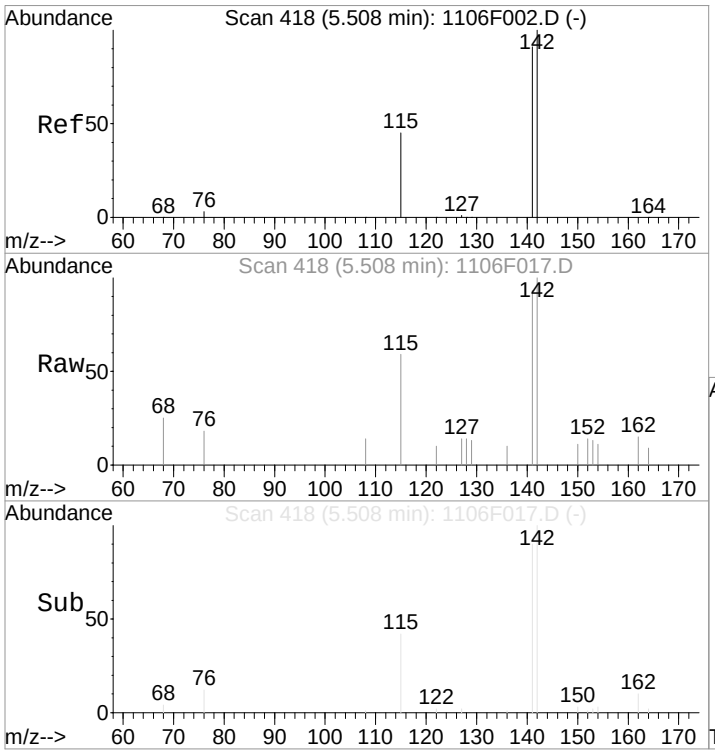
#4
2-Methylnaphthalene
Concen: 6.45 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:142 Resp: 1473

Ion	Ratio	Lower	Upper
142	100		
141	89.5	56.8	116.8
115	44.1	13.3	53.3



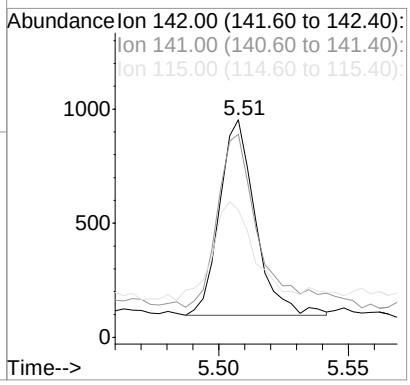
1st 11/16/18
2nd 11/27/18

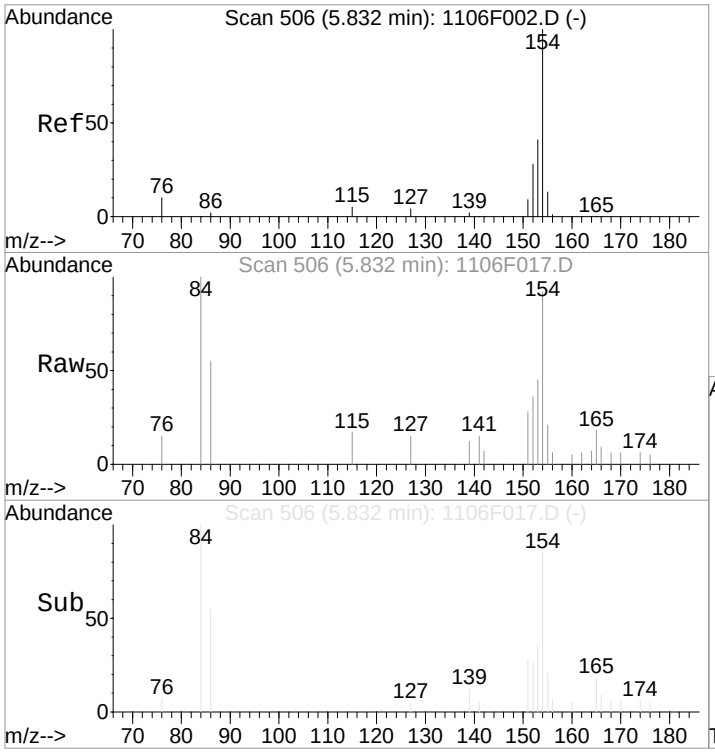


#5
1-Methylnaphthalene
Concen: 3.75 ng/ml
RT: 5.51 min Scan# 418
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:142 Resp: 824

Ion	Ratio	Lower	Upper
142	100		
141	88.7	59.7	119.7
115	42.1	13.7	53.7

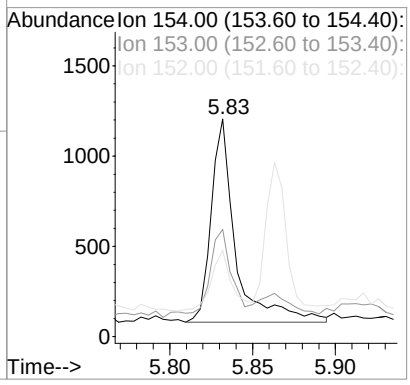




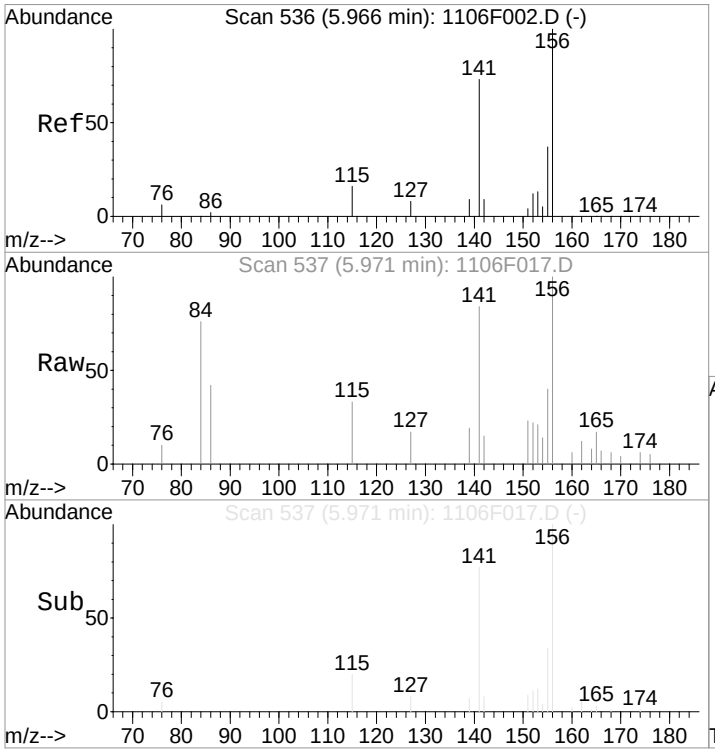
#6
Biphenyl
Concen: 4.06 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:154 Resp: 1156

Ion	Ratio	Lower	Upper
154	100		
153	41.4	11.4	71.4
152	29.1	7.1	47.1



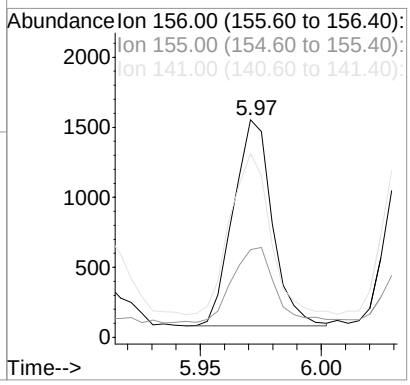
1st 11/16/18
2nd 11/27/18

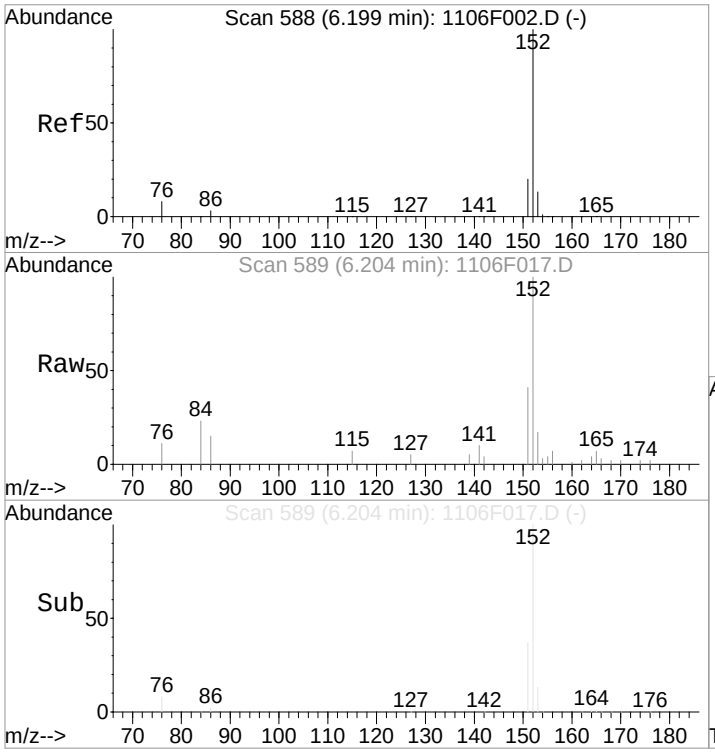


#7
2,6-Dimethylnaphthalene
Concen: 8.41 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:156 Resp: 1648

Ion	Ratio	Lower	Upper
156	100		
155	34.8	7.0	67.0
141	78.0	47.9	87.9

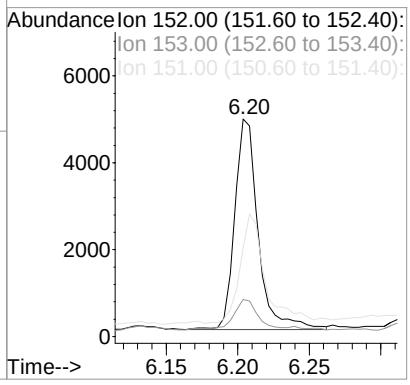




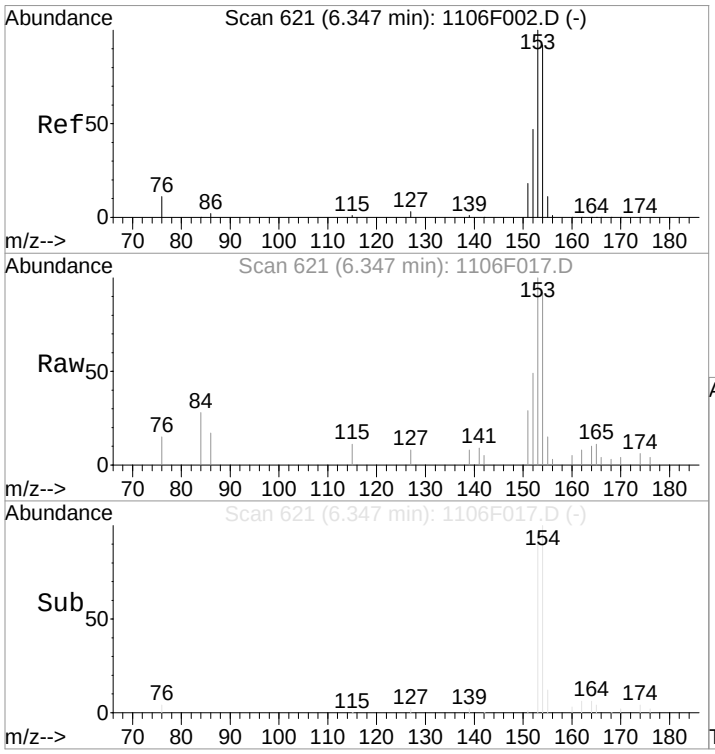
#9
Acenaphthylene
Concen: 15.02 ng/ml
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:152 Resp: 5565

Ion	Ratio	Lower	Upper
152	100		
153	14.4	0.0	42.9
151	35.8	0.2	40.2



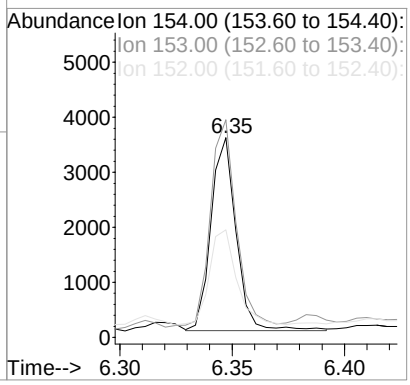
1st 11/16/18
2nd 11/27/18

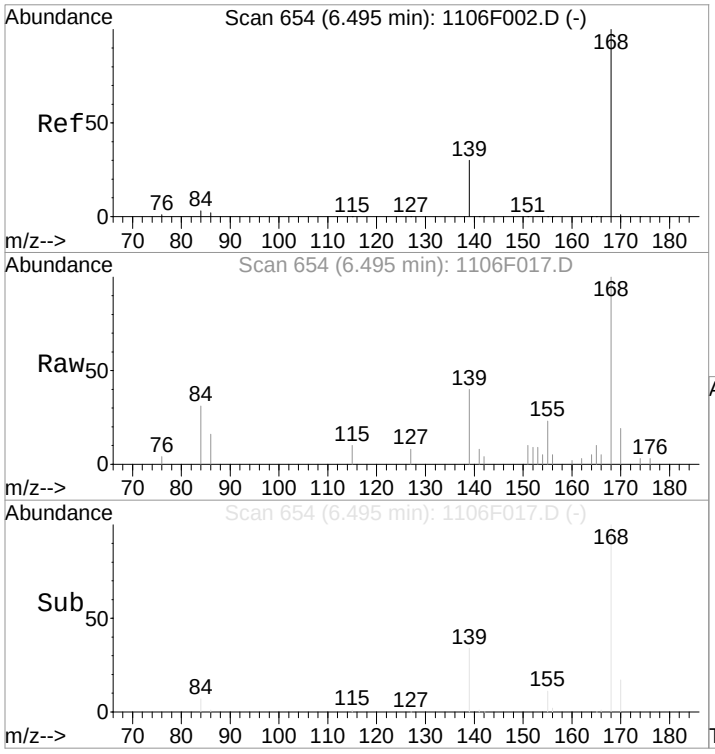


#10
Acenaphthene
Concen: 12.86 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:154 Resp: 2738

Ion	Ratio	Lower	Upper
154	100		
153	107.0	77.1	137.1
152	49.0	19.7	79.7

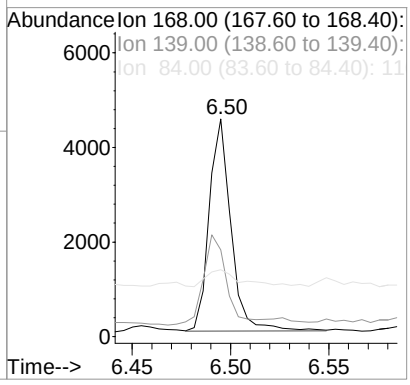




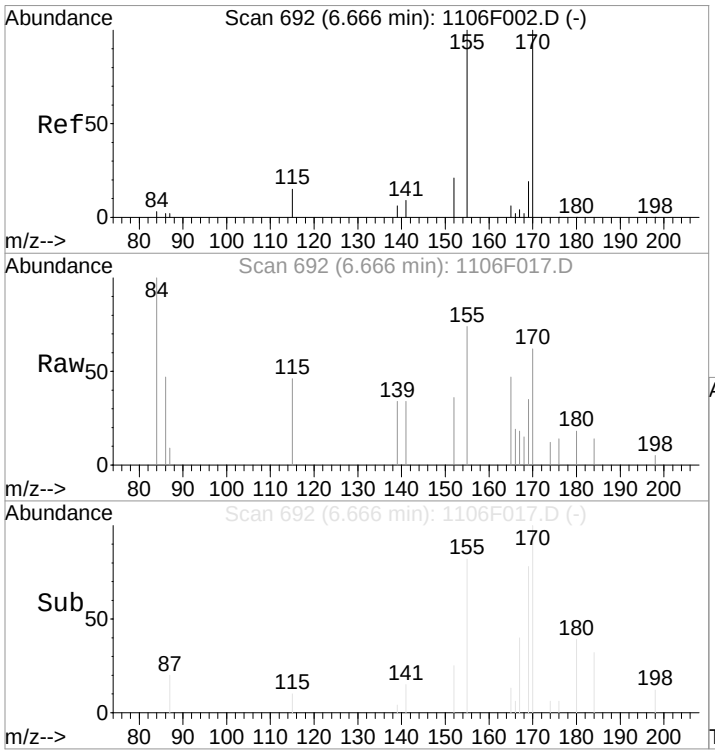
#11
Dibenzofuran
Concen: 10.12 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:168 Resp: 3457

Ion	Ratio	Lower	Upper
168	100		
139	34.1	0.0	55.8
84	7.7	0.0	23.5



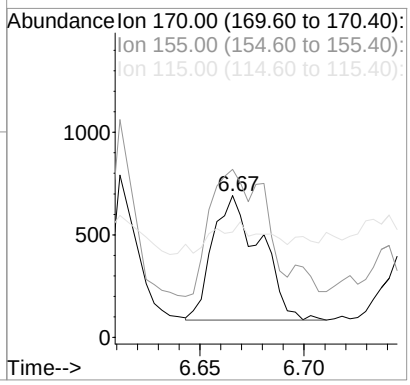
1st 11/16/18
2nd 11/27/18

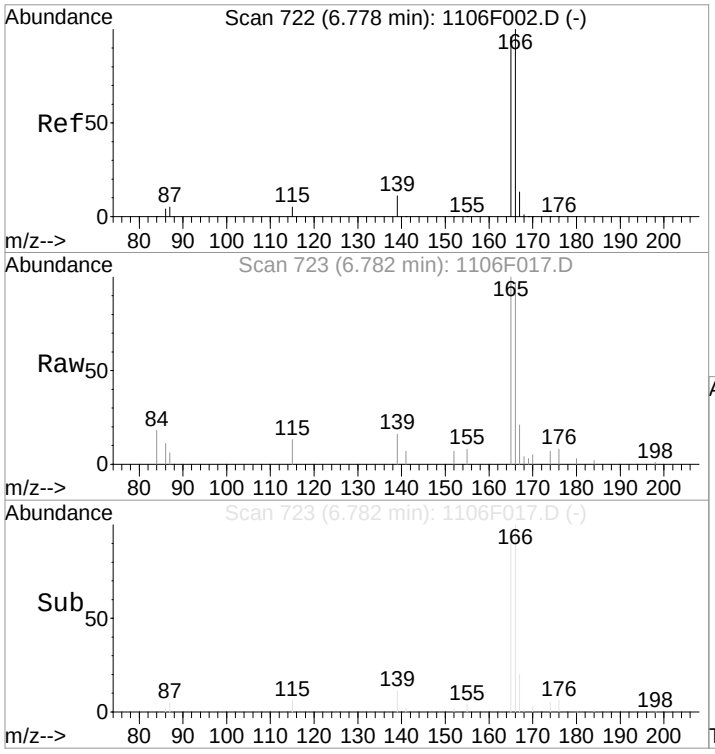


#12
2,3,5-Trimethylnaphthalene
Concen: 4.92 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:170 Resp: 968

Ion	Ratio	Lower	Upper
170	100		
155	102.1	59.2	119.2
115	9.9	0.0	30.1

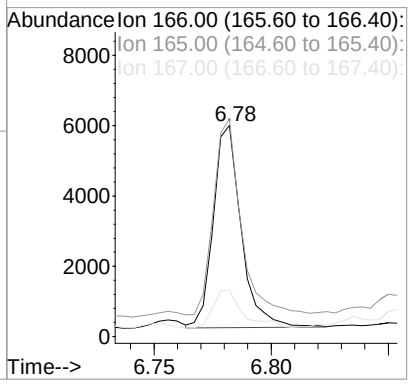




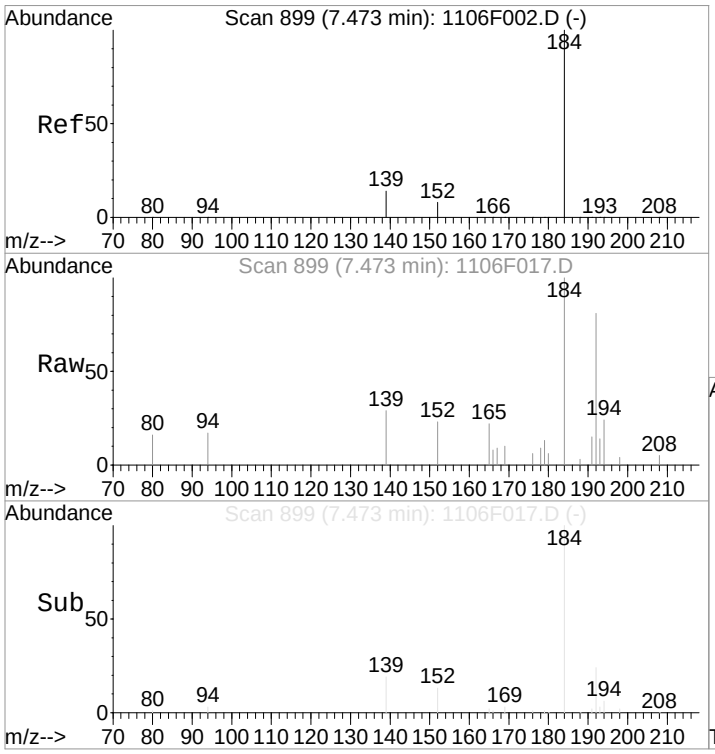
#14
Fluorene
Concen: 18.40 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:166 Resp: 4738

Ion	Ratio	Lower	Upper
166	100		
165	97.2	63.4	123.4
167	18.8	0.0	33.1



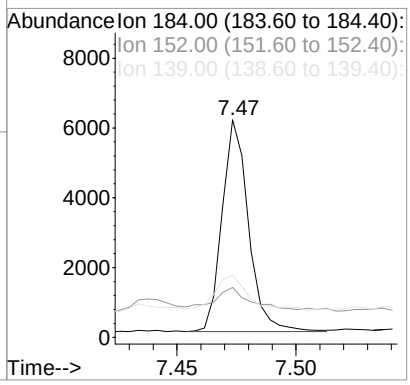
1st 11/16/18
2nd 11/27/18

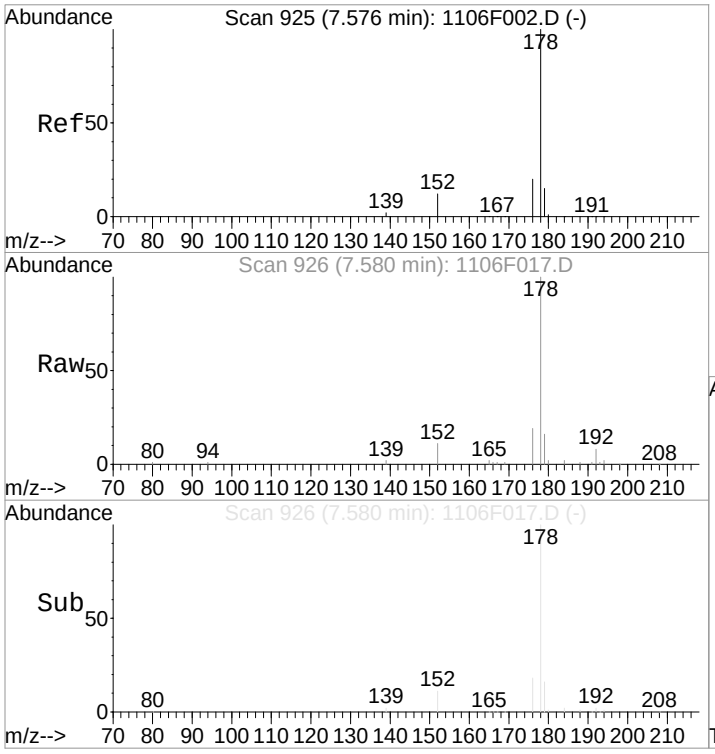


#16
Dibenzothiophene
Concen: 11.95 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. -0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:184 Resp: 4691

Ion	Ratio	Lower	Upper
184	100		
152	9.8	0.0	37.8
139	16.1	0.0	32.6

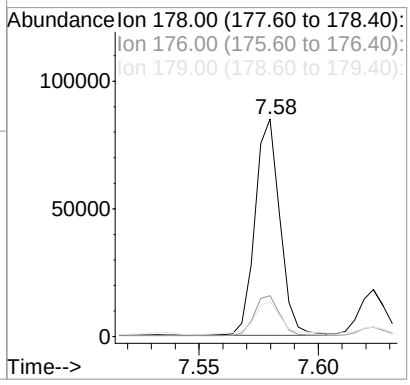




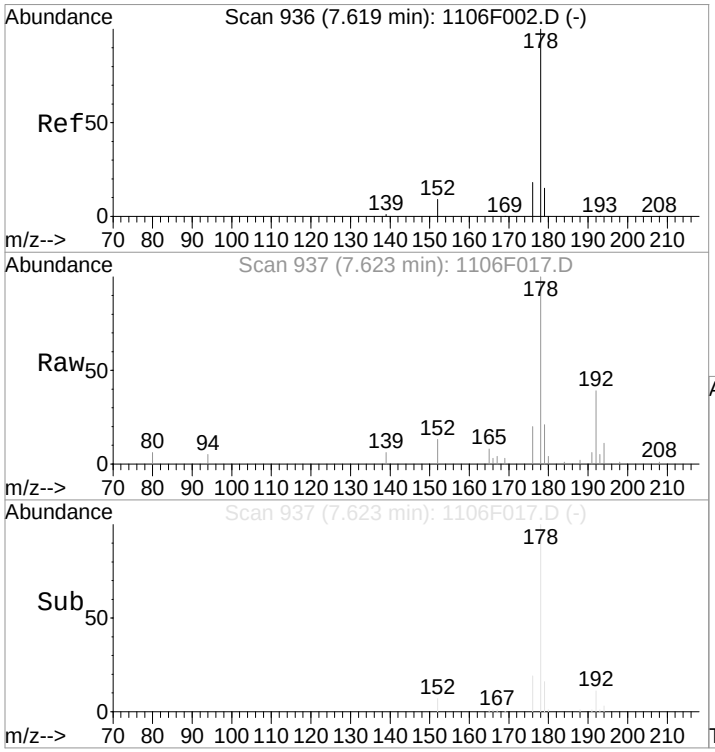
#17
Phenanthrene
Concen: 155.50 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:178 Resp: 61042

Ion	Ratio	Lower	Upper
178	100		
176	18.5	0.0	48.7
179	15.4	0.0	35.1



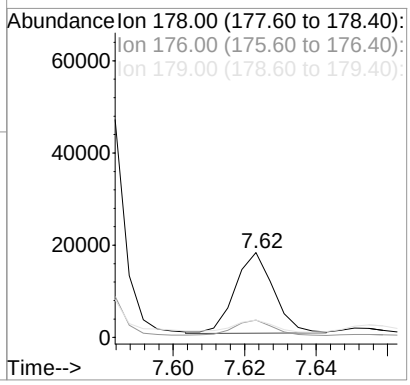
1st 11/16/18
2nd 11/27/18

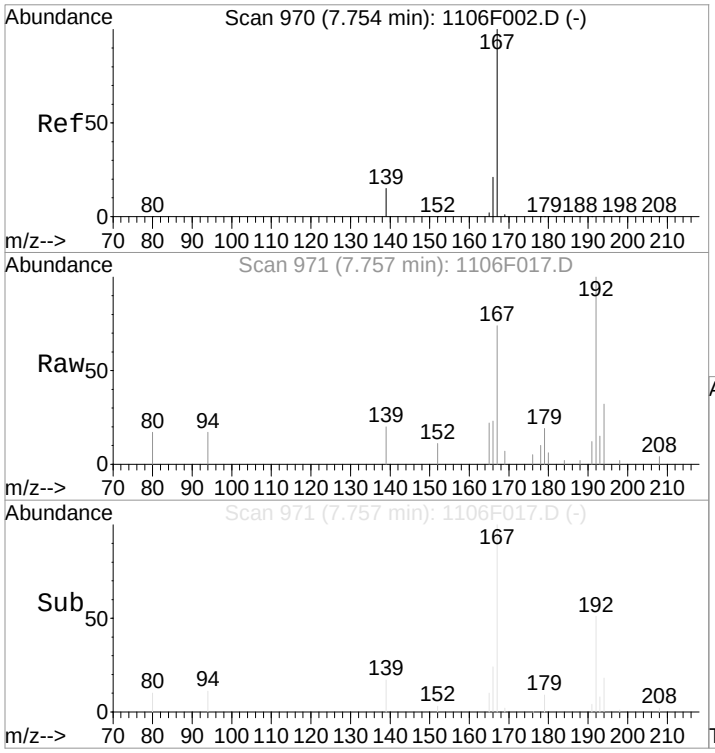


#18
Anthracene
Concen: 35.29 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:178 Resp: 13225

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	48.0
179	14.6	0.0	35.1

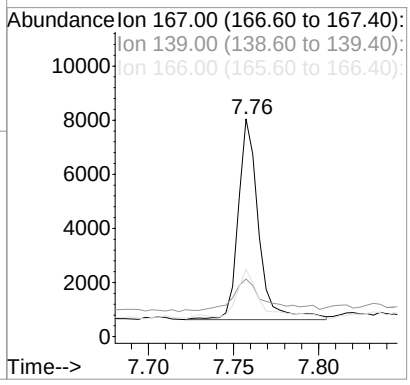




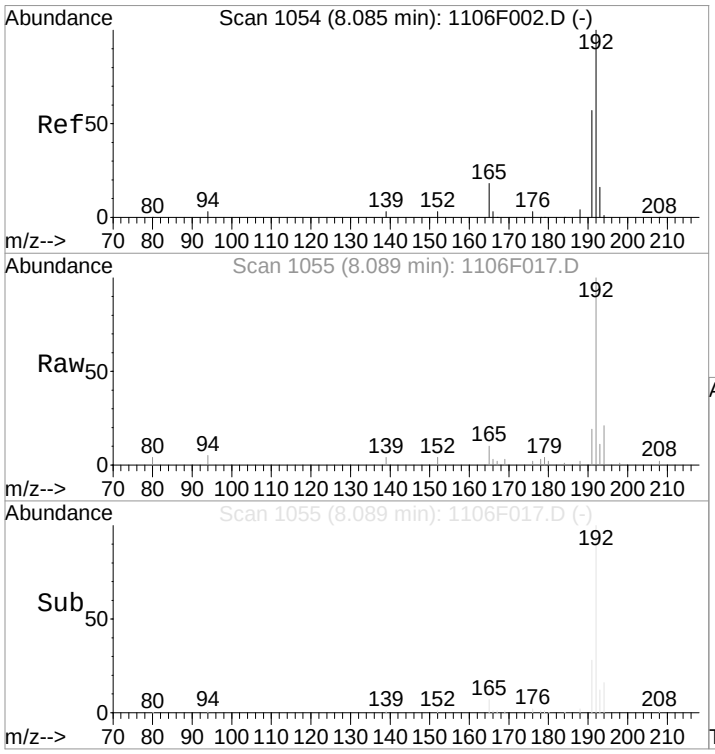
#19
Carbazole
Concen: 17.00 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:167 Resp: 6216

Ion	Ratio	Lower	Upper
167	100		
139	15.2	0.0	41.5
166	24.6	0.7	40.7



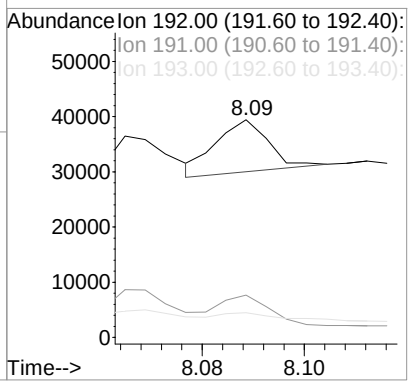
1st 11/16/18
2nd 11/27/18

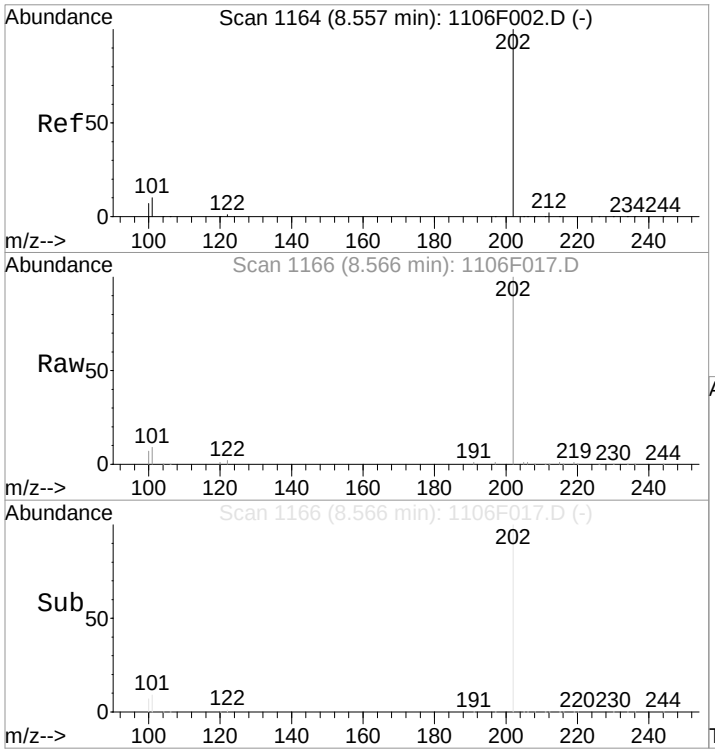


#20
1-Methylphenanthrene
Concen: 23.13 ng/ml
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:192 Resp: 6878

Ion	Ratio	Lower	Upper
192	100		
191	68.2	27.7	87.7
193	15.0	0.0	45.4

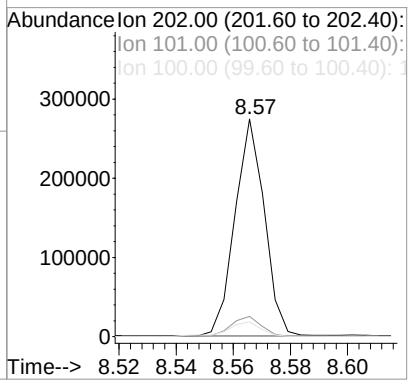




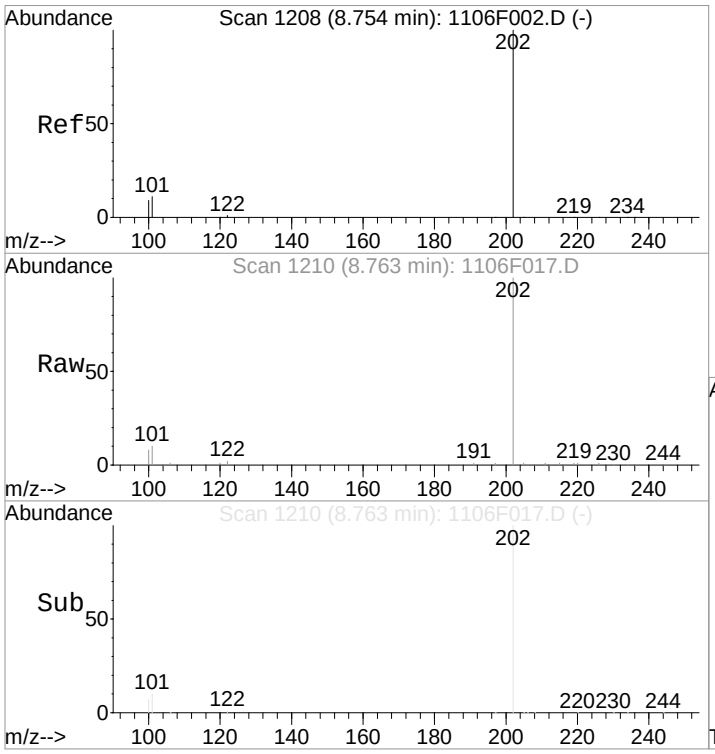
#21
Fluoranthene
Concen: 405.77 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.01 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:202 Resp: 196683

Ion	Ratio	Lower	Upper
202	100		
101	9.2	0.0	41.3
100	6.7	0.0	28.6



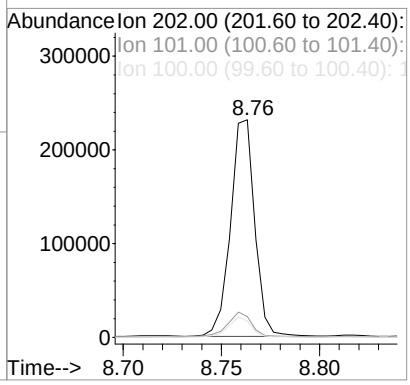
1st 11/16/18
2nd 11/27/18

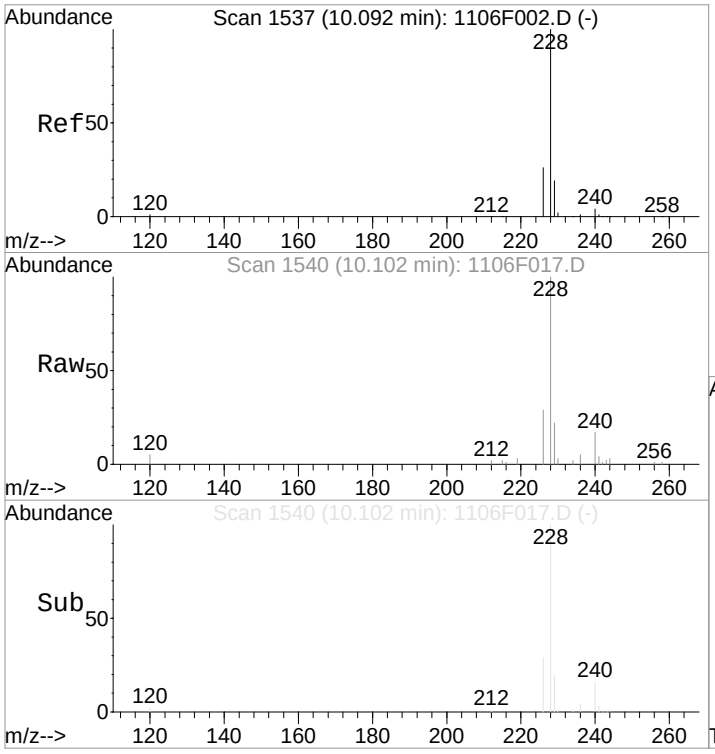


#24
Pyrene
Concen: 354.76 ng/ml
RT: 8.76 min Scan# 1210
Delta R.T. 0.01 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:202 Resp: 197470

Ion	Ratio	Lower	Upper
202	100		
101	9.4	0.0	40.8
100	7.5	0.0	28.5

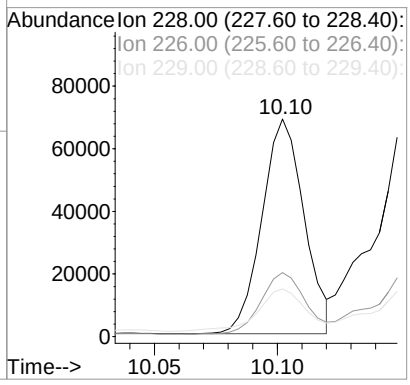




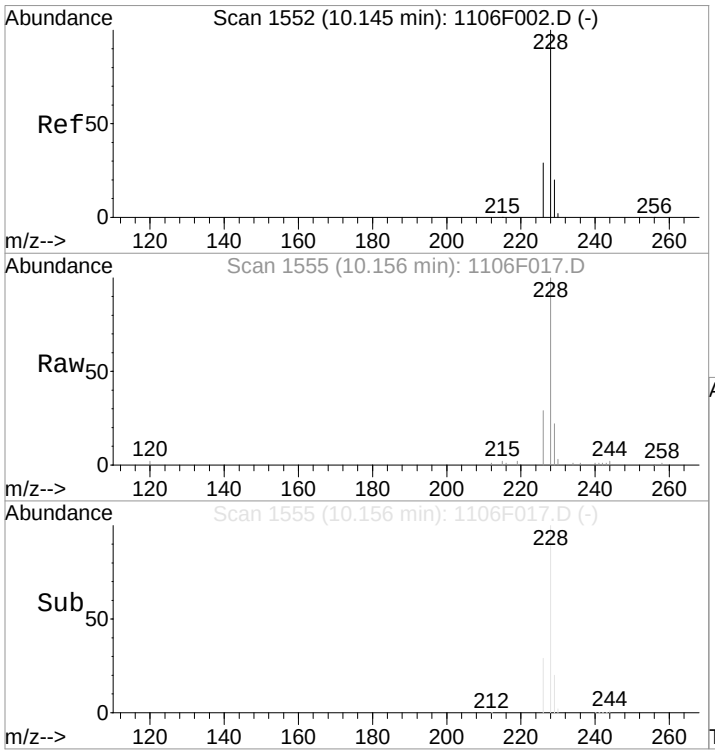
#26
Benz(a)anthracene
Concen: 156.48 ng/ml
RT: 10.10 min Scan# 1540
Delta R.T. 0.01 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:228 Resp: 82082

Ion	Ratio	Lower	Upper
228	100		
226	28.6	0.0	56.3
229	19.5	0.0	39.1



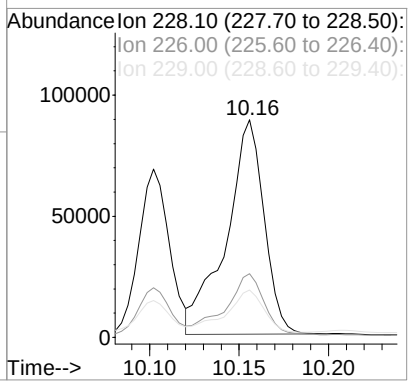
1st 11/16/18
2nd 11/27/18

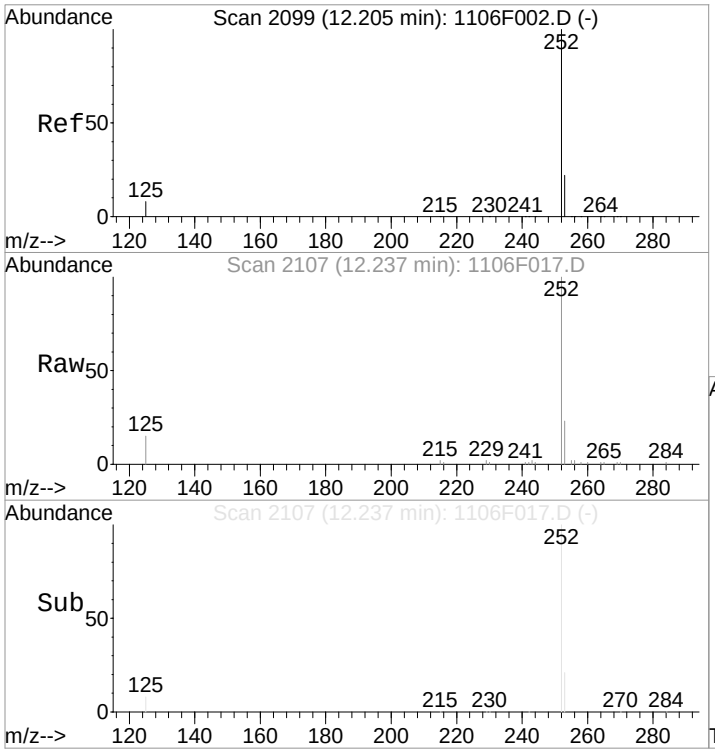


#27
Chrysene
Concen: 260.27 ng/ml
RT: 10.16 min Scan# 1555
Delta R.T. 0.01 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:228 Resp: 130770

Ion	Ratio	Lower	Upper
228	100		
226	28.6	0.0	58.7
229	19.3	0.0	39.2

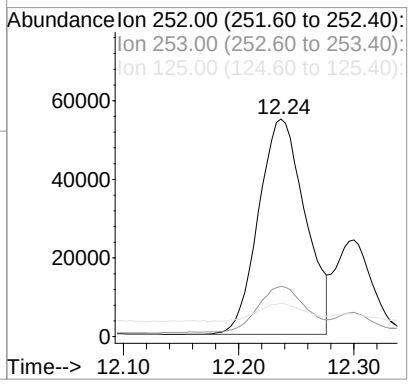




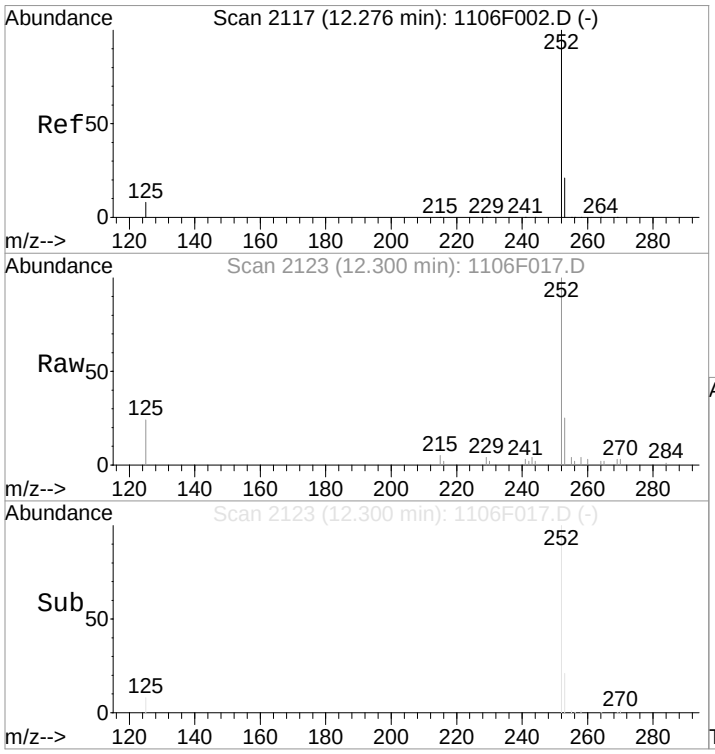
#29
Benzo(b)fluoranthene
Concen: 264.39 ng/ml
RT: 12.24 min Scan# 2107
Delta R.T. 0.03 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:252 Resp: 154842

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.2
125	8.3	0.0	29.5



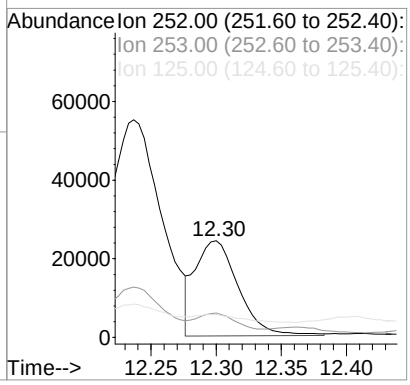
1st 11/16/18
2nd 11/27/18

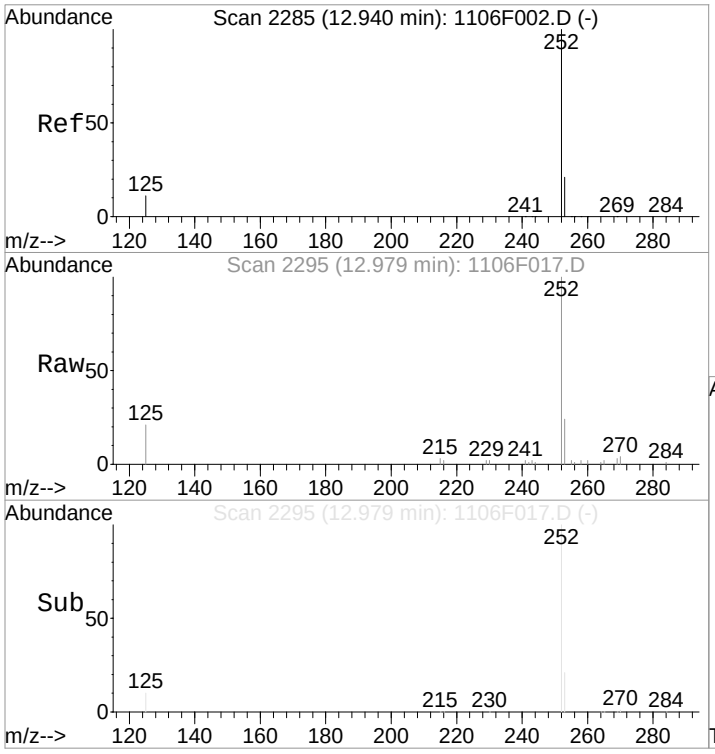


#30
Benzo(k)fluoranthene
Concen: 95.90 ng/ml m
RT: 12.30 min Scan# 2123
Delta R.T. 0.02 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:252 Resp: 55713

Ion	Ratio	Lower	Upper
252	100		
253	25.1	0.0	51.2
125	23.9	0.0	29.7

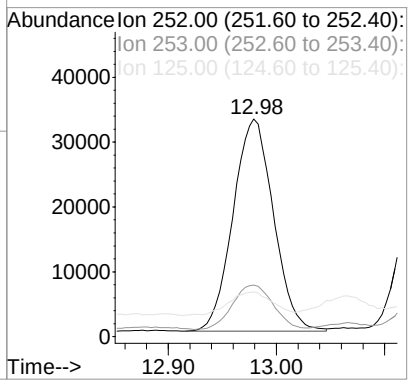




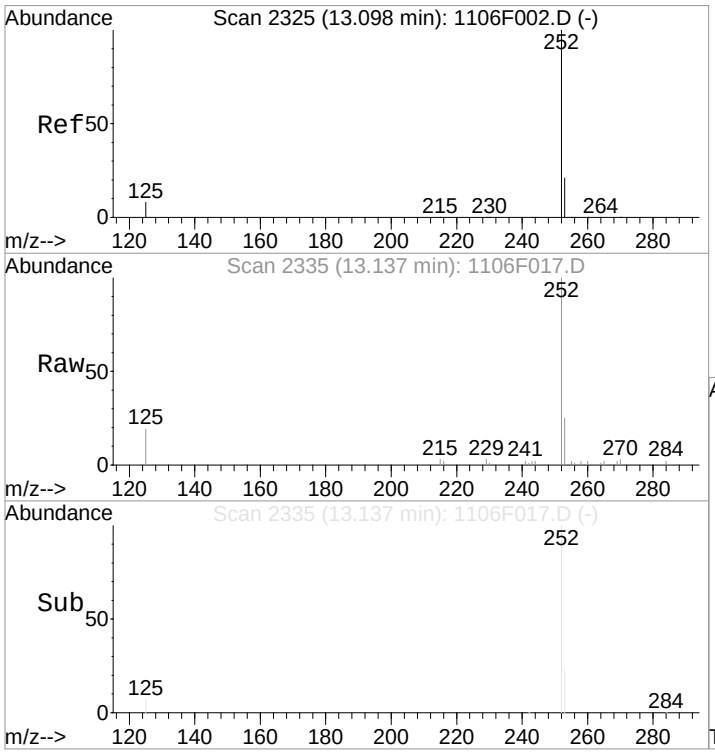
#31
Benzo(e)pyrene
Concen: 152.40 ng/ml
RT: 12.98 min Scan# 2295
Delta R.T. 0.04 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:252 Resp: 85077

Ion	Ratio	Lower	Upper
252	100		
253	20.5	0.0	51.3
125	11.0	0.0	33.5



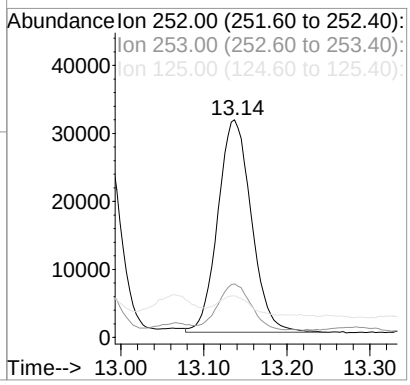
1st 11/16/18
2nd 11/27/18

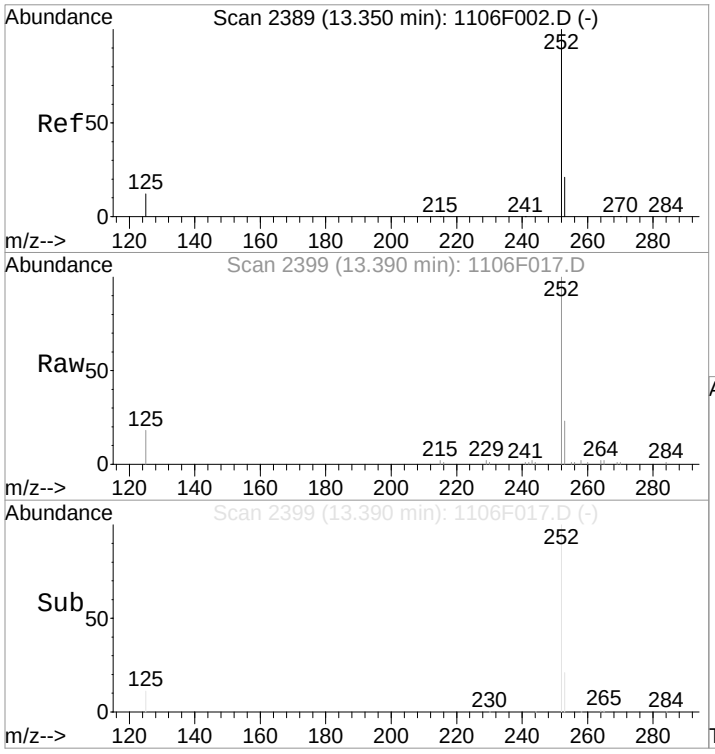


#32
Benzo(a)pyrene
Concen: 170.93 ng/ml
RT: 13.14 min Scan# 2335
Delta R.T. 0.04 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:252 Resp: 87786

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	50.9
125	9.0	0.0	30.3

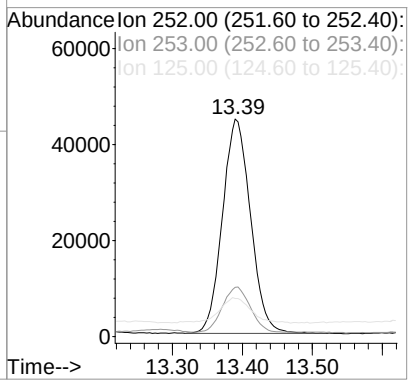




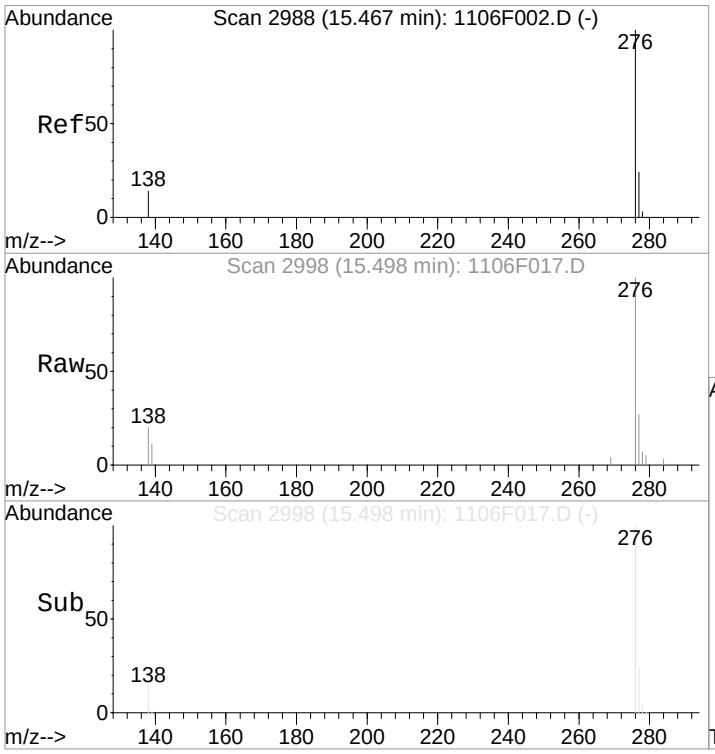
#33
Perylene
Concen: 231.07 ng/ml
RT: 13.39 min Scan# 2399
Delta R.T. 0.04 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:252 Resp: 124492

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.2
125	11.3	0.0	33.8



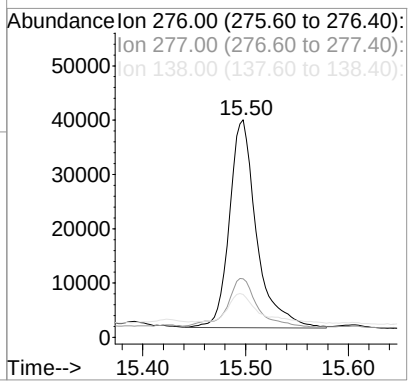
1st 11/16/18
2nd 11/27/18

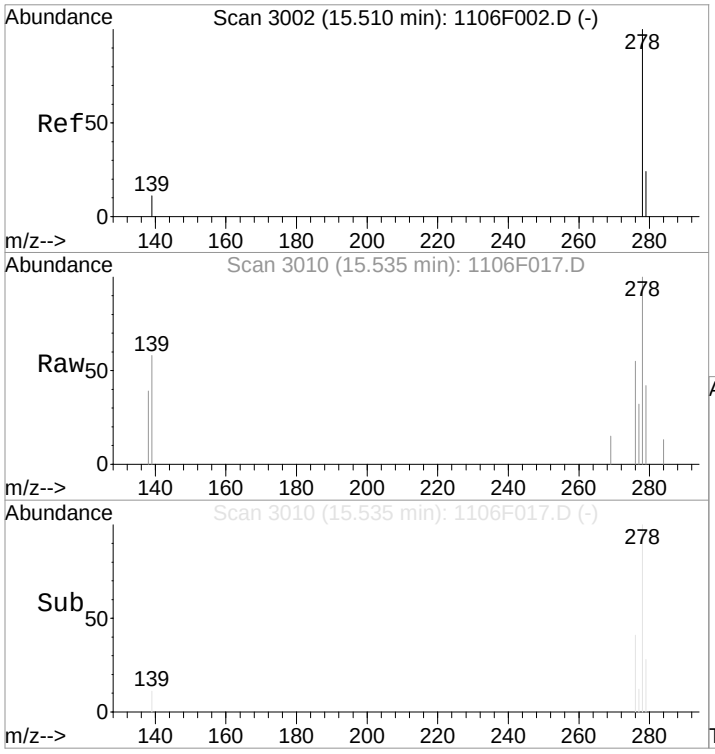


#34
Indeno(1,2,3-cd)pyrene
Concen: 140.21 ng/ml
RT: 15.50 min Scan# 2998
Delta R.T. 0.03 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:276 Resp: 70612

Ion	Ratio	Lower	Upper
276	100		
277	23.2	0.0	53.4
138	13.8	0.0	37.7

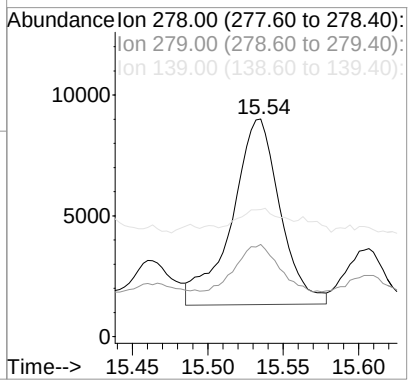




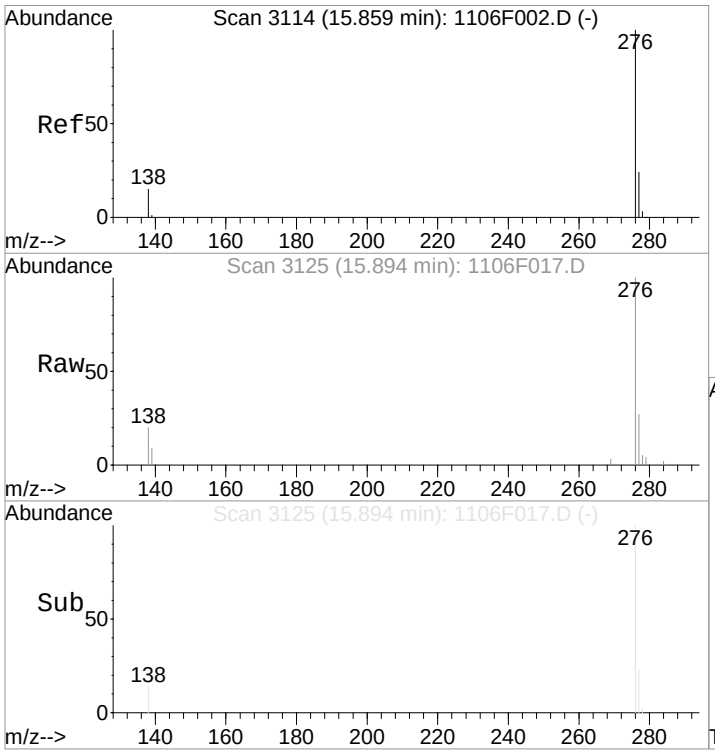
#35
Dibenz(a,h)anthracene
Concen: 33.50 ng/ml
RT: 15.54 min Scan# 3010
Delta R.T. 0.02 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:278 Resp: 17102

Ion	Ratio	Lower	Upper
278	100		
279	26.7	0.0	53.5
139	9.6	0.0	35.0



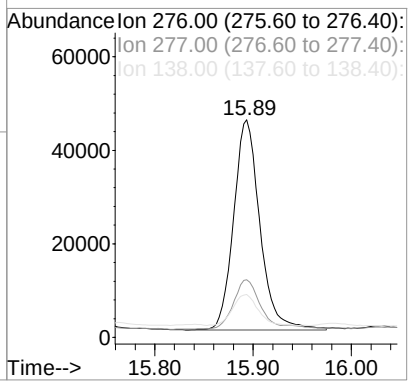
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 141.49 ng/ml
RT: 15.89 min Scan# 3125
Delta R.T. 0.03 min
Lab File: 1106F017.D
Acq: 6 Nov 2018 12:46 pm

Tgt Ion:276 Resp: 83444

Ion	Ratio	Lower	Upper
276	100		
277	23.5	0.0	53.1
138	14.3	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F017.D Vial: 17
Acq On : 6 Nov 2018 12:46 pm Operator: LWeiskopf
Sample : K1810270-015DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:51 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	65576	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31057	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	62927	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	81131	200.00	ng/ml	0.01
28) Perylene-d12	13.31	264	94792	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	16292	89.01	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.90%		
13) Fluorene-d10	6.76	176	26689	134.40	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.44%		
22) Fluoranthene-d10	8.55	212	54862	138.33	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.83%		
25) Terphenyl-d14	8.90	244	50345	143.07	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.31%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	4586	12.12	ng/ml	98
4) 2-Methylnaphthalene	5.42	142	1473	6.45	ng/ml	93
5) 1-Methylnaphthalene	5.51	142	824	3.75	ng/ml	95
6) Biphenyl	5.83	154	1156	4.06	ng/ml	98
7) 2,6-Dimethylnaphthalene	5.97	156	1648	8.41	ng/ml	91
9) Acenaphthylene	6.20	152	5565	15.02	ng/ml	78
10) Acenaphthene	6.35	154	2738	12.86	ng/ml	100
11) Dibenzofuran	6.50	168	3457	10.12	ng/ml	84
12) 2,3,5-Trimethylnaphthalene	6.67	170	968	4.92	ng/ml	88
14) Fluorene	6.78	166	4738	18.40	ng/ml	95
16) Dibenzothiophene	7.47	184	4691	11.95	ng/ml	92
17) Phenanthrene	7.58	178	61042	155.50	ng/ml	99
18) Anthracene	7.62	178	13225	35.29	ng/ml	98
19) Carbazole	7.76	167	6216	17.00	ng/ml	91
20) 1-Methylphenanthrene	8.09	192	6878	23.13	ng/ml	89
21) Fluoranthene	8.57	202	196683	405.77	ng/ml	95
24) Pyrene	8.76	202	197470	354.76	ng/ml	97
26) Benz(a)anthracene	10.10	228	82082	156.48	ng/ml	97
27) Chrysene	10.16	228	130770	260.27	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	154842	264.39	ng/ml	99
30) Benzo(k)fluoranthene	12.30	252	55713m	95.90	ng/ml	
31) Benzo(e)pyrene	12.98	252	85077	152.40	ng/ml	97
32) Benzo(a)pyrene	13.14	252	87786	170.93	ng/ml	98
33) Perylene	13.39	252	124492	231.07	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.50	276	70612	140.21	ng/ml	96
35) Dibenz(a,h)anthracene	15.54	278	17102	33.50	ng/ml	91
36) Benzo(g,h,i)perylene	15.89	276	83444	141.49	ng/ml	95

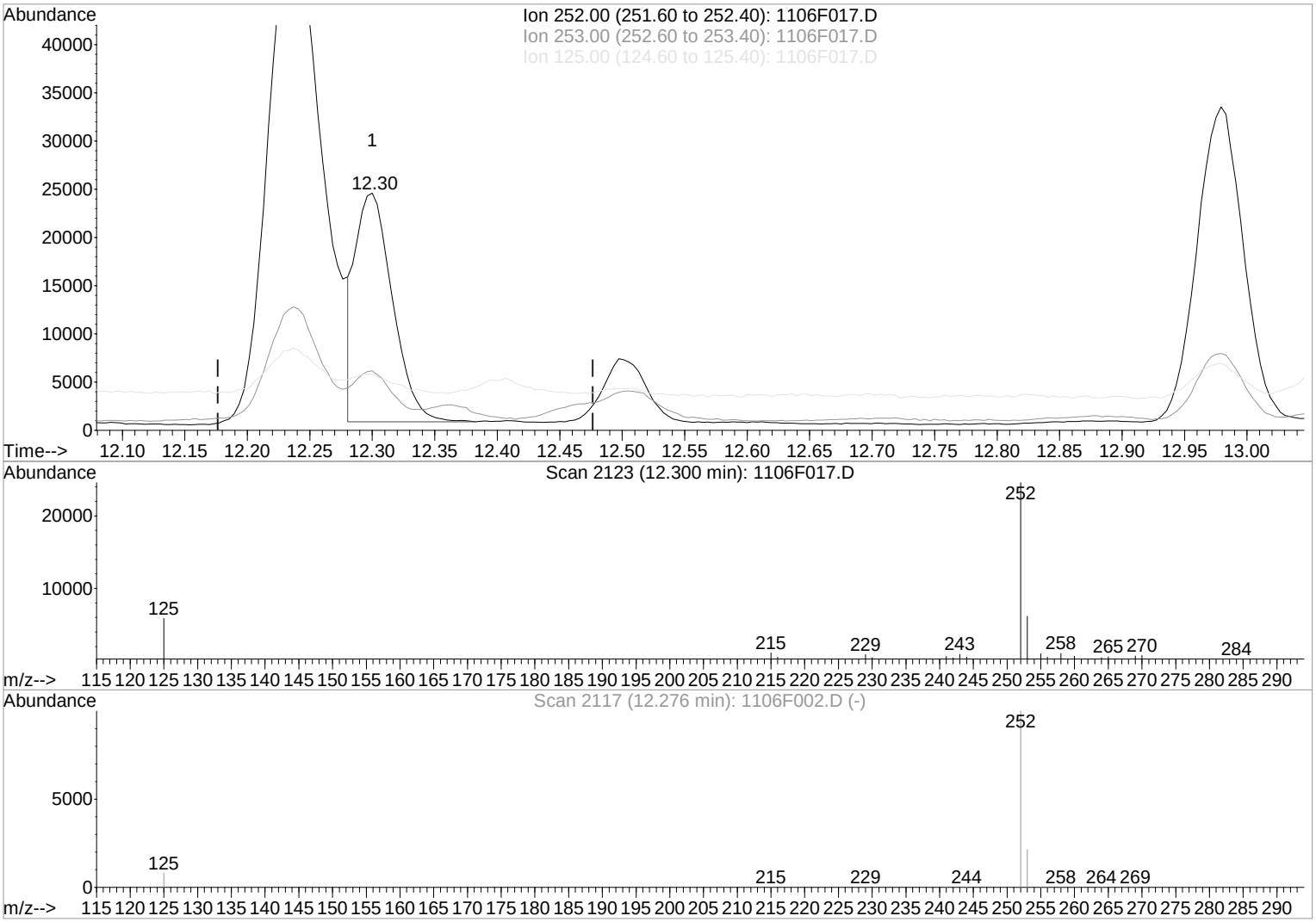
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F017.D Vial: 17
Acq On : 6 Nov 2018 12:46 pm Operator: LWeiskopf
Sample : K1810270-015DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 9:56 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F017.D

(30) Benzo(k)fluoranthene (T)

12.30min 84.75ng/ml

response 49239

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	18.62
125.00	9.70	5.90
0.00	0.00	0.00

Manual Integration:

Before

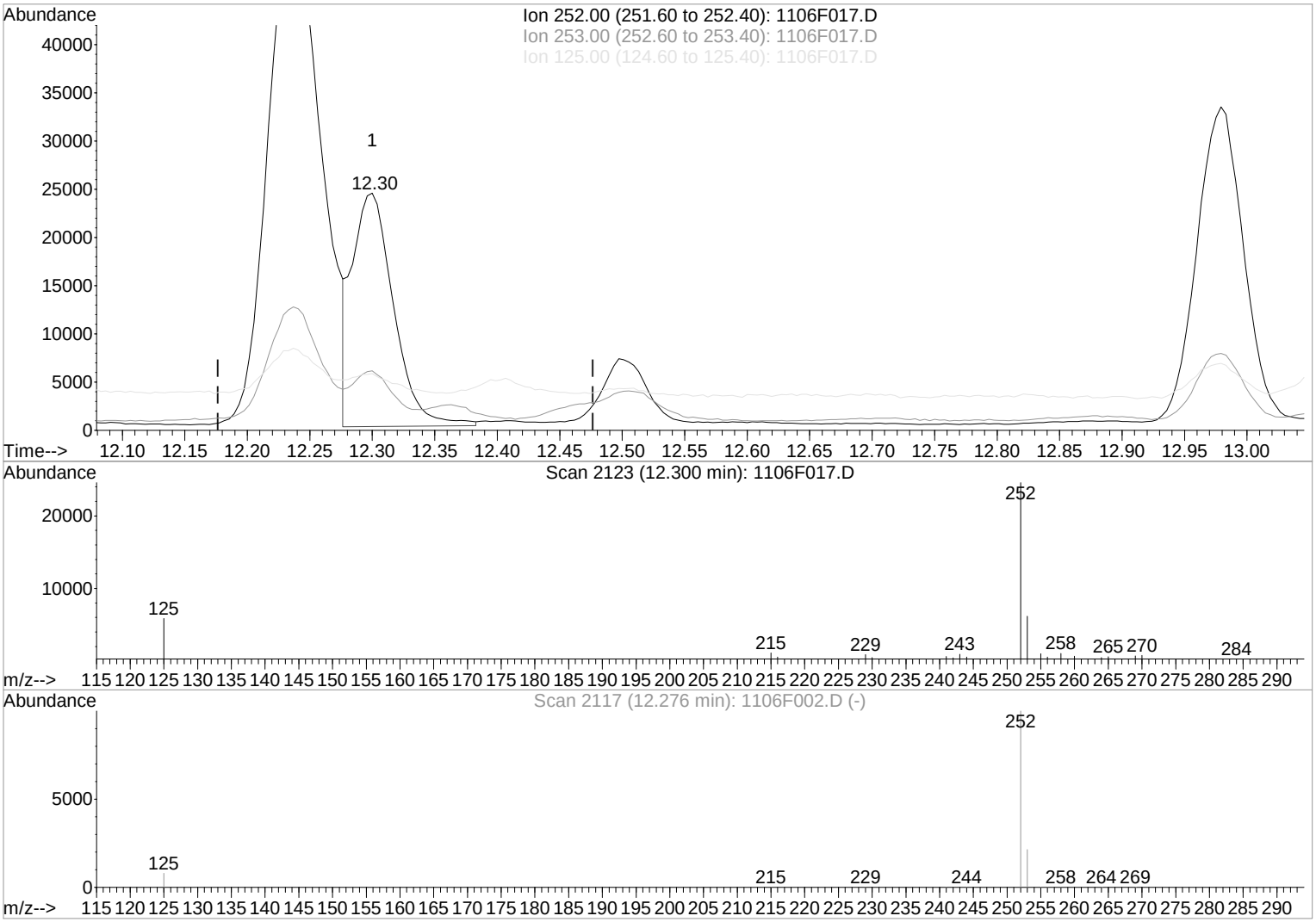
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F017.D Vial: 17
Acq On : 6 Nov 2018 12:46 pm Operator: LWeiskopf
Sample : K1810270-015DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:21 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F017.D

(30) Benzo(k)fluoranthene (T)

12.30min 95.90ng/ml m

response 55713

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	25.09
125.00	9.70	23.86
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F018.D
Lab ID: K1810270-016
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/06/2018 13:15
Date Quantitated: 11/16/2018 10:22
Batch ID: KWG1806026
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F018.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 13:15	**Quant Date:**	11/16/2018 10:22	**Vial:**	18
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-016			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700772	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	0.00	136	62762	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	30408	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	61730	200.00	OK
4	Chrysene-d12	10.12	0.01	240	83344	200.00	OK
5	Perylene-d12	13.35	0.08	264	94949	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	25041	128.79	64	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	51966	133.57	67	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	47895	132.49	66	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	9125	25.19	13	D	
1	2-Methylnaphthalene	5.42		0.00	142	2535	11.60	6.0	D	
2	Acenaphthylene	6.20		0.00	152	6883**m**	18.97	9.8	D	
2	Acenaphthene	6.35		0.00	154	3493	16.76	8.7	D	
2	Dibenzofuran	6.50		0.00	168	4189	12.53	6.5	D	
2	Fluorene	6.78		0.00	166	5280	20.95	11	D	
3	Phenanthrene	7.58		0.00	178	63529	164.97	85	D	
3	Anthracene	7.62		0.00	178	15299	41.62	22	D	
3	Fluoranthene	8.57	0.01	0.00	202	196397	413.03	210	D	
4	Pyrene	8.76	0.01	0.00	202	218323	381.80	200	D	
4	Benz(a)anthracene	10.11	0.02	0.00	228	84506	156.83	81	D	
4	Chrysene	10.16	0.01	0.00	228	139106**m**	269.51	140	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110618\1106F018.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 13:15	**Quant Date:**	11/16/2018 10:22	**Vial:**	18
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-016			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.26	0.05	0.00	252	188027	320.53	170	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	57618	99.01	51	D	
5	Benzo(a)pyrene	13.17	0.07	0.00	252	108541	210.99	110	D	
5	Indeno(1,2,3-cd)pyrene	15.52	0.05	0.00	276	93318	184.99	96	D	
5	Dibenz(a,h)anthracene	15.55	0.04	0.00	278	21234**m**	41.52	21	D	
5	Benzo(g,h,i)perylene	15.92	0.06	0.00	276	114078	193.11	100	D	

Prep Amount:	40.416 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	47.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

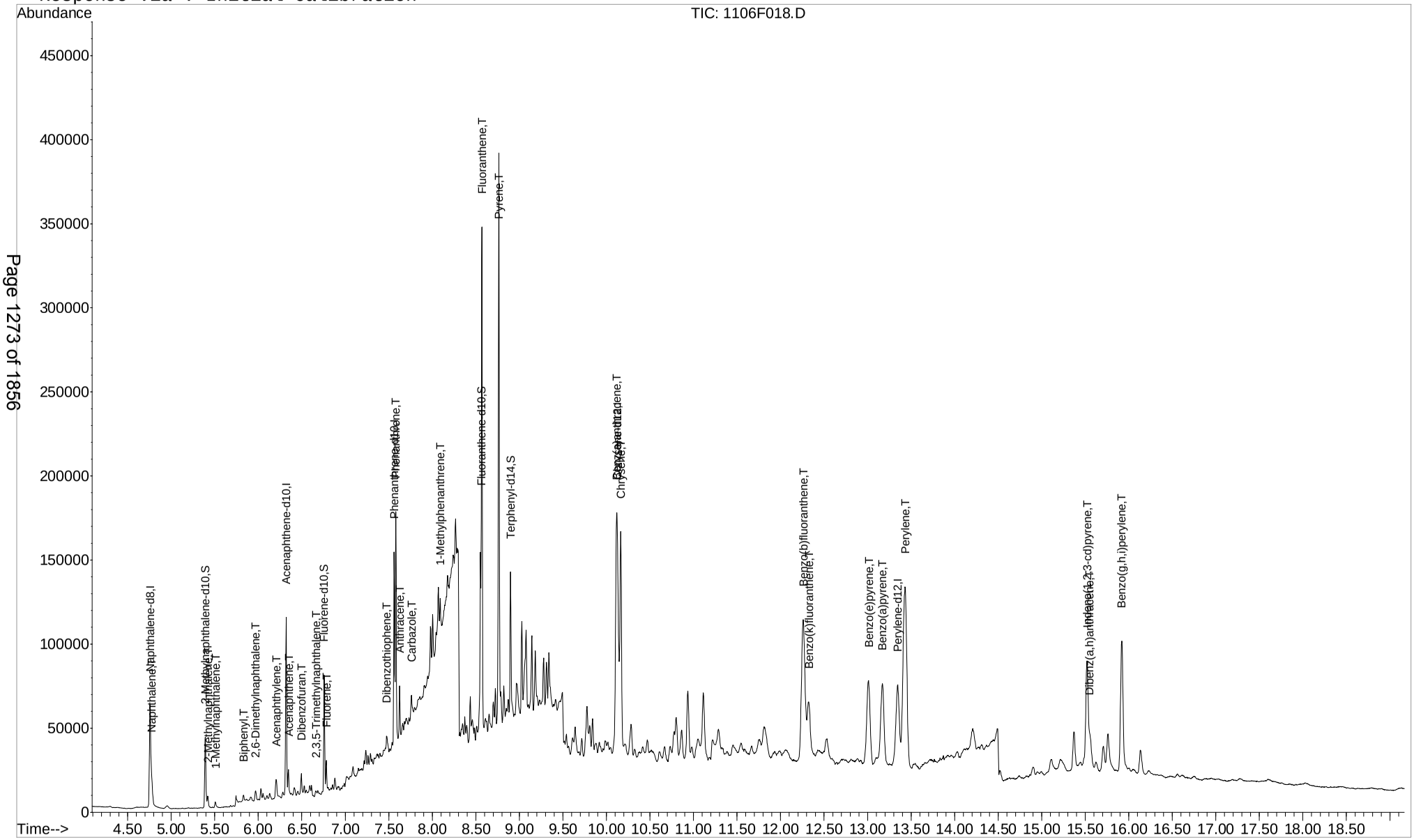
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

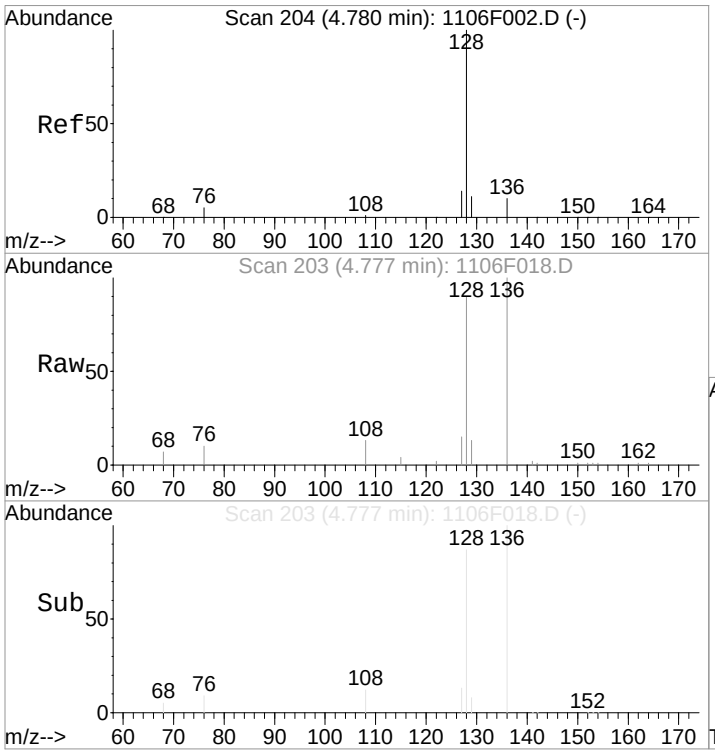
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:22 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



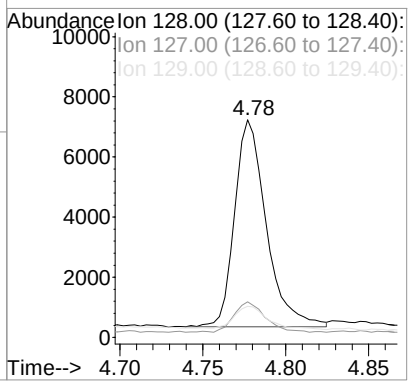
1st 11/16/18
2nd 11/27/18

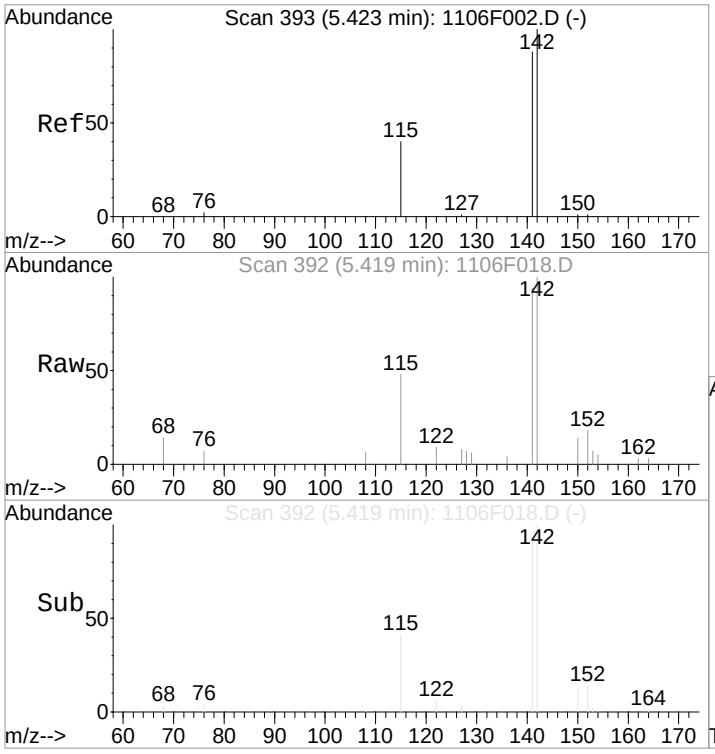


#2
Naphthalene
Concen: 25.19 ng/ml
RT: 4.78 min Scan# 203
Delta R.T. -0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:128 Resp: 9125

Ion	Ratio	Lower	Upper
128	100		
127	14.6	0.0	43.7
129	11.3	0.0	30.8

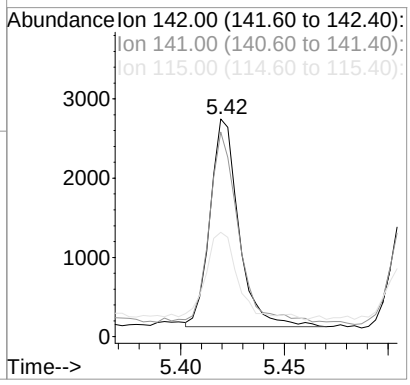




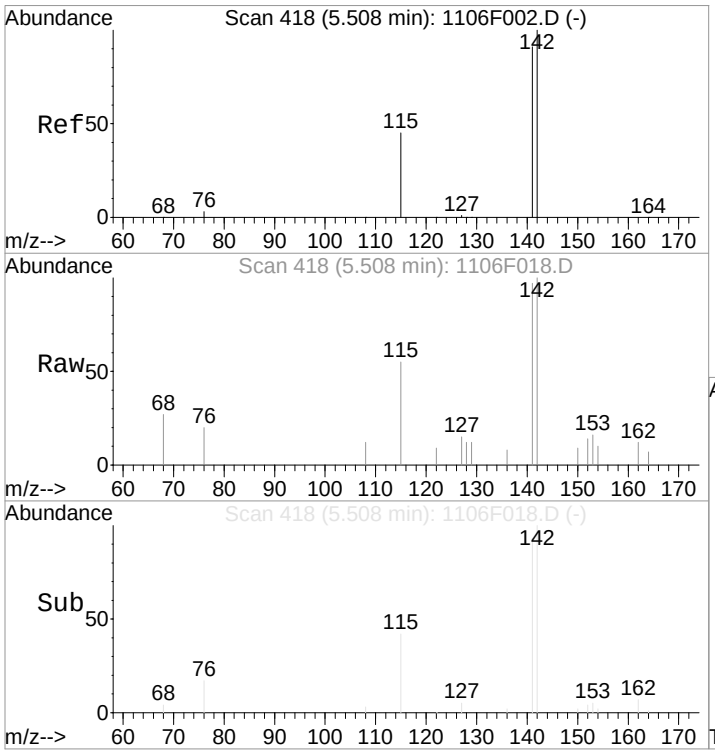
#4
2-Methylnaphthalene
Concen: 11.60 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:142 Resp: 2535

Ion	Ratio	Lower	Upper
142	100		
141	91.5	56.8	116.8
115	41.9	13.3	53.3



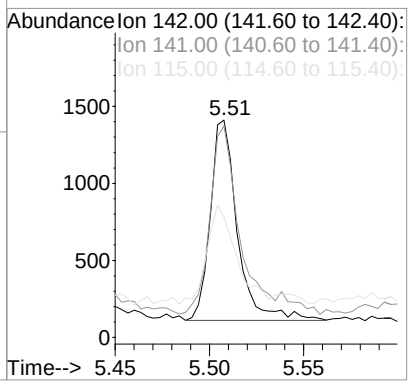
1st 11/16/18
2nd 11/27/18

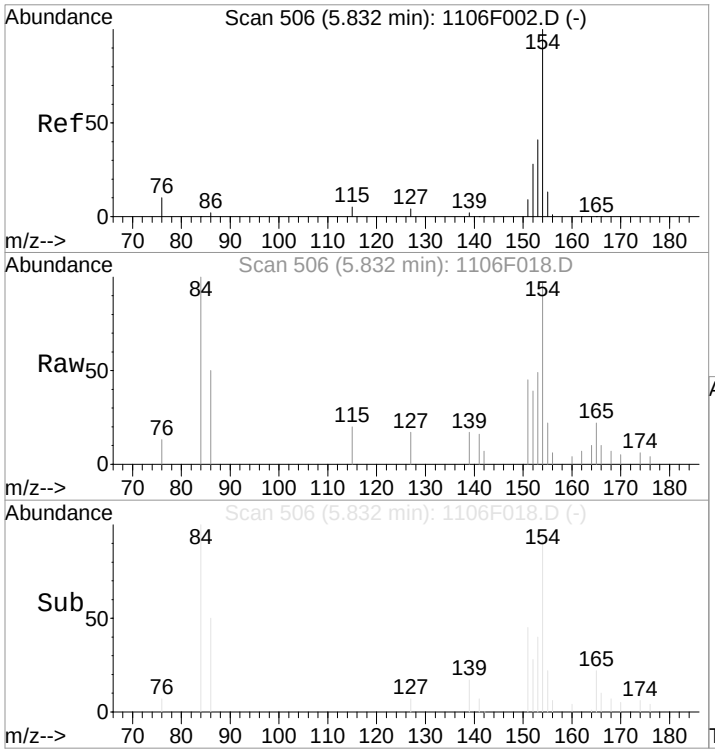


#5
1-Methylnaphthalene
Concen: 6.17 ng/ml
RT: 5.51 min Scan# 418
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:142 Resp: 1297

Ion	Ratio	Lower	Upper
142	100		
141	92.9	59.7	119.7
115	40.7	13.7	53.7

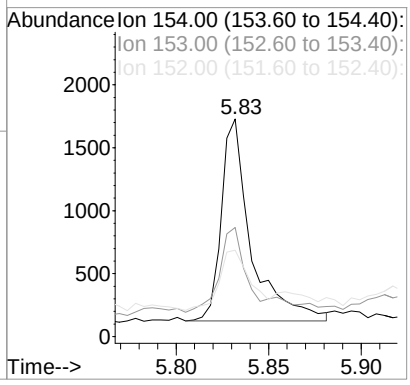




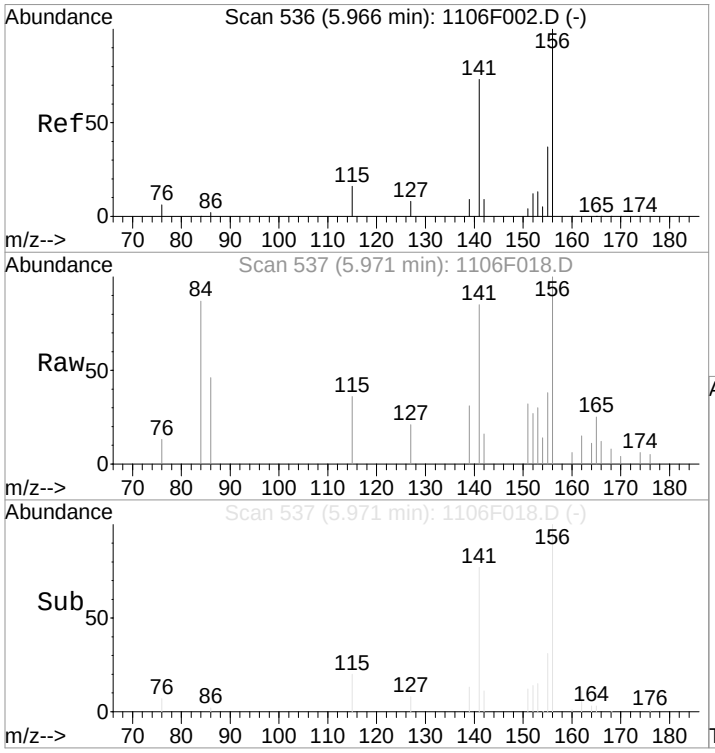
#6
Biphenyl
Concen: 6.60 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:154 Resp: 1800

Ion	Ratio	Lower	Upper
154	100		
153	42.0	11.4	71.4
152	29.8	7.1	47.1



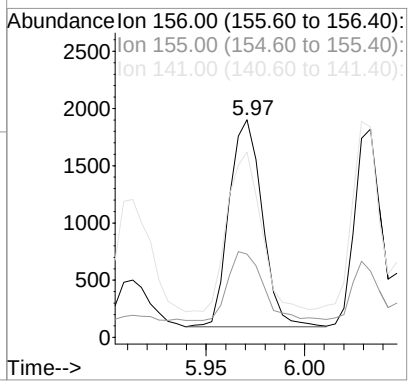
1st 11/16/18
2nd 11/27/18

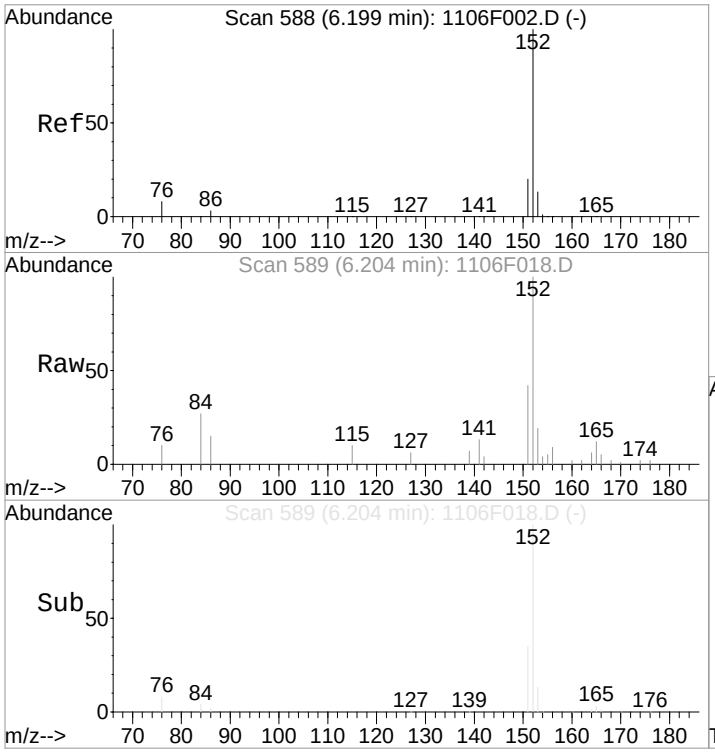


#7
2,6-Dimethylnaphthalene
Concen: 11.30 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:156 Resp: 2120

Ion	Ratio	Lower	Upper
156	100		
155	32.0	7.0	67.0
141	77.1	47.9	87.9

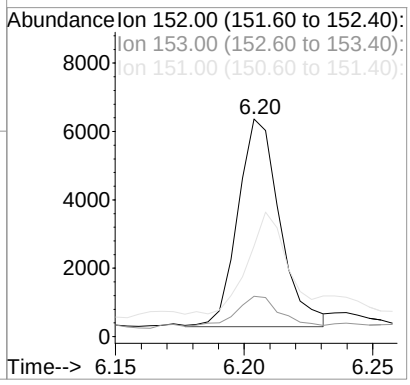




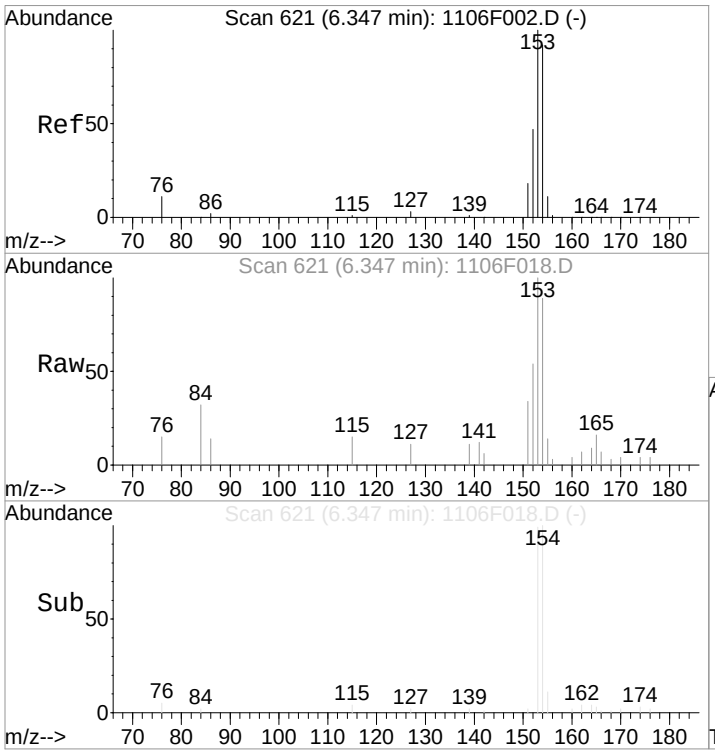
#9
Acenaphthylene
Concen: 18.97 ng/ml m
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:152 Resp: 6883

Ion	Ratio	Lower	Upper
152	100		
153	18.5	0.0	42.9
151	41.6	0.2	40.2#



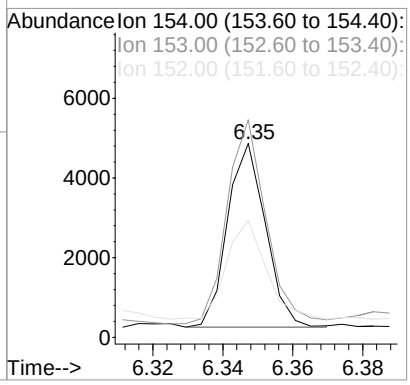
1st 11/16/18
2nd 11/27/18

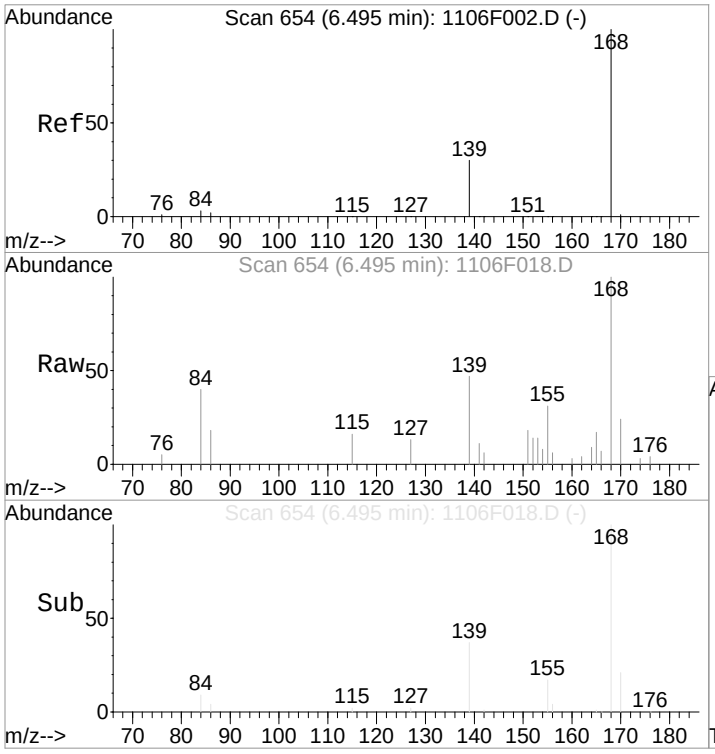


#10
Acenaphthene
Concen: 16.76 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:154 Resp: 3493

Ion	Ratio	Lower	Upper
154	100		
153	110.8	77.1	137.1
152	53.8	19.7	79.7

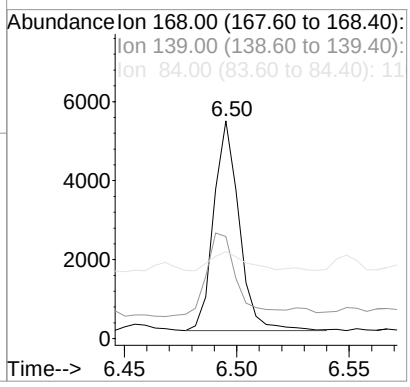




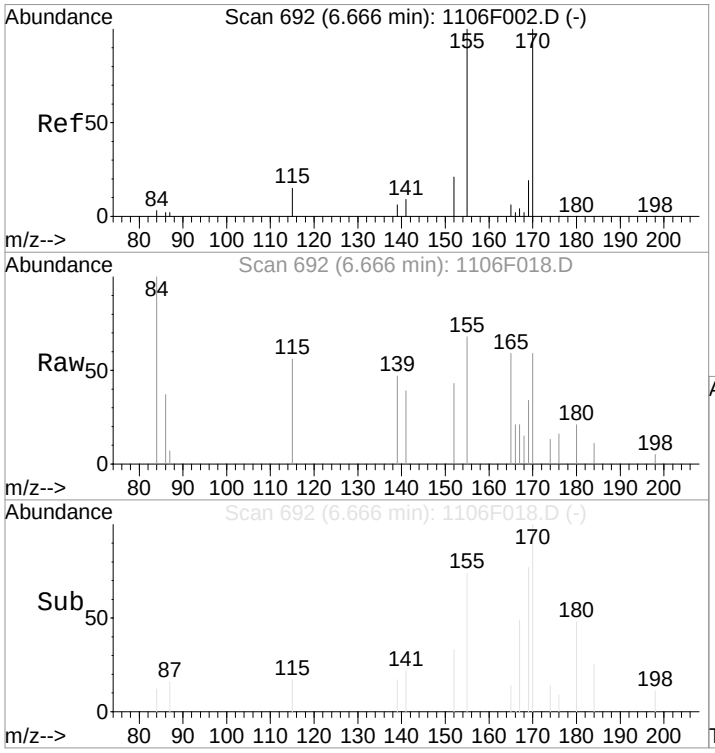
#11
Dibenzofuran
Concen: 12.53 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:168 Resp: 4189

Ion	Ratio	Lower	Upper
168	100		
139	37.0	0.0	55.8
84	9.0	0.0	23.5



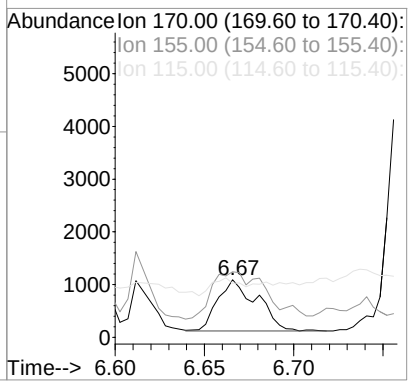
1st 11/16/18
2nd 11/27/18

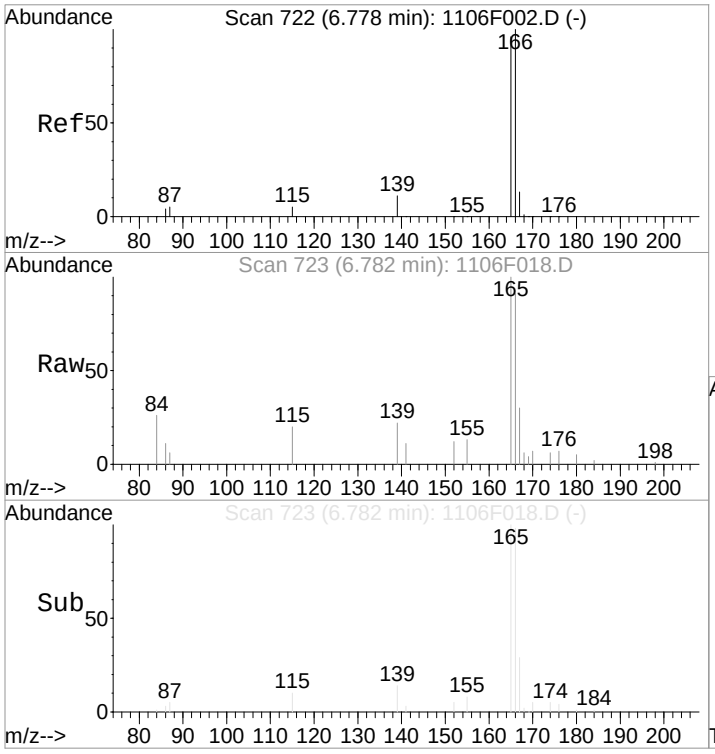


#12
2,3,5-Trimethylnaphthalene
Concen: 7.80 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:170 Resp: 1504

Ion	Ratio	Lower	Upper
170	100		
155	92.4	59.2	119.2
115	17.3	0.0	30.1

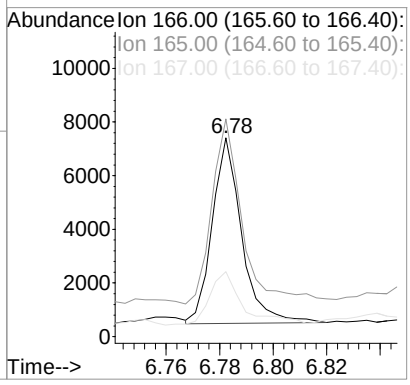


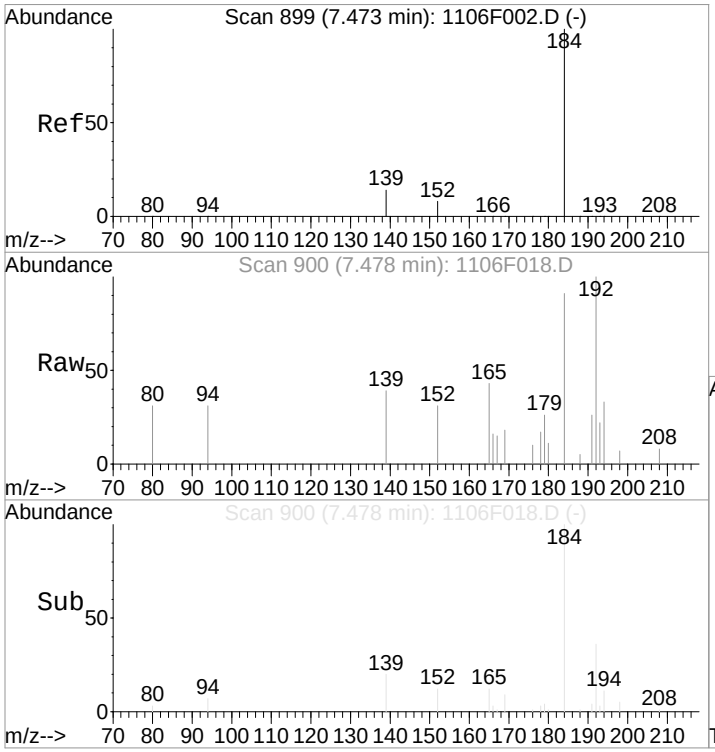


#14
Fluorene
Concen: 20.95 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:166 Resp: 5280

Ion	Ratio	Lower	Upper
166	100		
165	100.1	63.4	123.4
167	28.4	0.0	33.1

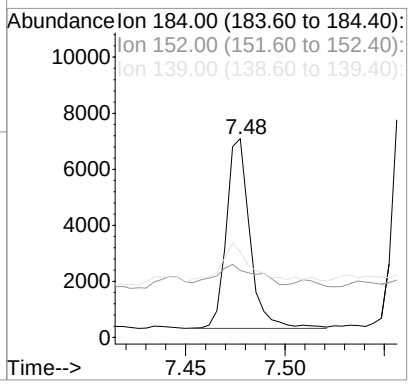


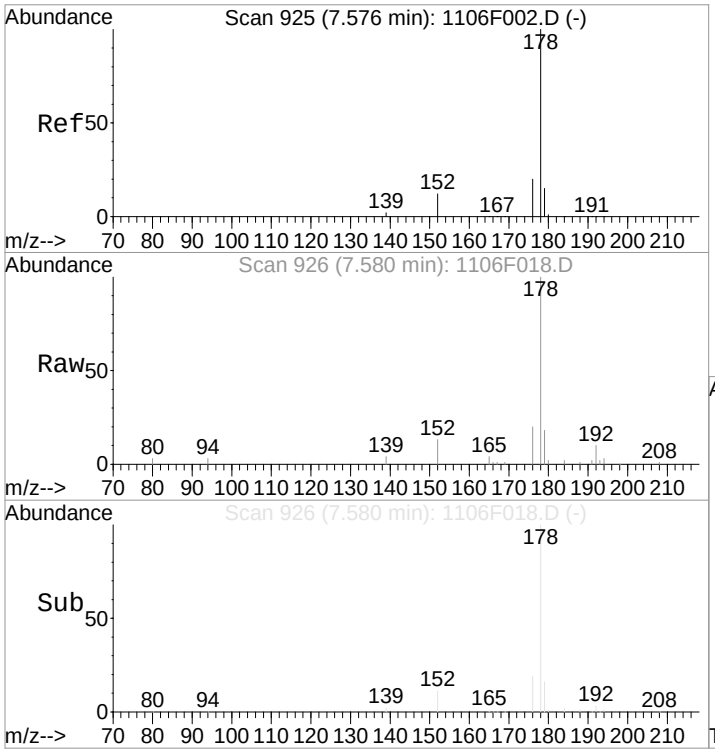


#16
Dibenzothiophene
Concen: 14.58 ng/ml
RT: 7.48 min Scan# 900
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:184 Resp: 5614

Ion	Ratio	Lower	Upper
184	100		
152	8.4	0.0	37.8
139	16.1	0.0	32.6

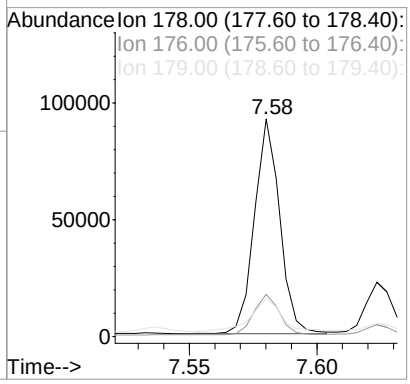




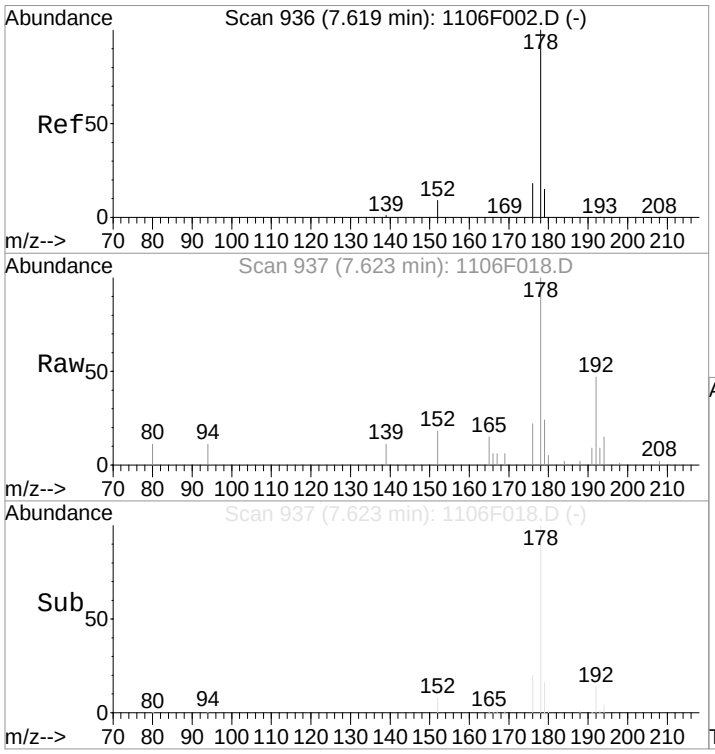
#17
Phenanthrene
Concen: 164.97 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:178 Resp: 63529

Ion	Ratio	Lower	Upper
178	100		
176	18.9	0.0	48.7
179	15.3	0.0	35.1



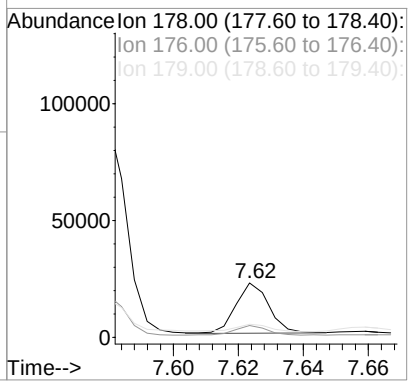
1st 11/16/18
2nd 11/27/18

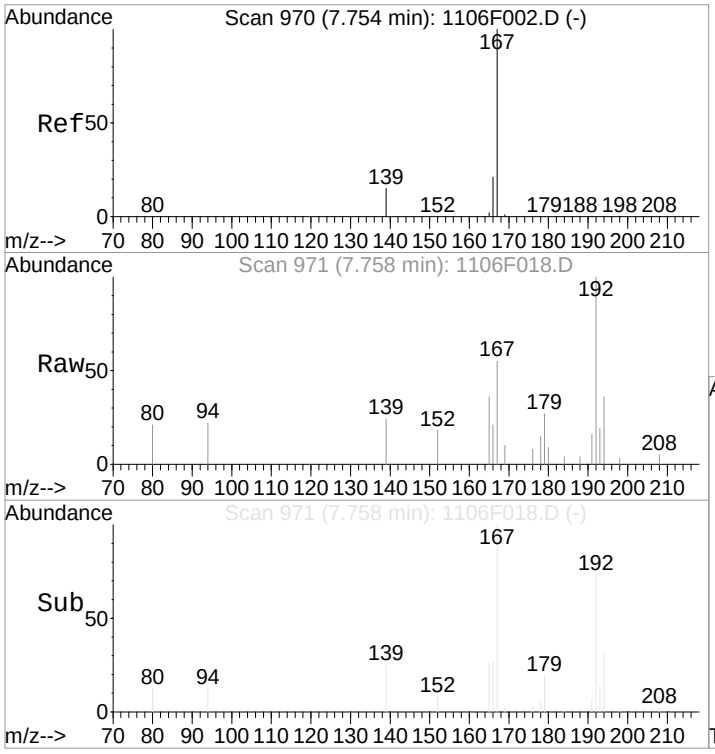


#18
Anthracene
Concen: 41.62 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:178 Resp: 15299

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	48.0
179	13.4	0.0	35.1

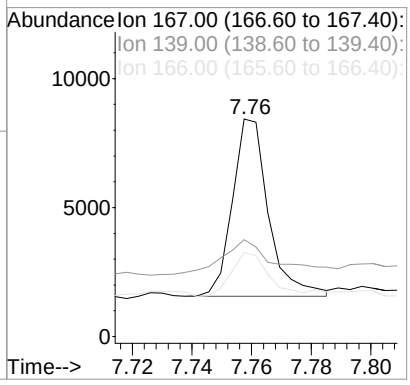




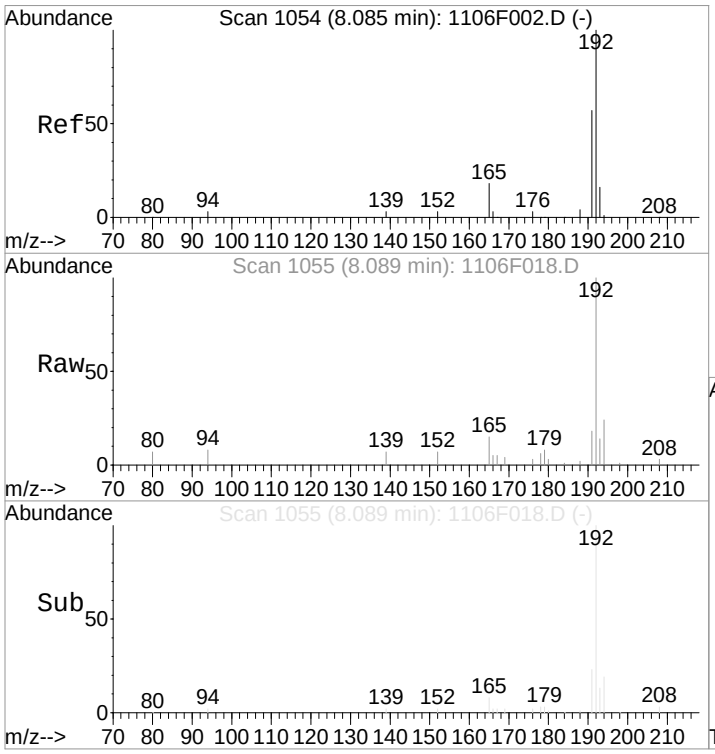
#19
Carbazole
Concen: 16.12 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:167 Resp: 5784

Ion	Ratio	Lower	Upper
167	100		
139	18.4	0.0	41.5
166	22.4	0.7	40.7



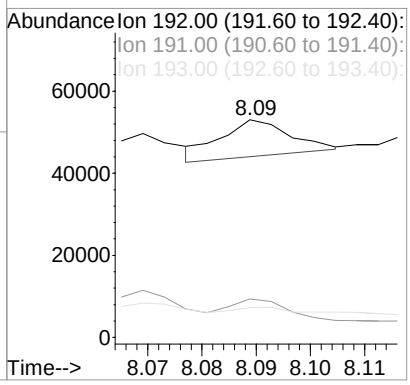
1st 11/16/18
2nd 11/27/18

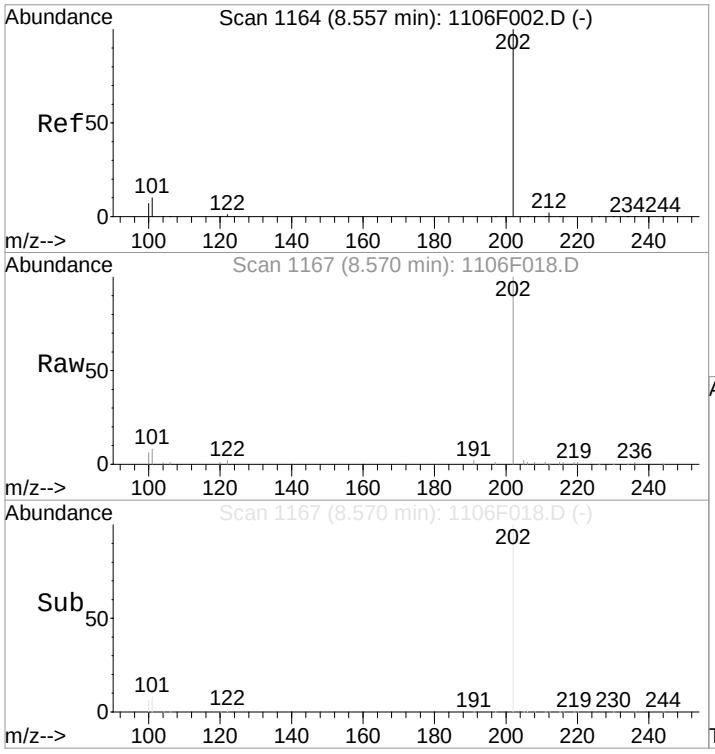


#20
1-Methylphenanthrene
Concen: 27.92 ng/ml m
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:192 Resp: 8144

Ion	Ratio	Lower	Upper
192	100		
191	17.7	27.7	87.7#
193	13.7	0.0	45.4

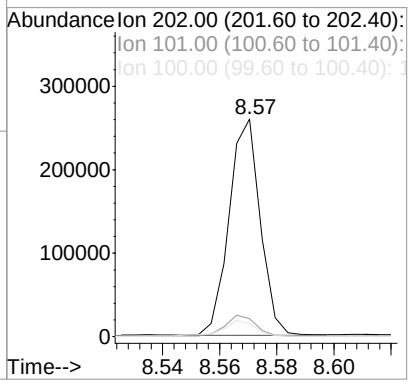




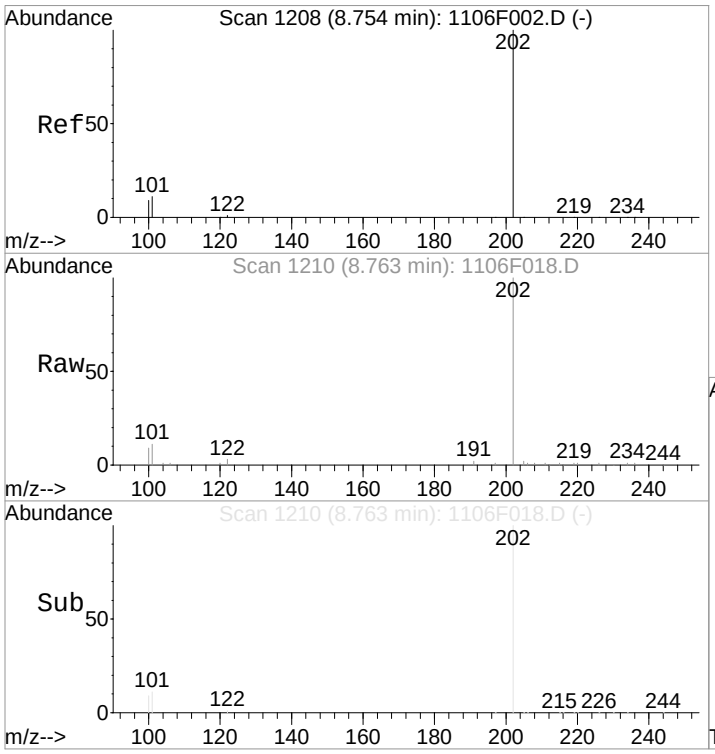
#21
Fluoranthene
Concen: 413.03 ng/ml
RT: 8.57 min Scan# 1167
Delta R.T. 0.01 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:202 Resp: 196397

Ion	Ratio	Lower	Upper
202	100		
101	8.1	0.0	41.3
100	5.9	0.0	28.6



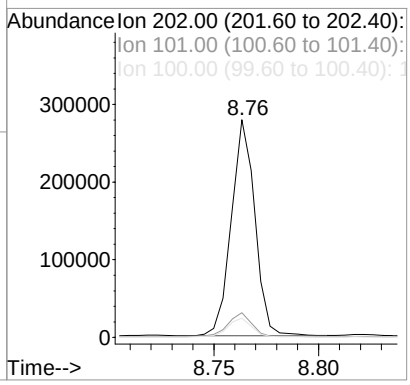
1st 11/16/18
2nd 11/27/18

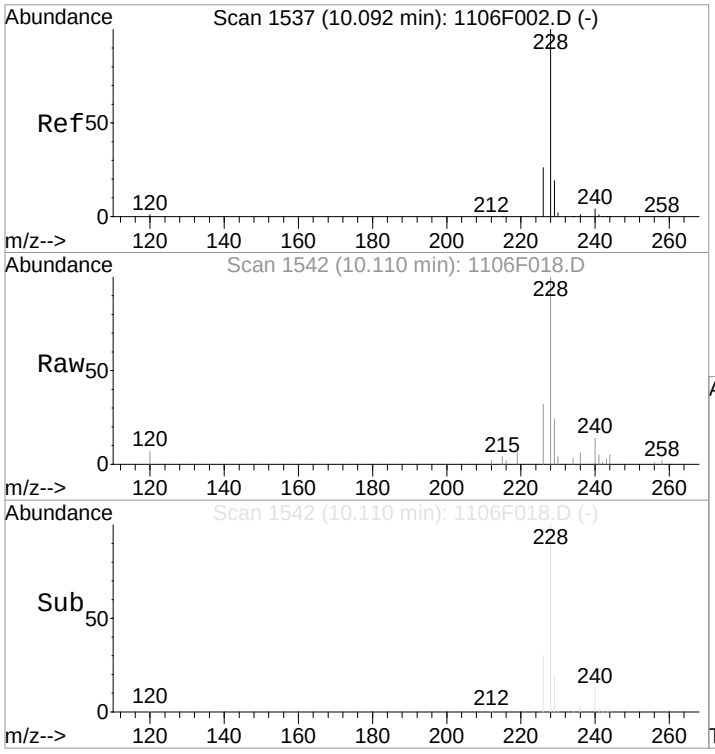


#24
Pyrene
Concen: 381.80 ng/ml
RT: 8.76 min Scan# 1210
Delta R.T. 0.01 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:202 Resp: 218323

Ion	Ratio	Lower	Upper
202	100		
101	11.2	0.0	40.8
100	8.8	0.0	28.5

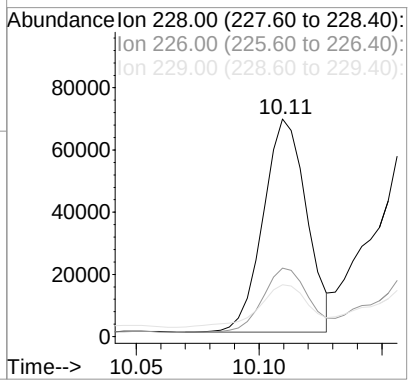


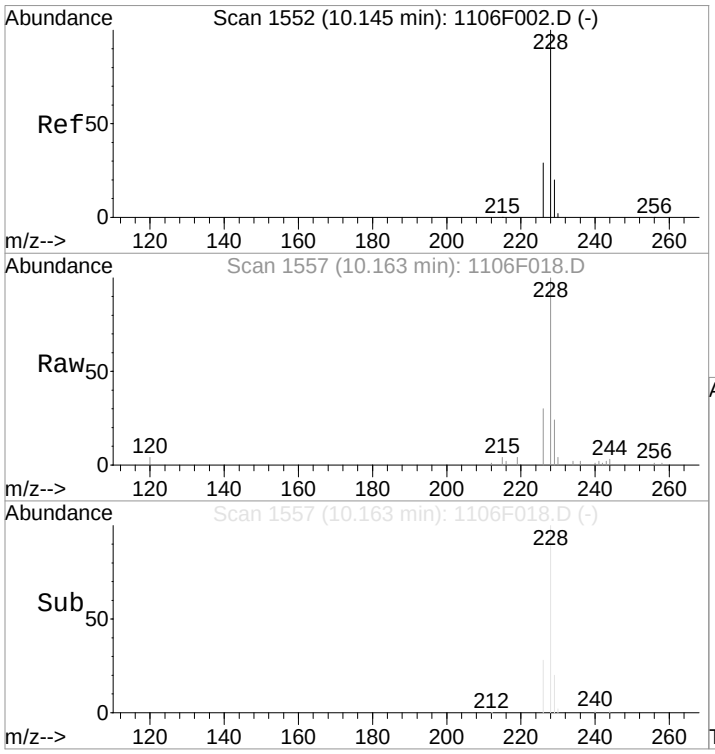


#26
Benz(a)anthracene
Concen: 156.83 ng/ml
RT: 10.11 min Scan# 1542
Delta R.T. 0.02 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:228 Resp: 84506

Ion	Ratio	Lower	Upper
228	100		
226	30.1	0.0	56.3
229	19.8	0.0	39.1

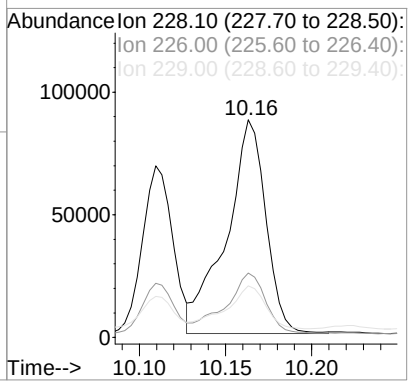


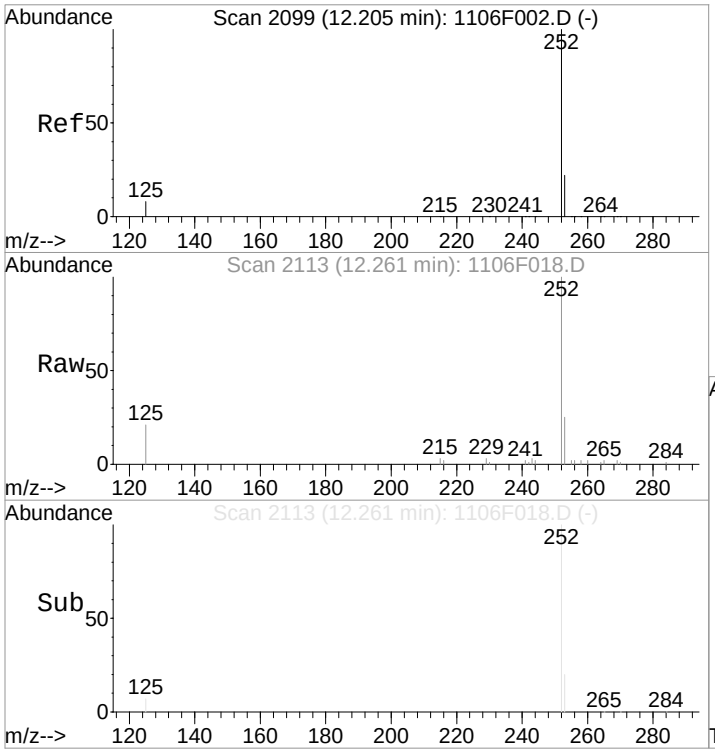


#27
Chrysene
Concen: 269.51 ng/ml m
RT: 10.16 min Scan# 1557
Delta R.T. 0.02 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:228 Resp: 139106

Ion	Ratio	Lower	Upper
228	100		
226	29.6	0.0	58.7
229	23.6	0.0	39.2

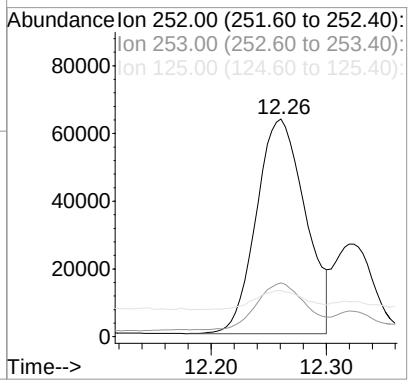


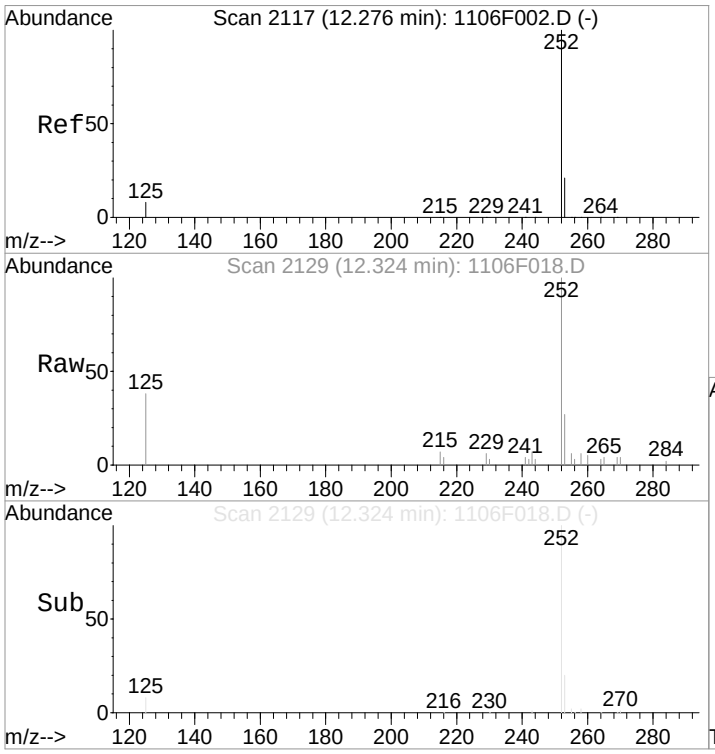


#29
Benzo(b)fluoranthene
Concen: 320.53 ng/ml
RT: 12.26 min Scan# 2113
Delta R.T. 0.06 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:252 Resp: 188027

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.2
125	8.6	0.0	29.5

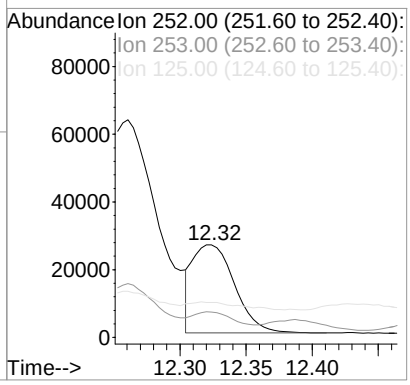


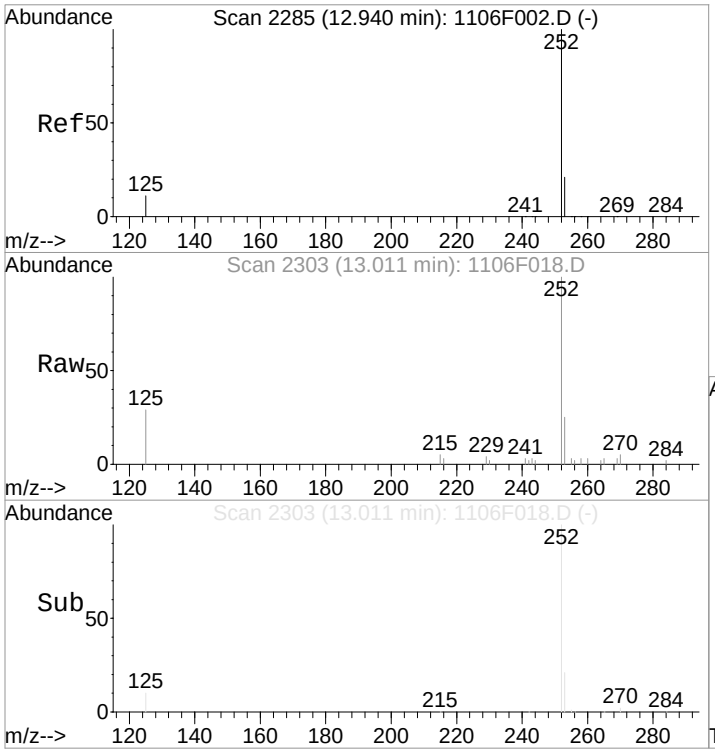


#30
Benzo(k)fluoranthene
Concen: 99.01 ng/ml
RT: 12.32 min Scan# 2129
Delta R.T. 0.05 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:252 Resp: 57618

Ion	Ratio	Lower	Upper
252	100		
253	14.7	0.0	51.2
125	3.8	0.0	29.7

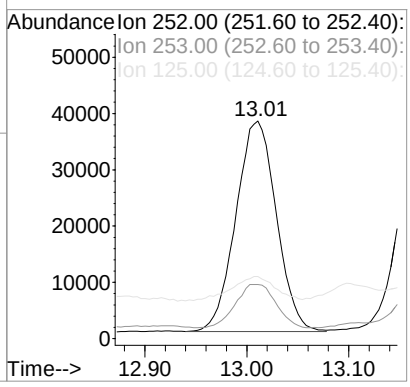




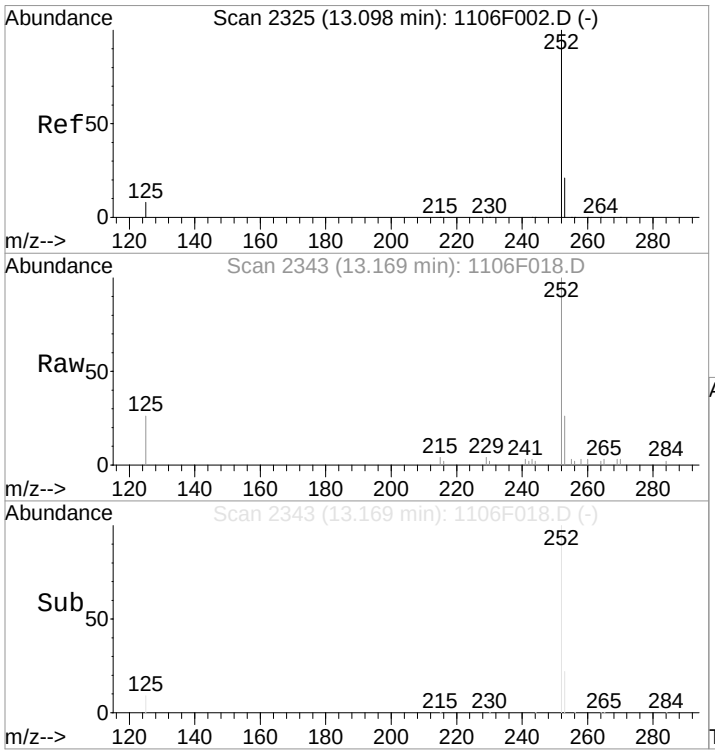
#31
Benzo(e)pyrene
Concen: 184.87 ng/ml
RT: 13.01 min Scan# 2303
Delta R.T. 0.07 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:252 Resp: 103371

Ion	Ratio	Lower	Upper
252	100		
253	20.3	0.0	51.3
125	11.6	0.0	33.5



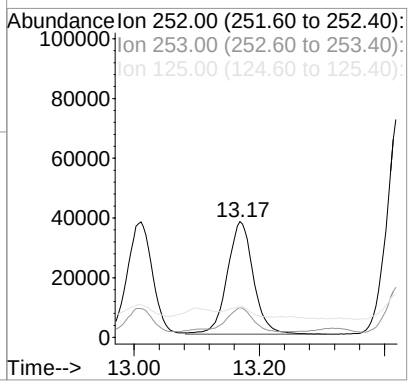
1st 11/16/18
2nd 11/27/18

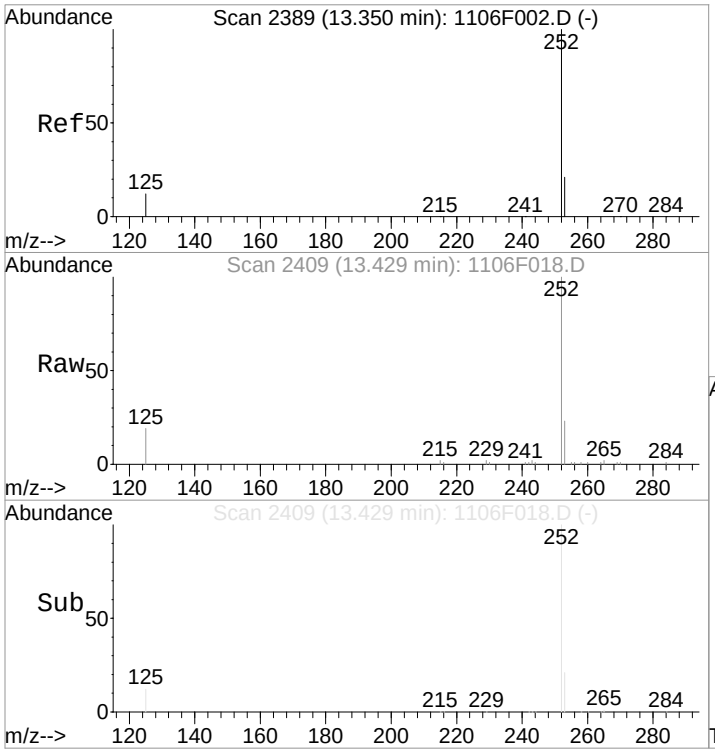


#32
Benzo(a)pyrene
Concen: 210.99 ng/ml
RT: 13.17 min Scan# 2343
Delta R.T. 0.07 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:252 Resp: 108541

Ion	Ratio	Lower	Upper
252	100		
253	20.6	0.0	50.9
125	10.0	0.0	30.3

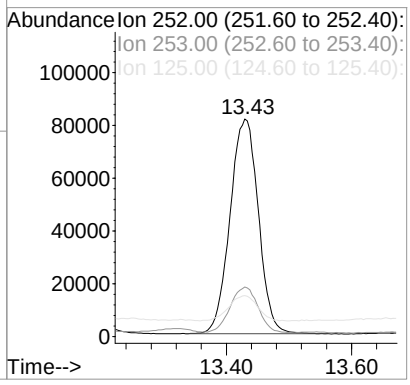




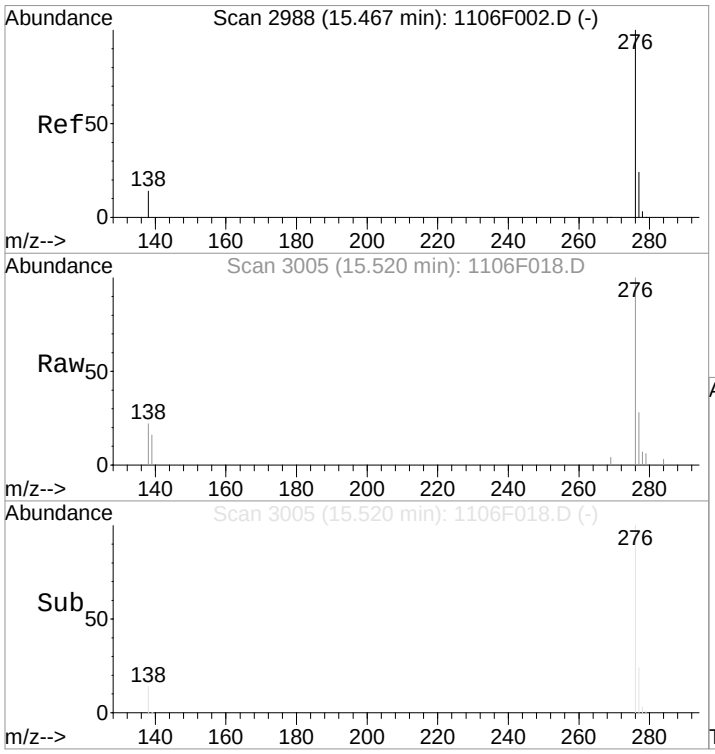
#33
Perylene
Concen: 475.40 ng/ml
RT: 13.43 min Scan# 2409
Delta R.T. 0.08 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:252 Resp: 256552

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	11.5	0.0	33.8



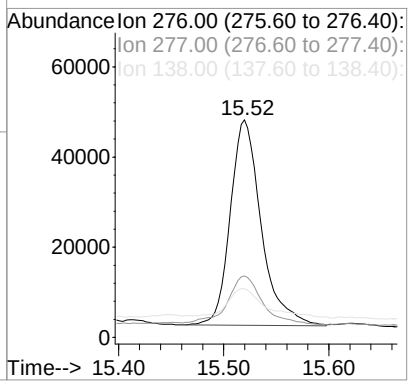
1st 11/16/18
2nd 11/27/18

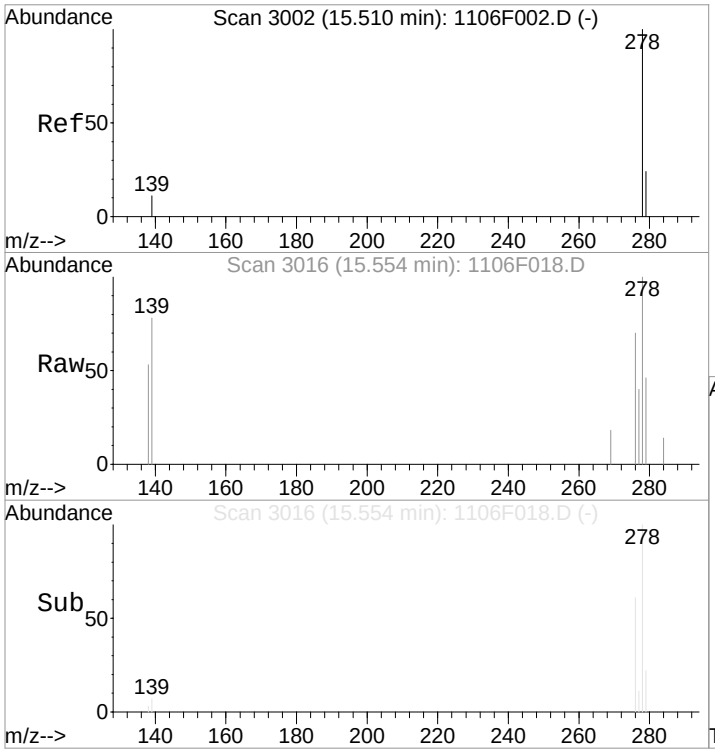


#34
Indeno(1,2,3-cd)pyrene
Concen: 184.99 ng/ml
RT: 15.52 min Scan# 3005
Delta R.T. 0.05 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:276 Resp: 93318

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.4
138	13.8	0.0	37.7

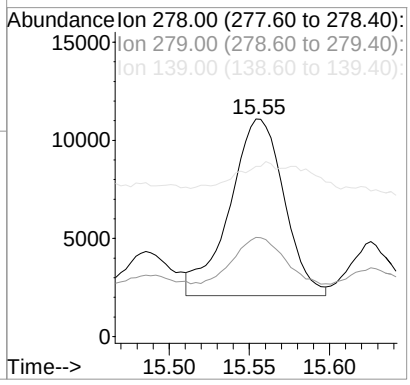




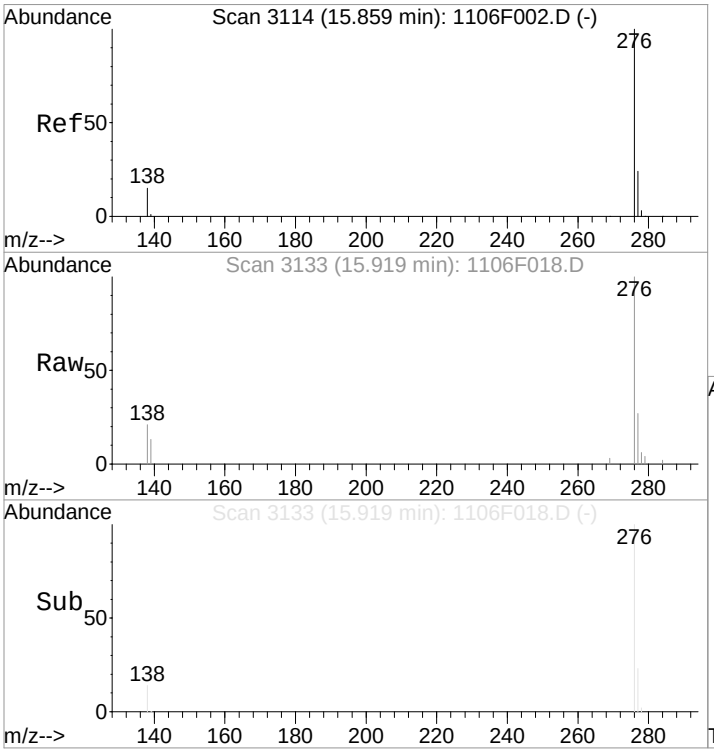
#35
Dibenz(a,h)anthracene
Concen: 41.52 ng/ml m
RT: 15.55 min Scan# 3016
Delta R.T. 0.04 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:278 Resp: 21234

Ion	Ratio	Lower	Upper
278	100		
279	45.6	0.0	53.5
139	78.3	0.0	35.0#



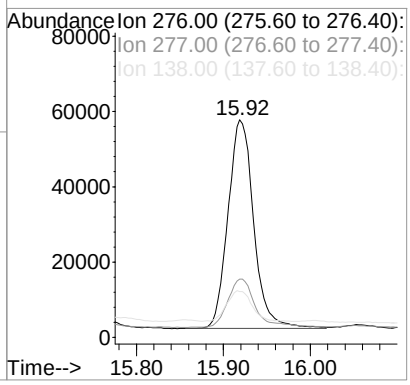
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 193.11 ng/ml
RT: 15.92 min Scan# 3133
Delta R.T. 0.06 min
Lab File: 1106F018.D
Acq: 6 Nov 2018 1:15 pm

Tgt Ion:276 Resp: 114078

Ion	Ratio	Lower	Upper
276	100		
277	23.1	0.0	53.1
138	14.3	0.0	39.2



1st 11/16/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:52 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	62762	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	30408	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	61730	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	83344	200.00	ng/ml	0.02
28) Perylene-d12	13.35	264	94949	200.00	ng/ml	0.08
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	15871	90.60	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.06%		
13) Fluorene-d10	6.76	176	25041	128.79	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	12.88%		
22) Fluoranthene-d10	8.55	212	51966	133.57	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.36%		
25) Terphenyl-d14	8.90	244	47895	132.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.25%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	9125	25.19	ng/ml	98
4) 2-Methylnaphthalene	5.42	142	2535	11.60	ng/ml	92
5) 1-Methylnaphthalene	5.51	142	1297	6.17	ng/ml	94
6) Biphenyl	5.83	154	1800	6.60	ng/ml	97
7) 2,6-Dimethylnaphthalene	5.97	156	2120	11.30	ng/ml	90
9) Acenaphthylene	6.20	152	6883m	18.97	ng/ml	
10) Acenaphthene	6.35	154	3493	16.76	ng/ml	96
11) Dibenzofuran	6.50	168	4189	12.53	ng/ml	79
12) 2,3,5-Trimethylnaphthalene	6.67	170	1504	7.80	ng/ml	95
14) Fluorene	6.78	166	5280	20.95	ng/ml	89
16) Dibenzothiophene	7.48	184	5614	14.58	ng/ml	94
17) Phenanthrene	7.58	178	63529	164.97	ng/ml	99
18) Anthracene	7.62	178	15299	41.62	ng/ml	96
19) Carbazole	7.76	167	5784	16.12	ng/ml	91
20) 1-Methylphenanthrene	8.09	192	8144m	27.92	ng/ml	
21) Fluoranthene	8.57	202	196397	413.03	ng/ml	92
24) Pyrene	8.76	202	218323	381.80	ng/ml	99
26) Benz(a)anthracene	10.11	228	84506	156.83	ng/ml	95
27) Chrysene	10.16	228	139106m	269.51	ng/ml	
29) Benzo(b)fluoranthene	12.26	252	188027	320.53	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	57618	99.01	ng/ml	86
31) Benzo(e)pyrene	13.01	252	103371	184.87	ng/ml	97
32) Benzo(a)pyrene	13.17	252	108541	210.99	ng/ml	99
33) Perylene	13.43	252	256552	475.40	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.52	276	93318	184.99	ng/ml	96
35) Dibenz(a,h)anthracene	15.55	278	21234m	41.52	ng/ml	
36) Benzo(g,h,i)perylene	15.92	276	114078	193.11	ng/ml	95

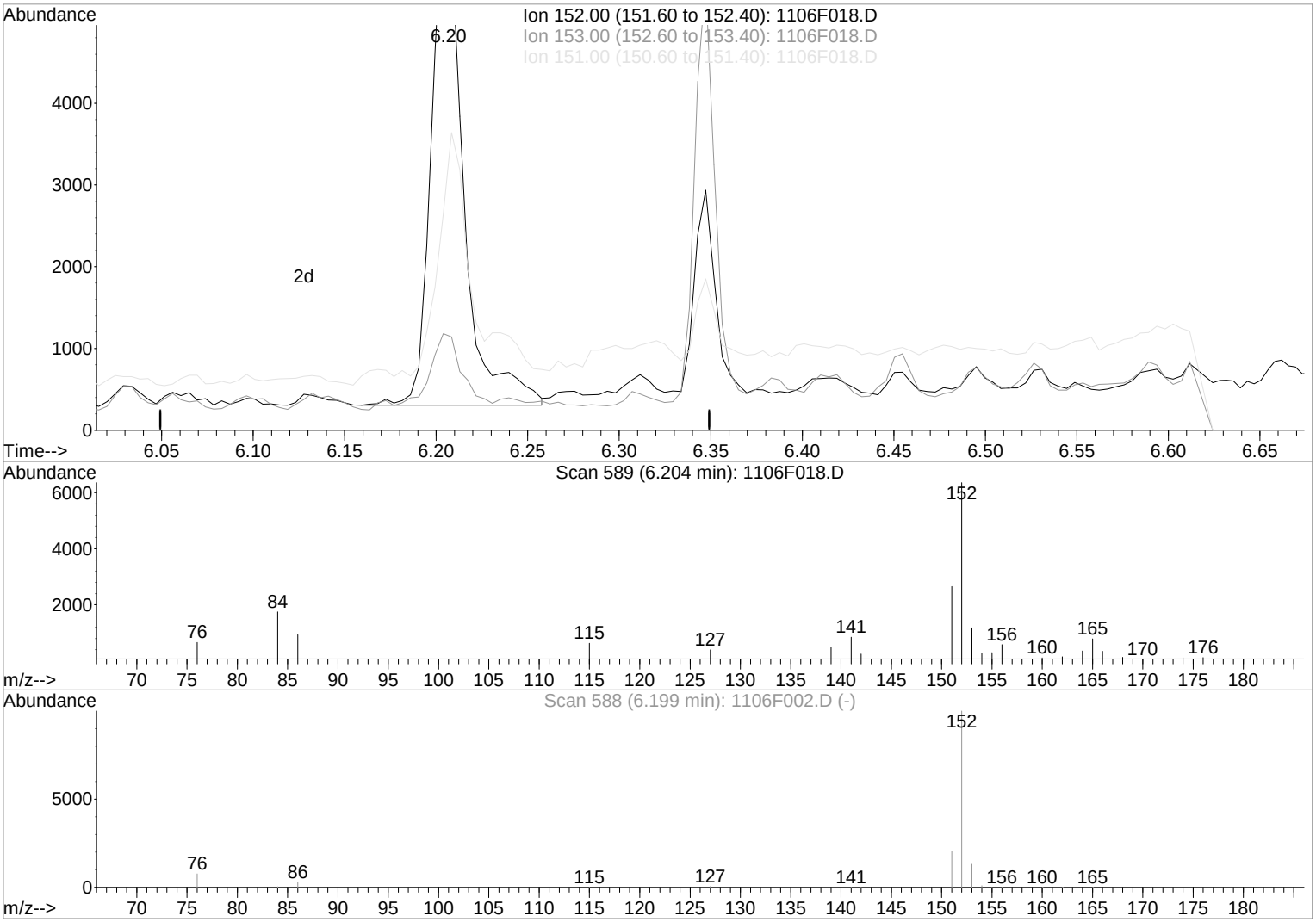
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 9:56 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F018.D

(9) Acenaphthylene (T)

6.20min 20.18ng/ml

response 7323

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	15.29
151.00	20.20	32.81
0.00	0.00	0.00

Manual Integration:

Before

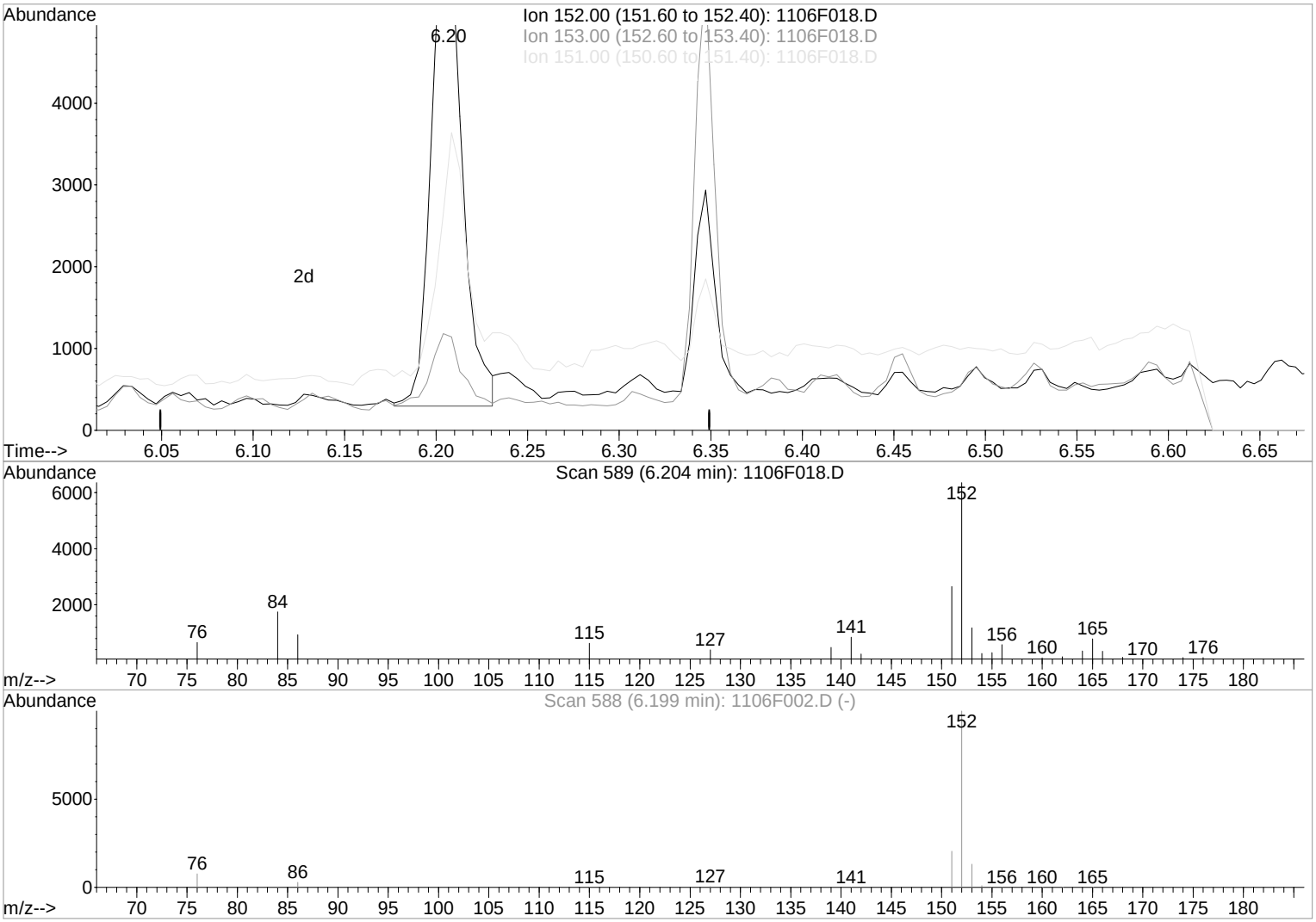
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:21 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F018.D

(9) Acenaphthylene (T)

6.20min 18.97ng/ml m

response 6883

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	18.55
151.00	20.20	41.62#
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

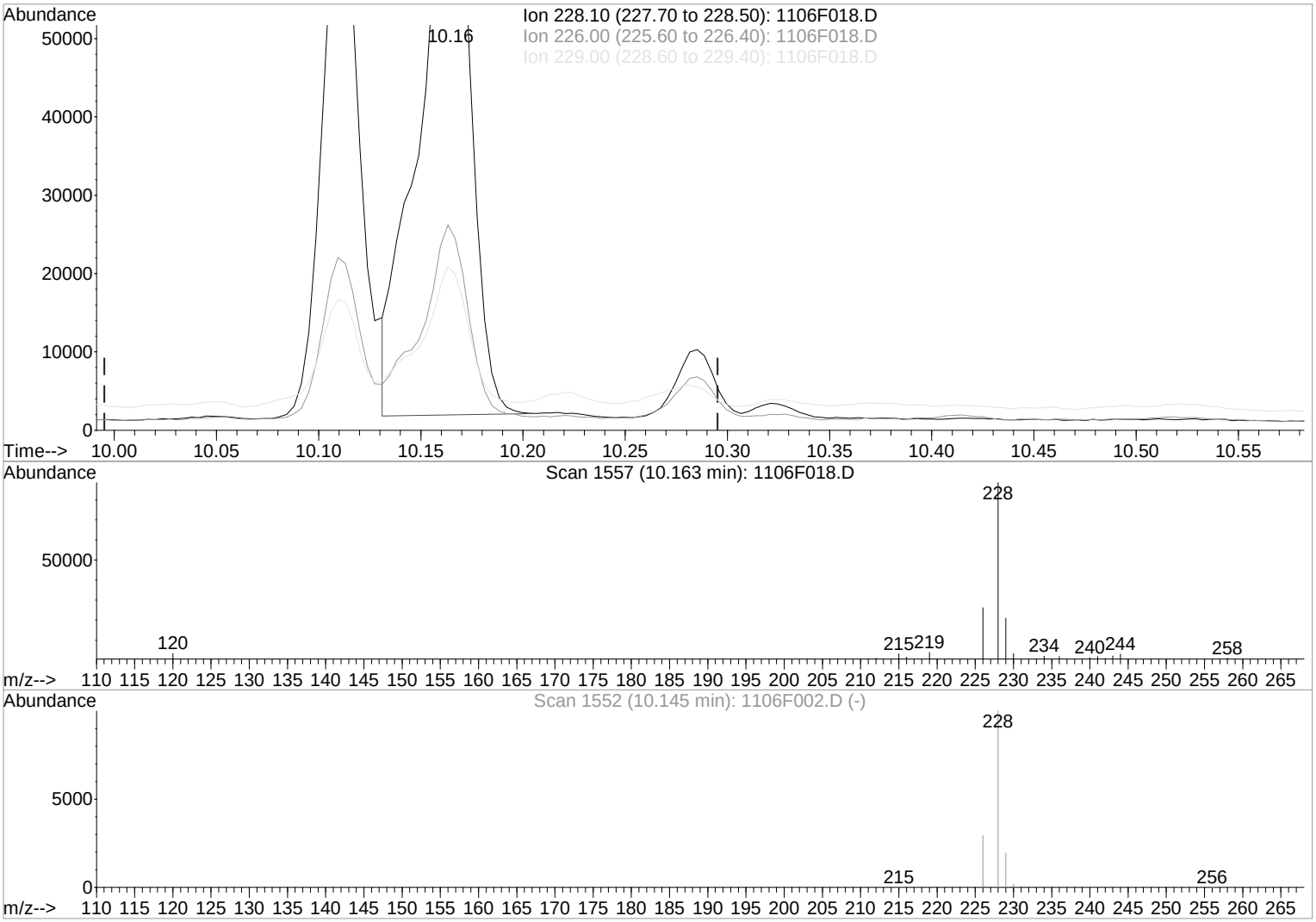
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:21 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F018.D

(27) Chrysene (T)

10.16min 260.80ng/ml

response 134609

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	28.31
229.00	19.20	19.77
0.00	0.00	0.00

Manual Integration:

Before

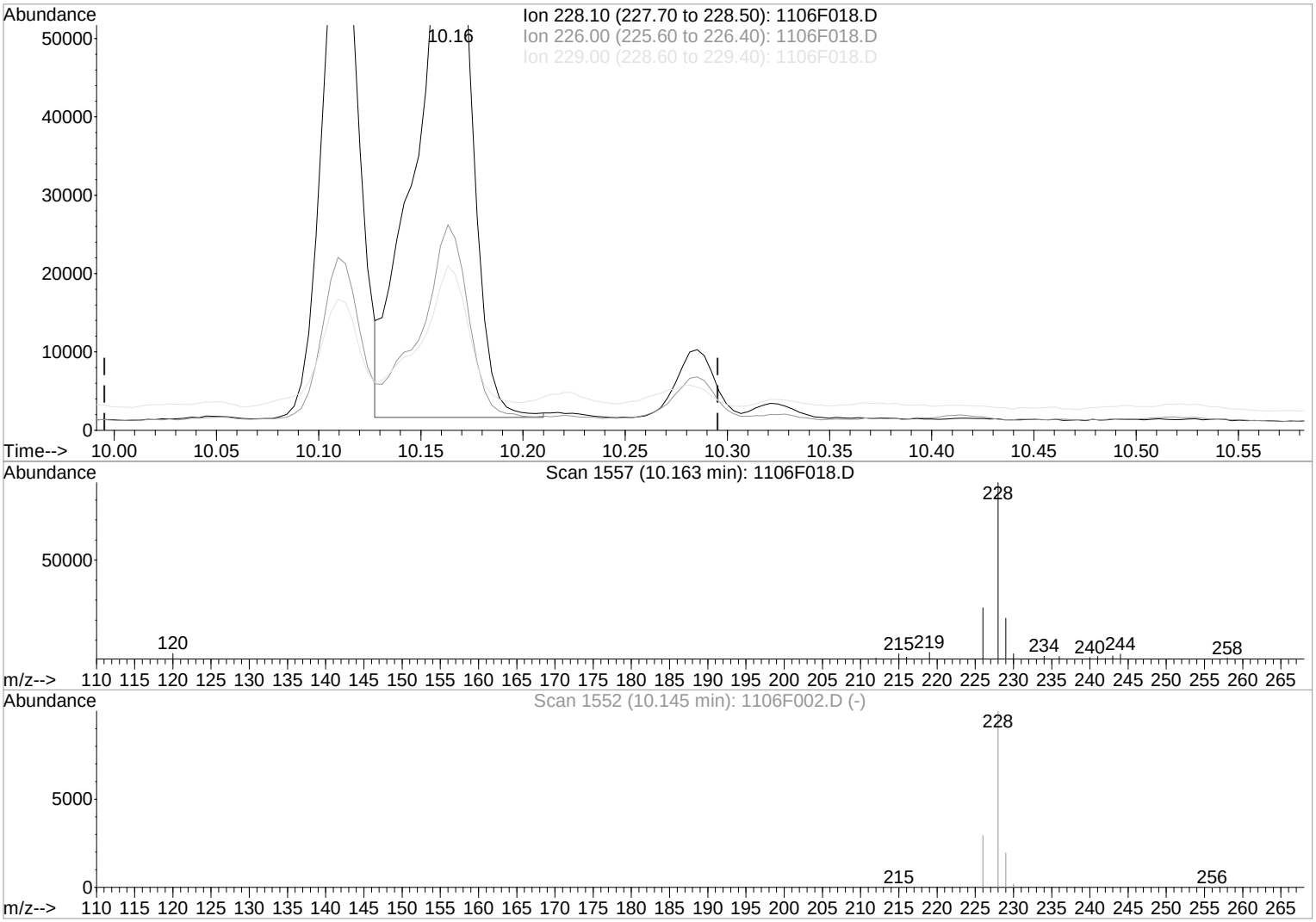
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:22 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F018.D

(27) Chrysene (T)

10.16min 269.51ng/ml m

response 139106

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	29.56
229.00	19.20	23.65
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

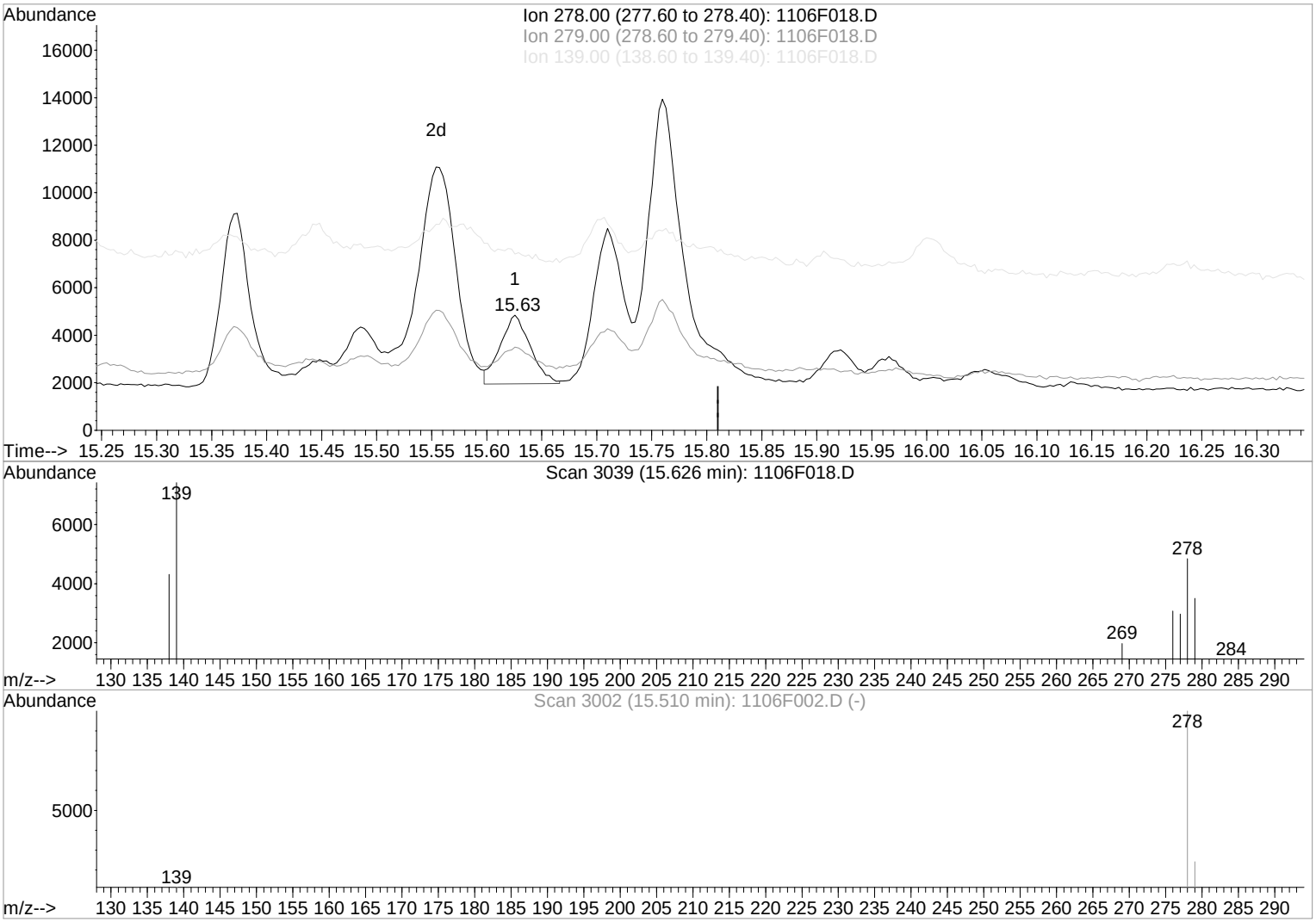
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:22 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F018.D

(35) Dibenz(a,h)anthracene (T)

15.63min 10.74ng/ml

response 5494

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	29.60
139.00	15.00	12.99
0.00	0.00	0.00

Manual Integration:

Before

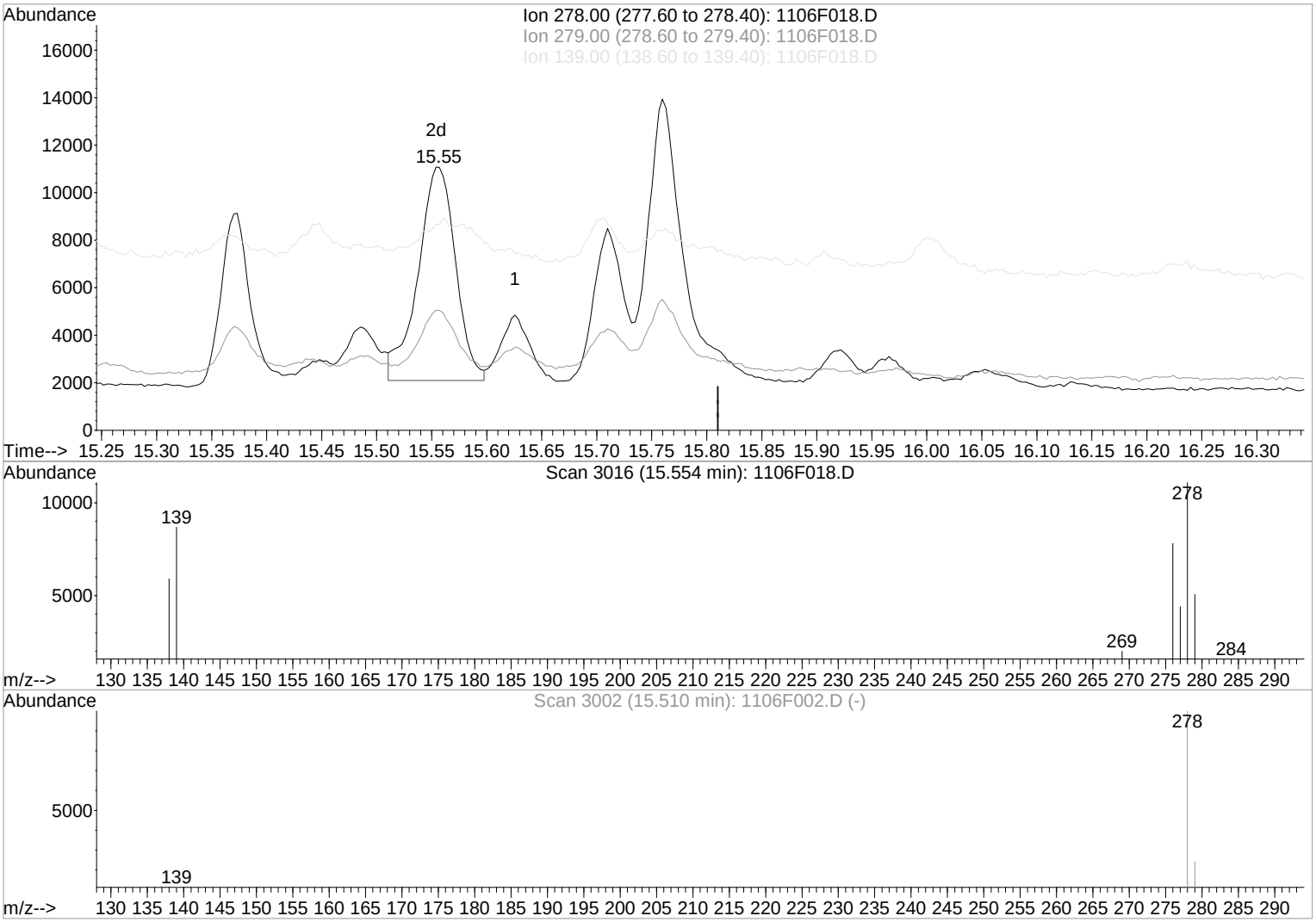
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F018.D Vial: 18
Acq On : 6 Nov 2018 1:15 pm Operator: LWeiskopf
Sample : K1810270-016DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:22 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F018.D

(35) Dibenz(a,h)anthracene (T)

15.55min 41.52ng/ml m

response 21234

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	45.58
139.00	15.00	78.26#
0.00	0.00	0.00

Manual Integration:

After

WP

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F019.D
Lab ID: K1810270-017
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/06/2018 13:44
Date Quantitated: 11/16/2018 10:31
Batch ID: KWG1806026
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F019.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 13:44	**Quant Date:**	11/16/2018 10:31	**Vial:**	19
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-017			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700773	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	0.00	136	66277	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31500	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	64204	200.00	OK
4	Chrysene-d12	10.12	0.01	240	82493	200.00	OK
5	Perylene-d12	13.32	0.05	264	95626	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	26261	130.38	65	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	56293	139.12	70	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	51373	143.58	72	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	7446	19.46	9.9	D	
1	2-Methylnaphthalene	5.42		0.00	142	2150	9.32	4.7	JD	
2	Acenaphthylene	6.20		0.00	152	5958**m**	15.85	8.1	D	
2	Acenaphthene	6.35		0.00	154	5350	24.78	13	D	
2	Dibenzofuran	6.50		0.00	168	8057	23.26	12	D	
2	Fluorene	6.78		0.00	166	6561	25.13	13	D	
3	Phenanthrene	7.58		0.00	178	171311	427.72	220	D	
3	Anthracene	7.62		0.00	178	16296	42.62	22	D	
3	Fluoranthene	8.57	0.01	0.00	202	349687	707.07	360	D	
4	Pyrene	8.76	0.01	0.00	202	314810	556.22	280	D	
4	Benz(a)anthracene	10.11	0.02	0.00	228	117671	220.63	110	D	
4	Chrysene	10.16	0.01	0.00	228	190888	373.65	190	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110618\1106F019.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 13:44	**Quant Date:**	11/16/2018 10:31	**Vial:**	19
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-017			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	234124	396.28	200	D	
5	Benzo(k)fluoranthene	12.31	0.03	0.00	252	84565**m**	144.29	74	D	
5	Benzo(a)pyrene	13.15	0.05	0.00	252	124230	239.77	120	D	
5	Indeno(1,2,3-cd)pyrene	15.50	0.03	0.00	276	107619	211.83	110	D	
5	Dibenz(a,h)anthracene	15.54	0.03	0.00	278	25396	49.31	25	D	
5	Benzo(g,h,i)perylene	15.90	0.04	0.00	276	118617	199.37	100	D	

Prep Amount:	40.290 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	48.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

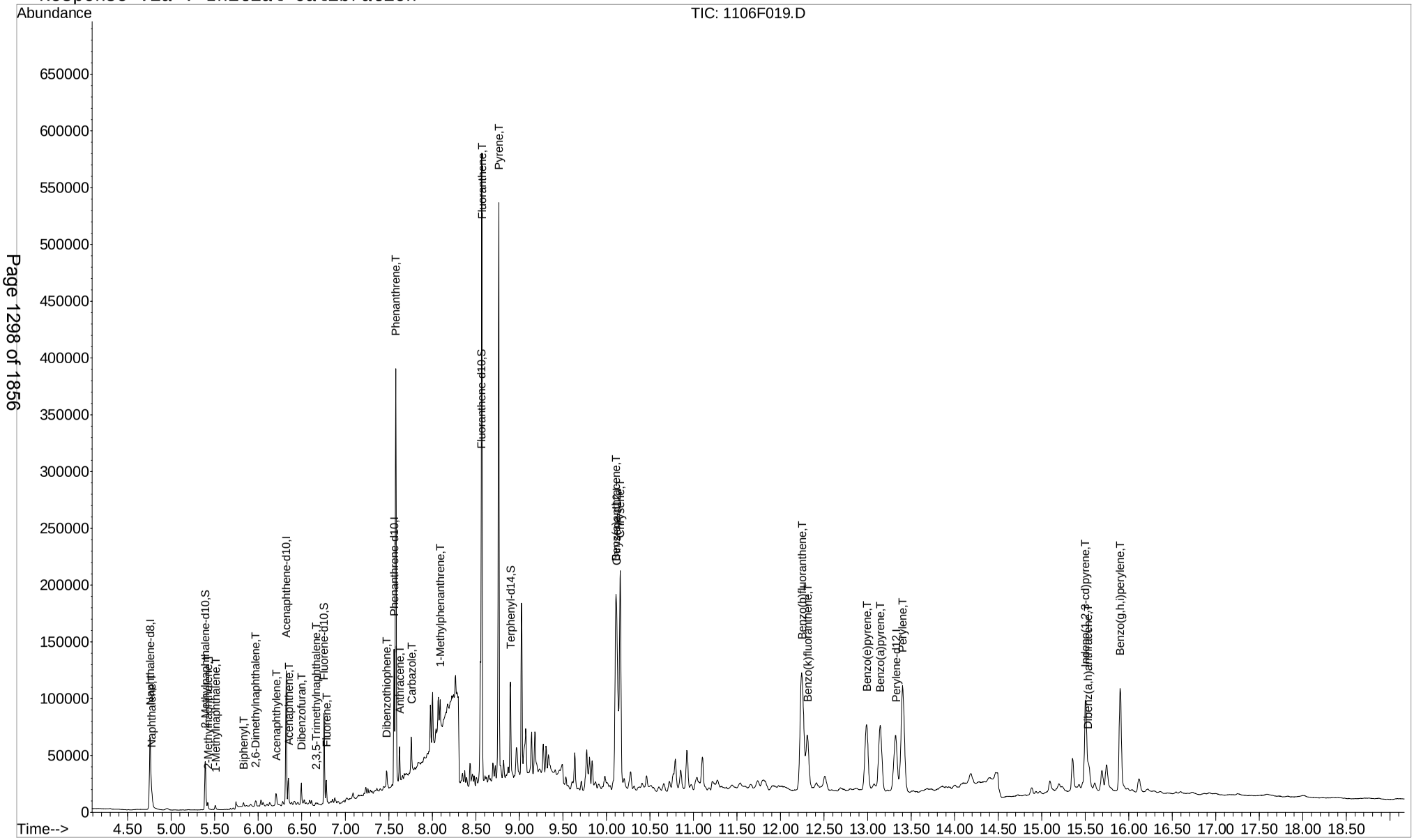
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

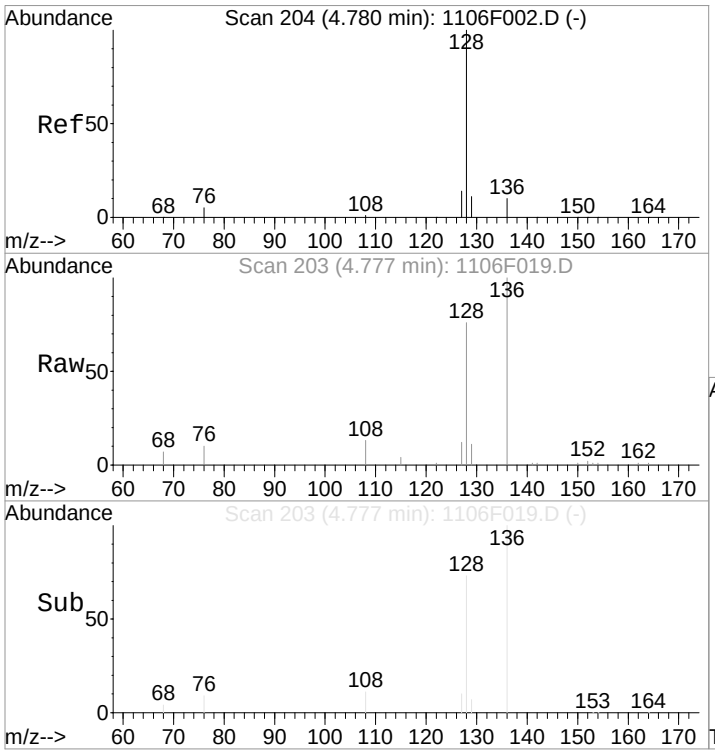
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F019.D Vial: 19
Acq On : 6 Nov 2018 1:44 pm Operator: LWeiskopf
Sample : K1810270-017DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:31 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



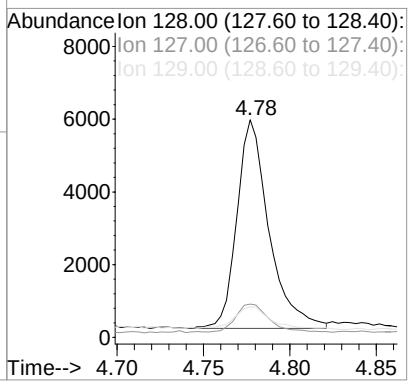
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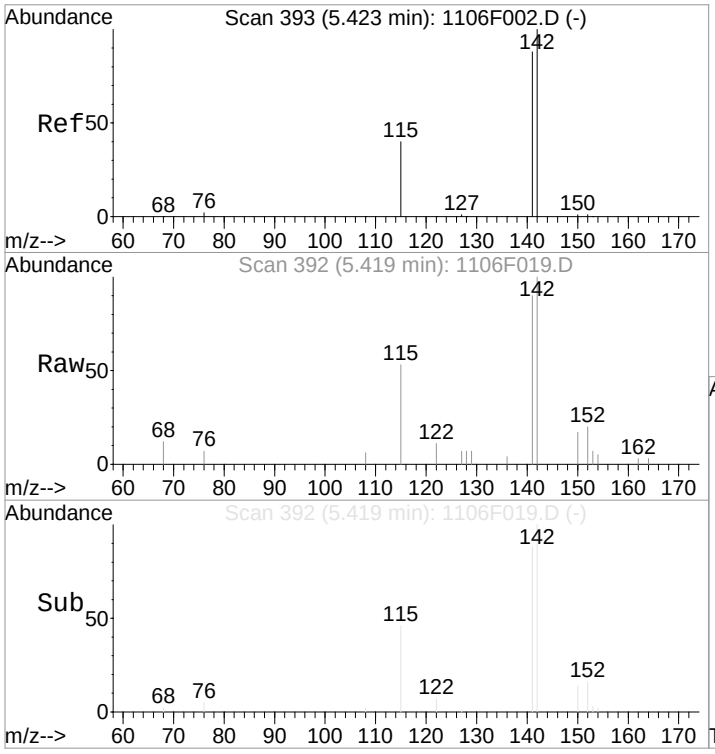


#2
Naphthalene
Concen: 19.46 ng/ml
RT: 4.78 min Scan# 203
Delta R.T. -0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:128 Resp: 7446

Ion	Ratio	Lower	Upper
128	100		
127	13.6	0.0	43.7
129	10.3	0.0	30.8

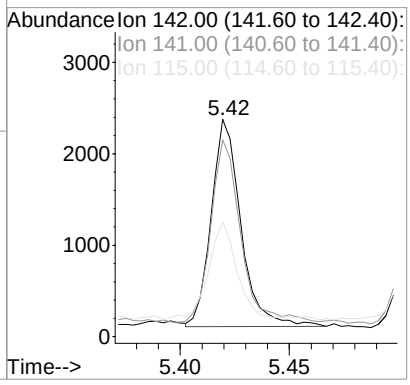




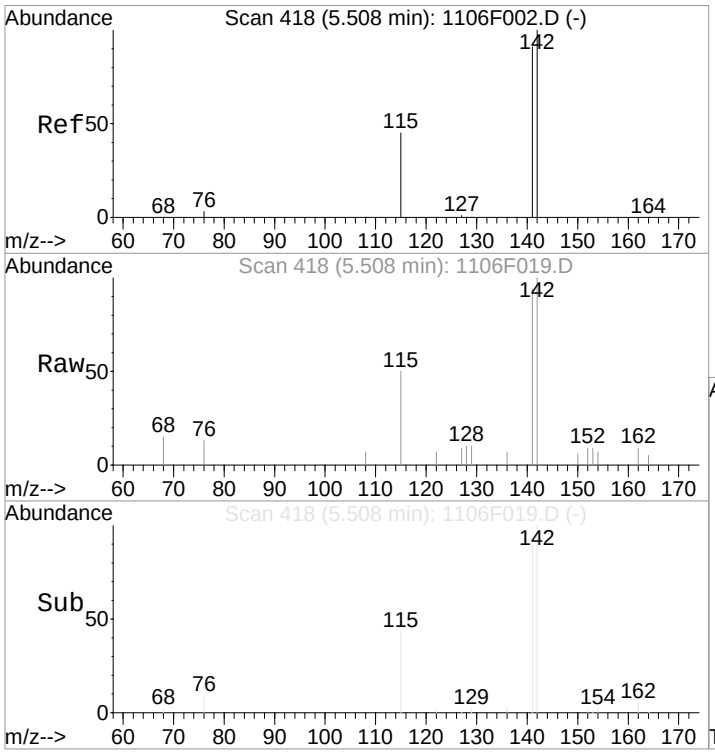
#4
2-Methylnaphthalene
Concen: 9.32 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:142 Resp: 2150

Ion	Ratio	Lower	Upper
142	100		
141	87.5	56.8	116.8
115	46.7	13.3	53.3



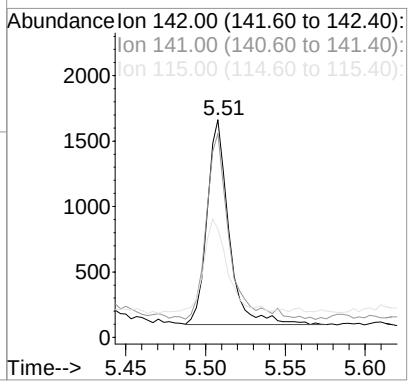
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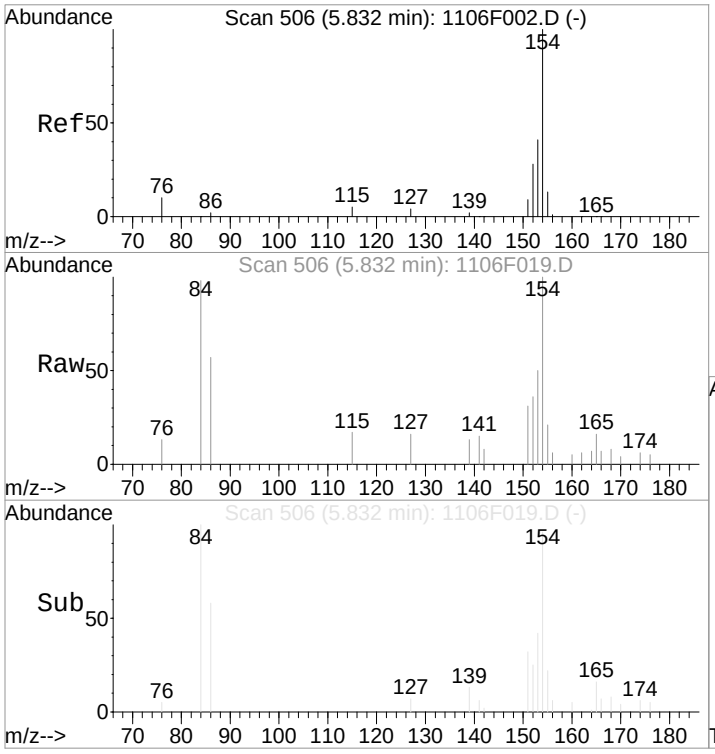


#5
1-Methylnaphthalene
Concen: 6.75 ng/ml
RT: 5.51 min Scan# 418
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:142 Resp: 1498

Ion	Ratio	Lower	Upper
142	100		
141	90.7	59.7	119.7
115	40.2	13.7	53.7

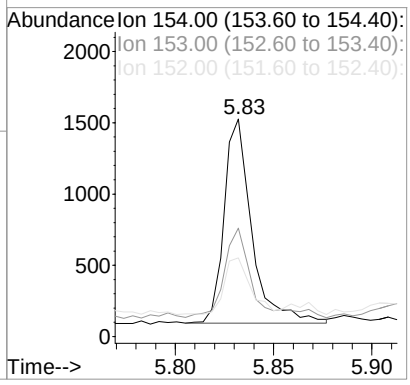




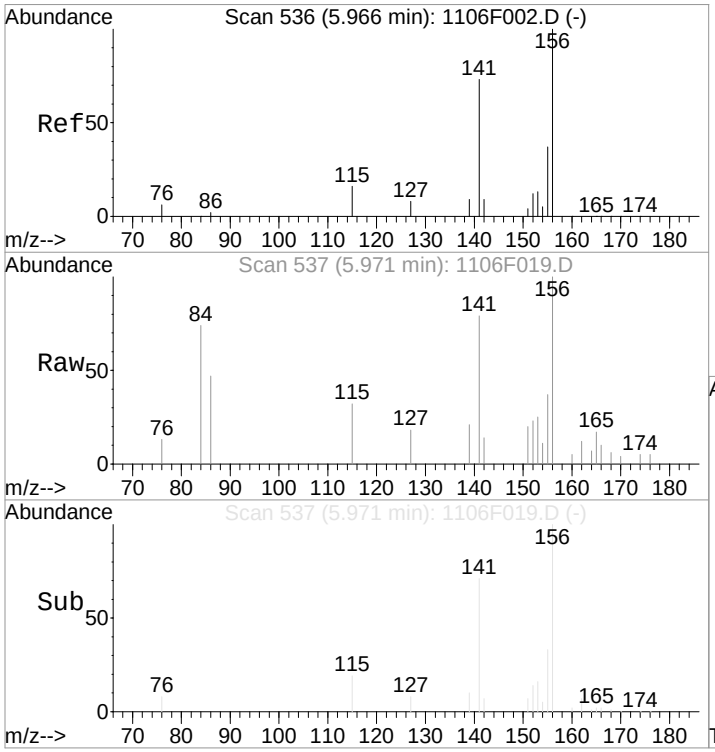
#6
Biphenyl
Concen: 4.87 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:154 Resp: 1403

Ion	Ratio	Lower	Upper
154	100		
153	43.9	11.4	71.4
152	27.8	7.1	47.1



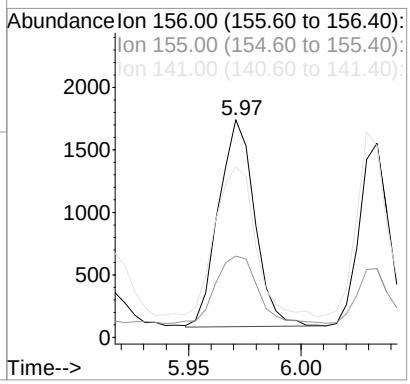
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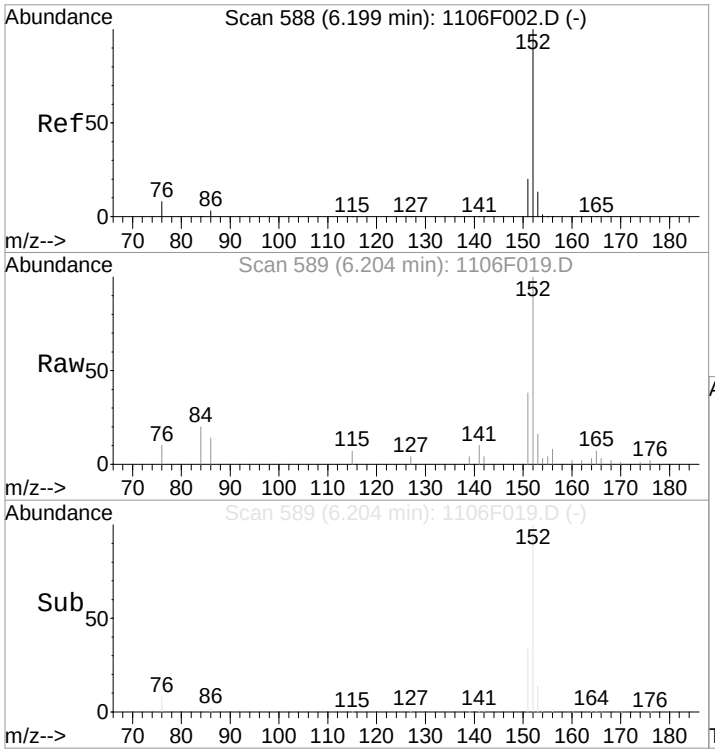


#7
2,6-Dimethylnaphthalene
Concen: 9.38 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:156 Resp: 1858

Ion	Ratio	Lower	Upper
156	100		
155	32.5	7.0	67.0
141	72.0	47.9	87.9

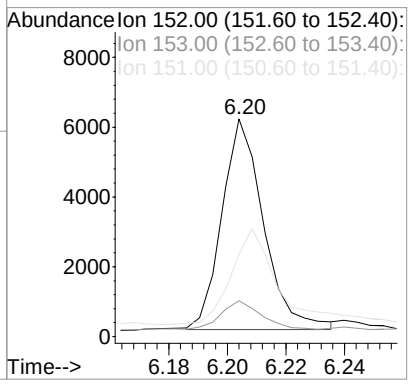




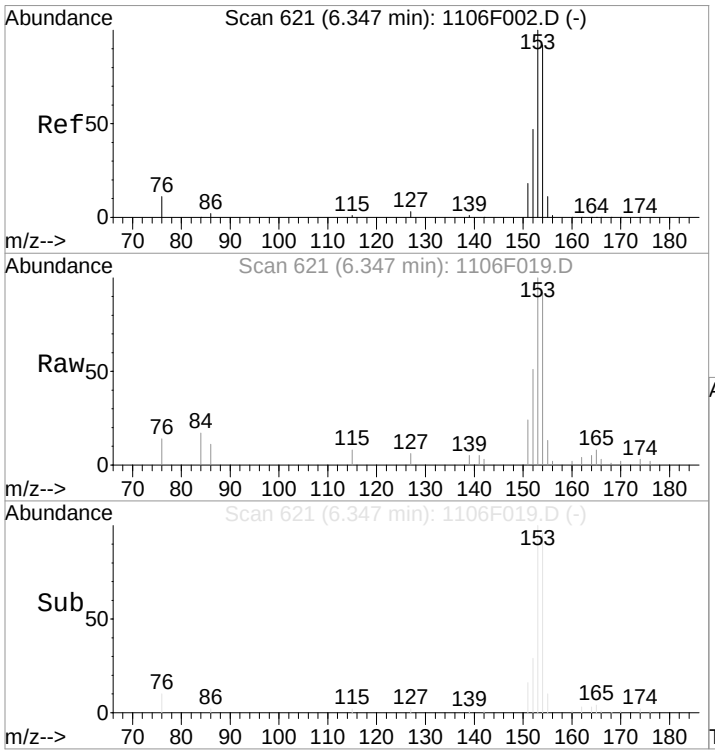
#9
Acenaphthylene
Concen: 15.85 ng/ml m
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:152 Resp: 5958

Ion	Ratio	Lower	Upper
152	100		
153	16.5	0.0	42.9
151	37.8	0.2	40.2



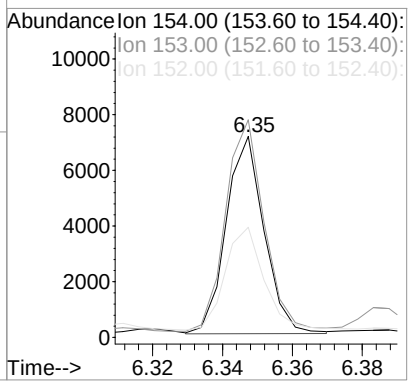
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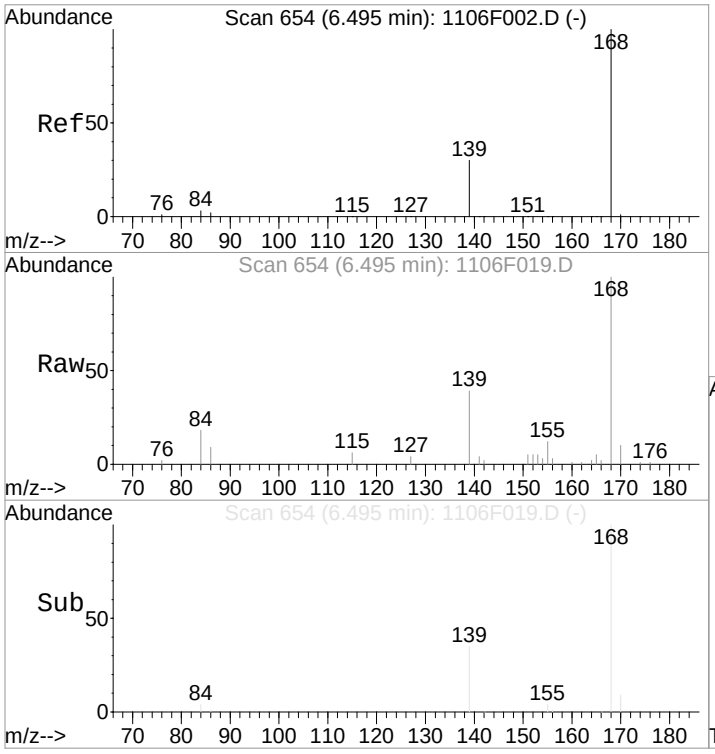


#10
Acenaphthene
Concen: 24.78 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:154 Resp: 5350

Ion	Ratio	Lower	Upper
154	100		
153	107.5	77.1	137.1
152	52.3	19.7	79.7

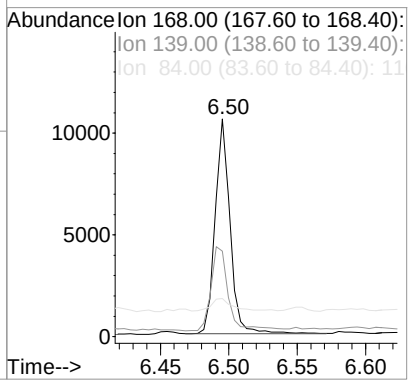




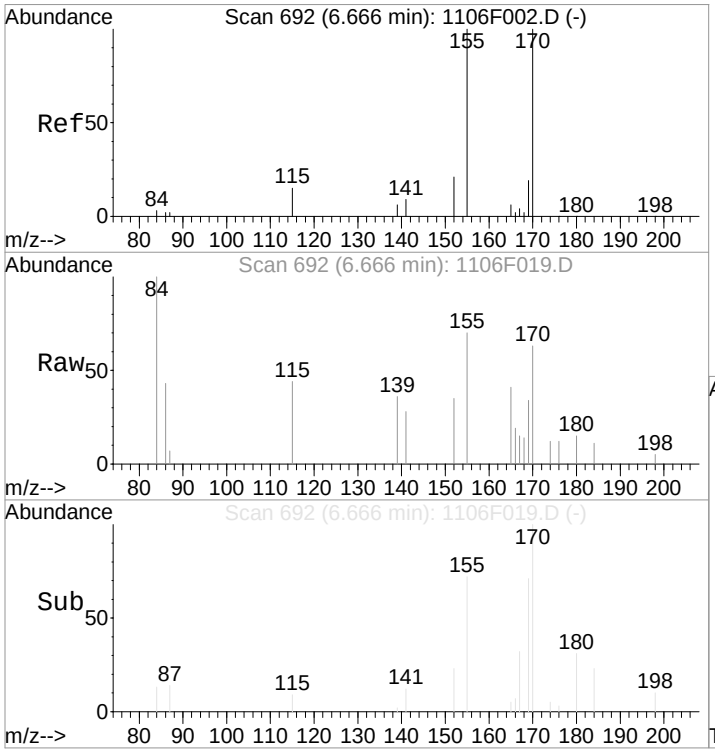
#11
Dibenzofuran
Concen: 23.26 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:168 Resp: 8057

Ion	Ratio	Lower	Upper
168	100		
139	37.1	0.0	55.8
84	5.2	0.0	23.5



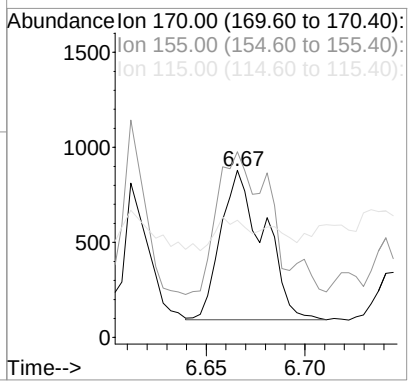
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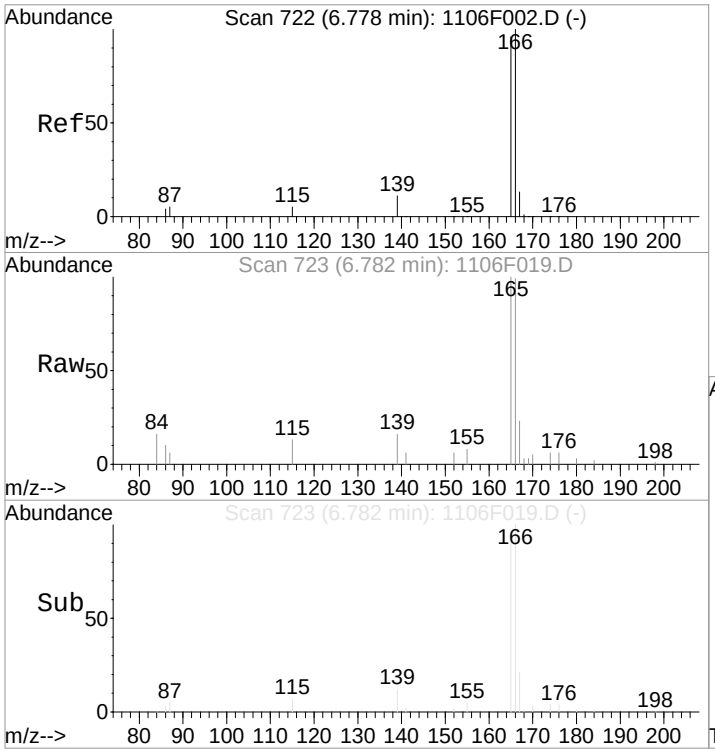


#12
2,3,5-Trimethylnaphthalene
Concen: 6.02 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:170 Resp: 1202

Ion	Ratio	Lower	Upper
170	100		
155	95.5	59.2	119.2
115	19.5	0.0	30.1

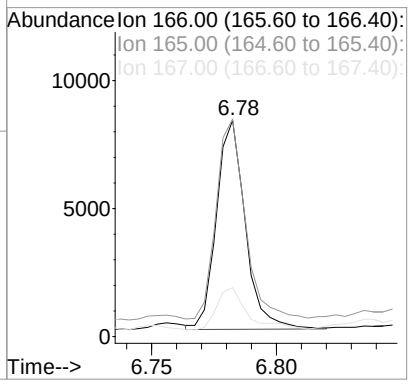




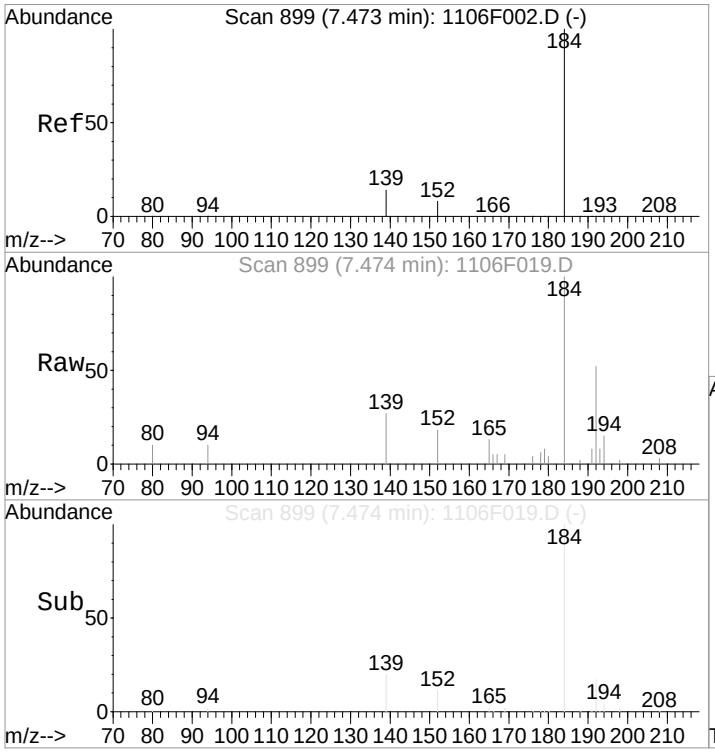
#14
Fluorene
Concen: 25.13 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:166 Resp: 6561

Ion	Ratio	Lower	Upper
166	100		
165	96.3	63.4	123.4
167	20.1	0.0	33.1



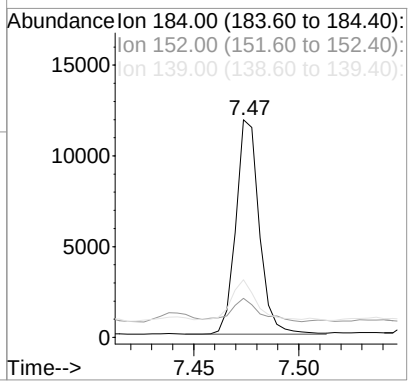
1st 11/16/18
2nd 11/27/18

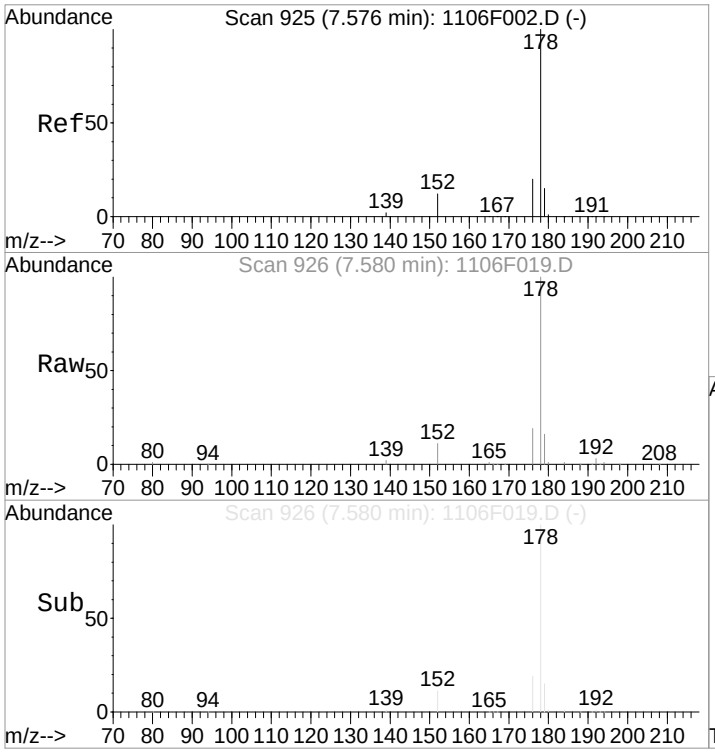


#16
Dibenzothiophene
Concen: 22.82 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:184 Resp: 9140

Ion	Ratio	Lower	Upper
184	100		
152	10.3	0.0	37.8
139	19.0	0.0	32.6

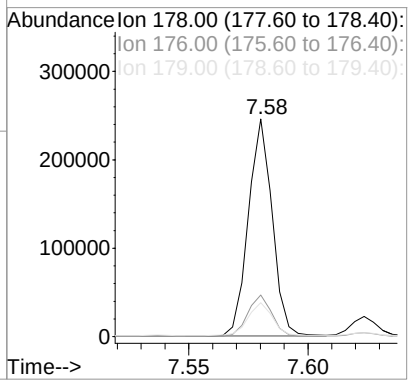




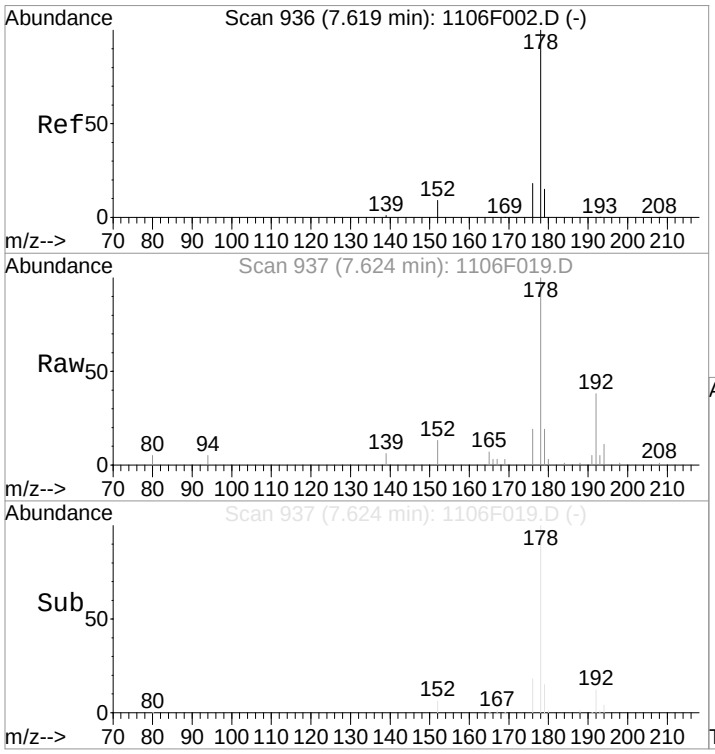
#17
Phenanthrene
Concen: 427.72 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:178 Resp: 171311

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	48.7
179	15.3	0.0	35.1



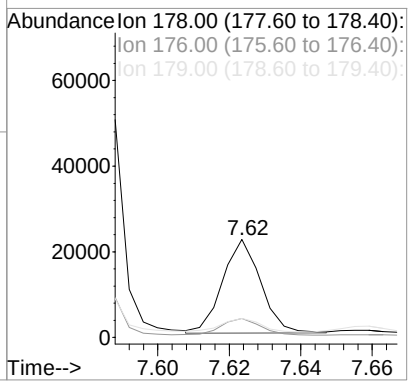
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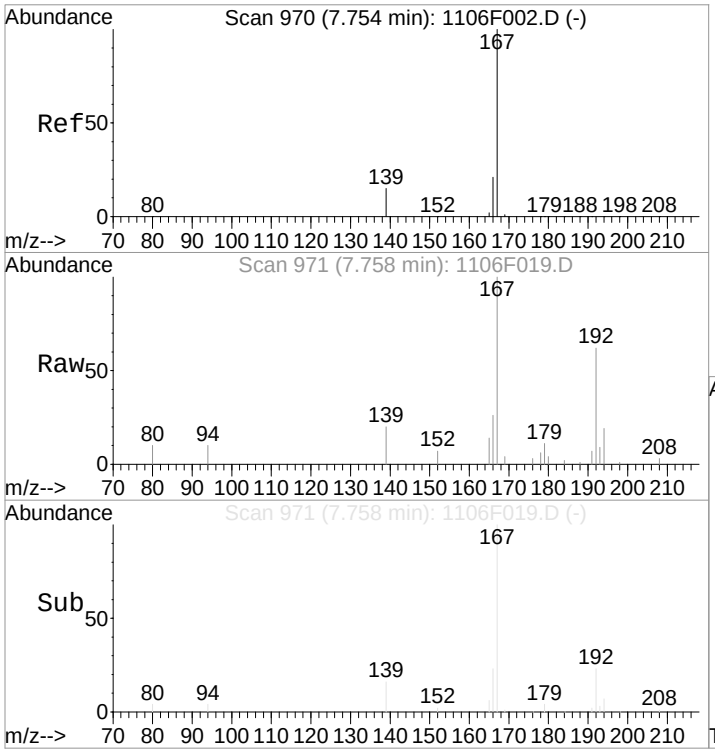


#18
Anthracene
Concen: 42.62 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:178 Resp: 16296

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	48.0
179	13.8	0.0	35.1

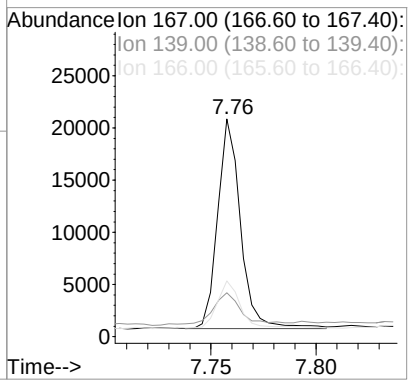




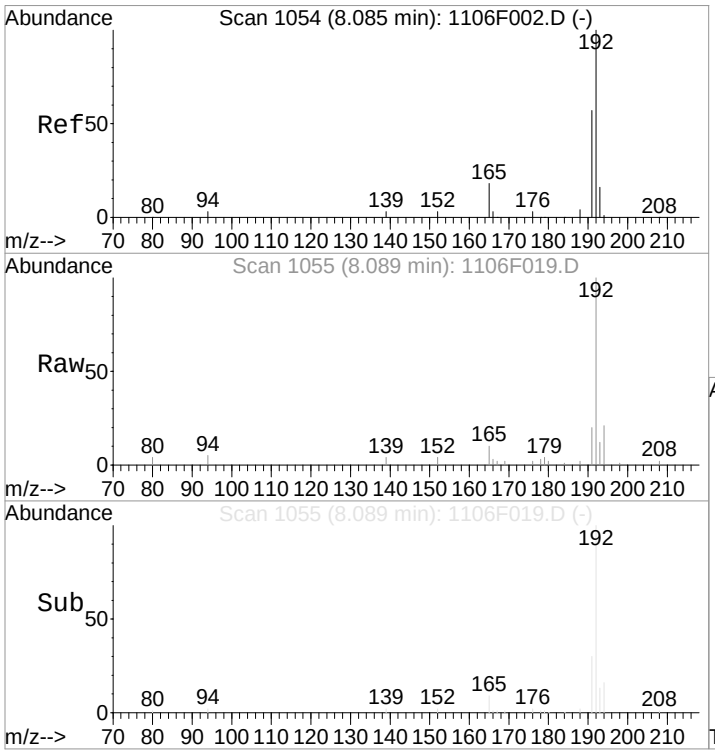
#19
Carbazole
Concen: 41.07 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:167 Resp: 15325

Ion	Ratio	Lower	Upper
167	100		
139	14.9	0.0	41.5
166	22.5	0.7	40.7



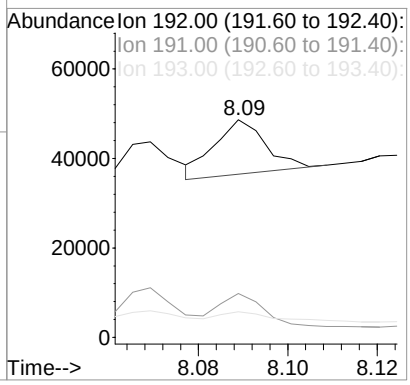
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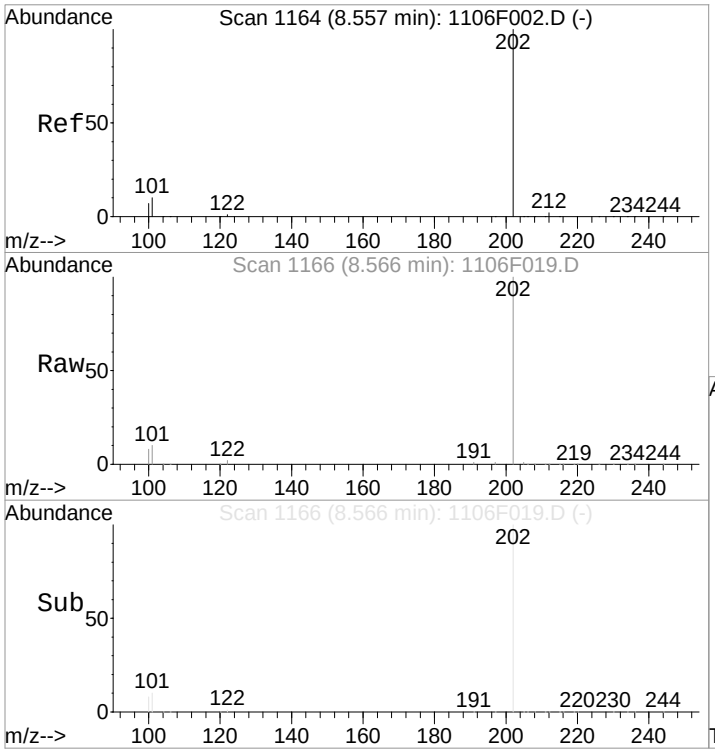


#20
1-Methylphenanthrene
Concen: 32.68 ng/ml
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:192 Resp: 9915

Ion	Ratio	Lower	Upper
192	100		
191	72.2	27.7	87.7
193	19.4	0.0	45.4

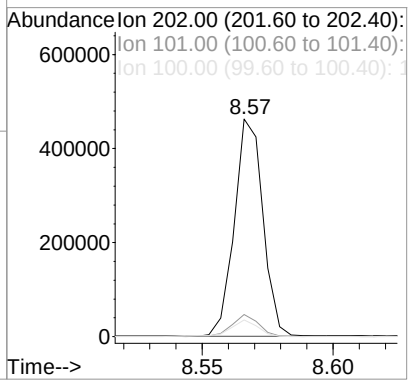




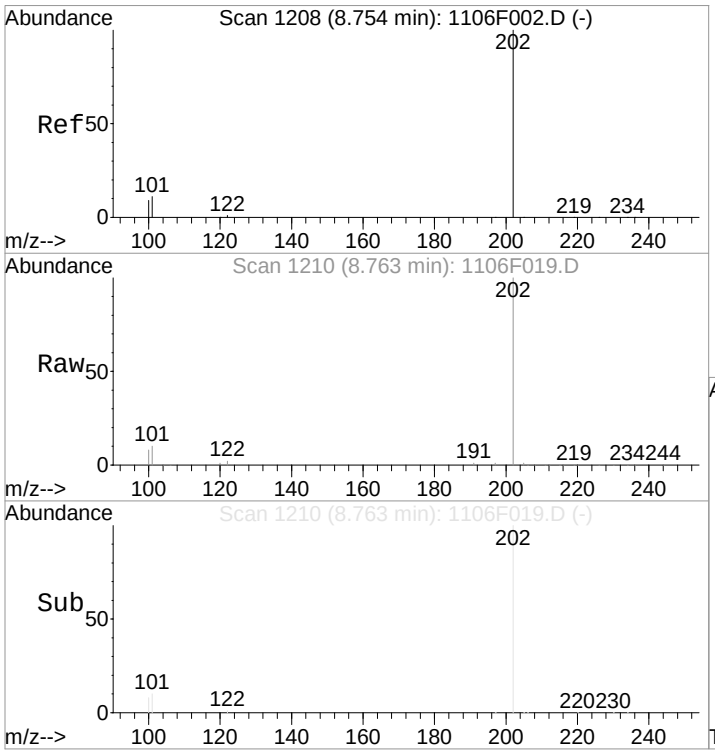
#21
Fluoranthene
Concen: 707.07 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.01 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:202 Resp: 349687

Ion	Ratio	Lower	Upper
202	100		
101	10.2	0.0	41.3
100	7.6	0.0	28.6



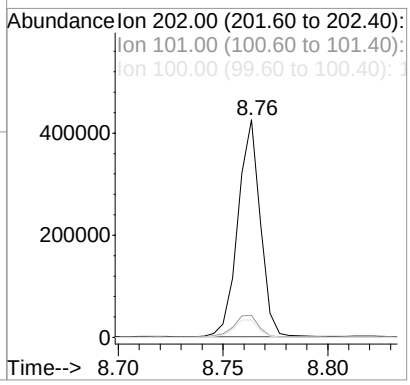
1st 11/16/18
2nd 11/27/18

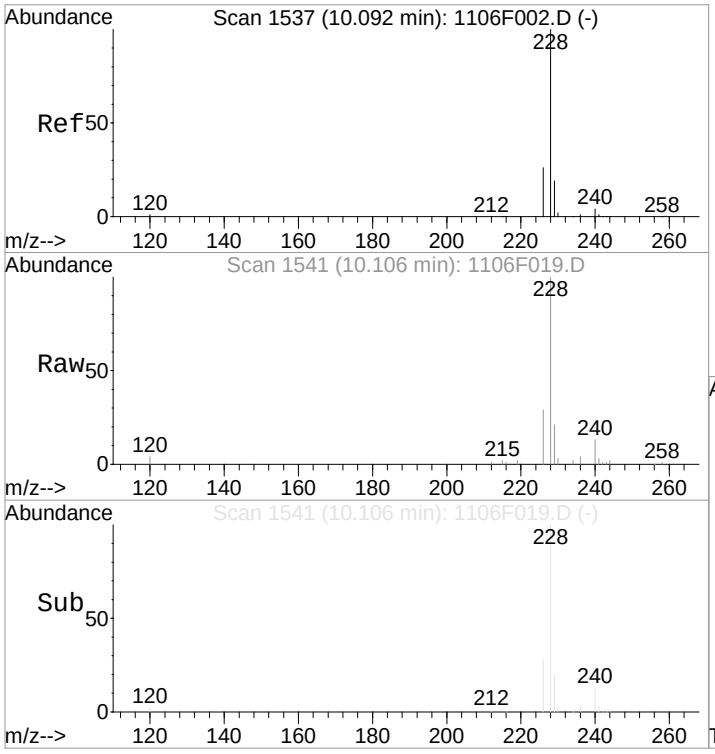


#24
Pyrene
Concen: 556.22 ng/ml
RT: 8.76 min Scan# 1210
Delta R.T. 0.01 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:202 Resp: 314810

Ion	Ratio	Lower	Upper
202	100		
101	10.0	0.0	40.8
100	7.9	0.0	28.5

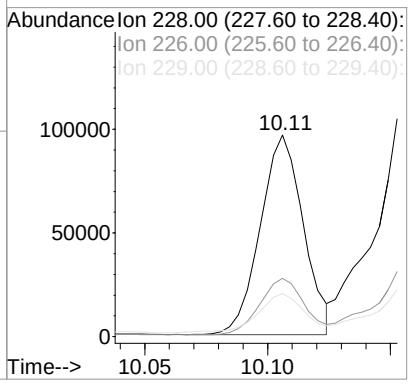




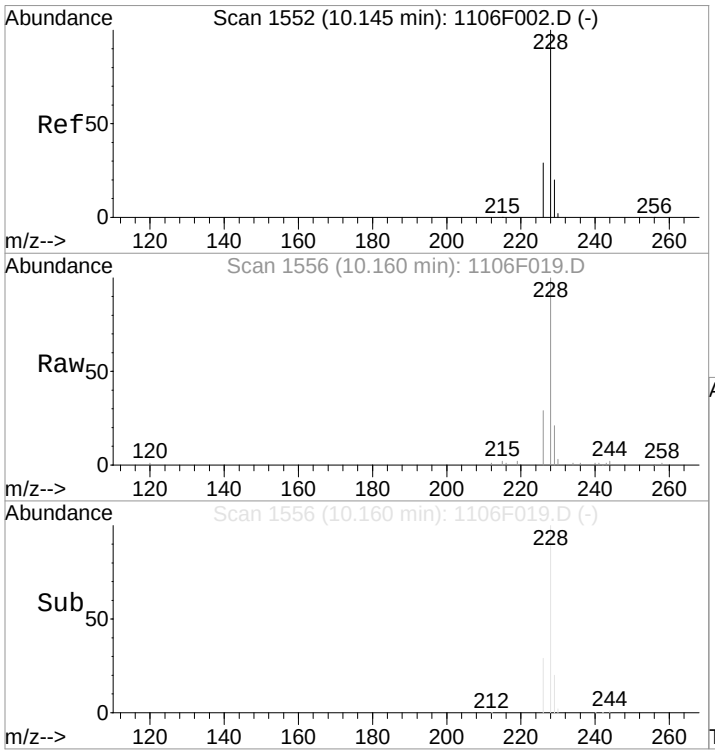
#26
Benz(a)anthracene
Concen: 220.63 ng/ml
RT: 10.11 min Scan# 1541
Delta R.T. 0.01 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:228 Resp: 117671

Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.0	56.3
229	19.5	0.0	39.1



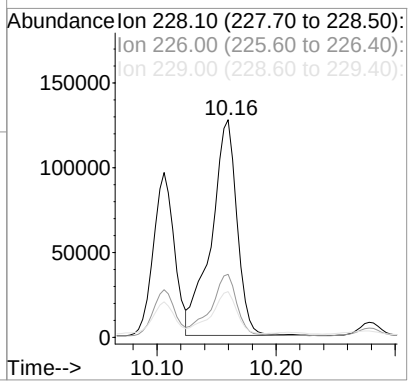
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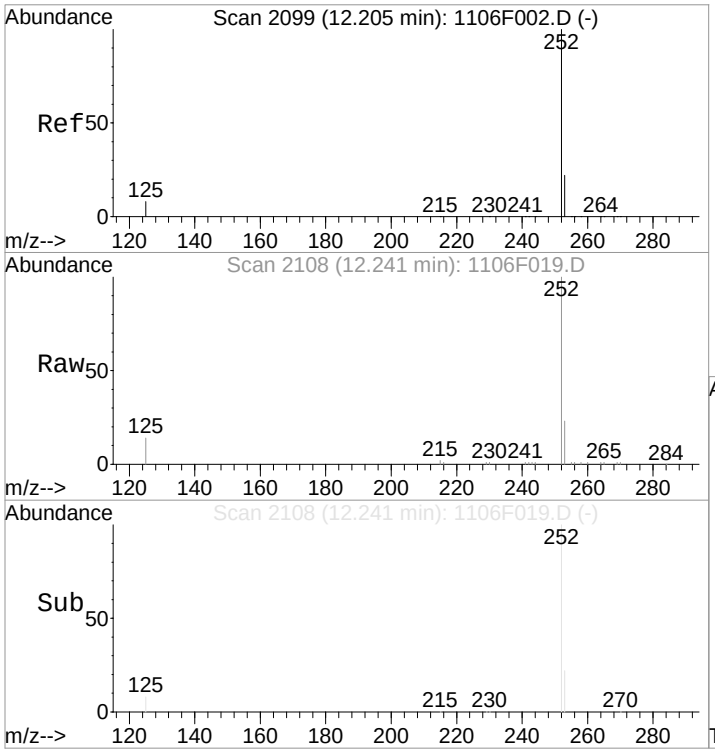


#27
Chrysene
Concen: 373.65 ng/ml
RT: 10.16 min Scan# 1556
Delta R.T. 0.01 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:228 Resp: 190888

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.7
229	19.6	0.0	39.2

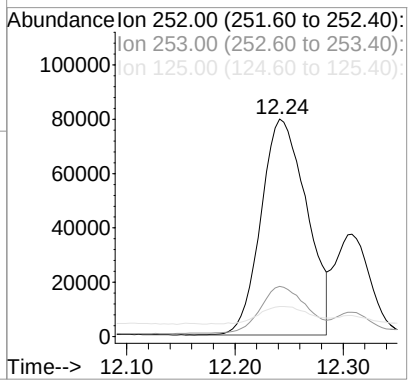




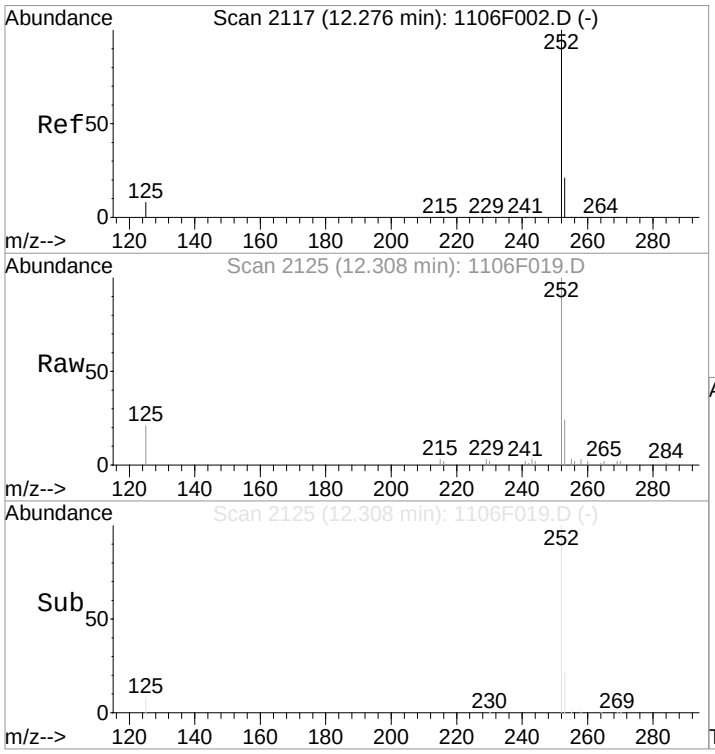
#29
Benzo(b)fluoranthene
Concen: 396.28 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. 0.04 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:252 Resp: 234124

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.2
125	7.8	0.0	29.5



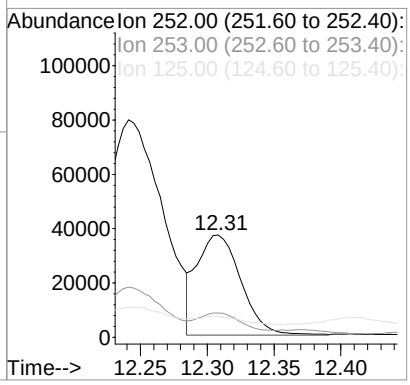
1st 11/16/18
2nd 11/27/18

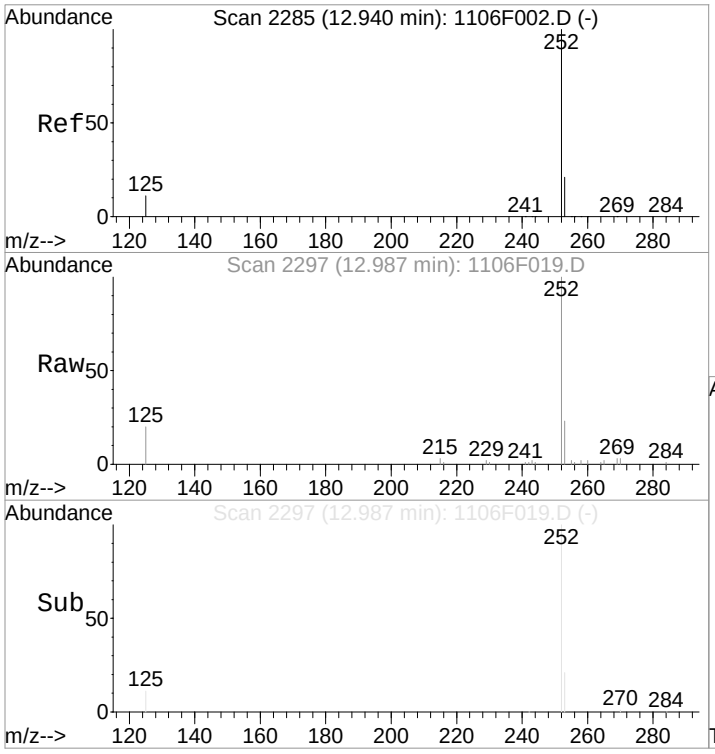


#30
Benzo(k)fluoranthene
Concen: 144.29 ng/ml m
RT: 12.31 min Scan# 2125
Delta R.T. 0.03 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:252 Resp: 84565

Ion	Ratio	Lower	Upper
252	100		
253	23.8	0.0	51.2
125	20.5	0.0	29.7

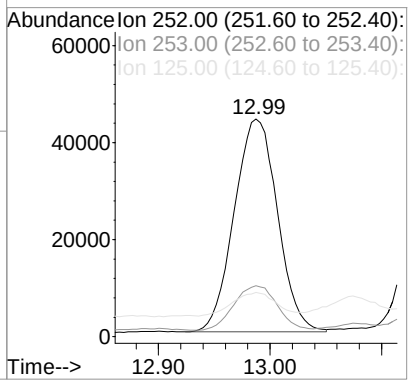




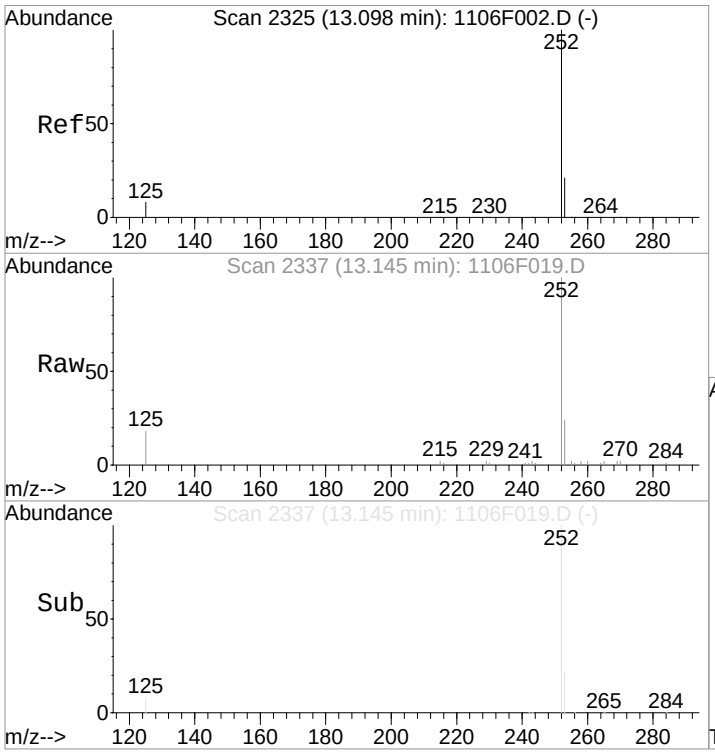
#31
Benzo(e)pyrene
Concen: 210.53 ng/ml
RT: 12.99 min Scan# 2297
Delta R.T. 0.05 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:252 Resp: 118556

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.3
125	10.9	0.0	33.5



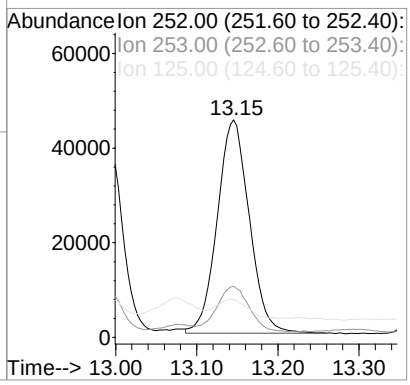
1st 11/16/18
2nd 11/27/18

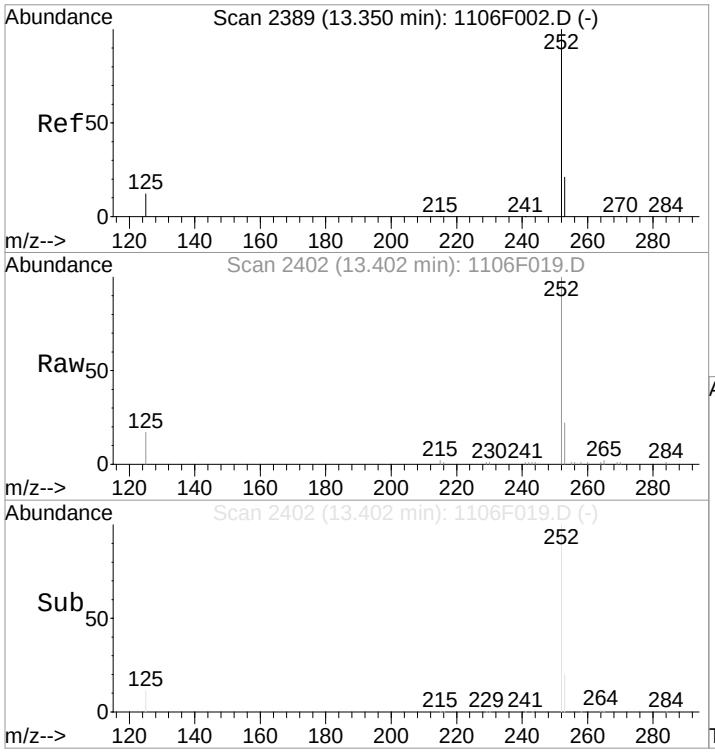


#32
Benzo(a)pyrene
Concen: 239.77 ng/ml
RT: 13.15 min Scan# 2337
Delta R.T. 0.05 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:252 Resp: 124230

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	50.9
125	9.5	0.0	30.3

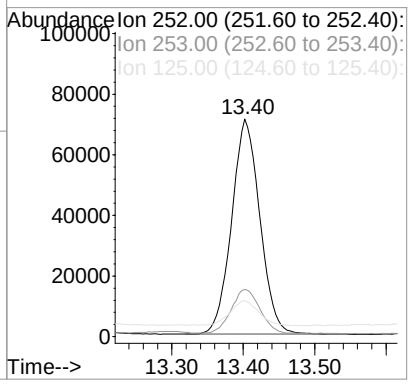




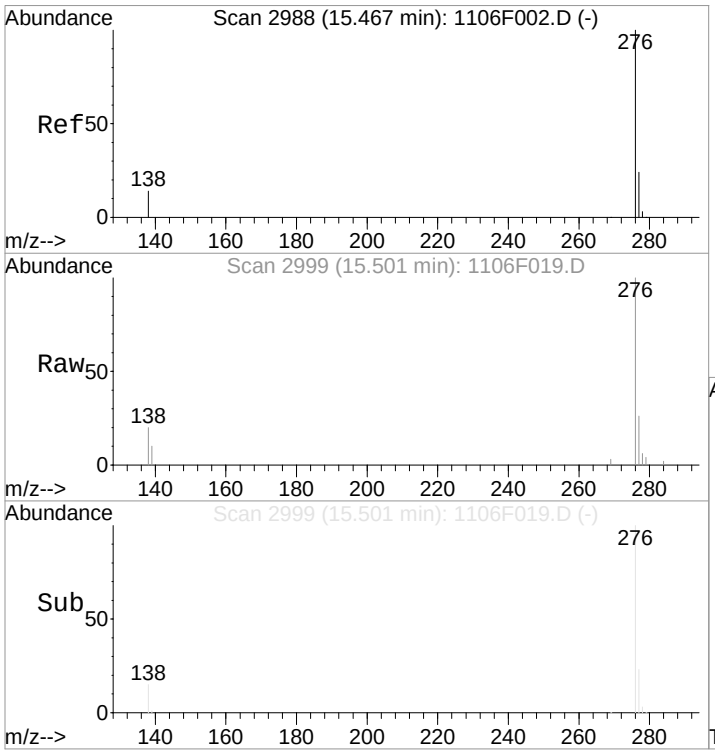
#33
Perylene
Concen: 358.45 ng/ml
RT: 13.40 min Scan# 2402
Delta R.T. 0.05 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:252 Resp: 194822

Ion	Ratio	Lower	Upper
252	100		
253	20.4	0.0	51.2
125	11.5	0.0	33.8



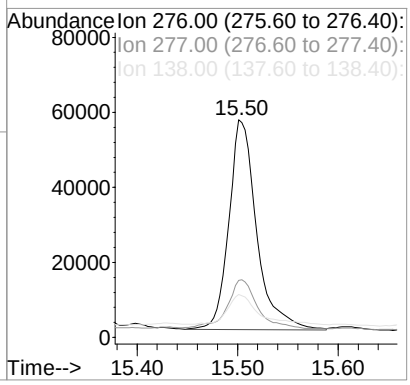
1st 11/16/18
2nd 11/27/18

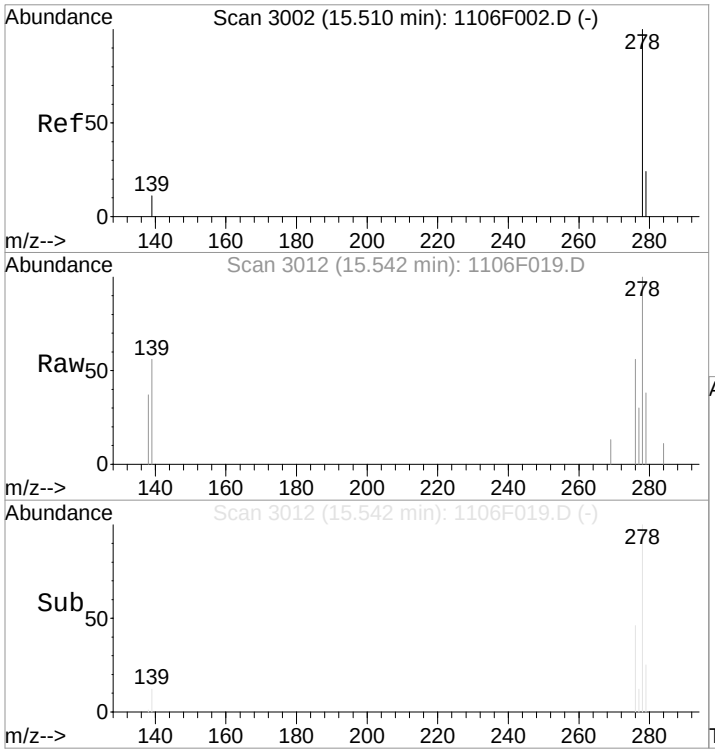


#34
Indeno(1,2,3-cd)pyrene
Concen: 211.83 ng/ml
RT: 15.50 min Scan# 2999
Delta R.T. 0.03 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:276 Resp: 107619

Ion	Ratio	Lower	Upper
276	100		
277	23.1	0.0	53.4
138	14.3	0.0	37.7

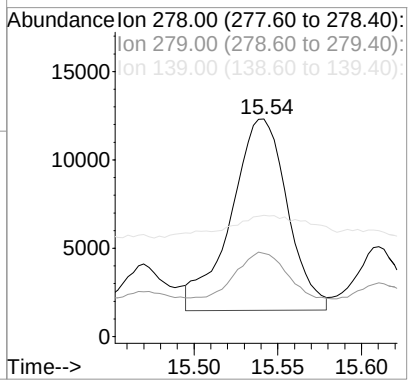


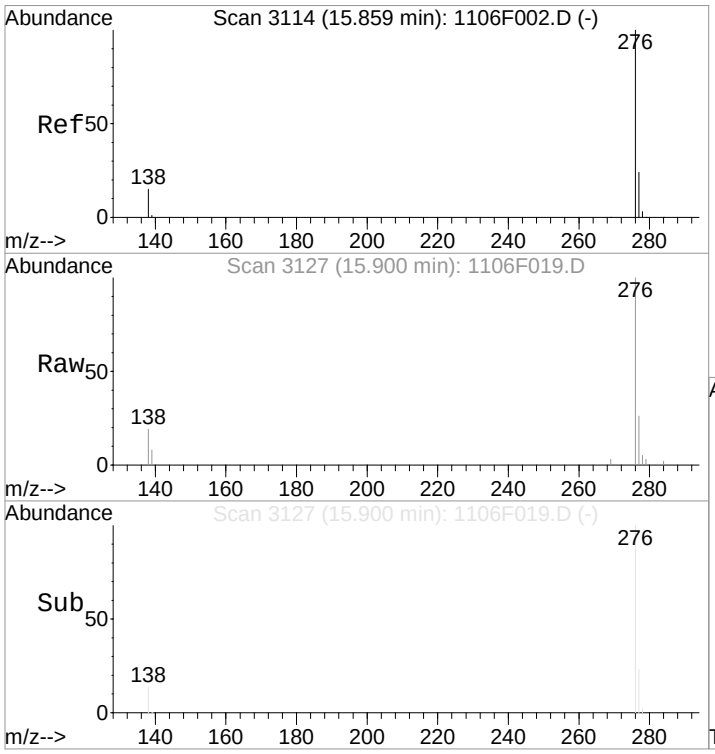


#35
Dibenz(a,h)anthracene
Concen: 49.31 ng/ml
RT: 15.54 min Scan# 3012
Delta R.T. 0.03 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:278 Resp: 25396

Ion	Ratio	Lower	Upper
278	100		
279	25.1	0.0	53.5
139	9.9	0.0	35.0

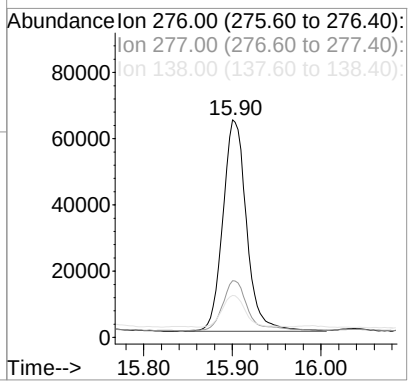




#36
Benzo(g,h,i)perylene
Concen: 199.37 ng/ml
RT: 15.90 min Scan# 3127
Delta R.T. 0.04 min
Lab File: 1106F019.D
Acq: 6 Nov 2018 1:44 pm

Tgt Ion:276 Resp: 118617

Ion	Ratio	Lower	Upper
276	100		
277	23.5	0.0	53.1
138	14.8	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F019.D Vial: 19
Acq On : 6 Nov 2018 1:44 pm Operator: LWeiskopf
Sample : K1810270-017DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:52 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	66277	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31500	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	64204	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	82493	200.00	ng/ml	0.01
28) Perylene-d12	13.32	264	95626	200.00	ng/ml	0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	16296	88.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.81%		
13) Fluorene-d10	6.76	176	26261	130.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.04%		
22) Fluoranthene-d10	8.55	212	56293	139.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.91%		
25) Terphenyl-d14	8.90	244	51373	143.58	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.36%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	7446	19.46	ng/ml	99
4) 2-Methylnaphthalene	5.42	142	2150	9.32	ng/ml	93
5) 1-Methylnaphthalene	5.51	142	1498	6.75	ng/ml	96
6) Biphenyl	5.83	154	1403	4.87	ng/ml	97
7) 2,6-Dimethylnaphthalene	5.97	156	1858	9.38	ng/ml	94
9) Acenaphthylene	6.20	152	5958m	15.85	ng/ml	
10) Acenaphthene	6.35	154	5350	24.78	ng/ml	98
11) Dibenzofuran	6.50	168	8057	23.26	ng/ml	80
12) 2,3,5-Trimethylnaphthalene	6.67	170	1202	6.02	ng/ml	91
14) Fluorene	6.78	166	6561	25.13	ng/ml	95
16) Dibenzothiophene	7.47	184	9140	22.82	ng/ml	87
17) Phenanthrene	7.58	178	171311	427.72	ng/ml	99
18) Anthracene	7.62	178	16296	42.62	ng/ml	99
19) Carbazole	7.76	167	15325	41.07	ng/ml	94
20) 1-Methylphenanthrene	8.09	192	9915	32.68	ng/ml	83
21) Fluoranthene	8.57	202	349687	707.07	ng/ml	97
24) Pyrene	8.76	202	314810	556.22	ng/ml	98
26) Benz(a)anthracene	10.11	228	117671	220.63	ng/ml	97
27) Chrysene	10.16	228	190888	373.65	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	234124	396.28	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	84565m	144.29	ng/ml	
31) Benzo(e)pyrene	12.99	252	118556	210.53	ng/ml	97
32) Benzo(a)pyrene	13.15	252	124230	239.77	ng/ml	99
33) Perylene	13.40	252	194822	358.45	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.50	276	107619	211.83	ng/ml	96
35) Dibenz(a,h)anthracene	15.54	278	25396	49.31	ng/ml	93
36) Benzo(g,h,i)perylene	15.90	276	118617	199.37	ng/ml	95

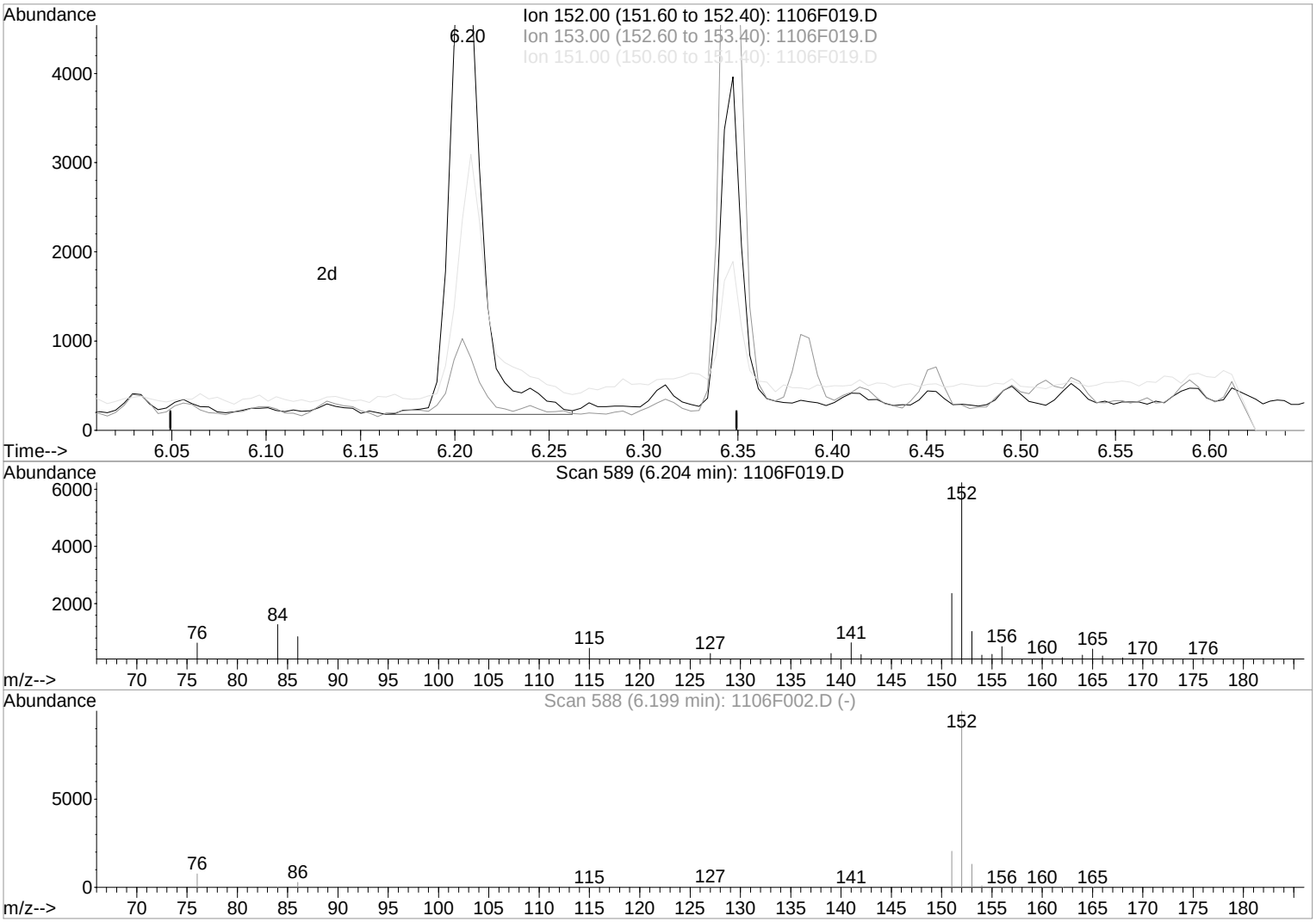
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F019.D Vial: 19
Acq On : 6 Nov 2018 1:44 pm Operator: LWeiskopf
Sample : K1810270-017DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 9:56 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F019.D

(9) Acenaphthylene (T)

6.20min 16.87ng/ml

response 6342

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	13.88
151.00	20.20	32.78
0.00	0.00	0.00

Manual Integration:

Before

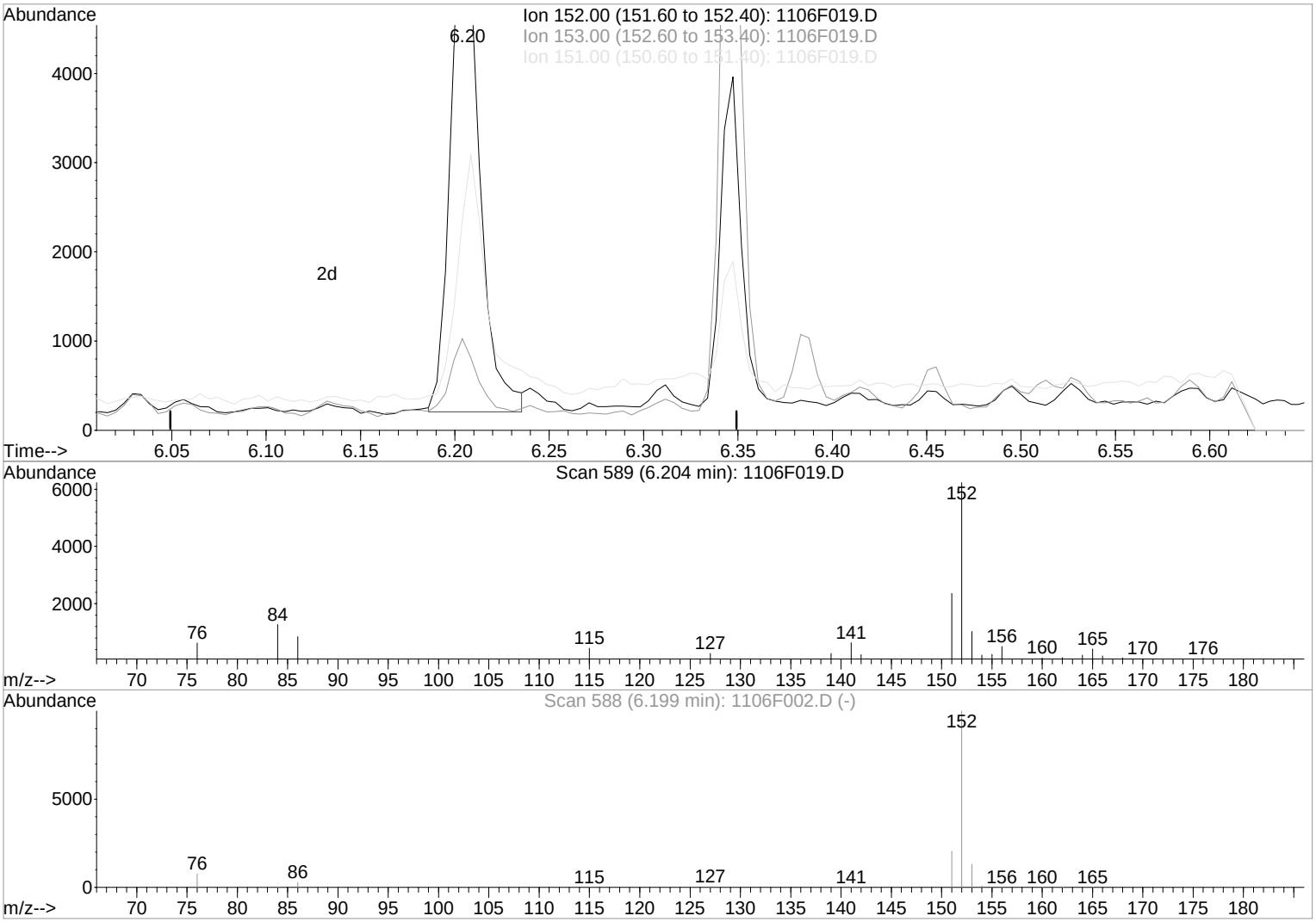
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F019.D Vial: 19
Acq On : 6 Nov 2018 1:44 pm Operator: LWeiskopf
Sample : K1810270-017DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:30 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F019.D

(9) Acenaphthylene (T)

6.20min 15.85ng/ml m

response 5958

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	16.48
151.00	20.20	37.79
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

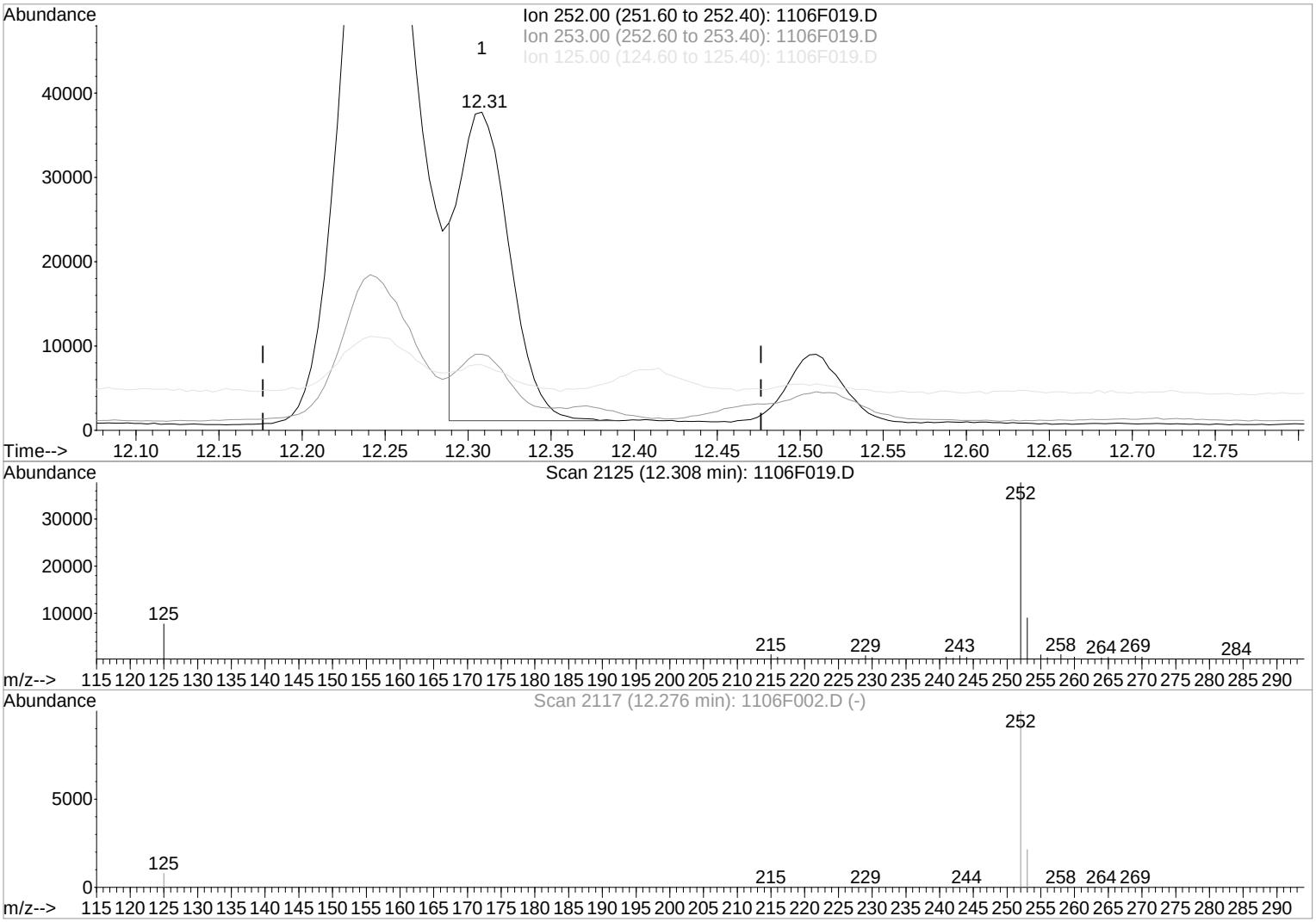
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F019.D Vial: 19
Acq On : 6 Nov 2018 1:44 pm Operator: LWeiskopf
Sample : K1810270-017DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:30 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F019.D

(30) Benzo(k)fluoranthene (T)

12.31min 131.48ng/ml

response 77059

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	19.02
125.00	9.70	3.86
0.00	0.00	0.00

Manual Integration:

Before

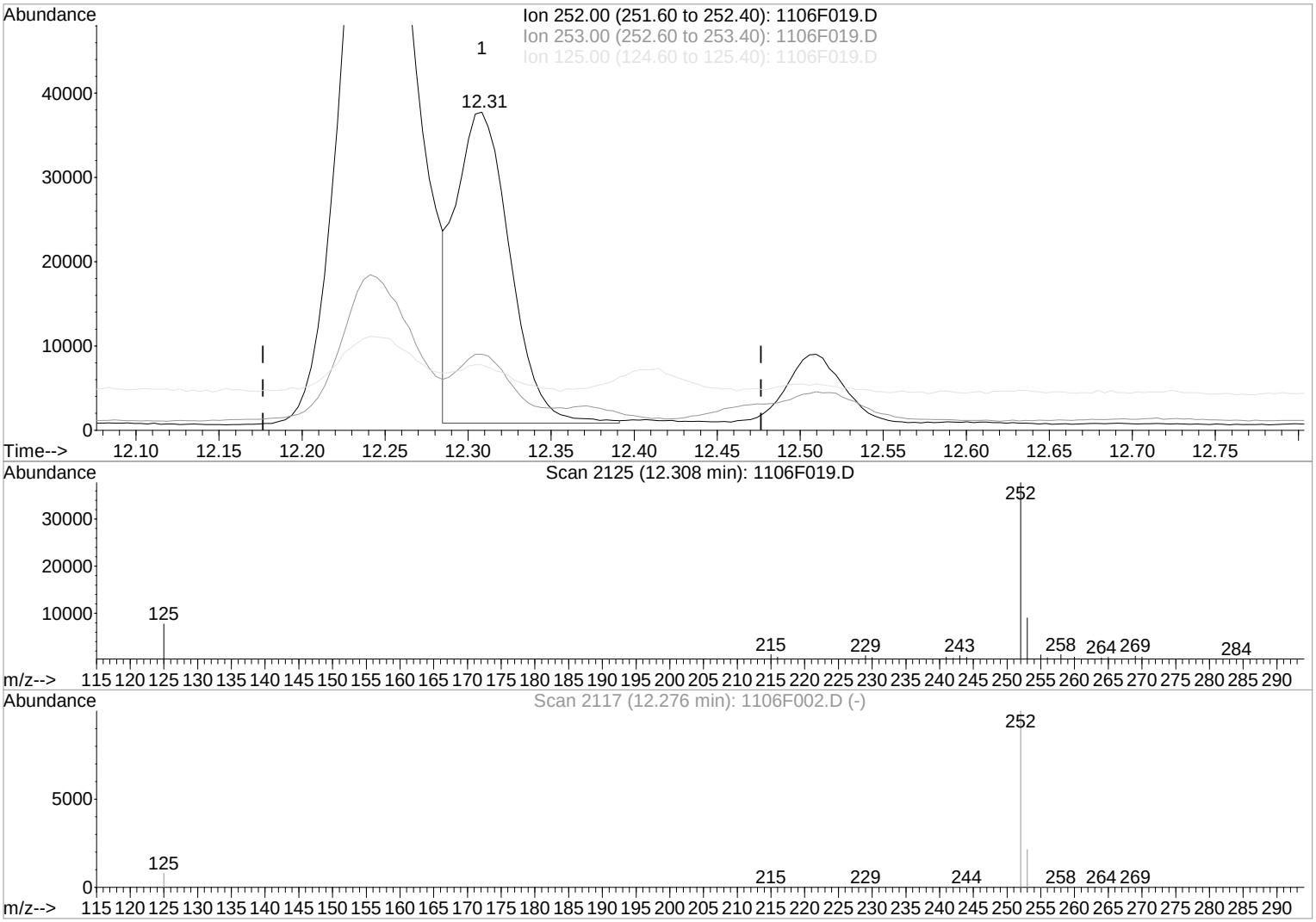
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F019.D Vial: 19
Acq On : 6 Nov 2018 1:44 pm Operator: LWeiskopf
Sample : K1810270-017DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:31 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F019.D

(30) Benzo(k)fluoranthene (T)

12.31min 144.29ng/ml m

response 84565

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	23.84
125.00	9.70	20.55
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F020.D
Lab ID: K1810270-018
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/06/2018 14:13
Date Quantitated: 11/16/2018 10:32
Batch ID: KWG1806026
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F020.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 14:13	**Quant Date:**	11/16/2018 10:32	**Vial:**	20
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-018			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700774	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	0.00	136	66491	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	30903	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	62644	200.00	OK
4	Chrysene-d12	10.12	0.01	240	82257	200.00	OK
5	Perylene-d12	13.34	0.07	264	95692	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	25980	131.48	66	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	58041	147.01	74	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	52097	146.02	73	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	8854	23.07	12	D	
1	2-Methylnaphthalene	5.42		0.00	142	2540	10.97	5.9	D	
2	Acenaphthylene	6.20		0.00	152	7661**m**	20.78	11	D	
2	Acenaphthene	6.35		0.00	154	3825	18.06	9.8	D	
2	Dibenzofuran	6.50		0.00	168	4636	13.64	7.4	D	
2	Fluorene	6.78		0.00	166	6177	24.11	13	D	
3	Phenanthrene	7.58		0.00	178	82973	212.32	110	D	
3	Anthracene	7.62		0.00	178	20302	54.42	29	D	
3	Fluoranthene	8.57	0.01	0.00	202	233181	483.24	260	D	
4	Pyrene	8.76	0.01	0.00	202	247738	438.97	240	D	
4	Benz(a)anthracene	10.11	0.02	0.00	228	121680	228.80	120	D	
4	Chrysene	10.16	0.01	0.00	228	182698	358.64	190	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/16/18
2nd 11/27/18

Data File:	J:\MS14\DATA\110618\1106F020.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 14:13	**Quant Date:**	11/16/2018 10:32	**Vial:**	20
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-018			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	228362	386.26	210	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	82222**m**	140.19	76	D	
5	Benzo(a)pyrene	13.17	0.07	0.00	252	138504	267.14	140	D	
5	Indeno(1,2,3-cd)pyrene	15.51	0.04	0.00	276	112582	221.44	120	D	
5	Dibenz(a,h)anthracene	15.55	0.04	0.00	278	25792**m**	50.05	27	D	
5	Benzo(g,h,i)perylene	15.92	0.06	0.00	276	131271	220.49	120	D	

Prep Amount:	40.319 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	45.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

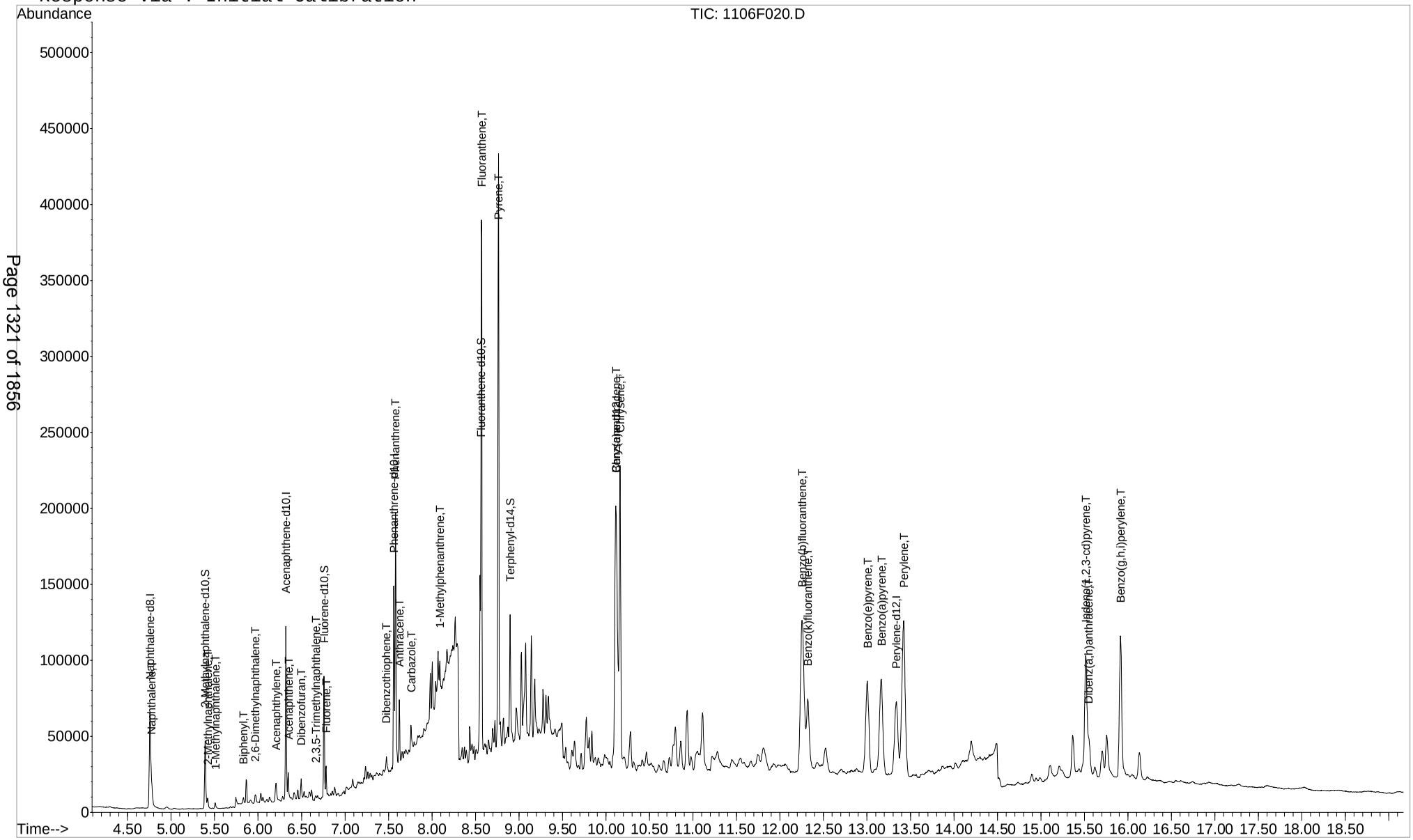
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

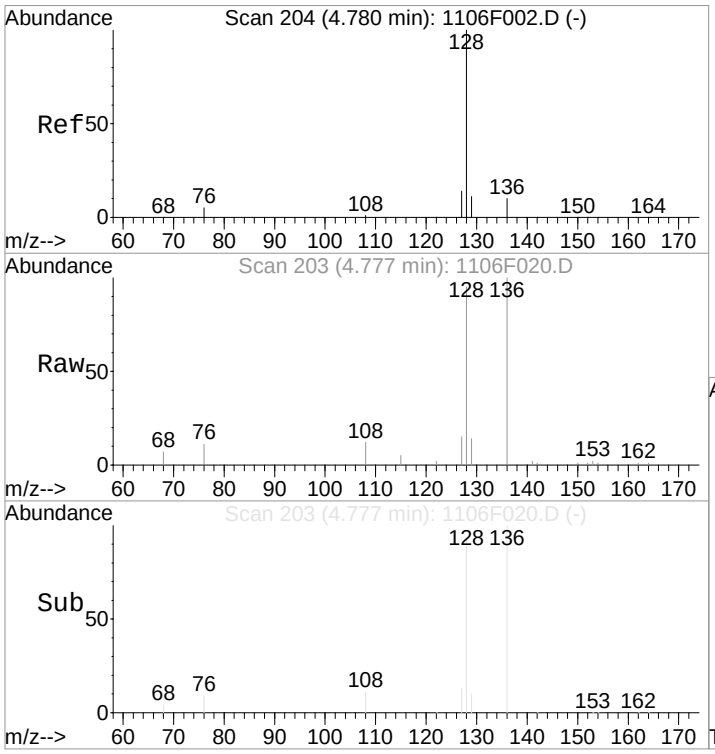
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:32 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



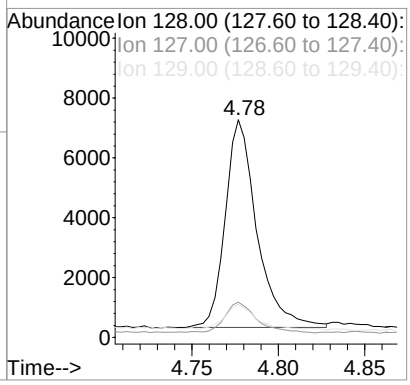
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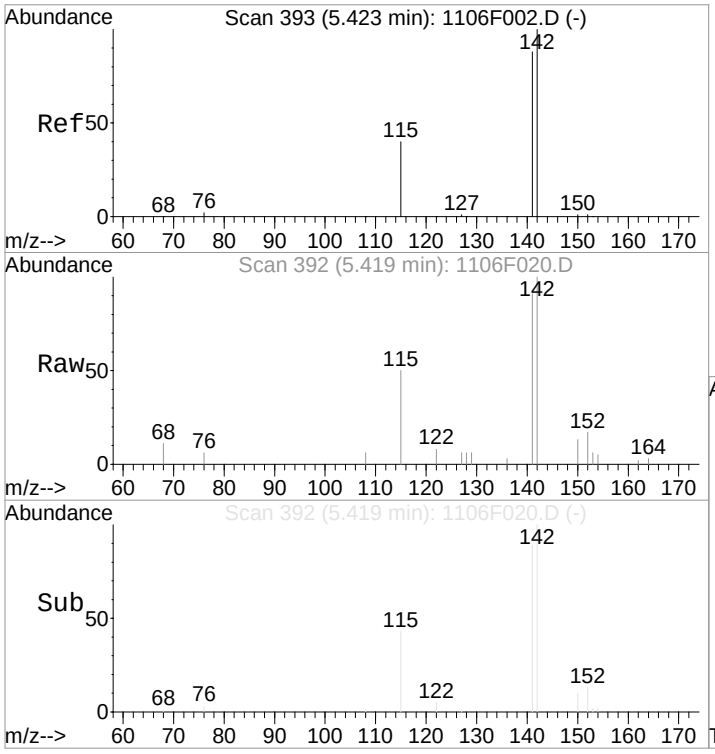


#2
Naphthalene
Concen: 23.07 ng/ml
RT: 4.78 min Scan# 203
Delta R.T. -0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:128 Resp: 8854

Ion	Ratio	Lower	Upper
128	100		
127	14.5	0.0	43.7
129	12.4	0.0	30.8

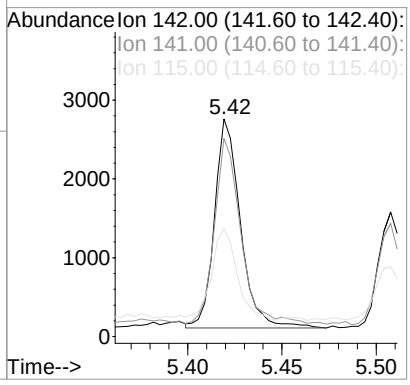




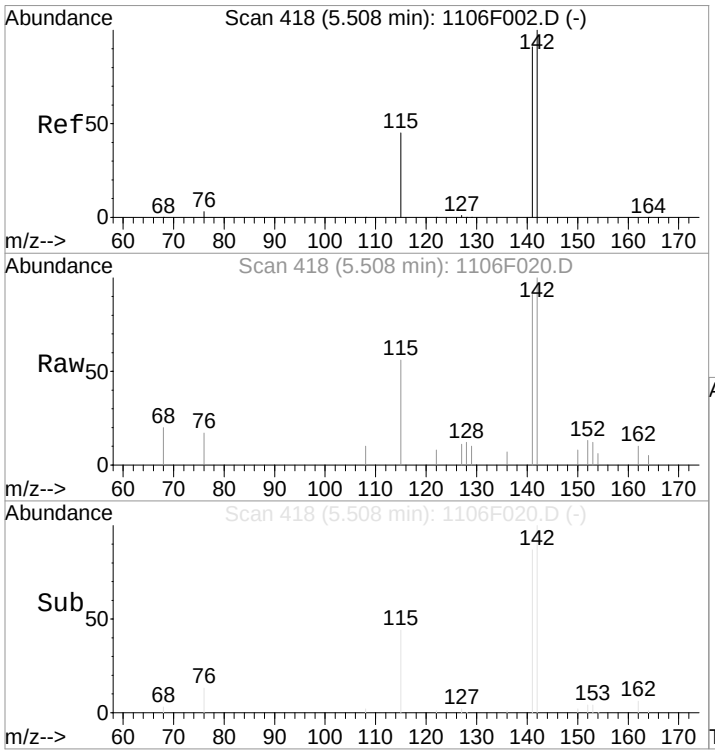
#4
2-Methylnaphthalene
Concen: 10.97 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:142 Resp: 2540

Ion	Ratio	Lower	Upper
142	100		
141	88.9	56.8	116.8
115	43.4	13.3	53.3



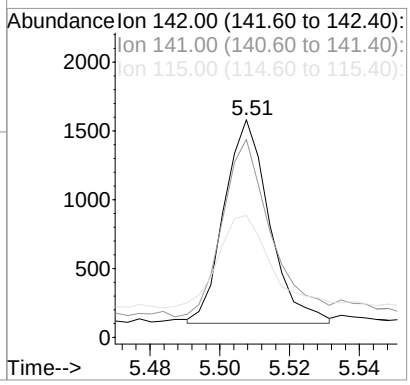
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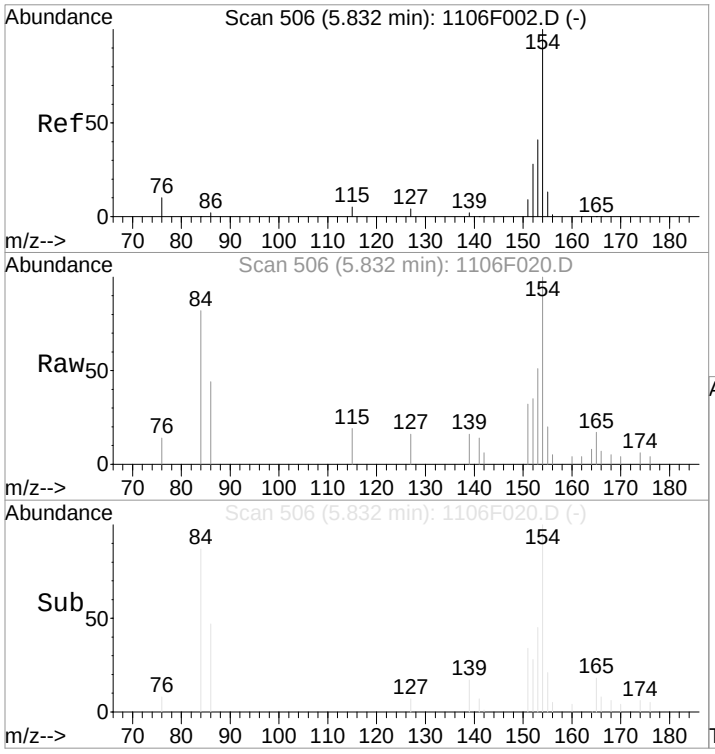


#5
1-Methylnaphthalene
Concen: 6.01 ng/ml m
RT: 5.51 min Scan# 418
Delta R.T. -0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:142 Resp: 1338

Ion	Ratio	Lower	Upper
142	100		
141	91.1	59.7	119.7
115	56.1	13.7	53.7#

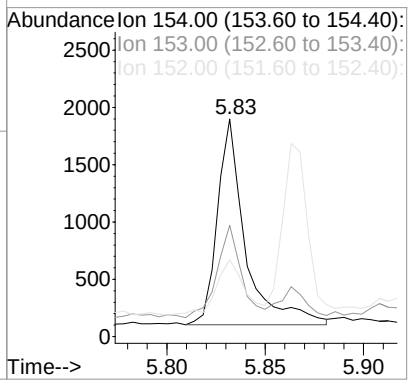




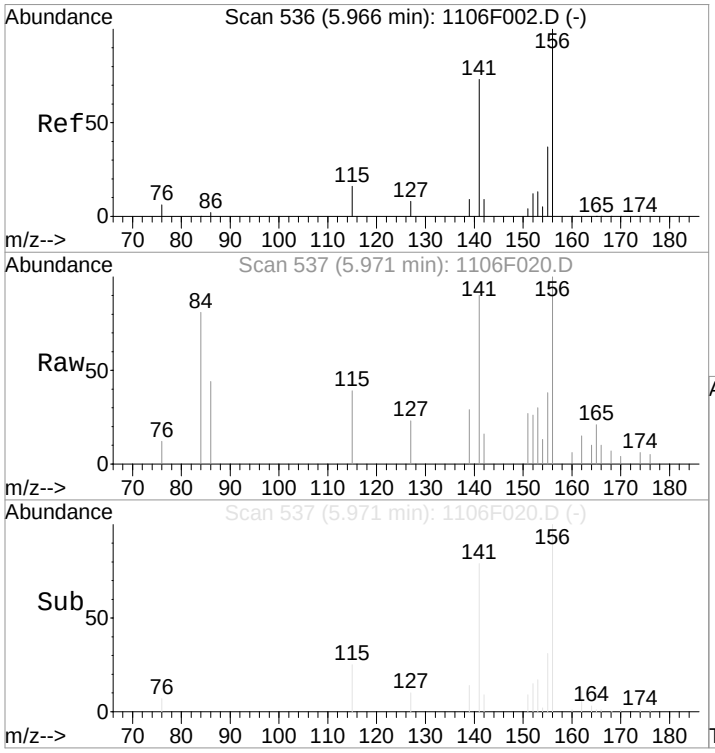
#6
Biphenyl
Concen: 6.20 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. -0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:154 Resp: 1790

Ion	Ratio	Lower	Upper
154	100		
153	45.0	11.4	71.4
152	25.9	7.1	47.1



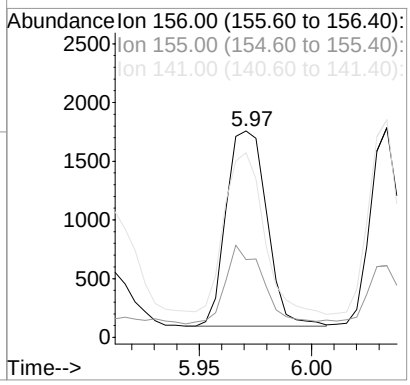
1st 11/16/18
2nd 11/27/18

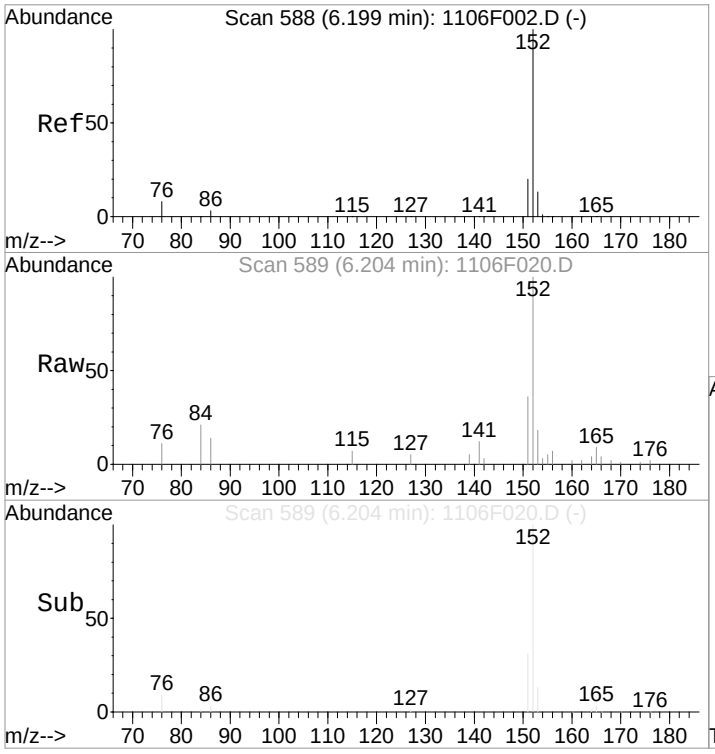


#7
2,6-Dimethylnaphthalene
Concen: 10.50 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:156 Resp: 2087

Ion	Ratio	Lower	Upper
156	100		
155	33.0	7.0	67.0
141	82.9	47.9	87.9

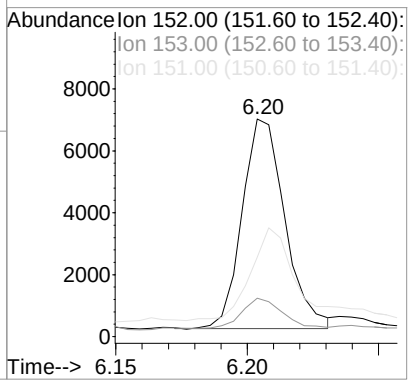




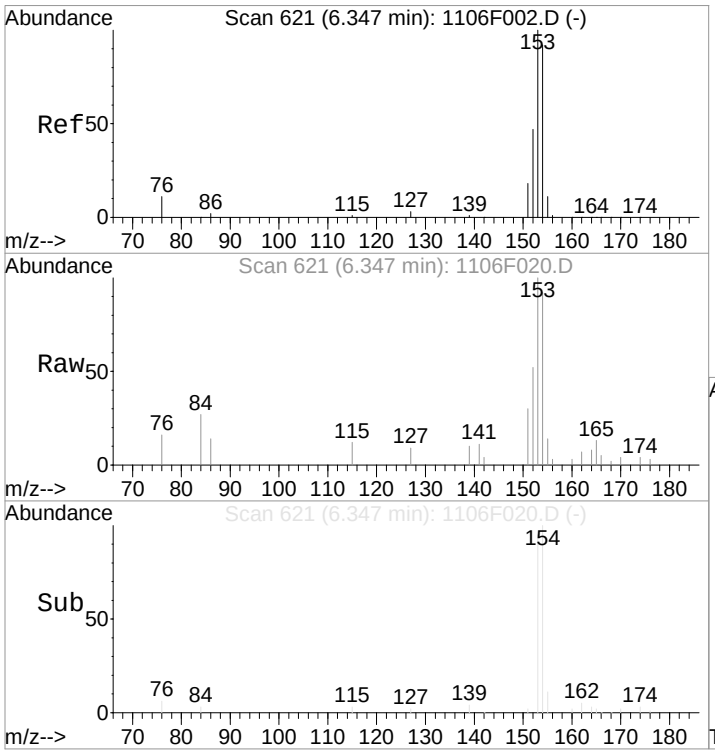
#9
Acenaphthylene
Concen: 20.78 ng/ml m
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:152 Resp: 7661

Ion	Ratio	Lower	Upper
152	100		
153	17.7	0.0	42.9
151	36.4	0.2	40.2



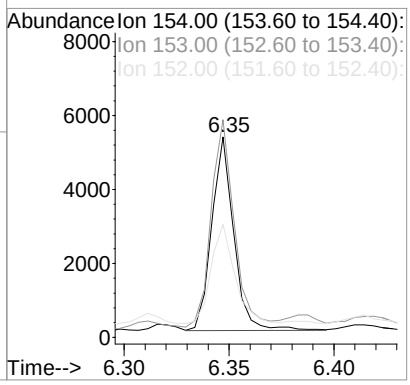
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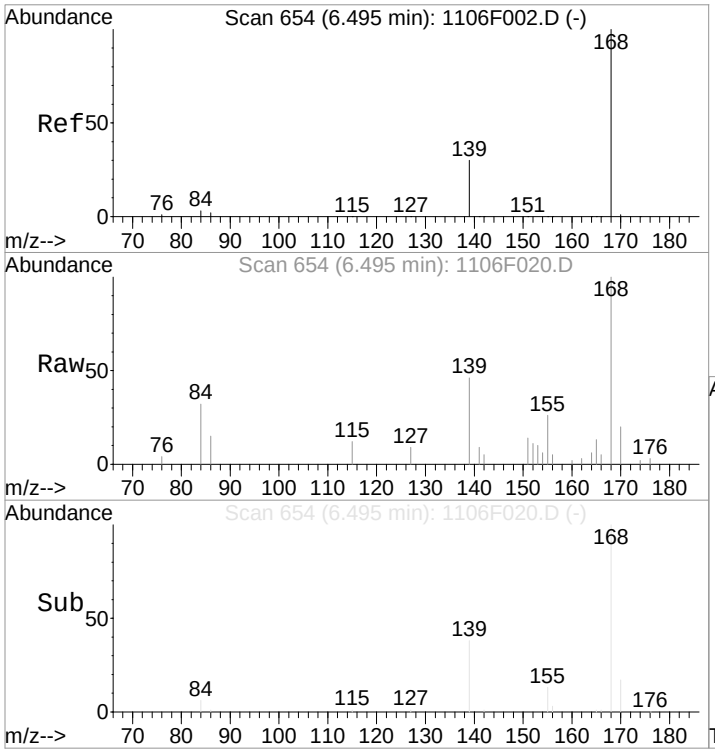


#10
Acenaphthene
Concen: 18.06 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. -0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:154 Resp: 3825

Ion	Ratio	Lower	Upper
154	100		
153	107.2	77.1	137.1
152	51.4	19.7	79.7

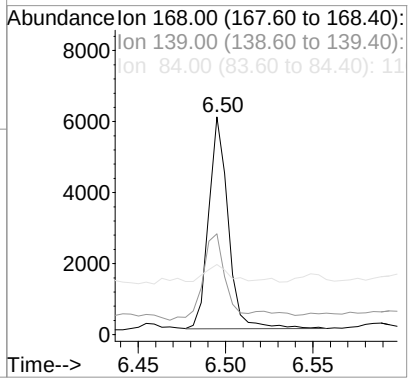




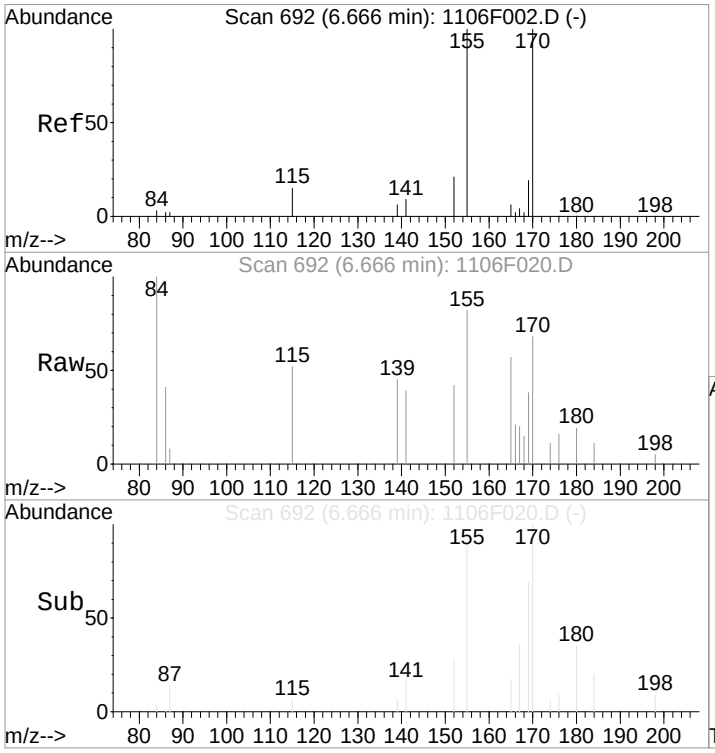
#11
Dibenzofuran
Concen: 13.64 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. -0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:168 Resp: 4636

Ion	Ratio	Lower	Upper
168	100		
139	39.6	0.0	55.8
84	8.0	0.0	23.5



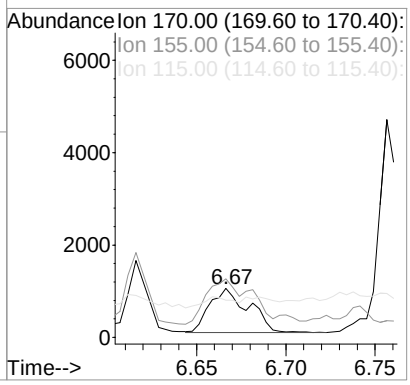
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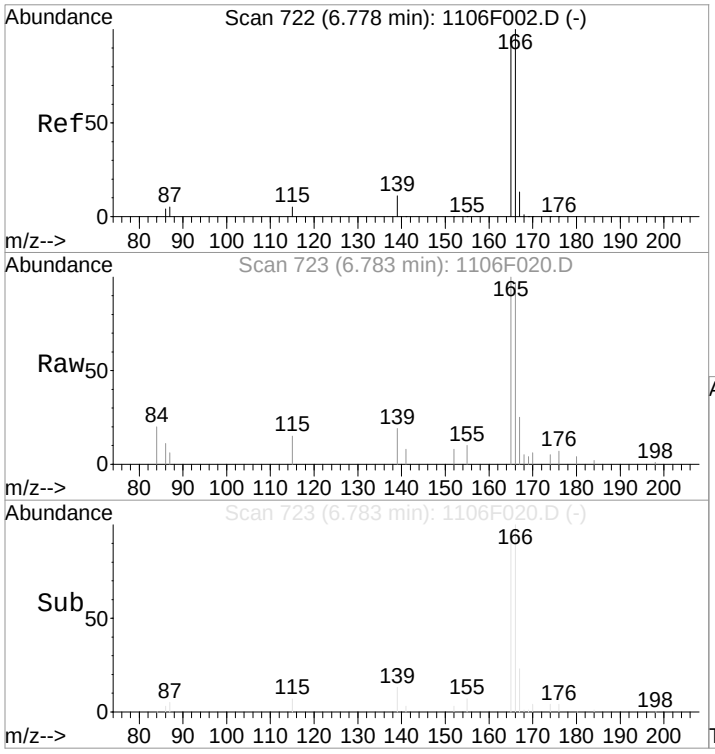


#12
2,3,5-Trimethylnaphthalene
Concen: 7.37 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:170 Resp: 1443

Ion	Ratio	Lower	Upper
170	100		
155	103.9	59.2	119.2
115	17.4	0.0	30.1

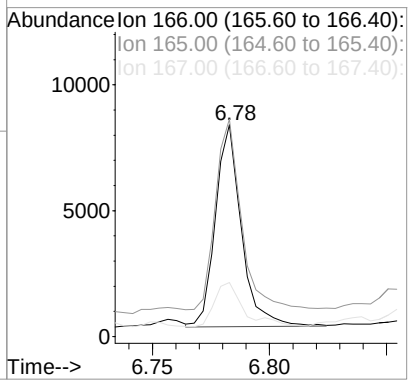




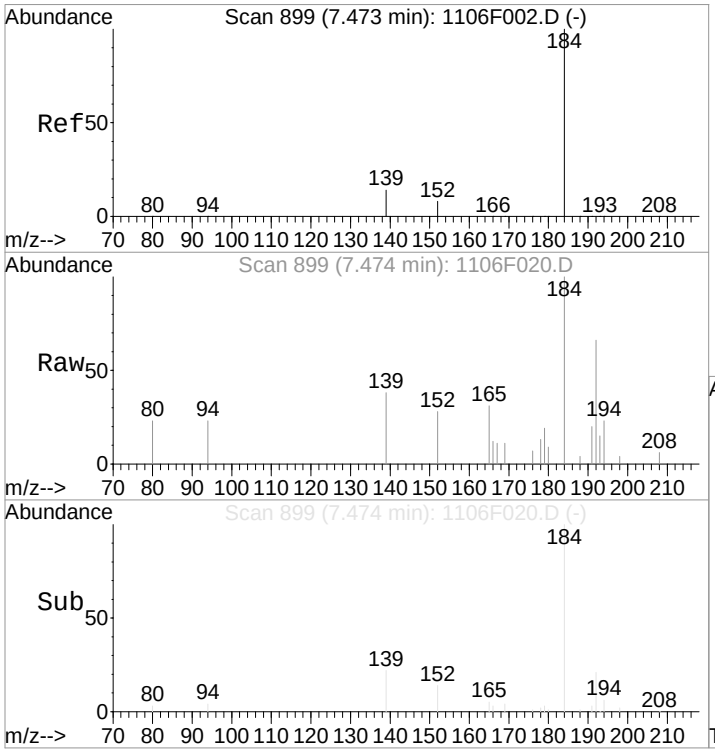
#14
Fluorene
Concen: 24.11 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:166 Resp: 6177

Ion	Ratio	Lower	Upper
166	100		
165	94.9	63.4	123.4
167	21.8	0.0	33.1



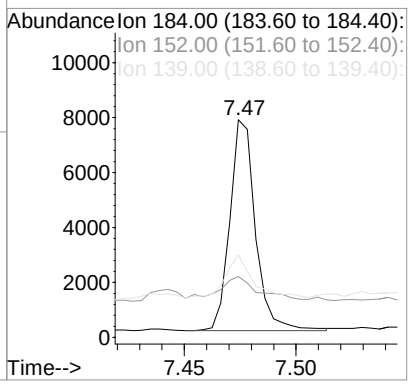
1st 11/16/18
2nd 11/27/18

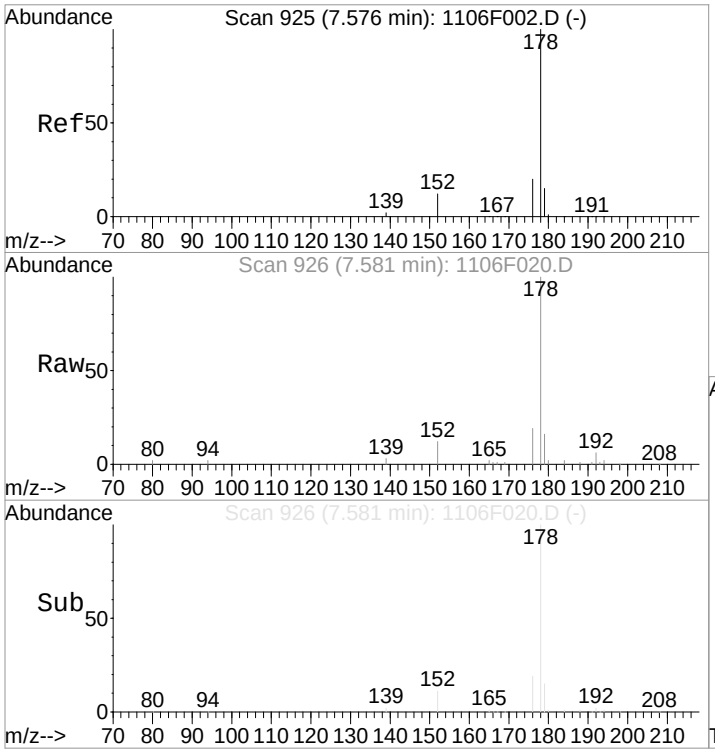


#16
Dibenzothiophene
Concen: 15.66 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:184 Resp: 6117

Ion	Ratio	Lower	Upper
184	100		
152	11.0	0.0	37.8
139	20.5	0.0	32.6

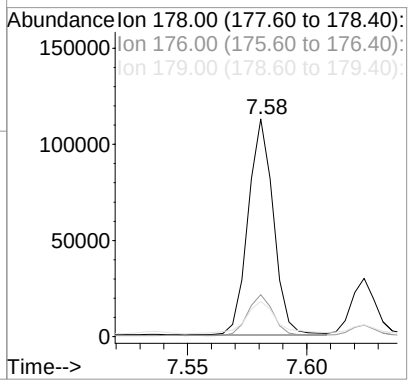




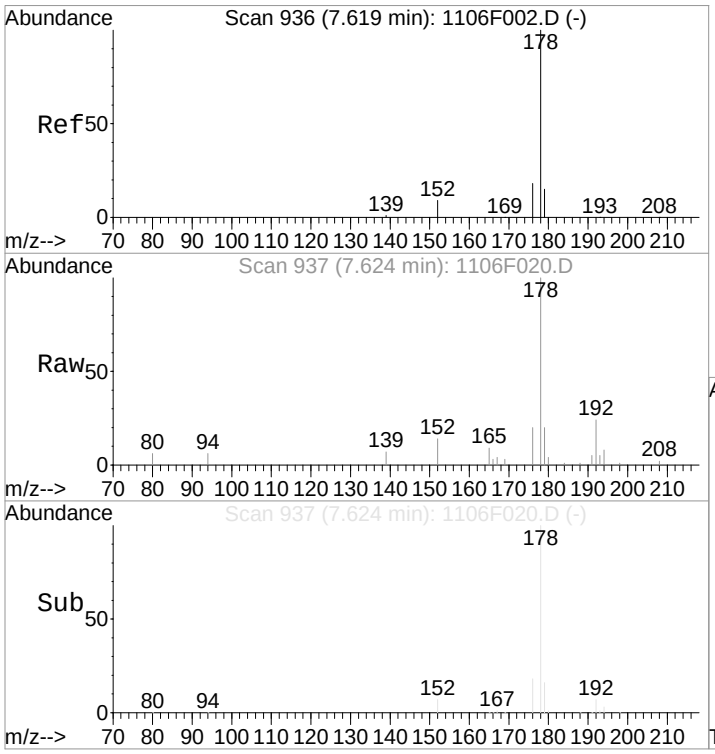
#17
Phenanthrene
Concen: 212.32 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:178 Resp: 82973

Ion	Ratio	Lower	Upper
178	100		
176	18.9	0.0	48.7
179	15.0	0.0	35.1



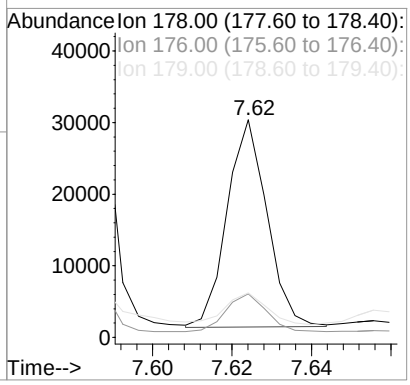
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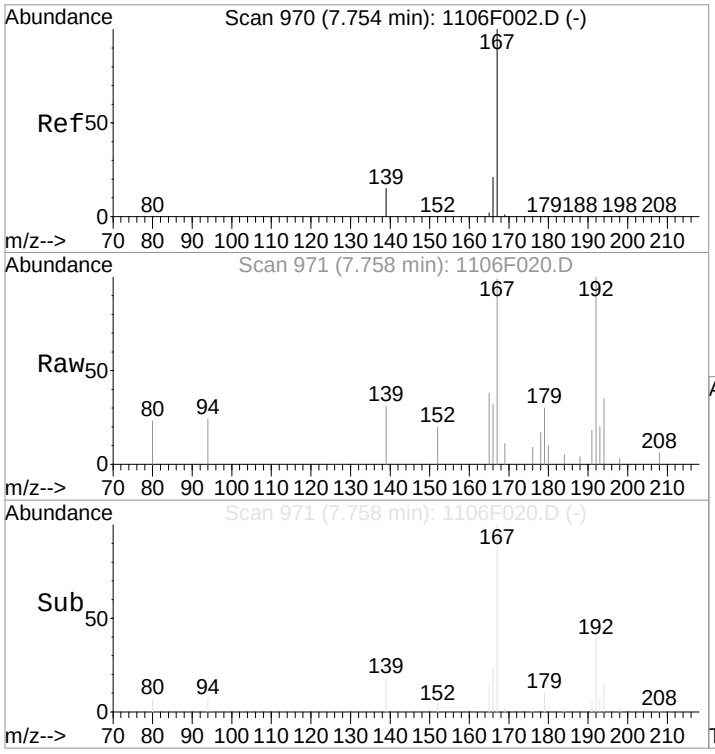


#18
Anthracene
Concen: 54.42 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:178 Resp: 20302

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	48.0
179	14.6	0.0	35.1

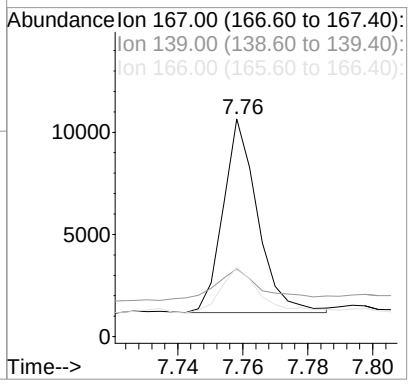




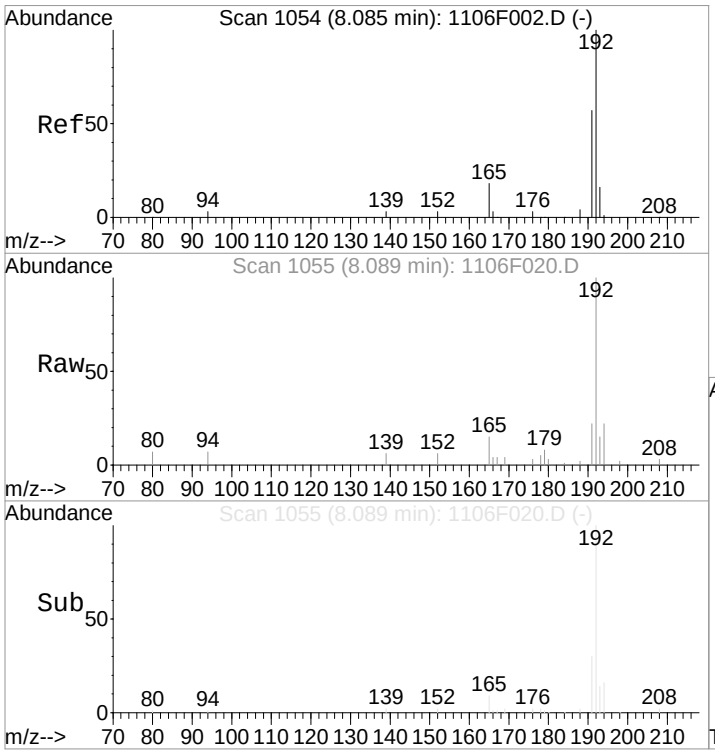
#19
Carbazole
Concen: 19.28 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:167 Resp: 7019

Ion	Ratio	Lower	Upper
167	100		
139	15.0	0.0	41.5
166	23.5	0.7	40.7



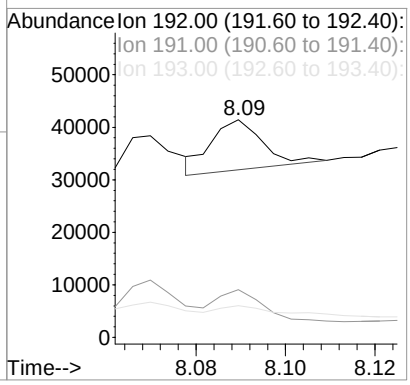
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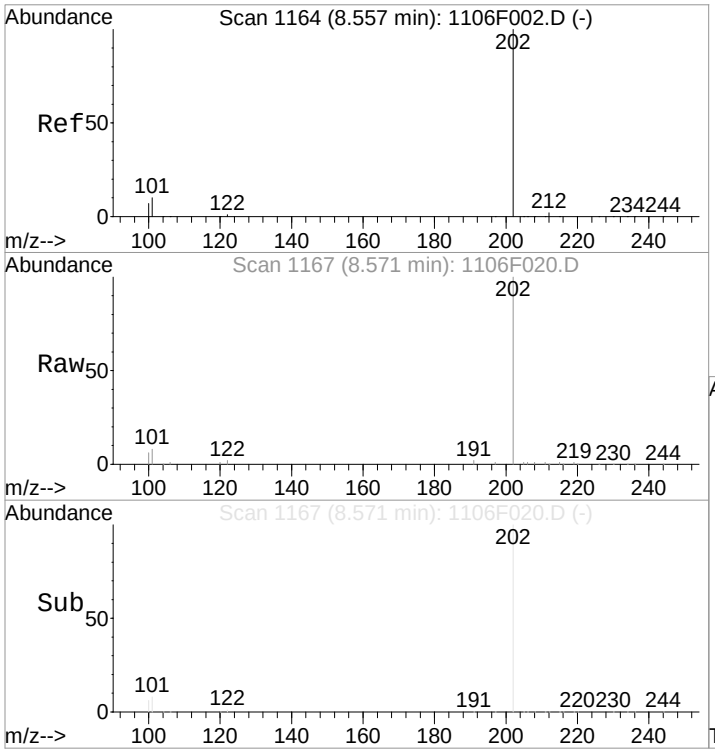


#20
1-Methylphenanthrene
Concen: 26.28 ng/ml
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:192 Resp: 7779

Ion	Ratio	Lower	Upper
192	100		
191	77.4	27.7	87.7
193	20.5	0.0	45.4

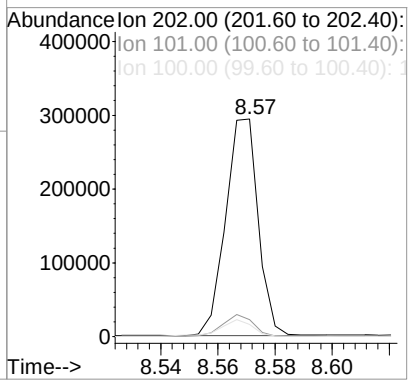




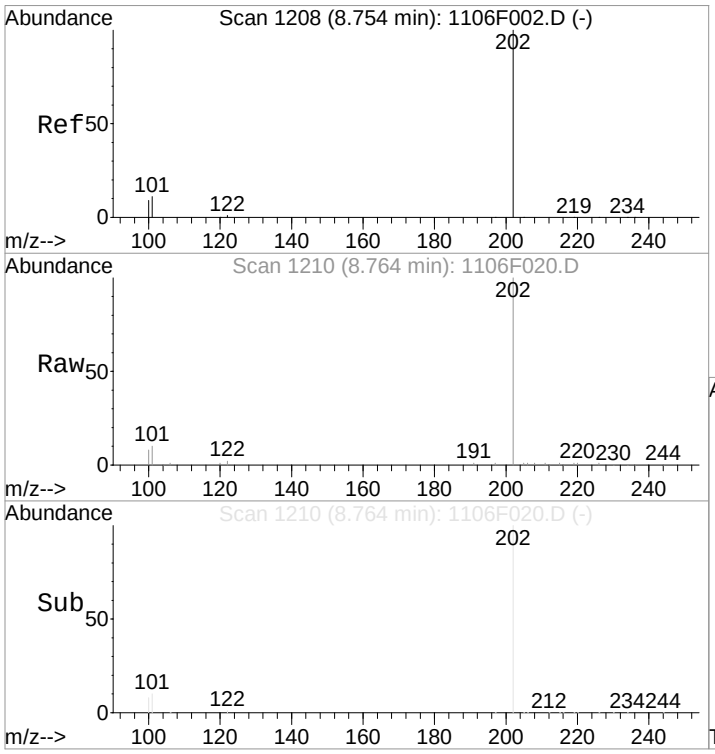
#21
Fluoranthene
Concen: 483.24 ng/ml
RT: 8.57 min Scan# 1167
Delta R.T. 0.01 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:202 Resp: 233181

Ion	Ratio	Lower	Upper
202	100		
101	7.7	0.0	41.3
100	5.5	0.0	28.6



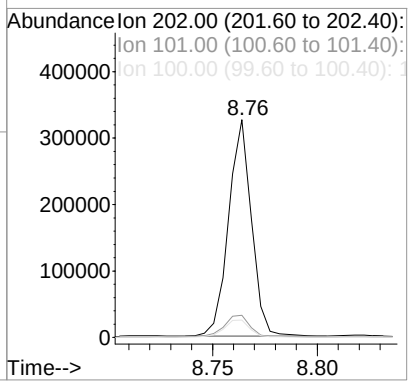
1st 11/16/18
2nd 11/27/18

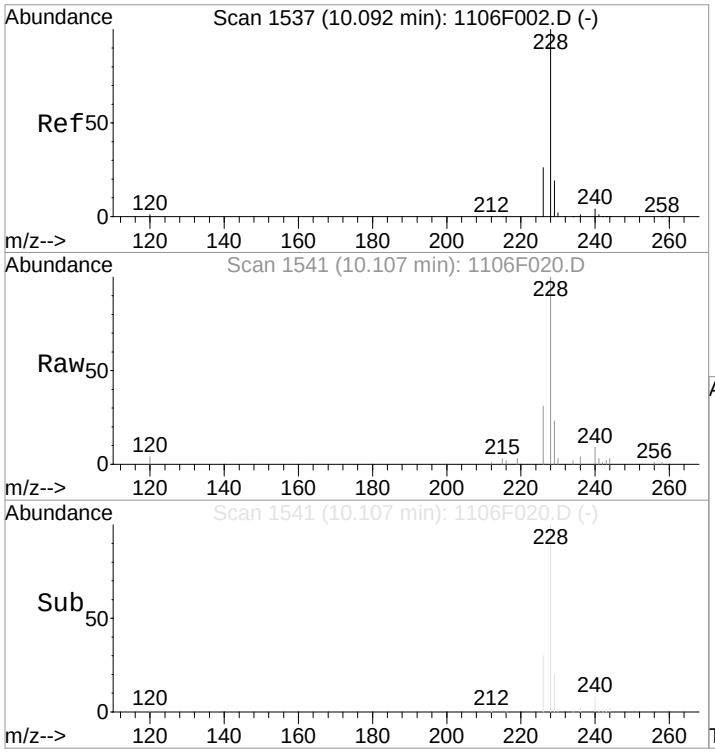


#24
Pyrene
Concen: 438.97 ng/ml
RT: 8.76 min Scan# 1210
Delta R.T. 0.01 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:202 Resp: 247738

Ion	Ratio	Lower	Upper
202	100		
101	10.1	0.0	40.8
100	7.9	0.0	28.5

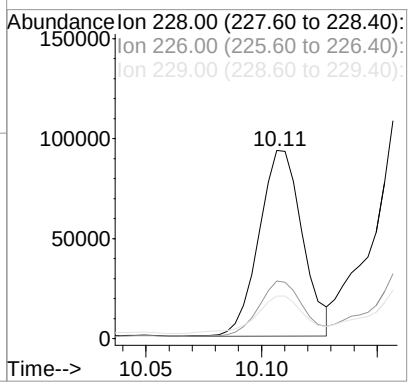




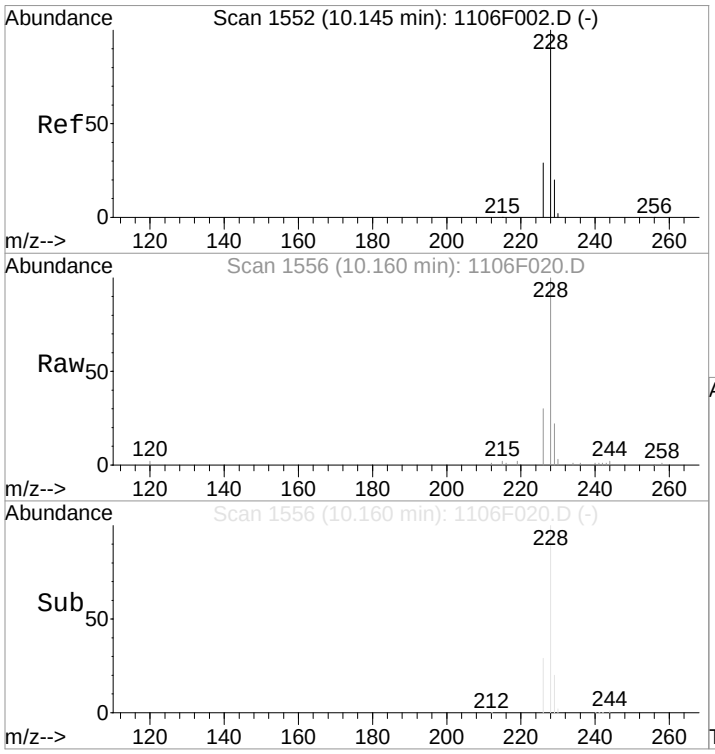
#26
Benz(a)anthracene
Concen: 228.80 ng/ml
RT: 10.11 min Scan# 1541
Delta R.T. 0.02 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:228 Resp: 121680

Ion	Ratio	Lower	Upper
228	100		
226	29.7	0.0	56.3
229	20.1	0.0	39.1



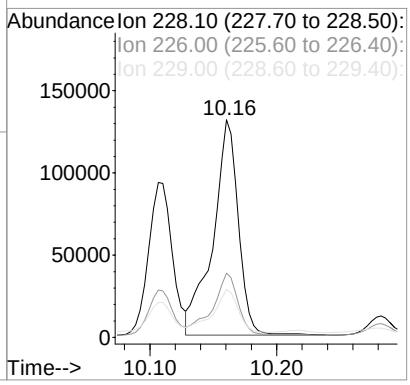
1st 11/16/18
2nd 11/27/18

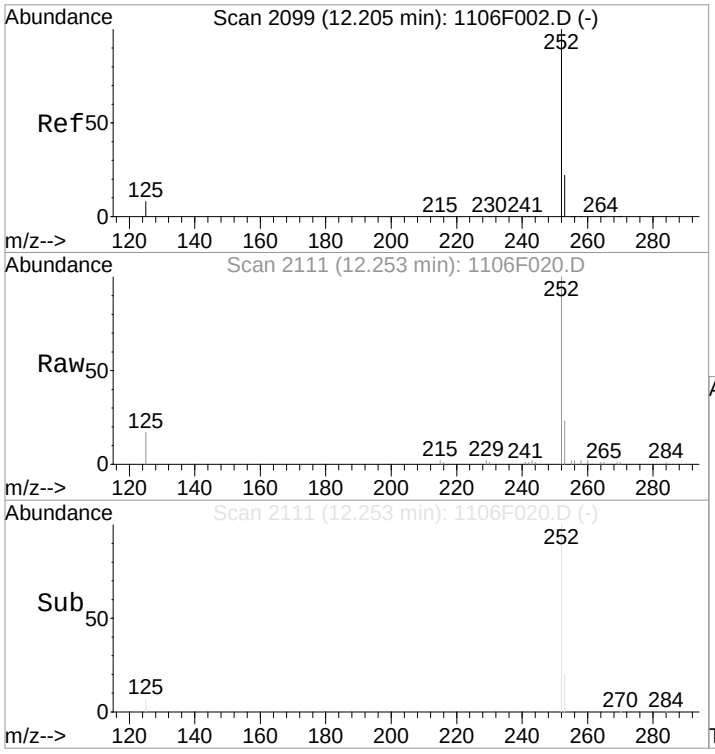


#27
Chrysene
Concen: 358.64 ng/ml
RT: 10.16 min Scan# 1556
Delta R.T. 0.02 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:228 Resp: 182698

Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	58.7
229	20.1	0.0	39.2

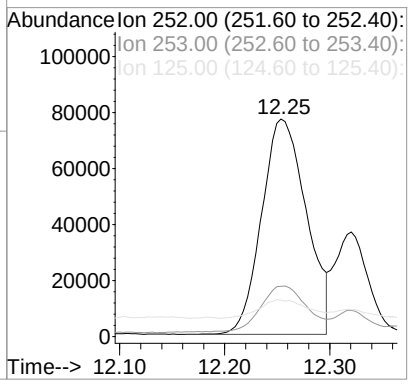




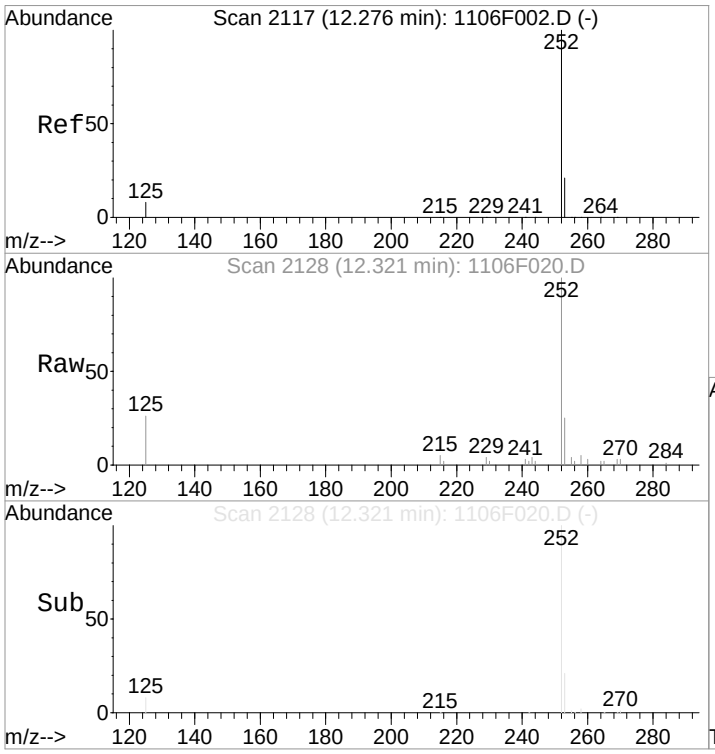
#29
Benzo(b)fluoranthene
Concen: 386.26 ng/ml
RT: 12.25 min Scan# 2111
Delta R.T. 0.05 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:252 Resp: 228362

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.2
125	8.4	0.0	29.5



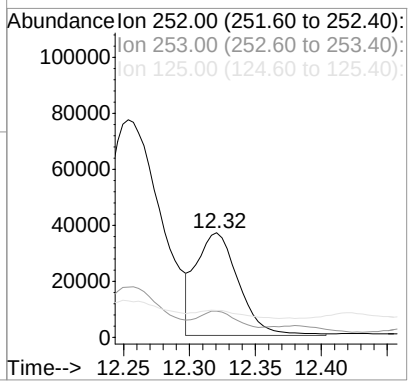
1st 11/16/18
2nd 11/27/18

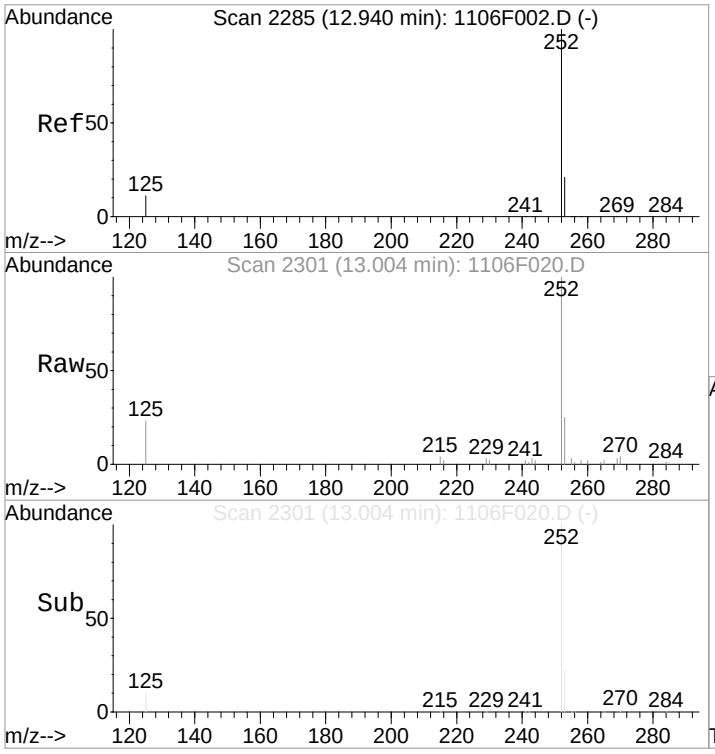


#30
Benzo(k)fluoranthene
Concen: 140.19 ng/ml m
RT: 12.32 min Scan# 2128
Delta R.T. 0.04 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:252 Resp: 82222

Ion	Ratio	Lower	Upper
252	100		
253	25.1	0.0	51.2
125	25.8	0.0	29.7

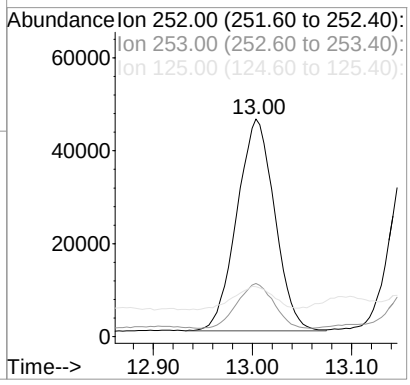




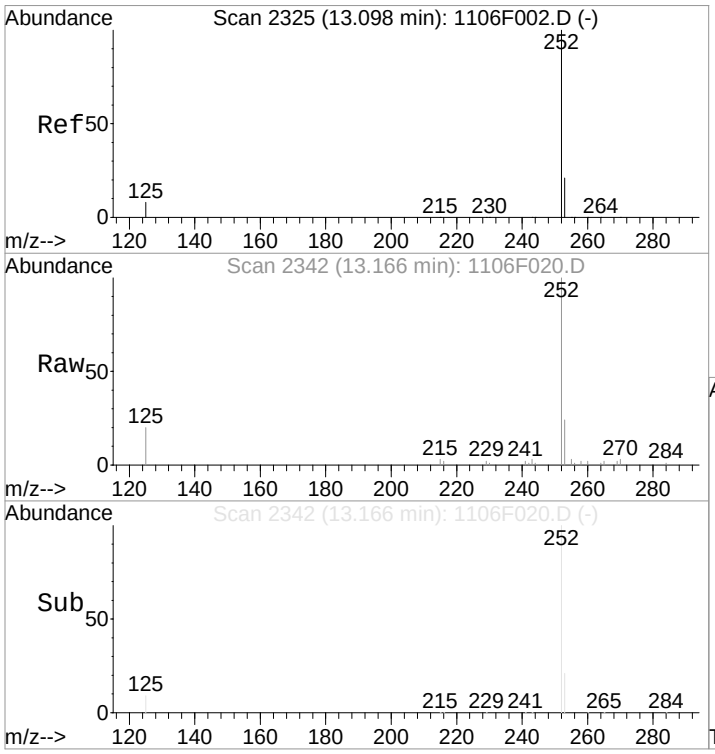
#31
Benzo(e)pyrene
Concen: 214.04 ng/ml
RT: 13.00 min Scan# 2301
Delta R.T. 0.06 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:252 Resp: 120616

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.3
125	10.7	0.0	33.5



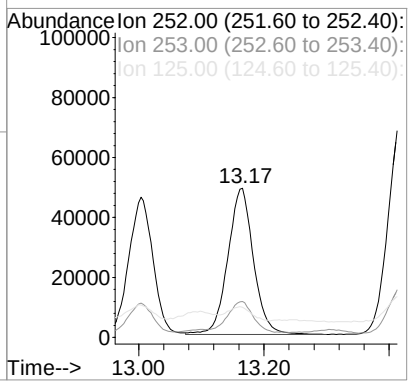
1st 11/16/18
2nd 11/27/18

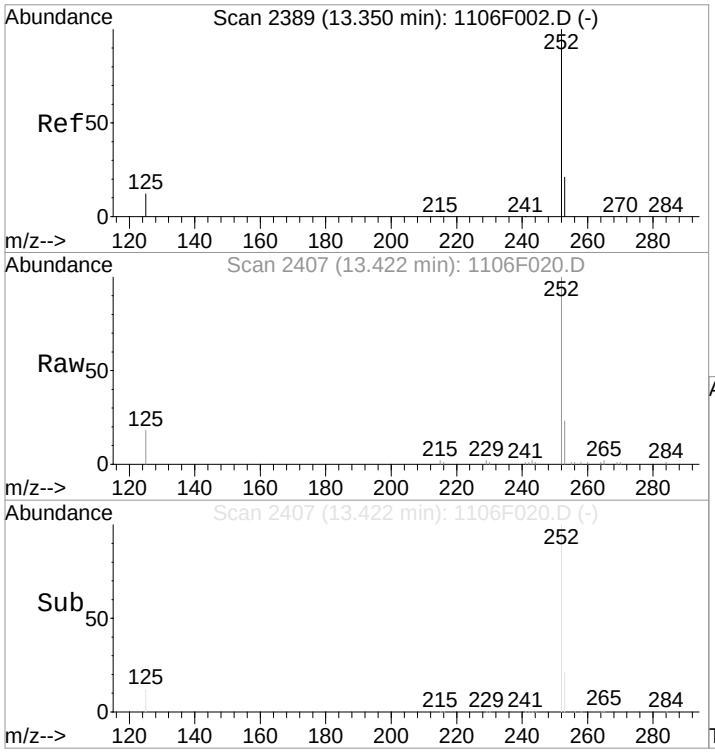


#32
Benzo(a)pyrene
Concen: 267.14 ng/ml
RT: 13.17 min Scan# 2342
Delta R.T. 0.07 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:252 Resp: 138504

Ion	Ratio	Lower	Upper
252	100		
253	20.1	0.0	50.9
125	9.9	0.0	30.3

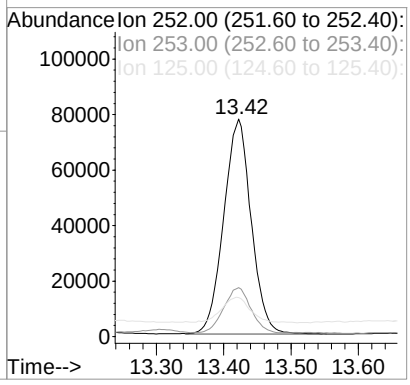




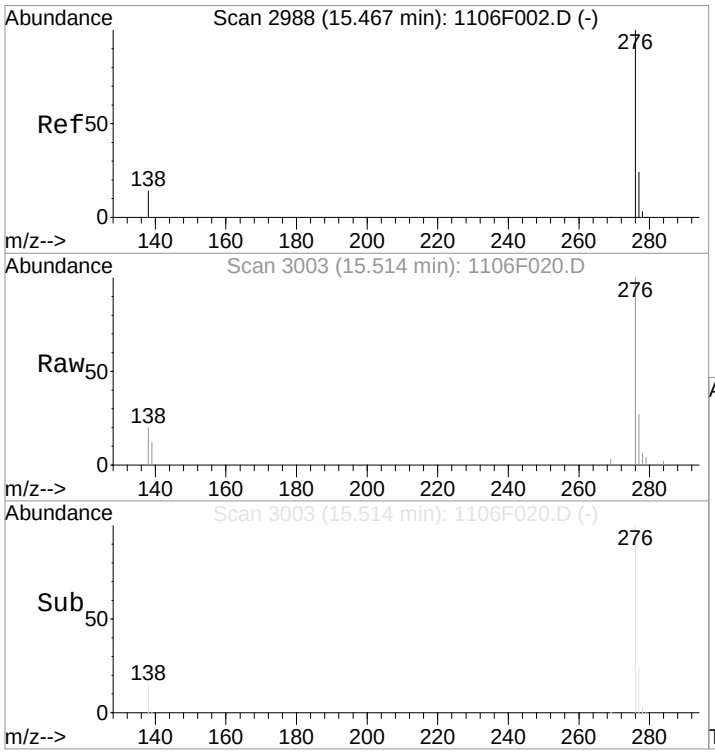
#33
Perylene
Concen: 403.00 ng/ml
RT: 13.42 min Scan# 2407
Delta R.T. 0.07 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:252 Resp: 219183

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.2
125	11.2	0.0	33.8



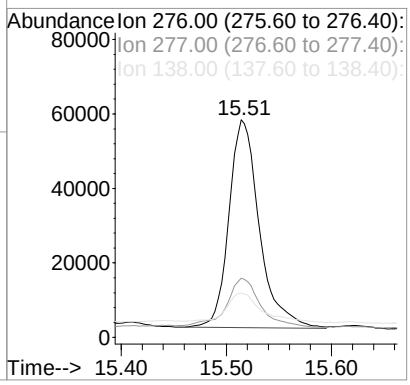
1st 11/16/18
2nd 11/27/18

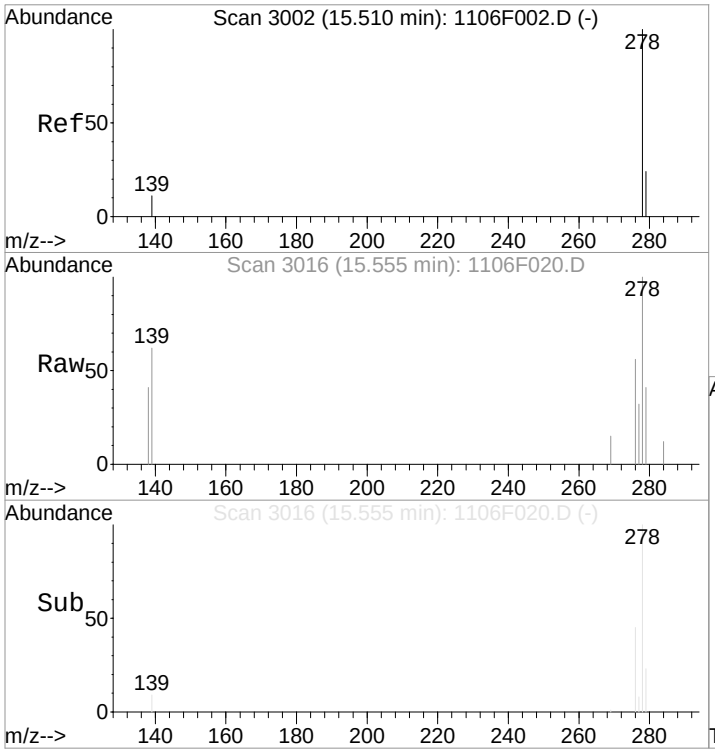


#34
Indeno(1,2,3-cd)pyrene
Concen: 221.44 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. 0.05 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:276 Resp: 112582

Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	53.4
138	14.2	0.0	37.7

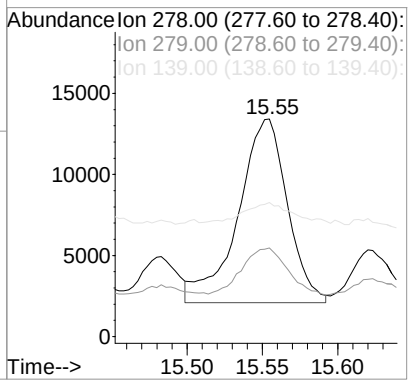


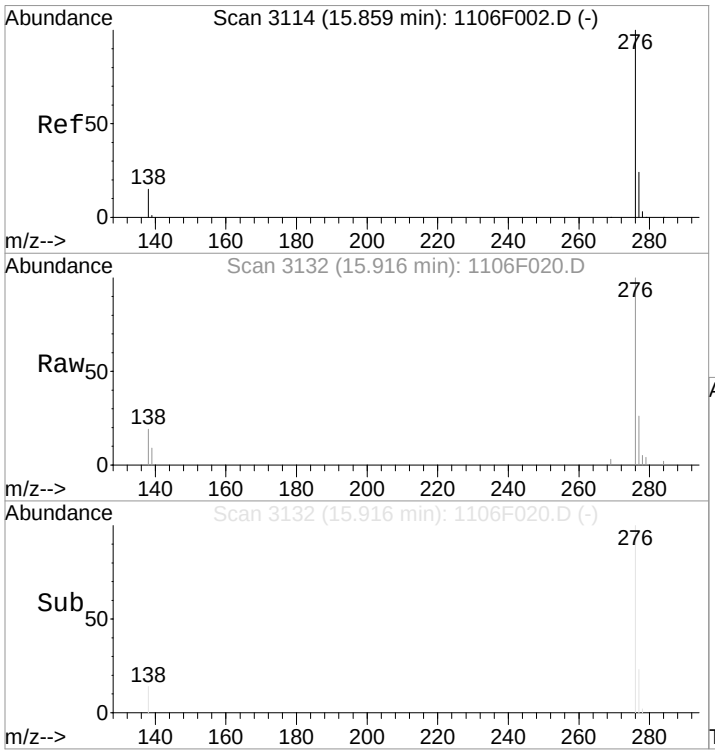


#35
Dibenz(a,h)anthracene
Concen: 50.05 ng/ml m
RT: 15.55 min Scan# 3016
Delta R.T. 0.04 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:278 Resp: 25792

Ion	Ratio	Lower	Upper
278	100		
279	40.8	0.0	53.5
139	61.7	0.0	35.0#

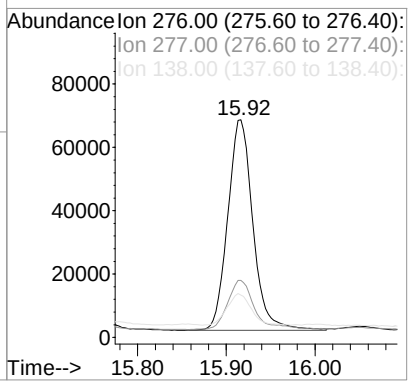




#36
Benzo(g,h,i)perylene
Concen: 220.49 ng/ml
RT: 15.92 min Scan# 3132
Delta R.T. 0.06 min
Lab File: 1106F020.D
Acq: 6 Nov 2018 2:13 pm

Tgt Ion:276 Resp: 131271

Ion	Ratio	Lower	Upper
276	100		
277	23.3	0.0	53.1
138	14.0	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:53 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	66491	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	30903	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	62644	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	82257	200.00	ng/ml	0.02
28) Perylene-d12	13.34	264	95692	200.00	ng/ml	0.07
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	16774	90.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.04%		
13) Fluorene-d10	6.76	176	25980	131.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.15%		
22) Fluoranthene-d10	8.55	212	58041	147.01	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.70%		
25) Terphenyl-d14	8.90	244	52097	146.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.60%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	8854	23.07	ng/ml	97
4) 2-Methylnaphthalene	5.42	142	2540	10.97	ng/ml	93
5) 1-Methylnaphthalene	5.51	142	1338m	6.01	ng/ml	
6) Biphenyl	5.83	154	1790	6.20	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.97	156	2087	10.50	ng/ml	86
9) Acenaphthylene	6.20	152	7661m	20.78	ng/ml	
10) Acenaphthene	6.35	154	3825	18.06	ng/ml	99
11) Dibenzofuran	6.50	168	4636	13.64	ng/ml	75
12) 2,3,5-Trimethylnaphthalene	6.67	170	1443	7.37	ng/ml	84
14) Fluorene	6.78	166	6177	24.11	ng/ml	96
16) Dibenzothiophene	7.47	184	6117	15.66	ng/ml	84
17) Phenanthrene	7.58	178	82973	212.32	ng/ml	100
18) Anthracene	7.62	178	20302	54.42	ng/ml	99
19) Carbazole	7.76	167	7019	19.28	ng/ml	93
20) 1-Methylphenanthrene	8.09	192	7779	26.28	ng/ml	76
21) Fluoranthene	8.57	202	233181	483.24	ng/ml	91
24) Pyrene	8.76	202	247738	438.97	ng/ml	98
26) Benz(a)anthracene	10.11	228	121680	228.80	ng/ml	95
27) Chrysene	10.16	228	182698	358.64	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	228362	386.26	ng/ml	99
30) Benzo(k)fluoranthene	12.32	252	82222m	140.19	ng/ml	
31) Benzo(e)pyrene	13.00	252	120616	214.04	ng/ml	97
32) Benzo(a)pyrene	13.17	252	138504	267.14	ng/ml	98
33) Perylene	13.42	252	219183	403.00	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.51	276	112582	221.44	ng/ml	96
35) Dibenz(a,h)anthracene	15.55	278	25792m	50.05	ng/ml	
36) Benzo(g,h,i)perylene	15.92	276	131271	220.49	ng/ml	95

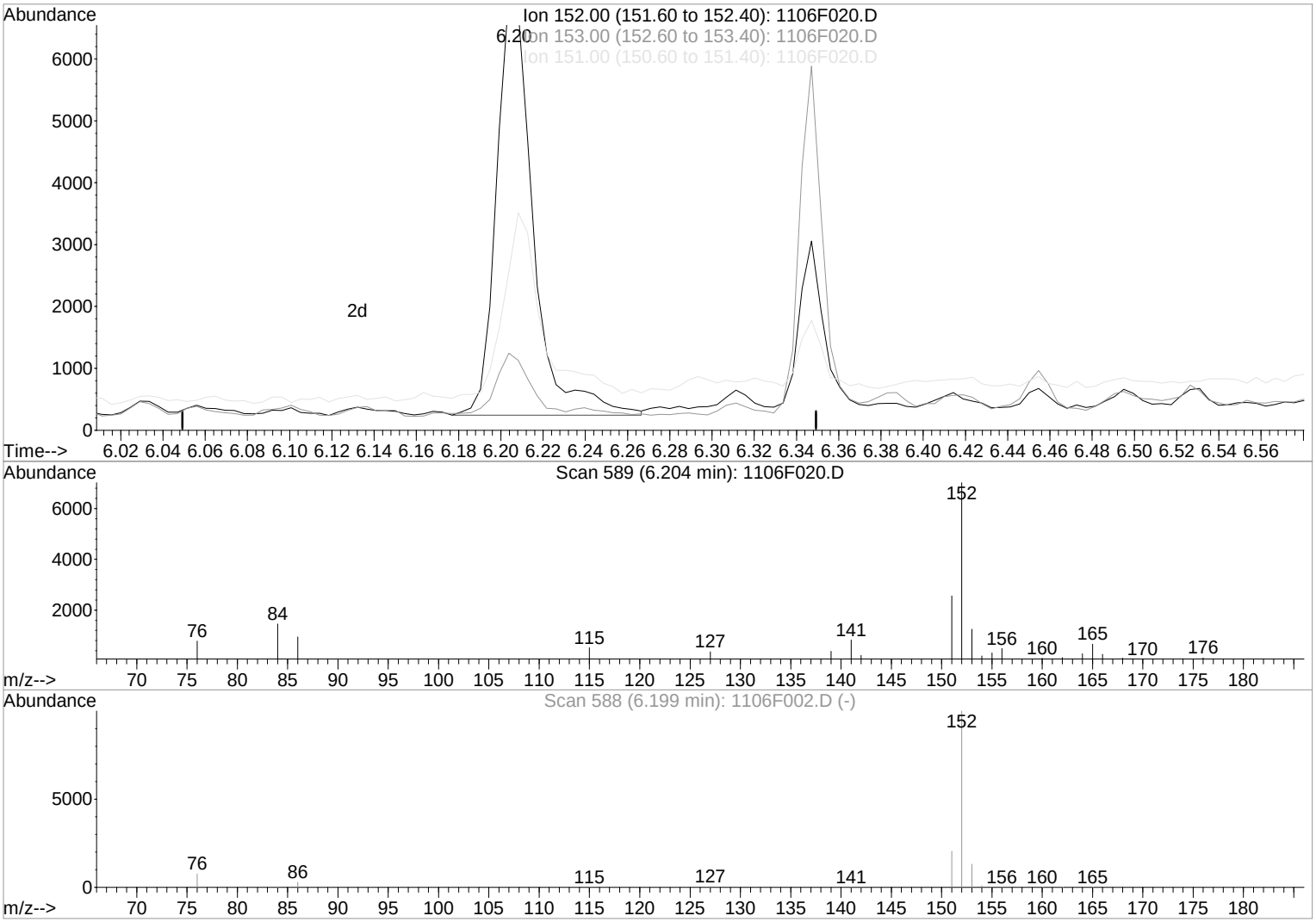
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:31 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F020.D

(9) Acenaphthylene (T)

6.20min 22.23ng/ml

response 8197

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	14.45
151.00	20.20	30.18
0.00	0.00	0.00

Manual Integration:

Before

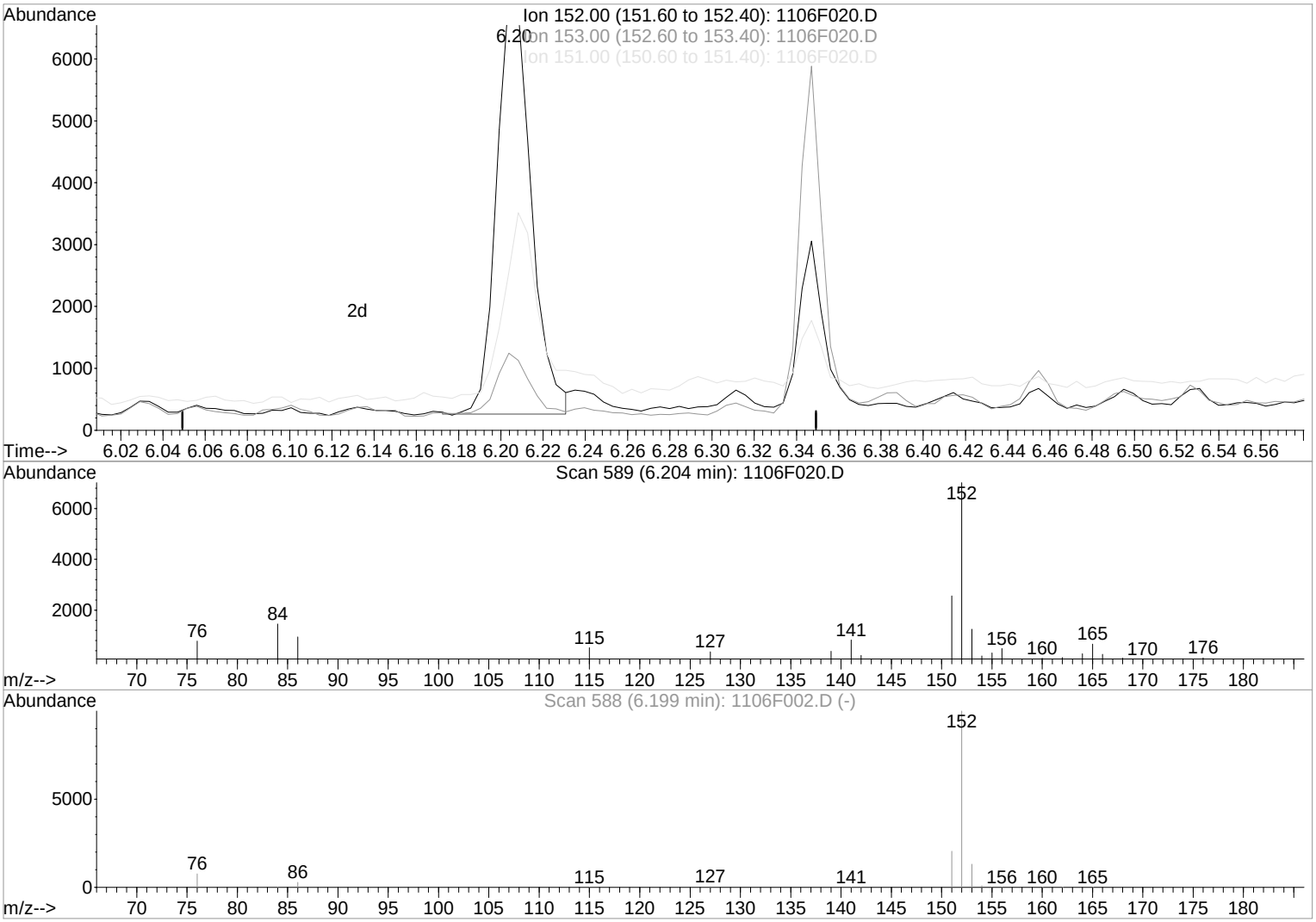
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:31 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F020.D

(9) Acenaphthylene (T)

6.20min 20.78ng/ml m

response 7661

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	17.74
151.00	20.20	36.44
0.00	0.00	0.00

Manual Integration:

After

BLC

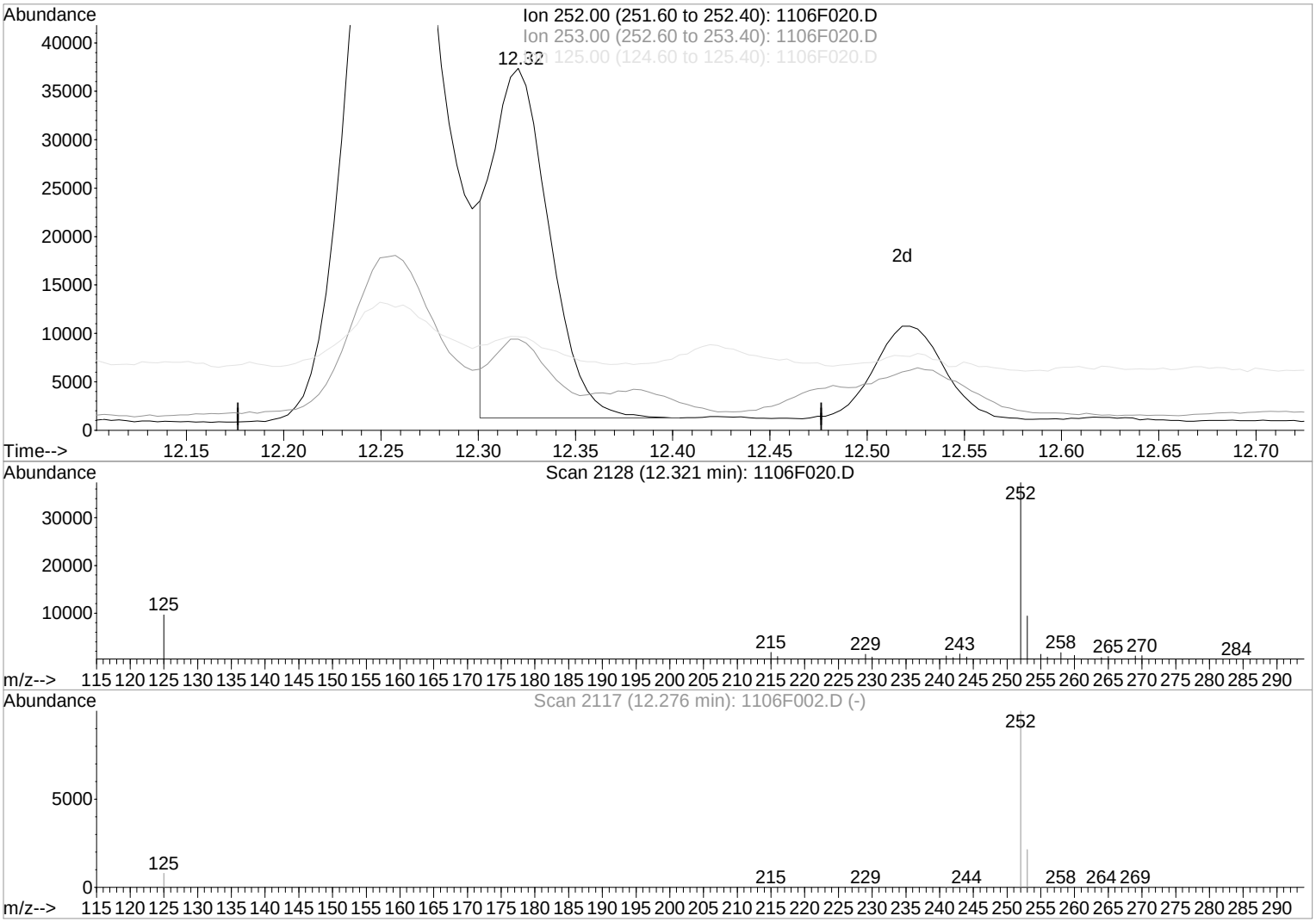
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:31 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F020.D

(30) Benzo(k)fluoranthene (T)

12.32min 125.07ng/ml

response 73355

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	18.07
125.00	9.70	5.23
0.00	0.00	0.00

Manual Integration:

Before

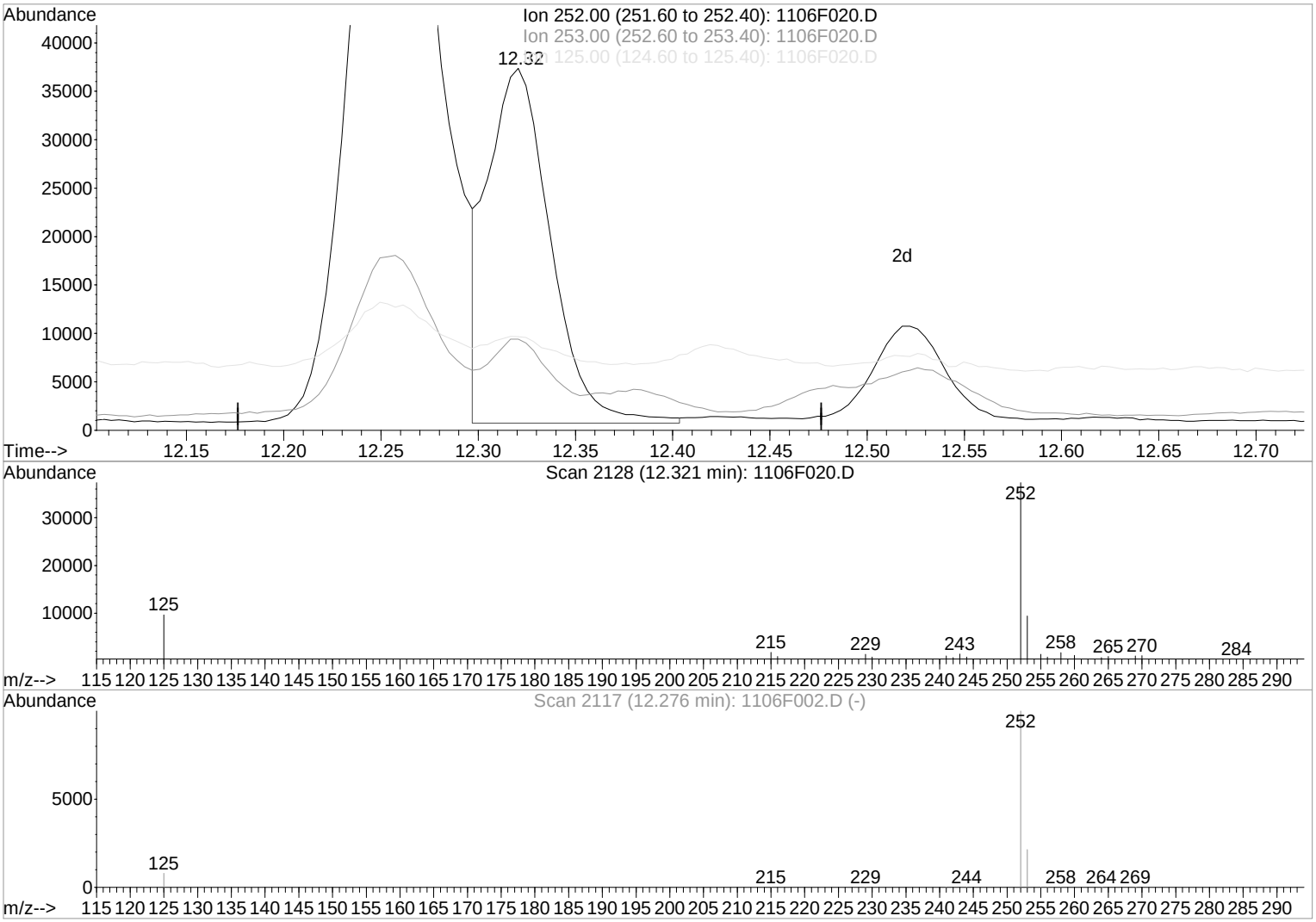
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:32 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F020.D

(30) Benzo(k)fluoranthene (T)

12.32min 140.19ng/ml m

response 82222

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	25.14
125.00	9.70	25.84
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

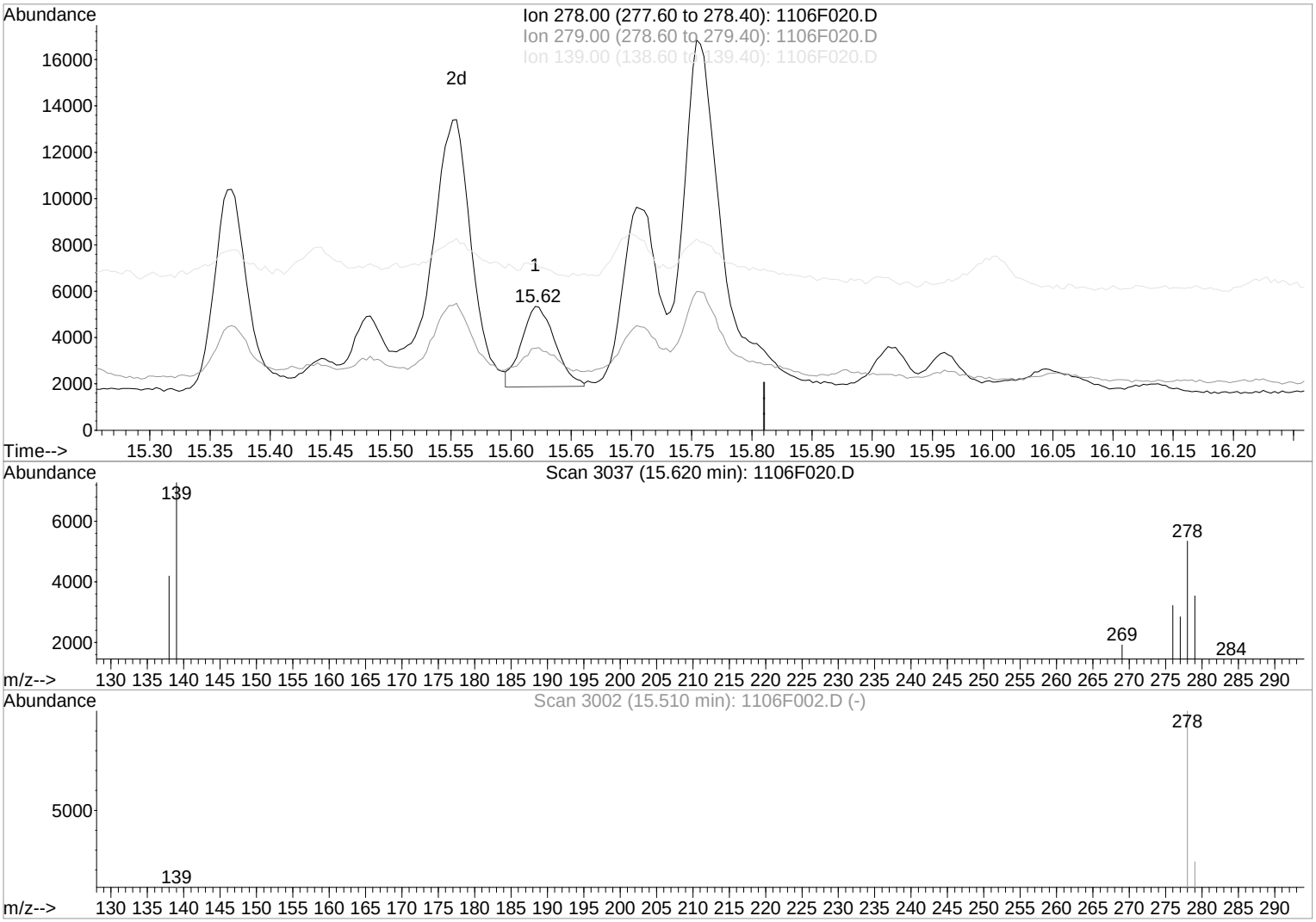
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:32 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F020.D

(35) Dibenz(a,h)anthracene (T)

15.62min 13.08ng/ml

response 6742

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	30.36
139.00	15.00	15.41
0.00	0.00	0.00

Manual Integration:

Before

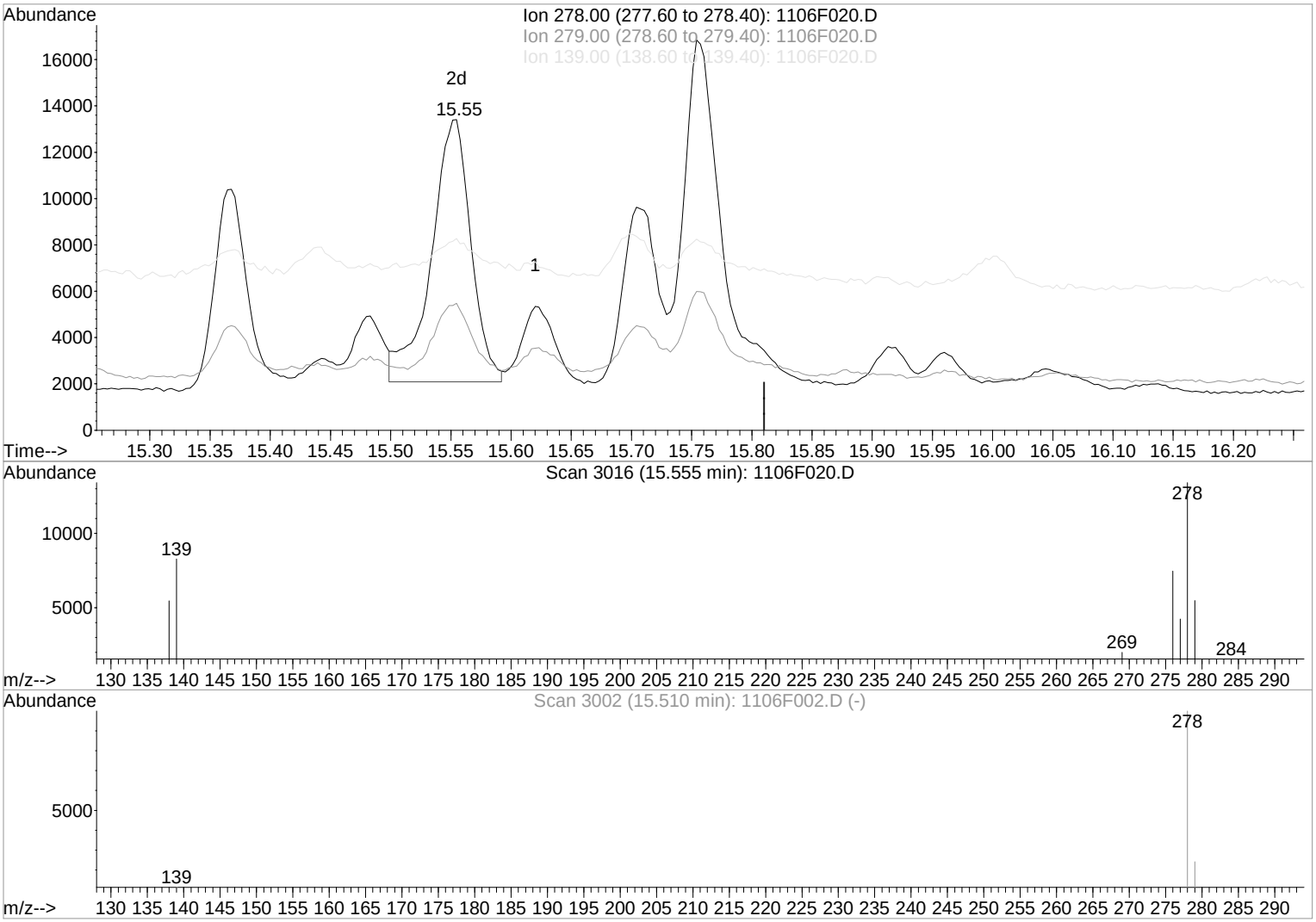
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F020.D Vial: 20
Acq On : 6 Nov 2018 2:13 pm Operator: LWeiskopf
Sample : K1810270-018DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:32 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F020.D

(35) Dibenz(a,h)anthracene (T)

15.55min 50.05ng/ml m

response 25792

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	40.82
139.00	15.00	61.71#
0.00	0.00	0.00

Manual Integration:

After

WP

11/16/18

1st 11/16/18
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Exception Report

Data File: J:\MS14\DATA\110618\1106F021.D
Lab ID: K1810270-019
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/06/2018 14:42
Date Quantitated: 11/16/2018 10:32
Batch ID: KWG1806026
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F021.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 14:42	**Quant Date:**	11/16/2018 10:32	**Vial:**	21
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-019			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700775	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	0.00	136	66644	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	31032	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	62836	200.00	OK
4	Chrysene-d12	10.12	0.01	240	82262	200.00	OK
5	Perylene-d12	13.32	0.05	264	94884	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	25295	127.48	64	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	54903	138.64	69	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	50250	140.83	70	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	5177	13.46	8.3	D	
1	2-Methylnaphthalene	5.42		0.00	142	1778	7.66	4.7	JD	
2	Acenaphthylene	6.21	0.01	0.00	152	5799	15.66	9.6	D	
2	Acenaphthene	6.35		0.00	154	2350	11.05	6.8	D	
2	Dibenzofuran	6.50		0.00	168	3135	9.19	5.7	D	
2	Fluorene	6.78		0.00	166	4153	16.14	9.9	D	
3	Phenanthrene	7.58		0.00	178	47957	122.34	75	D	
3	Anthracene	7.62		0.00	178	11643	31.11	19	D	
3	Fluoranthene	8.57	0.01	0.00	202	154412	319.02	200	D	
4	Pyrene	8.76	0.01	0.00	202	165217	292.73	180	D	
4	Benz(a)anthracene	10.11	0.02	0.00	228	69494	130.66	80	D	
4	Chrysene	10.16	0.01	0.00	228	106657	209.36	130	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110618\1106F021.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 14:42	**Quant Date:**	11/16/2018 10:32	**Vial:**	21
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810270-019			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	144811	247.03	150	D	
5	Benzo(k)fluoranthene	12.31	0.03	0.00	252	52670**m**	90.57	56	D	
5	Benzo(a)pyrene	13.15	0.05	0.00	252	82181	159.86	98	D	
5	Indeno(1,2,3-cd)pyrene	15.50	0.03	0.00	276	69458	137.78	85	D	
5	Dibenz(a,h)anthracene	15.54	0.03	0.00	278	16590	32.46	20	D	
5	Benzo(g,h,i)perylene	15.90	0.04	0.00	276	84444	143.04	88	D	

Prep Amount:	40.149 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	40.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

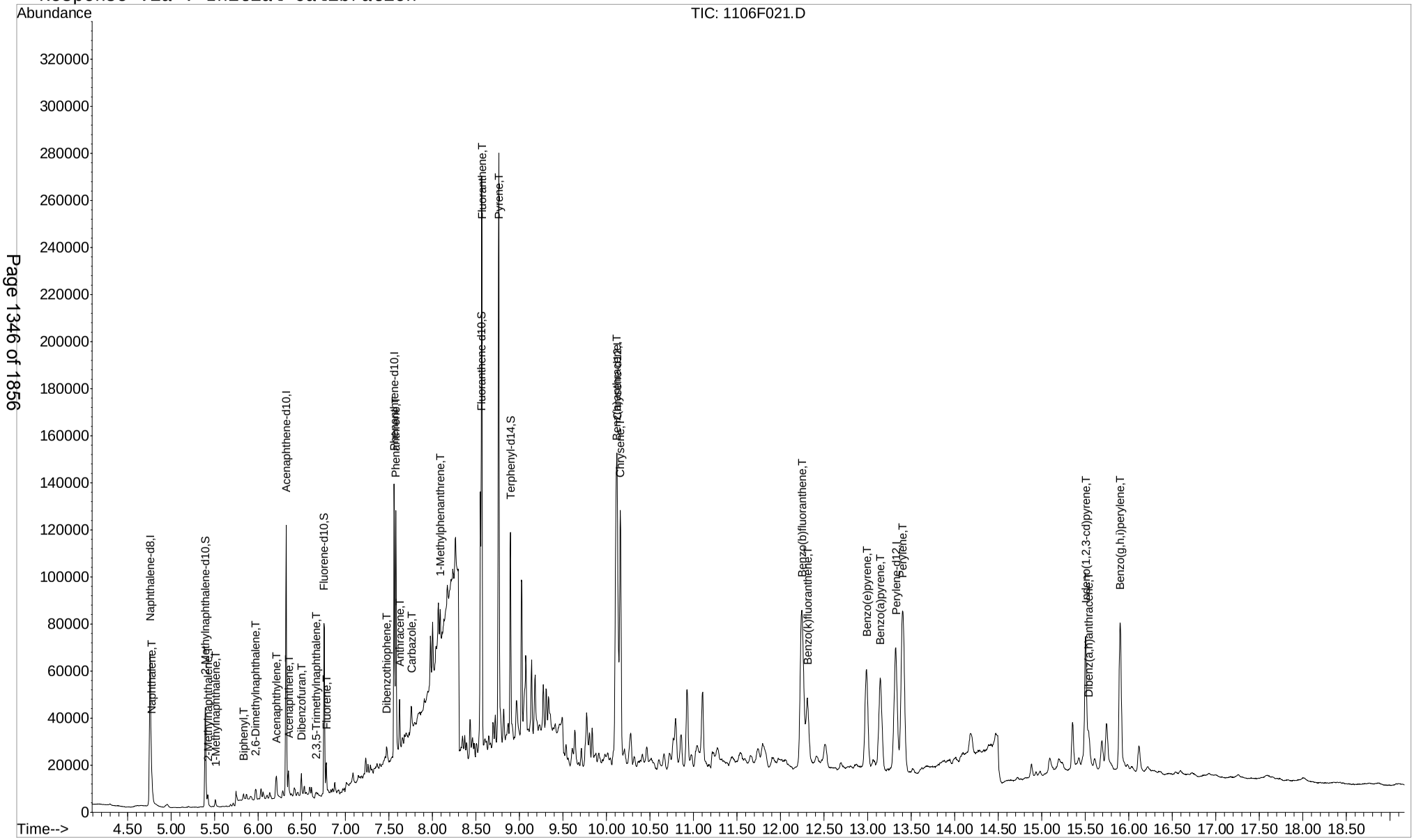
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

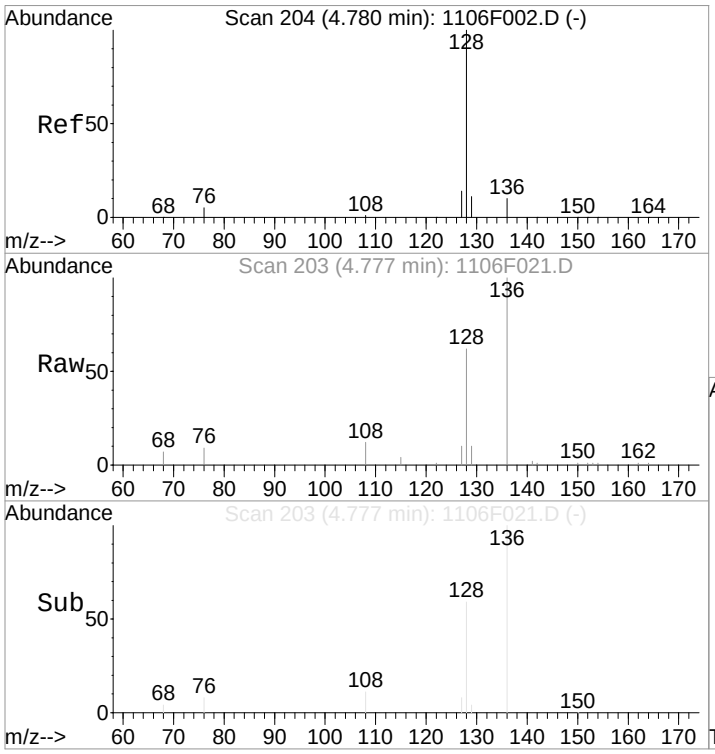
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F021.D Vial: 21
Acq On : 6 Nov 2018 2:42 pm Operator: LWeiskopf
Sample : K1810270-019DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:32 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



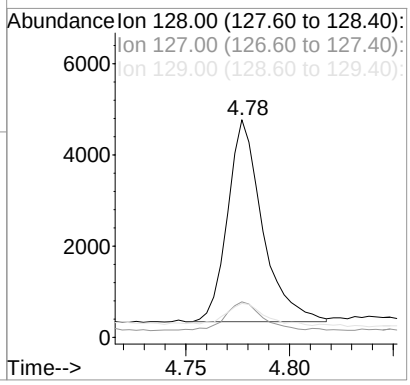
1st 11/16/18
2nd 11/27/18

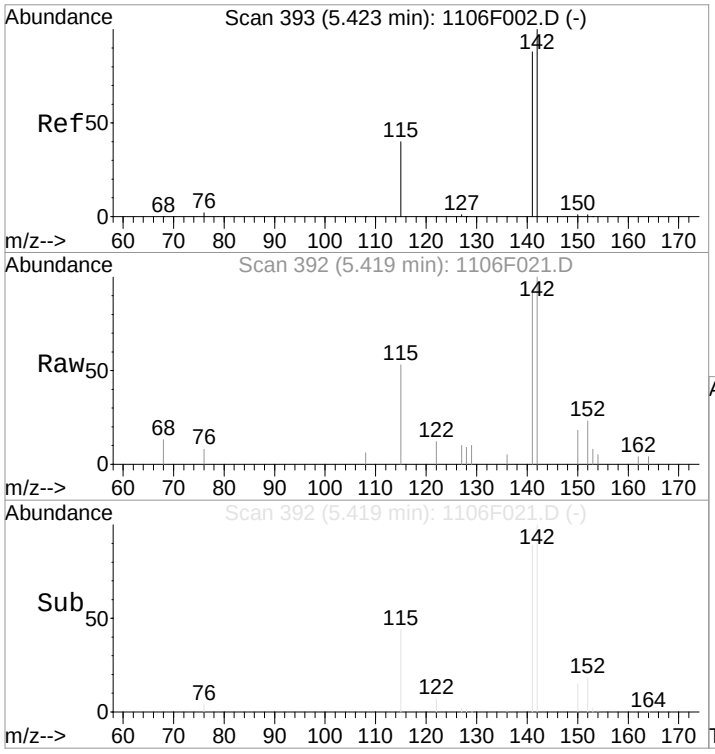


#2
Naphthalene
Concen: 13.46 ng/ml
RT: 4.78 min Scan# 203
Delta R.T. -0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:128 Resp: 5177

Ion	Ratio	Lower	Upper
128	100		
127	13.9	0.0	43.7
129	10.5	0.0	30.8

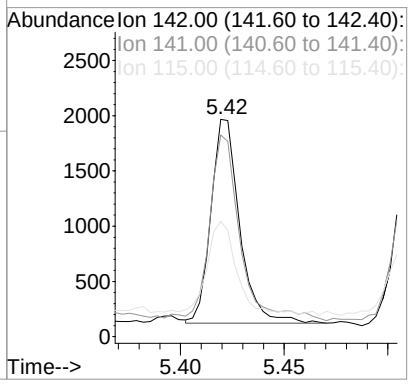




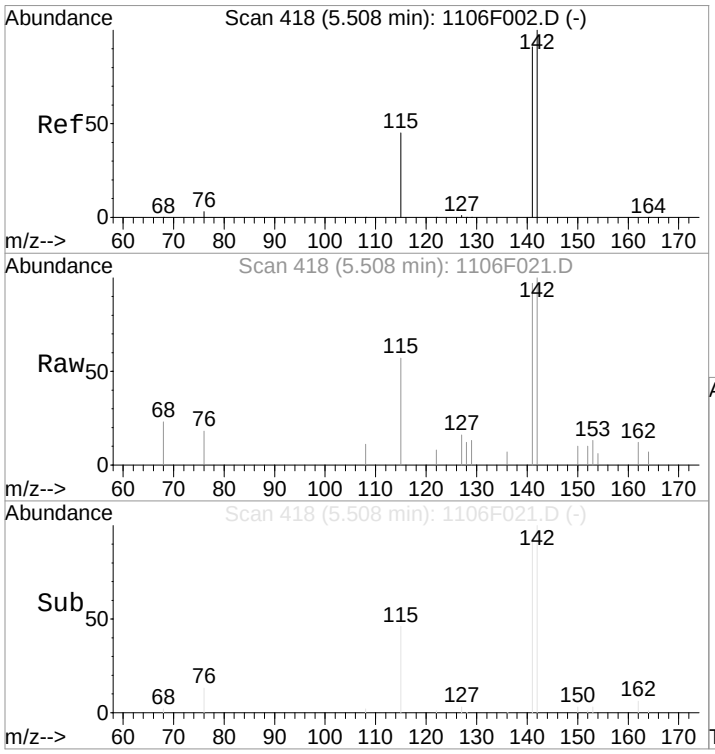
#4
2-Methylnaphthalene
Concen: 7.66 ng/ml
RT: 5.42 min Scan# 392
Delta R.T. -0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:142 Resp: 1778

Ion	Ratio	Lower	Upper
142	100		
141	91.2	56.8	116.8
115	44.1	13.3	53.3



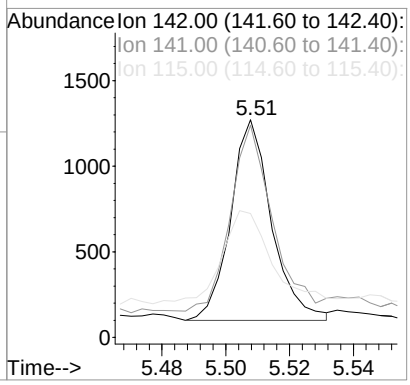
1st 11/16/18
2nd 11/27/18

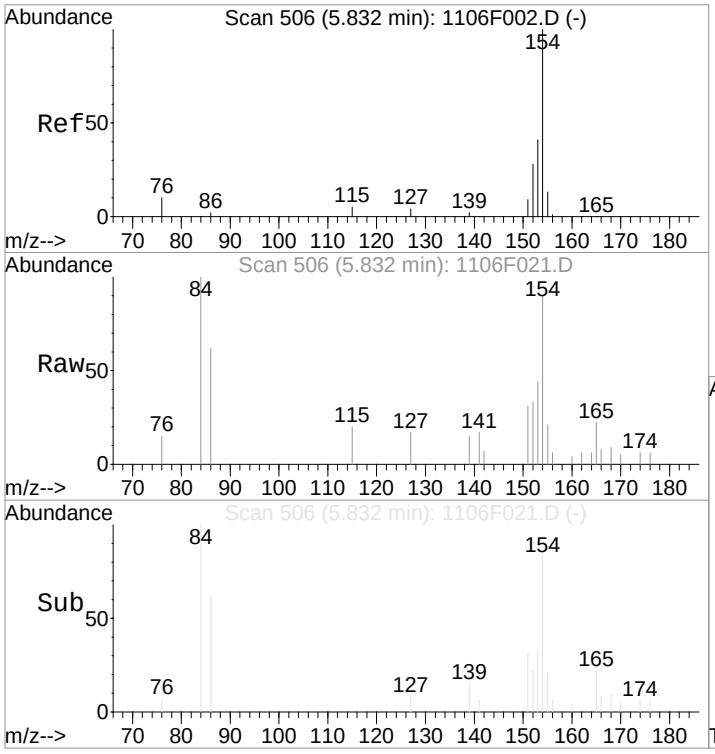


#5
1-Methylnaphthalene
Concen: 4.69 ng/ml
RT: 5.51 min Scan# 418
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:142 Resp: 1047

Ion	Ratio	Lower	Upper
142	100		
141	92.6	59.7	119.7
115	42.2	13.7	53.7

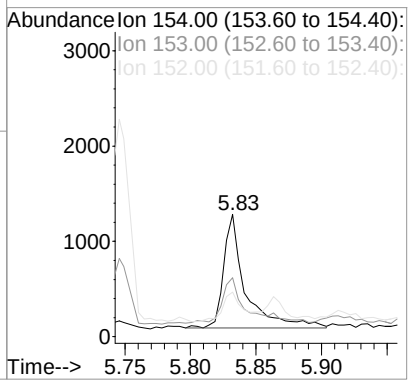




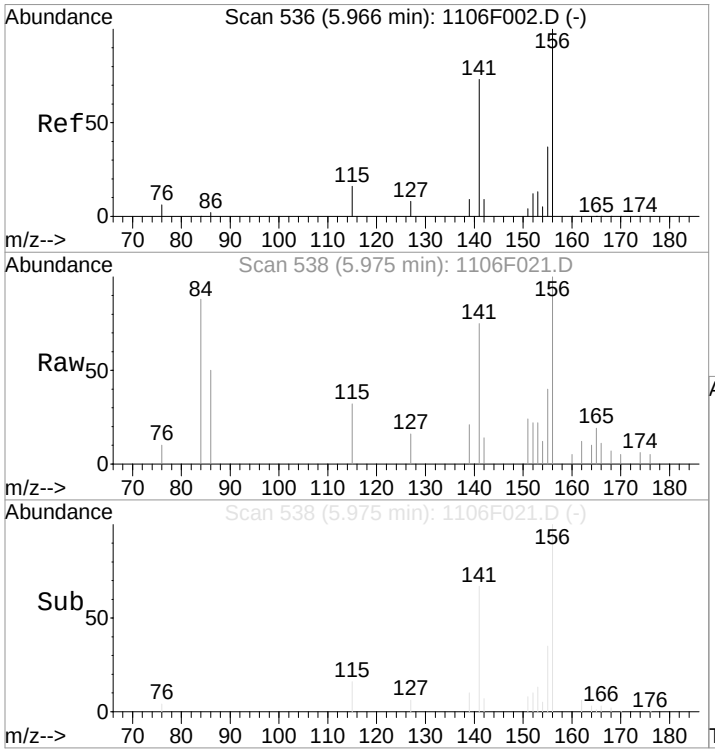
#6
Biphenyl
Concen: 4.78 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:154 Resp: 1384

Ion	Ratio	Lower	Upper
154	100		
153	40.0	11.4	71.4
152	24.2	7.1	47.1



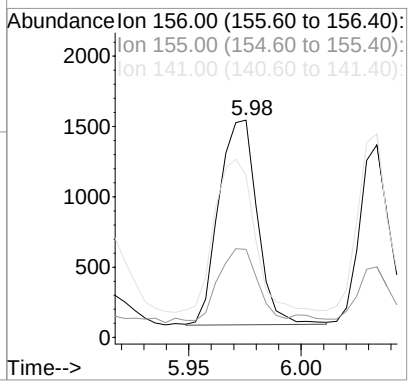
1st 11/16/18
2nd 11/27/18

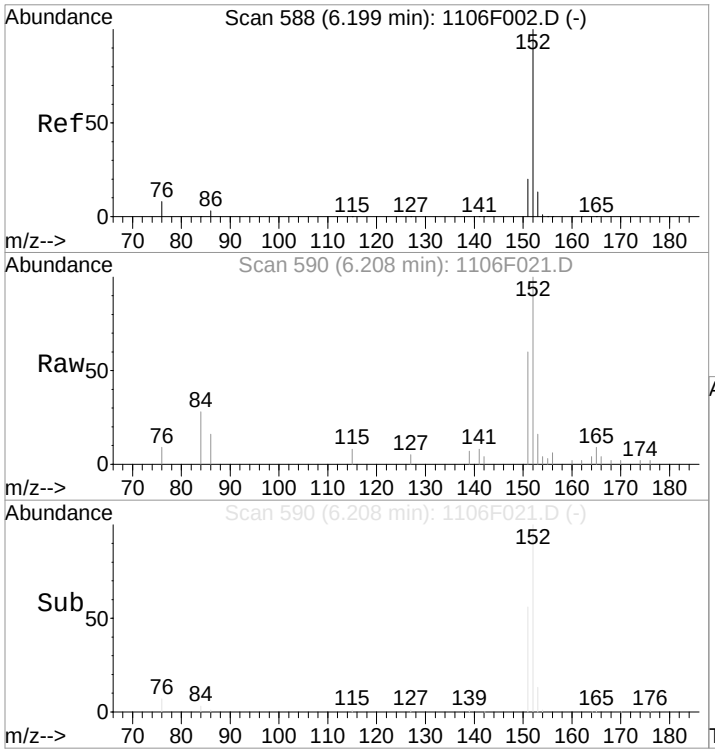


#7
2,6-Dimethylnaphthalene
Concen: 8.69 ng/ml
RT: 5.98 min Scan# 538
Delta R.T. 0.01 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:156 Resp: 1730

Ion	Ratio	Lower	Upper
156	100		
155	34.8	7.0	67.0
141	66.3	47.9	87.9

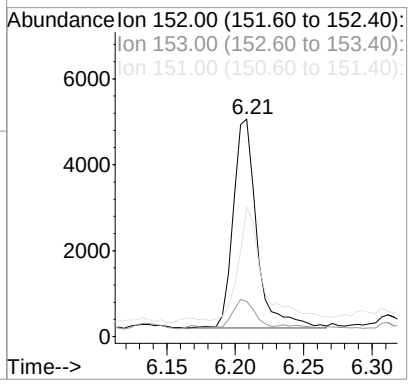




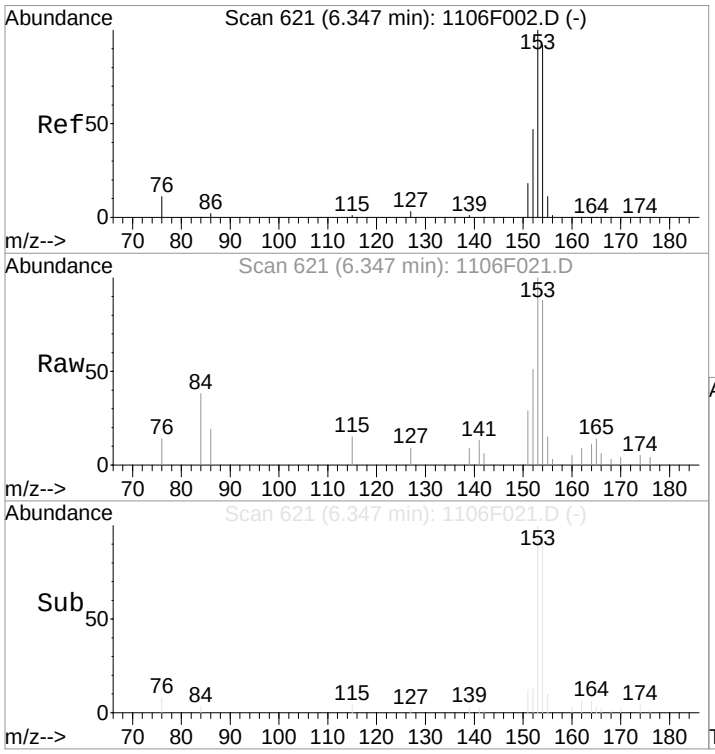
#9
Acenaphthylene
Concen: 15.66 ng/ml
RT: 6.21 min Scan# 590
Delta R.T. 0.01 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:152 Resp: 5799

Ion	Ratio	Lower	Upper
152	100		
153	12.4	0.0	42.9
151	53.5	0.2	40.2#



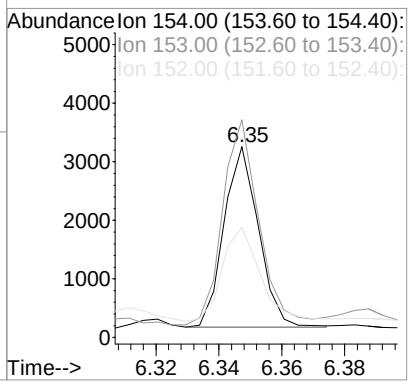
1st 11/16/18
2nd 11/27/18

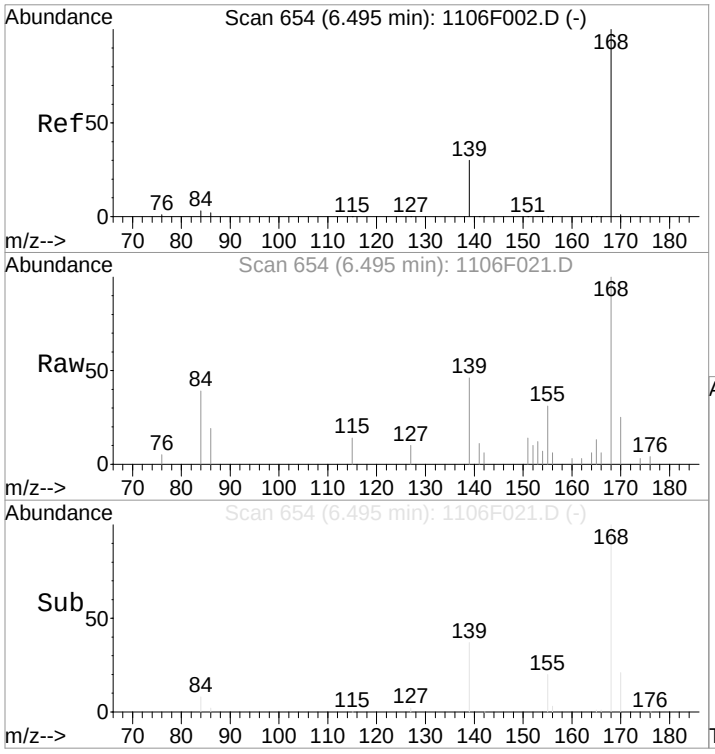


#10
Acenaphthene
Concen: 11.05 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:154 Resp: 2350

Ion	Ratio	Lower	Upper
154	100		
153	113.6	77.1	137.1
152	52.3	19.7	79.7

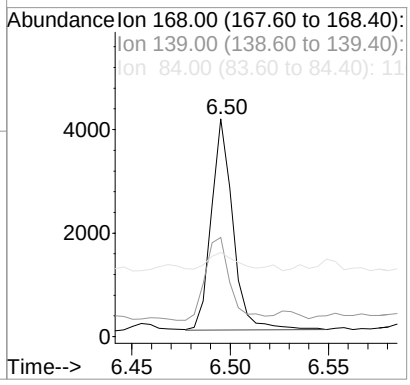




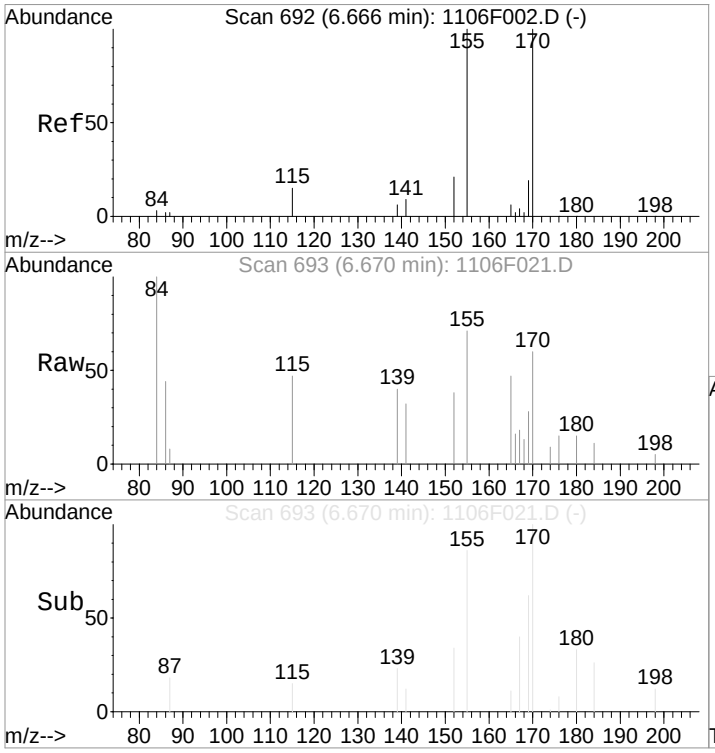
#11
Dibenzofuran
Concen: 9.19 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:168 Resp: 3135

Ion	Ratio	Lower	Upper
168	100		
139	39.4	0.0	55.8
84	7.7	0.0	23.5



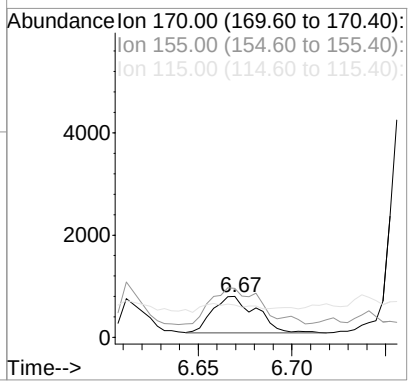
1st 11/16/18
2nd 11/27/18

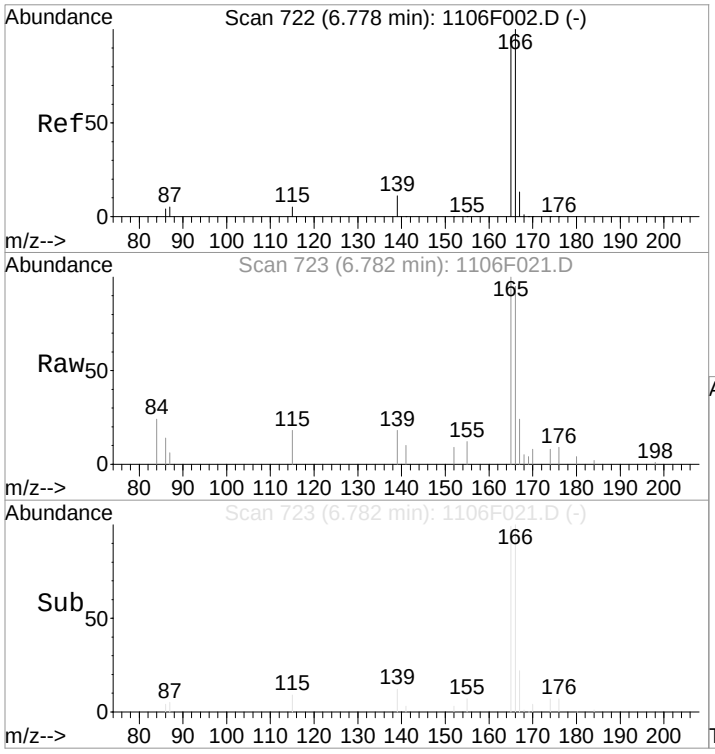


#12
2,3,5-Trimethylnaphthalene
Concen: 5.88 ng/ml
RT: 6.67 min Scan# 693
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:170 Resp: 1157

Ion	Ratio	Lower	Upper
170	100		
155	97.5	59.2	119.2
115	12.4	0.0	30.1

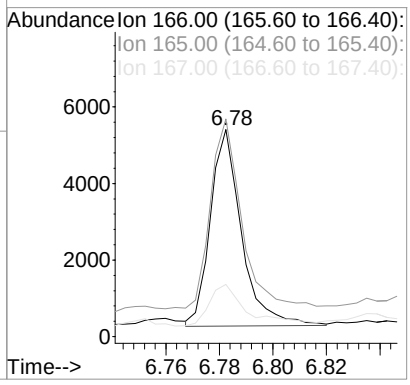




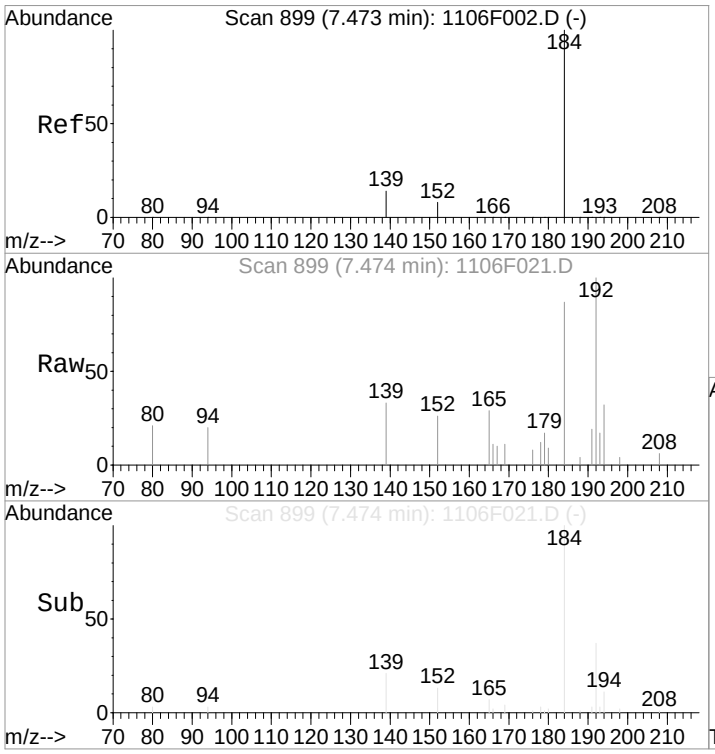
#14
Fluorene
Concen: 16.14 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:166 Resp: 4153

Ion	Ratio	Lower	Upper
166	100		
165	97.0	63.4	123.4
167	21.1	0.0	33.1



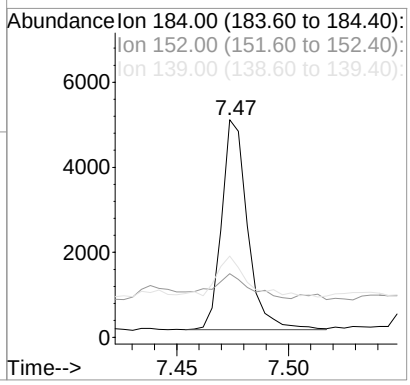
1st 11/16/18
2nd 11/27/18

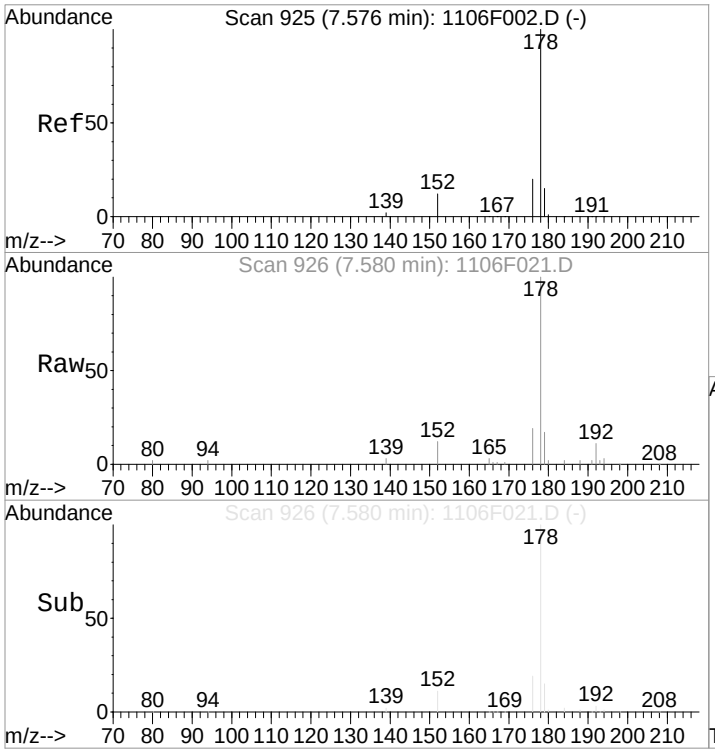


#16
Dibenzothiophene
Concen: 10.16 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:184 Resp: 3983

Ion	Ratio	Lower	Upper
184	100		
152	12.2	0.0	37.8
139	19.0	0.0	32.6

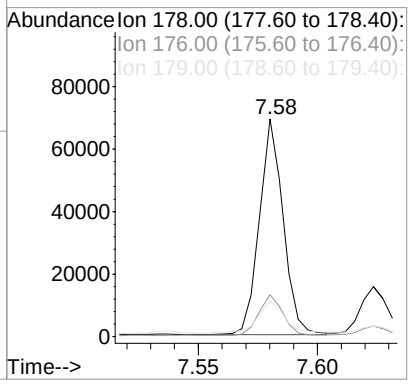




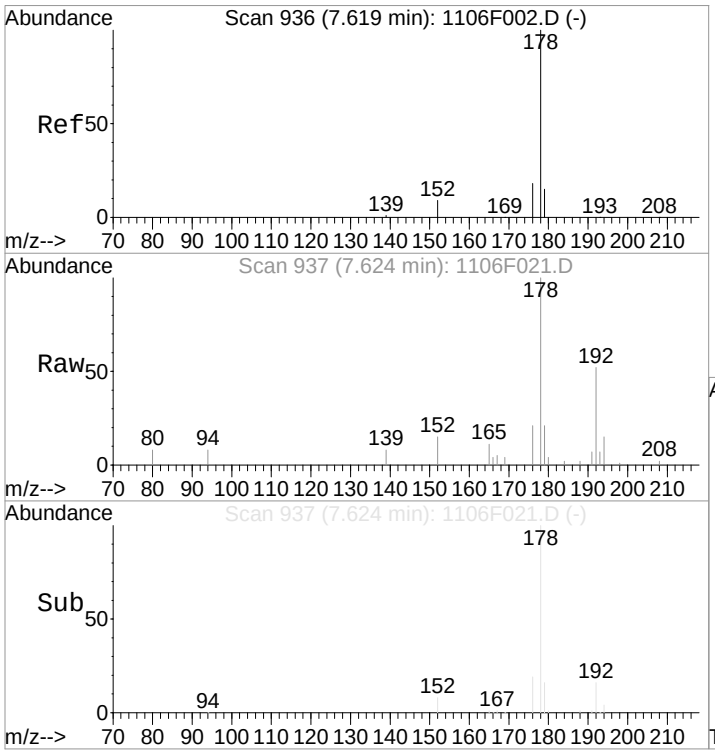
#17
Phenanthrene
Concen: 122.34 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:178 Resp: 47957

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.7
179	15.0	0.0	35.1



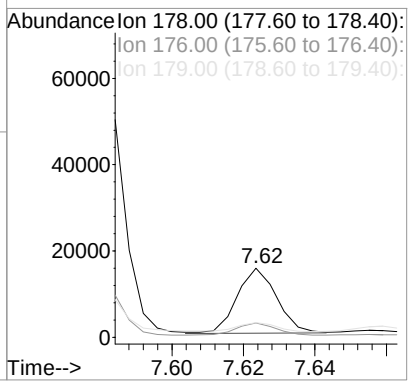
1st 11/16/18
2nd 11/27/18

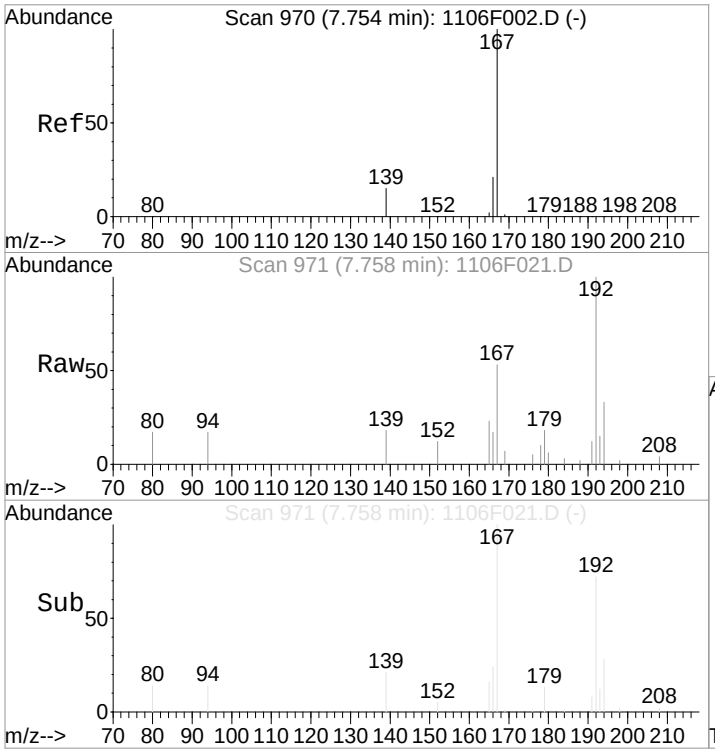


#18
Anthracene
Concen: 31.11 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:178 Resp: 11643

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.0
179	13.8	0.0	35.1

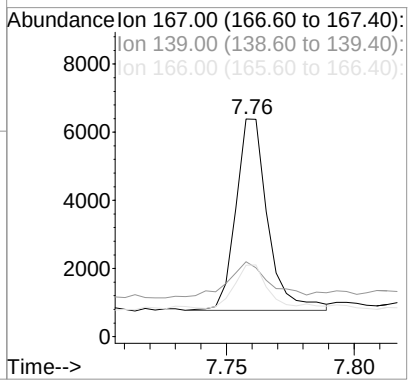




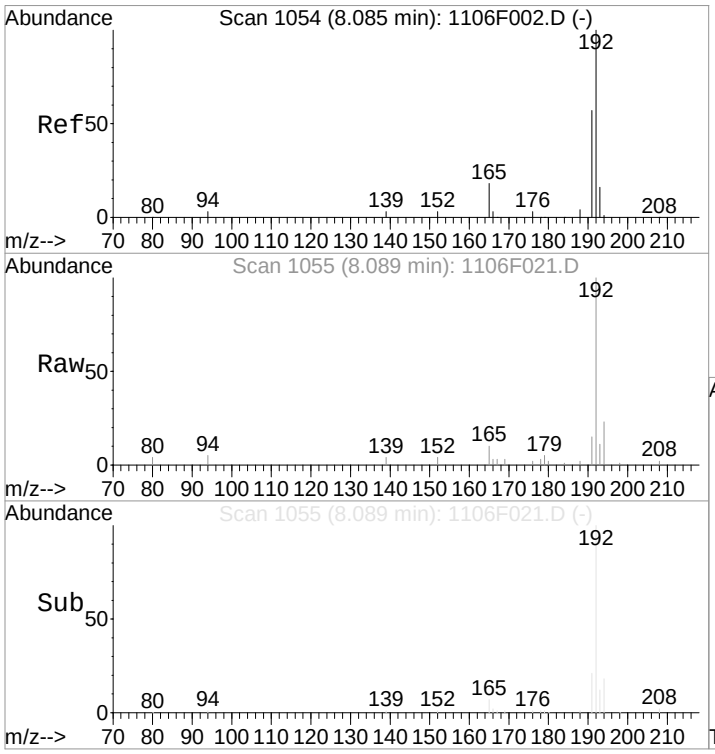
#19
Carbazole
Concen: 13.41 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:167 Resp: 4898

Ion	Ratio	Lower	Upper
167	100		
139	18.3	0.0	41.5
166	21.5	0.7	40.7



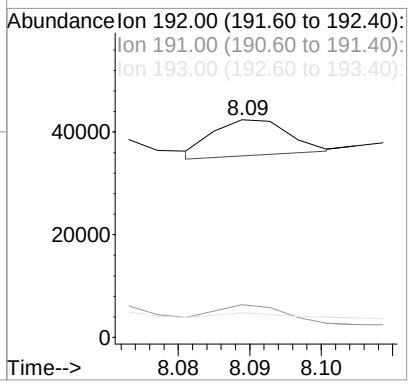
1st 11/16/18
2nd 11/27/18

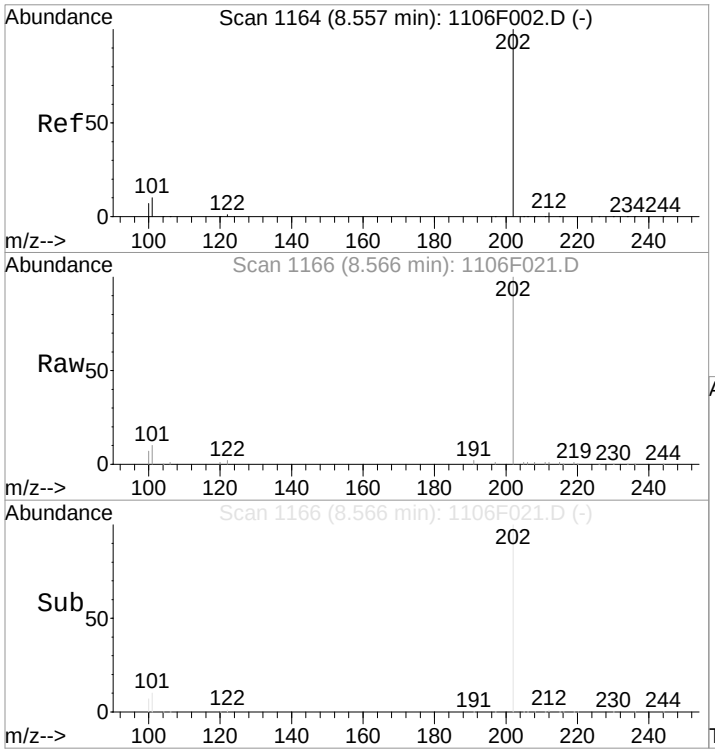


#20
1-Methylphenanthrene
Concen: 17.64 ng/ml
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:192 Resp: 5238

Ion	Ratio	Lower	Upper
192	100		
191	58.7	27.7	87.7
193	15.1	0.0	45.4

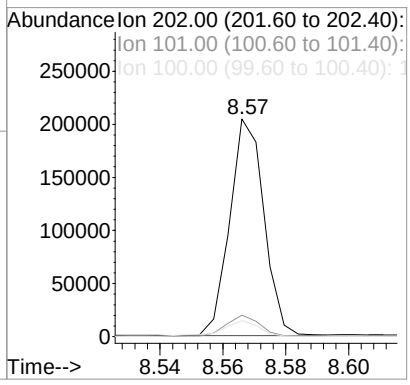




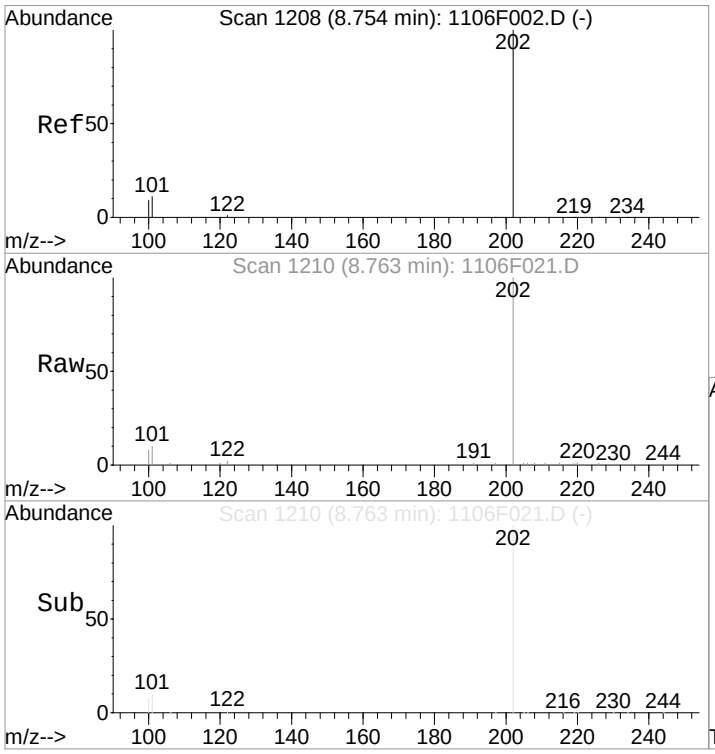
#21
Fluoranthene
Concen: 319.02 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.01 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:202 Resp: 154412

Ion	Ratio	Lower	Upper
202	100		
101	9.7	0.0	41.3
100	7.3	0.0	28.6



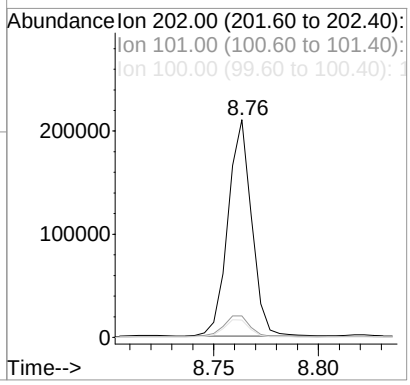
1st 11/16/18
2nd 11/27/18

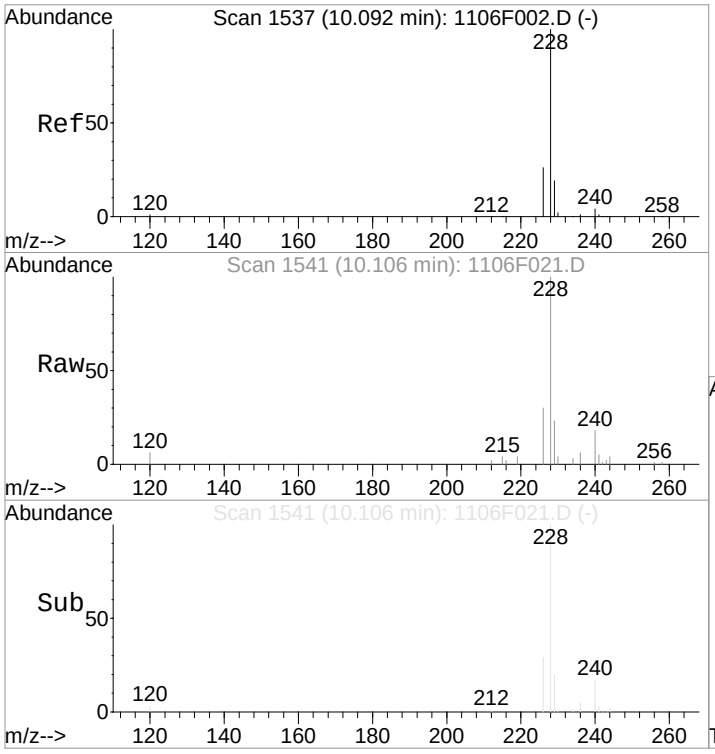


#24
Pyrene
Concen: 292.73 ng/ml
RT: 8.76 min Scan# 1210
Delta R.T. 0.01 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:202 Resp: 165217

Ion	Ratio	Lower	Upper
202	100		
101	9.7	0.0	40.8
100	7.8	0.0	28.5

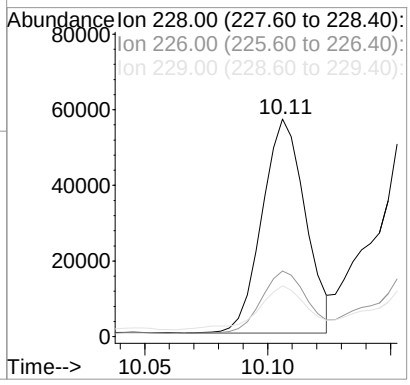


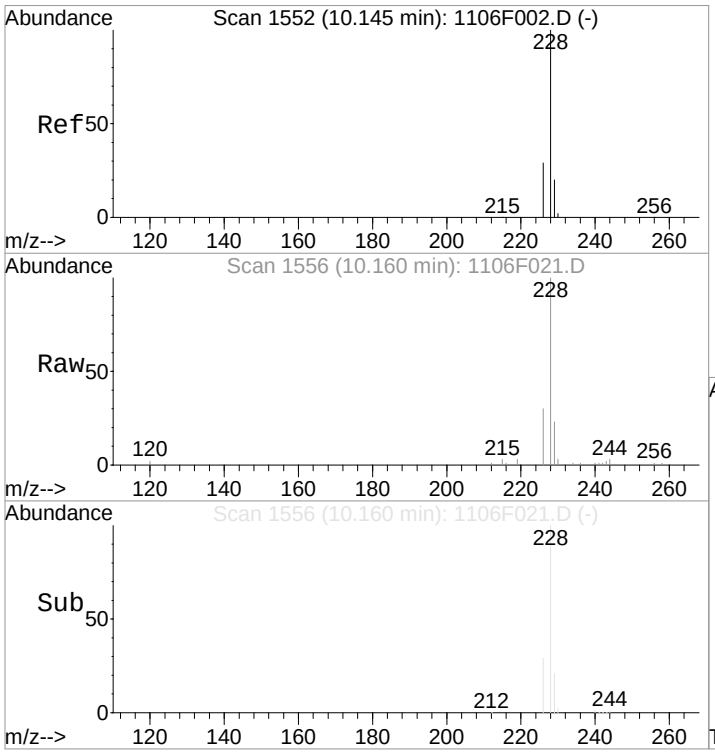


#26
Benz(a)anthracene
Concen: 130.66 ng/ml
RT: 10.11 min Scan# 1541
Delta R.T. 0.01 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:228 Resp: 69494

Ion	Ratio	Lower	Upper
228	100		
226	29.2	0.0	56.3
229	20.1	0.0	39.1

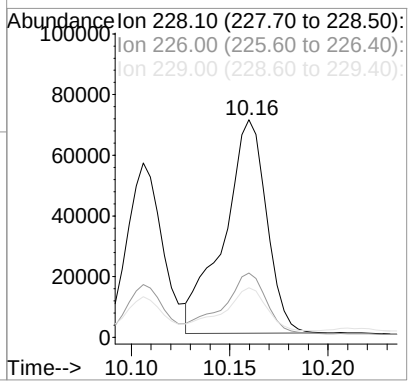


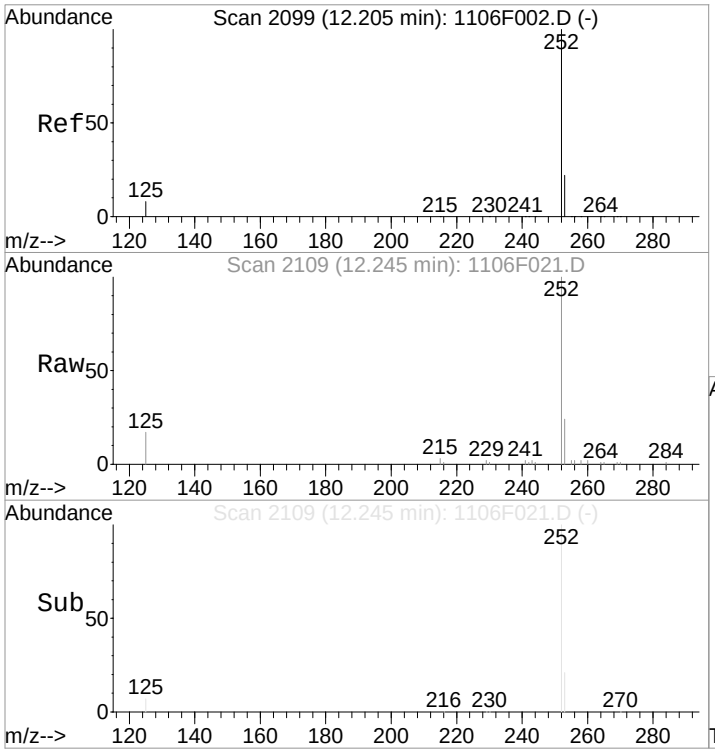


#27
Chrysene
Concen: 209.36 ng/ml
RT: 10.16 min Scan# 1556
Delta R.T. 0.01 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:228 Resp: 106657

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.7
229	19.9	0.0	39.2

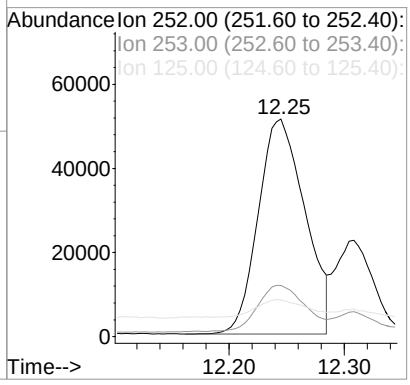




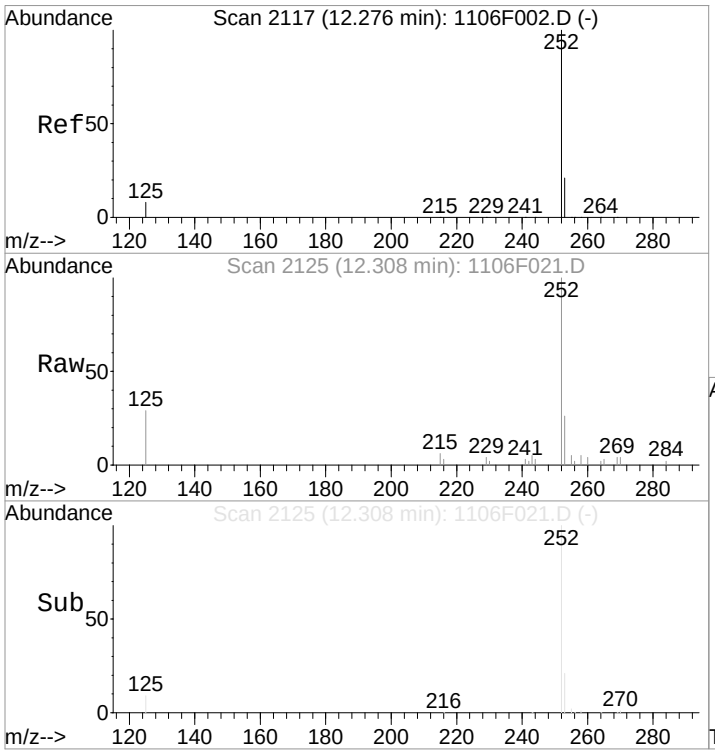
#29
Benzo(b)fluoranthene
Concen: 247.03 ng/ml
RT: 12.25 min Scan# 2109
Delta R.T. 0.04 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:252 Resp: 144811

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.2
125	7.9	0.0	29.5



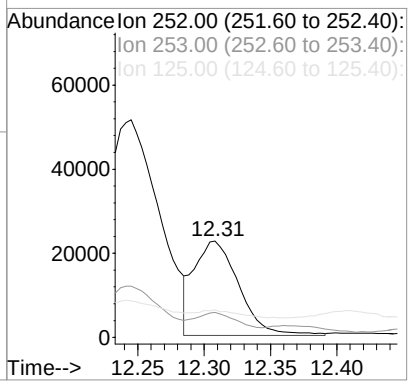
1st 11/16/18
2nd 11/27/18

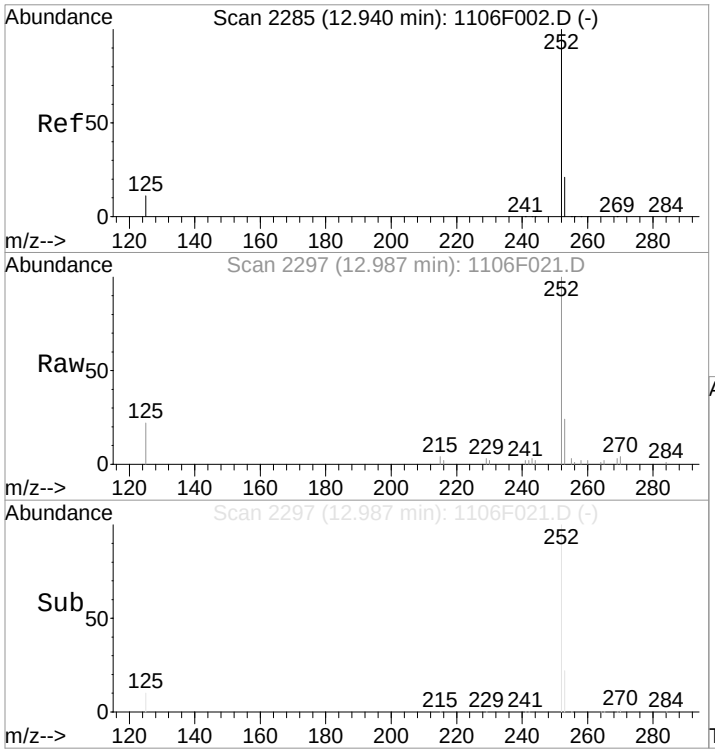


#30
Benzo(k)fluoranthene
Concen: 90.57 ng/ml m
RT: 12.31 min Scan# 2125
Delta R.T. 0.03 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:252 Resp: 52670

Ion	Ratio	Lower	Upper
252	100		
253	25.9	0.0	51.2
125	28.7	0.0	29.7

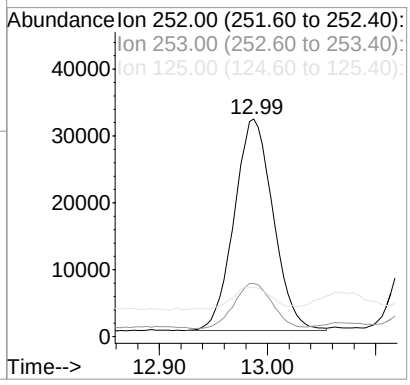




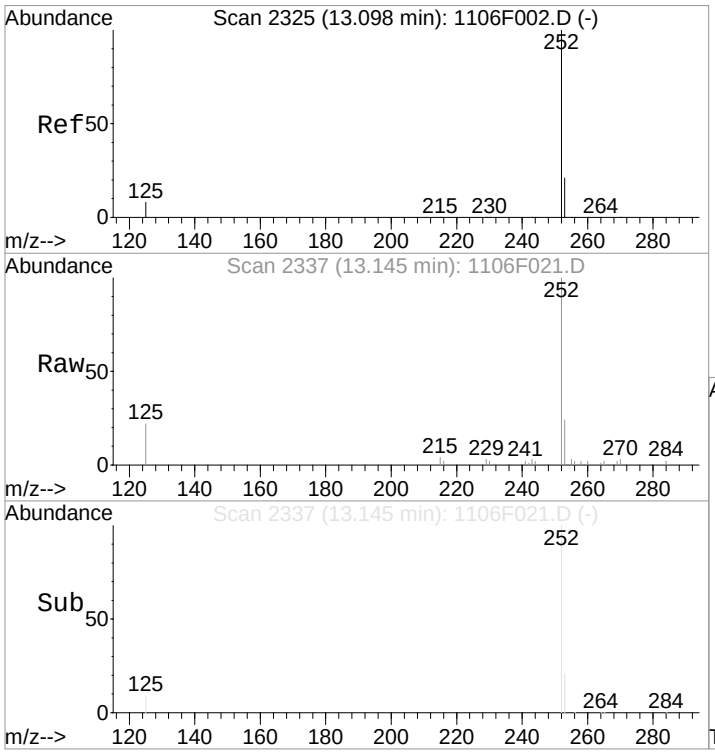
#31
Benzo(e)pyrene
Concen: 142.10 ng/ml
RT: 12.99 min Scan# 2297
Delta R.T. 0.05 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:252 Resp: 79401

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.3
125	10.2	0.0	33.5



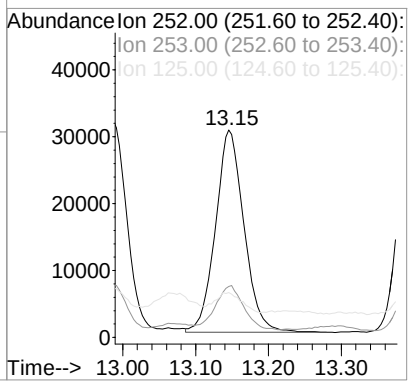
1st 11/16/18
2nd 11/27/18

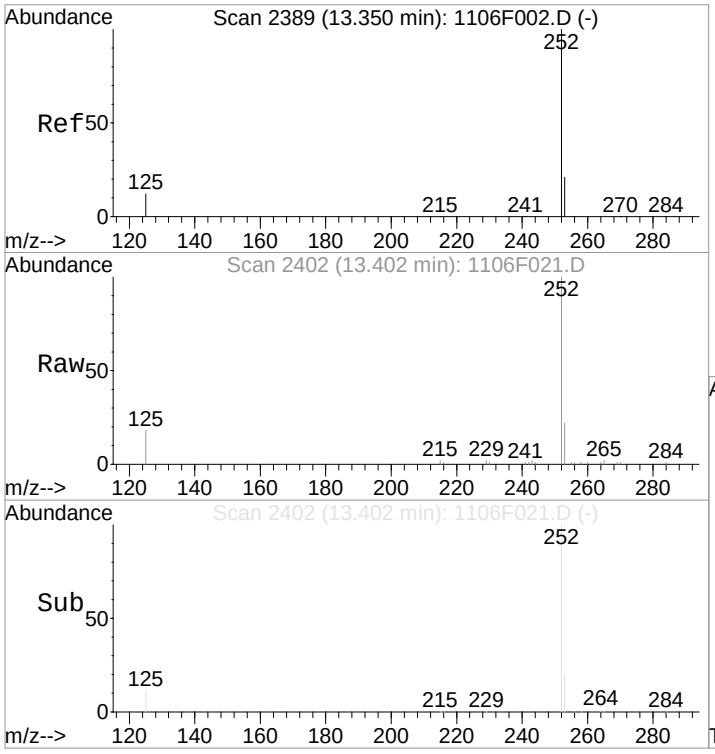


#32
Benzo(a)pyrene
Concen: 159.86 ng/ml
RT: 13.15 min Scan# 2337
Delta R.T. 0.05 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:252 Resp: 82181

Ion	Ratio	Lower	Upper
252	100		
253	19.8	0.0	50.9
125	10.3	0.0	30.3

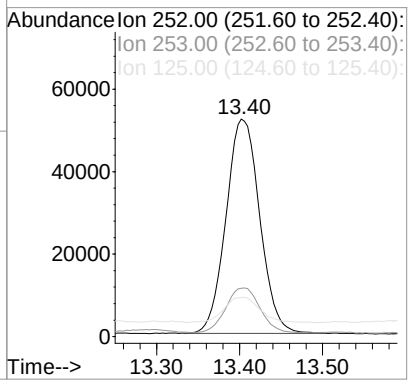




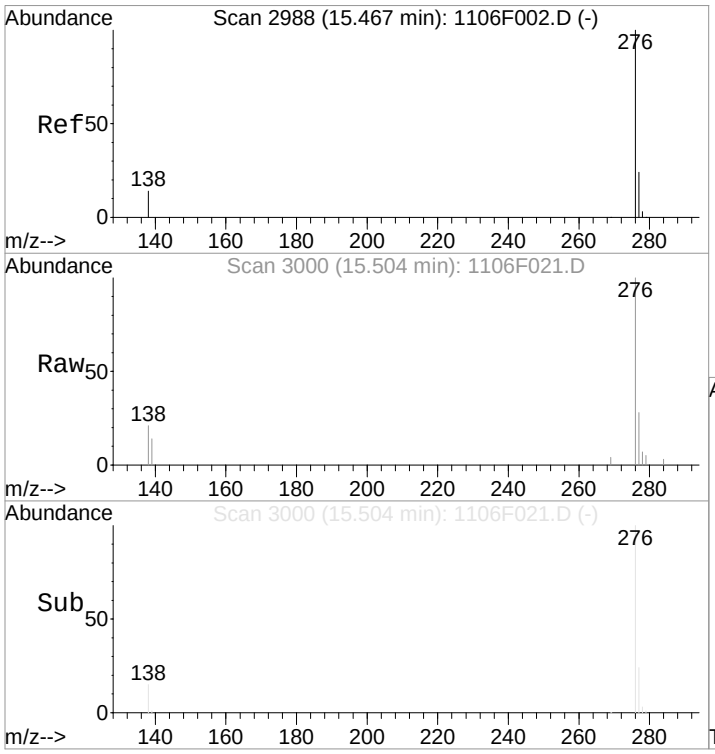
#33
Perylene
Concen: 272.65 ng/ml
RT: 13.40 min Scan# 2402
Delta R.T. 0.05 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:252 Resp: 147040

Ion	Ratio	Lower	Upper
252	100		
253	20.6	0.0	51.2
125	11.7	0.0	33.8



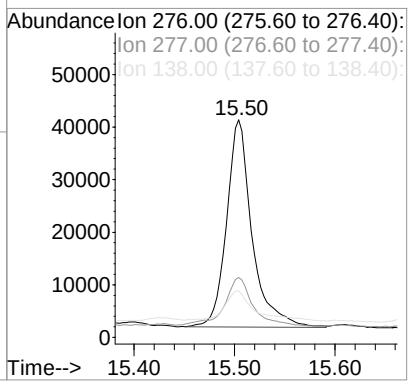
1st 11/16/18
2nd 11/27/18

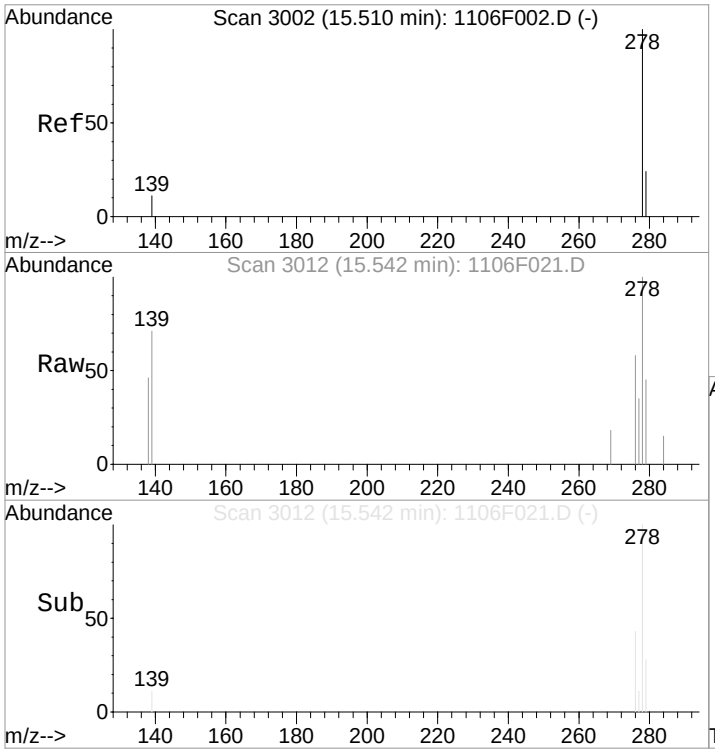


#34
Indeno(1,2,3-cd)pyrene
Concen: 137.78 ng/ml
RT: 15.50 min Scan# 3000
Delta R.T. 0.04 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:276 Resp: 69458

Ion	Ratio	Lower	Upper
276	100		
277	23.3	0.0	53.4
138	14.5	0.0	37.7

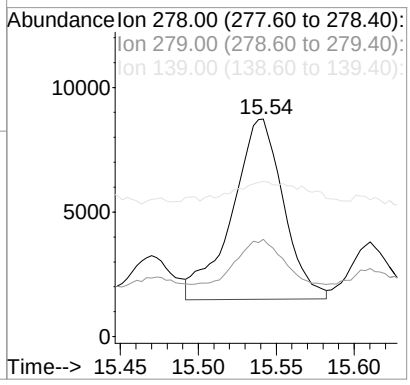




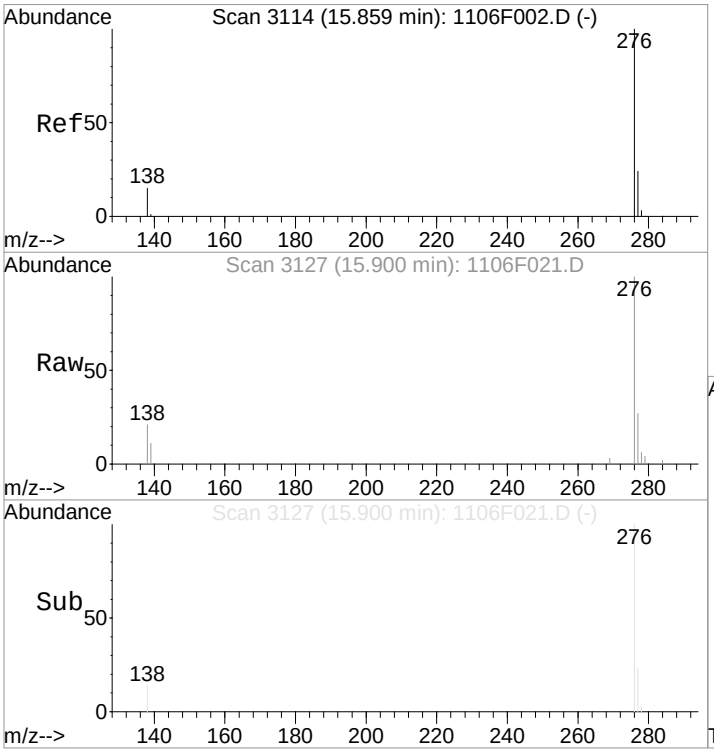
#35
Dibenz(a,h)anthracene
Concen: 32.46 ng/ml
RT: 15.54 min Scan# 3012
Delta R.T. 0.03 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:278 Resp: 16590

Ion	Ratio	Lower	Upper
278	100		
279	26.4	0.0	53.5
139	10.0	0.0	35.0



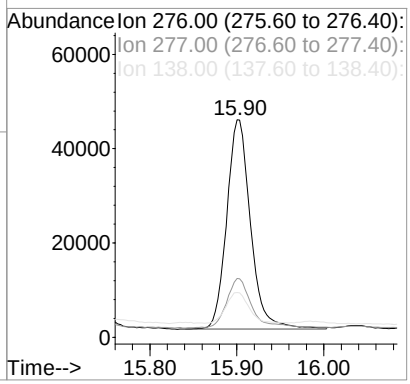
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 143.04 ng/ml
RT: 15.90 min Scan# 3127
Delta R.T. 0.04 min
Lab File: 1106F021.D
Acq: 6 Nov 2018 2:42 pm

Tgt Ion:276 Resp: 84444

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.1
138	14.3	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F021.D Vial: 21
Acq On : 6 Nov 2018 2:42 pm Operator: LWeiskopf
Sample : K1810270-019DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:53 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	66644	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31032	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	62836	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	82262	200.00	ng/ml	0.02
28) Perylene-d12	13.32	264	94884	200.00	ng/ml	0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	15696	84.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.44%		
13) Fluorene-d10	6.76	176	25295	127.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	12.75%		
22) Fluoranthene-d10	8.55	212	54903	138.64	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.86%		
25) Terphenyl-d14	8.90	244	50250	140.83	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.08%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	5177	13.46	ng/ml	99
4) 2-Methylnaphthalene	5.42	142	1778	7.66	ng/ml	91
5) 1-Methylnaphthalene	5.51	142	1047	4.69	ng/ml	94
6) Biphenyl	5.83	154	1384	4.78	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.98	156	1730	8.69	ng/ml	97
9) Acenaphthylene	6.21	152	5799	15.66	ng/ml#	55
10) Acenaphthene	6.35	154	2350	11.05	ng/ml	95
11) Dibenzofuran	6.50	168	3135	9.19	ng/ml	75
12) 2,3,5-Trimethylnaphthalene	6.67	170	1157	5.88	ng/ml	91
14) Fluorene	6.78	166	4153	16.14	ng/ml	94
16) Dibenzothiophene	7.47	184	3983	10.16	ng/ml	85
17) Phenanthrene	7.58	178	47957	122.34	ng/ml	100
18) Anthracene	7.62	178	11643	31.11	ng/ml	97
19) Carbazole	7.76	167	4898	13.41	ng/ml	93
20) 1-Methylphenanthrene	8.09	192	5238	17.64	ng/ml	99
21) Fluoranthene	8.57	202	154412	319.02	ng/ml	96
24) Pyrene	8.76	202	165217	292.73	ng/ml	98
26) Benz(a)anthracene	10.11	228	69494	130.66	ng/ml	96
27) Chrysene	10.16	228	106657	209.36	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	144811	247.03	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	52670m	90.57	ng/ml	
31) Benzo(e)pyrene	12.99	252	79401	142.10	ng/ml	96
32) Benzo(a)pyrene	13.15	252	82181	159.86	ng/ml	98
33) Perylene	13.40	252	147040	272.65	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.50	276	69458	137.78	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	16590	32.46	ng/ml	92
36) Benzo(g,h,i)perylene	15.90	276	84444	143.04	ng/ml	94

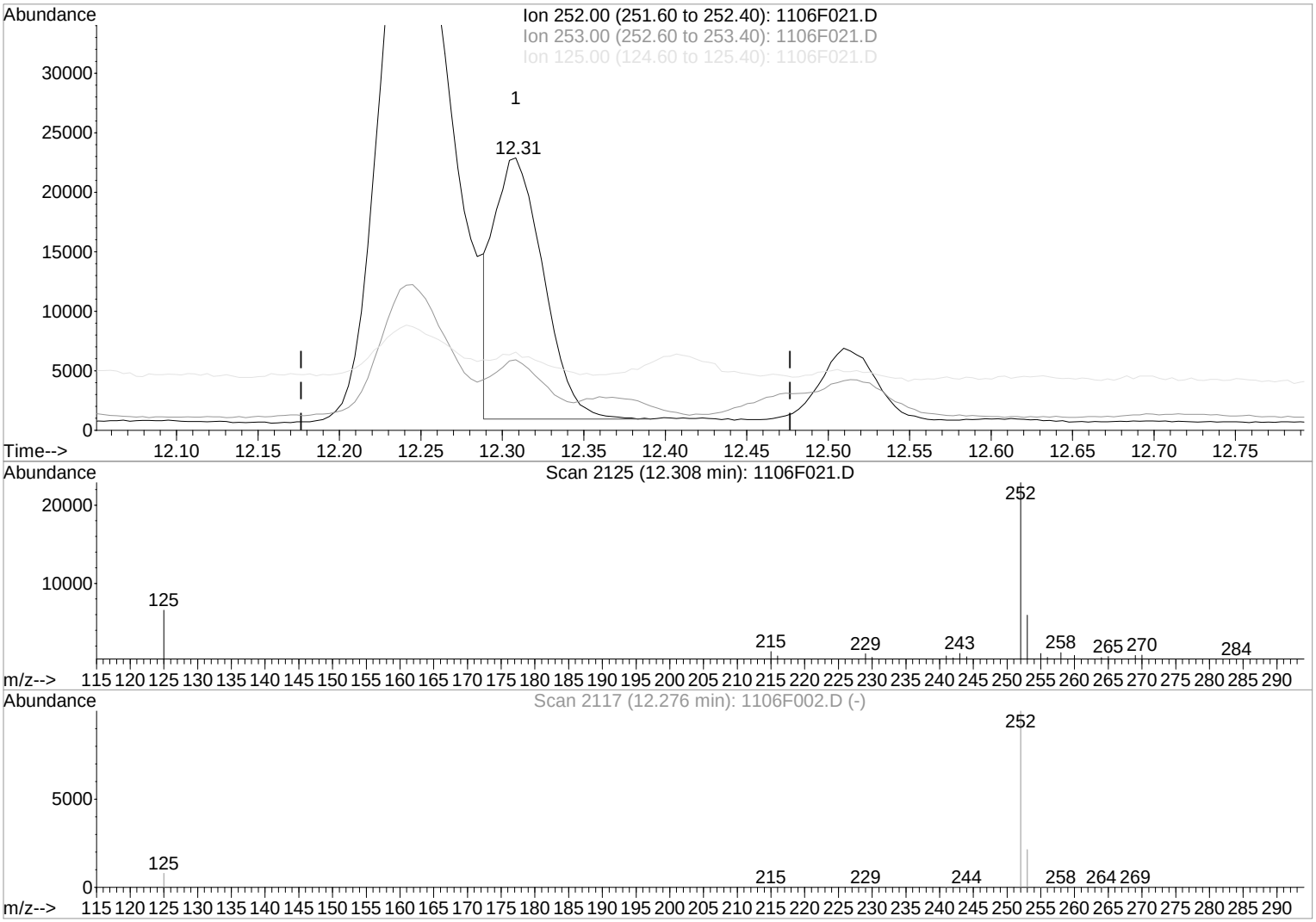
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F021.D Vial: 21
Acq On : 6 Nov 2018 2:42 pm Operator: LWeiskopf
Sample : K1810270-019DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 9:56 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F021.D

(30) Benzo(k)fluoranthene (T)

12.31min 79.84ng/ml

response 46429

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	17.81
125.00	9.70	4.12
0.00	0.00	0.00

Manual Integration:

Before

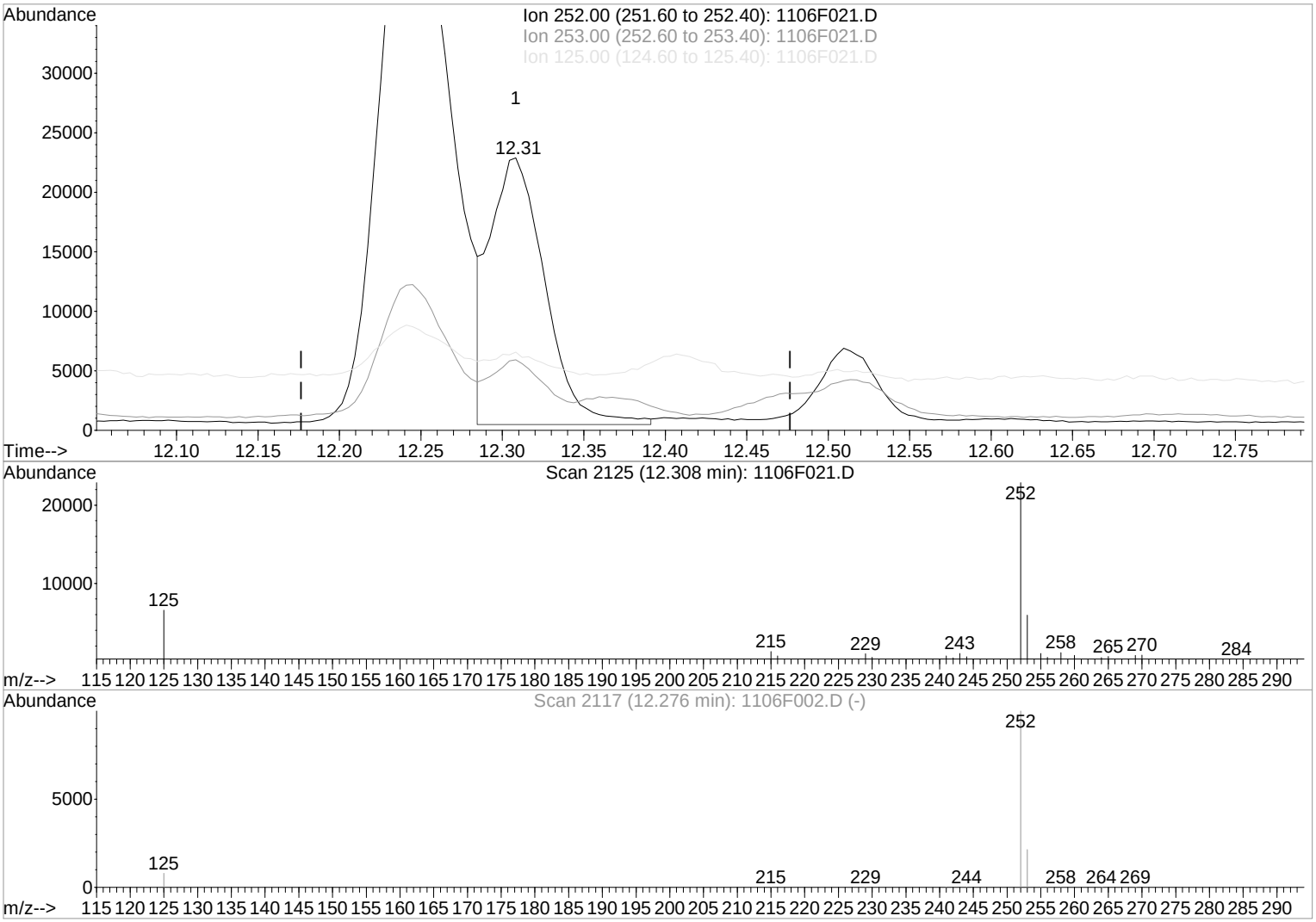
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F021.D Vial: 21
Acq On : 6 Nov 2018 2:42 pm Operator: LWeiskopf
Sample : K1810270-019DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 10:32 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration



TIC: 1106F021.D

(30) Benzo(k)fluoranthene (T)

12.31min 90.57ng/ml m

response 52670

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	25.90
125.00	9.70	28.72
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F021.D
Lab ID: K1810270-020
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/05/2018 19:10
Date Quantitated: 11/16/2018 08:45
Batch ID: KWG1806019
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F021.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 19:10	**Quant Date:**	11/16/2018 08:45	**Vial:**	21
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-020			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/16/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700776	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	71357	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	32606	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	65476	200.00	OK
4	Chrysene-d12	10.12	0.02	240	81376	200.00	OK
5	Perylene-d12	13.35	0.09	264	94405	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	120895	579.88	58	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	253539	614.40	61	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	227891	645.65	65	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	14744	35.80	5.0		
1	2-Methylnaphthalene	5.42		0.00	142	4749	19.12	2.7		
2	Acenaphthylene	6.20		0.00	152	15918	40.91	5.8		
2	Acenaphthene	6.35		0.00	154	9456	42.31	6.0		
2	Dibenzofuran	6.50		0.00	168	8875	24.75	3.5		
2	Fluorene	6.78		0.00	166	11492	42.52	6.0		
3	Phenanthrene	7.58		0.00	178	196481	481.03	68		
3	Anthracene	7.62		0.00	178	42500	109.00	15		
3	Fluoranthene	8.57	0.01	0.00	202	505176	1,002	140		
4	Pyrene	8.77	0.02	0.00	202	511309	915.80	130		
4	Benz(a)anthracene	10.11	0.02	0.00	228	246721	468.94	66		
4	Chrysene	10.16	0.02	0.00	228	368270	730.76	100		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F021.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 19:10	**Quant Date:**	11/16/2018 08:45	**Vial:**	21
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-020			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.26	0.07	0.00	252	468949	804.02	110		
5	Benzo(k)fluoranthene	12.32	0.06	0.00	252	173269**m**	299.46	42		
5	Benzo(a)pyrene	13.17	0.08	0.00	252	287266	561.62	79		
5	Indeno(1,2,3-cd)pyrene	15.53	0.07	0.00	276	228034	454.65	64		
5	Dibenz(a,h)anthracene	15.56	0.06	0.00	278	55359**m**	108.88	15		
5	Benzo(g,h,i)perylene	15.93	0.08	0.00	276	254193	432.77	61		

Prep Amount:	40.302 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	35.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

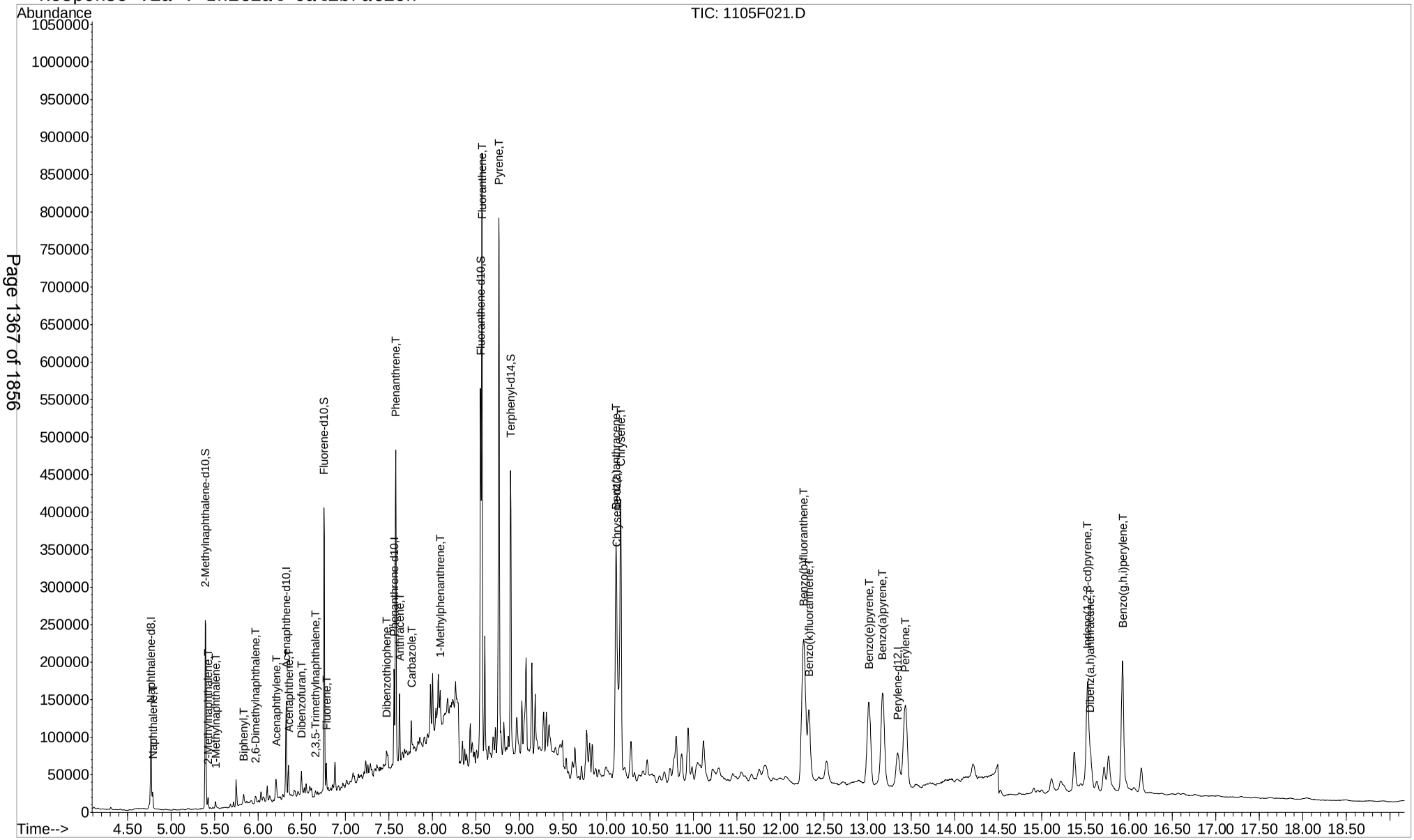
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

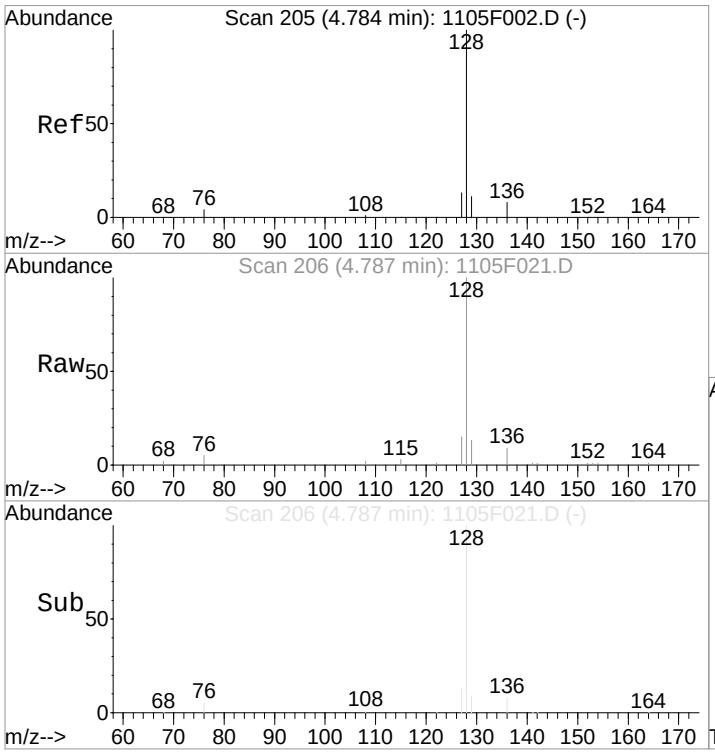
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F021.D Vial: 21
Acq On : 5 Nov 2018 7:10 pm Operator: LWeiskopf
Sample : K1810270-020 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



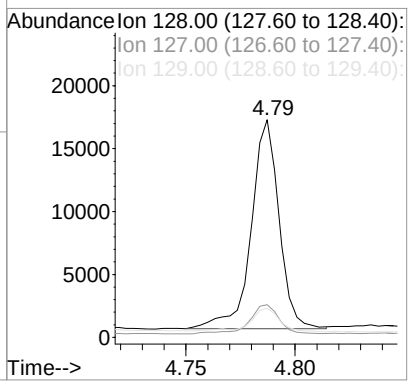
1st 11/16/18
2nd 11/27/18

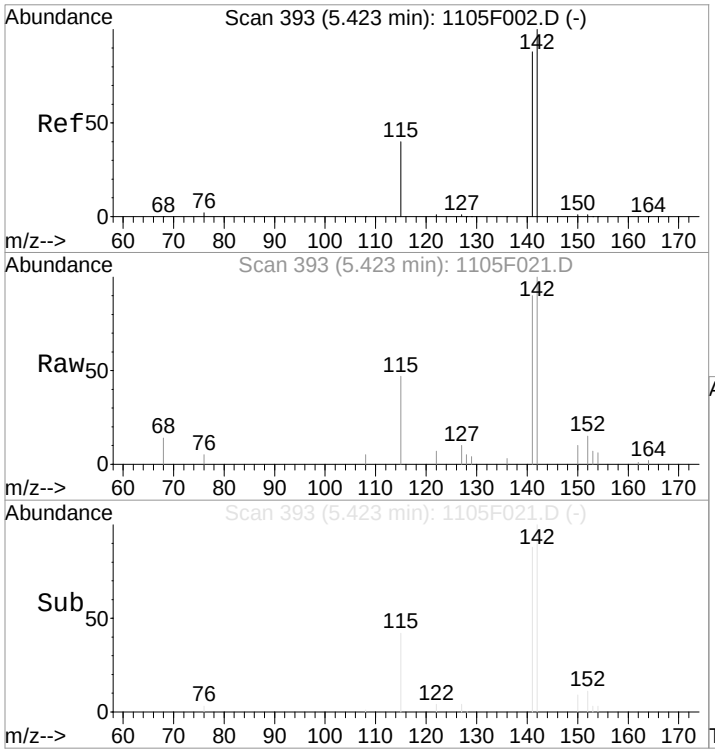


#2
Naphthalene
Concen: 35.80 ng/ml
RT: 4.79 min Scan# 206
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:128 Resp: 14744

Ion	Ratio	Lower	Upper
128	100		
127	13.9	0.0	43.7
129	11.4	0.0	30.8

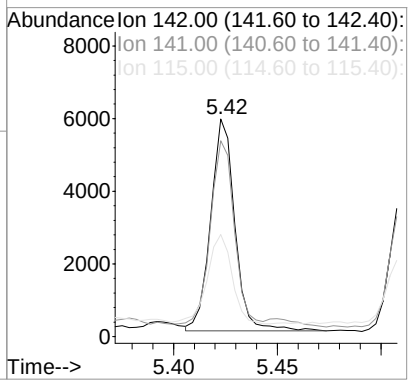




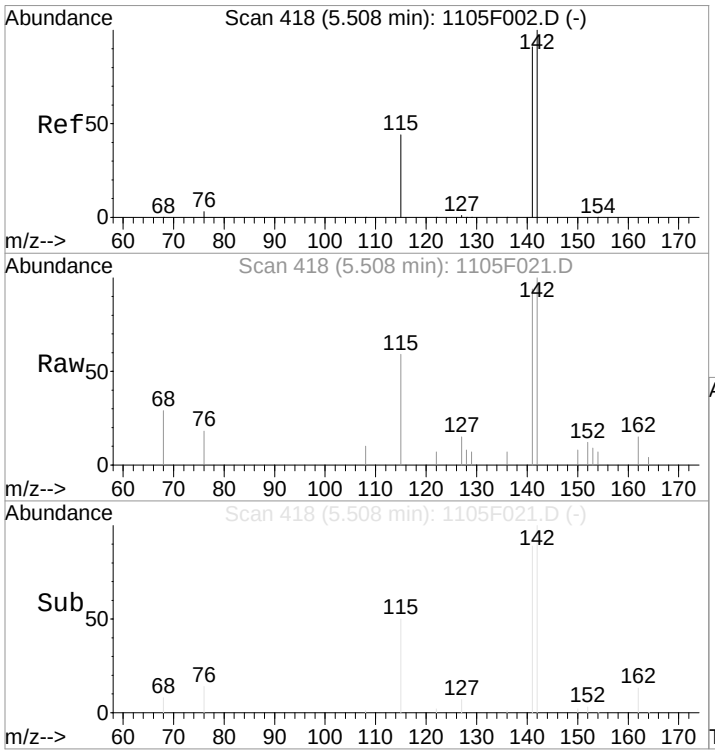
#4
2-Methylnaphthalene
Concen: 19.12 ng/ml
RT: 5.42 min Scan# 393
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:142 Resp: 4749

Ion	Ratio	Lower	Upper
142	100		
141	87.9	56.8	116.8
115	41.7	13.3	53.3



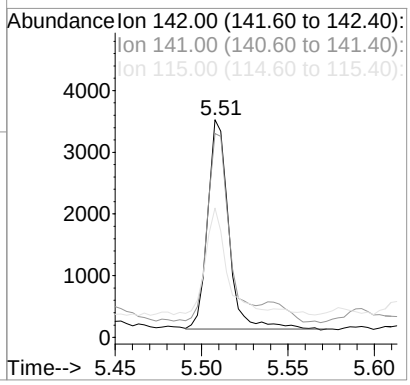
1st 11/16/18
2nd 11/27/18

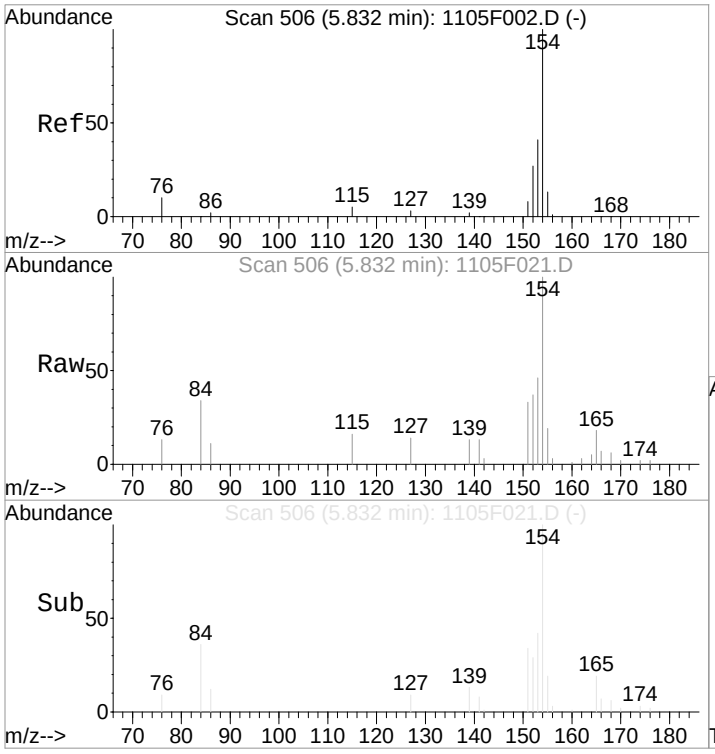


#5
1-Methylnaphthalene
Concen: 12.01 ng/ml
RT: 5.51 min Scan# 418
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:142 Resp: 2872

Ion	Ratio	Lower	Upper
142	100		
141	89.7	59.7	119.7
115	50.3	13.7	53.7

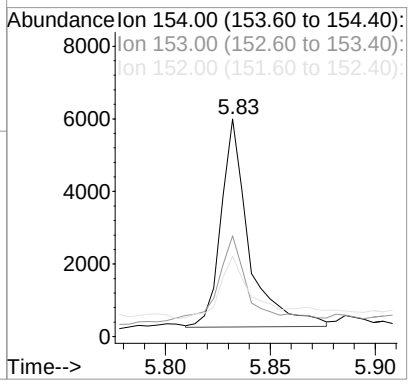




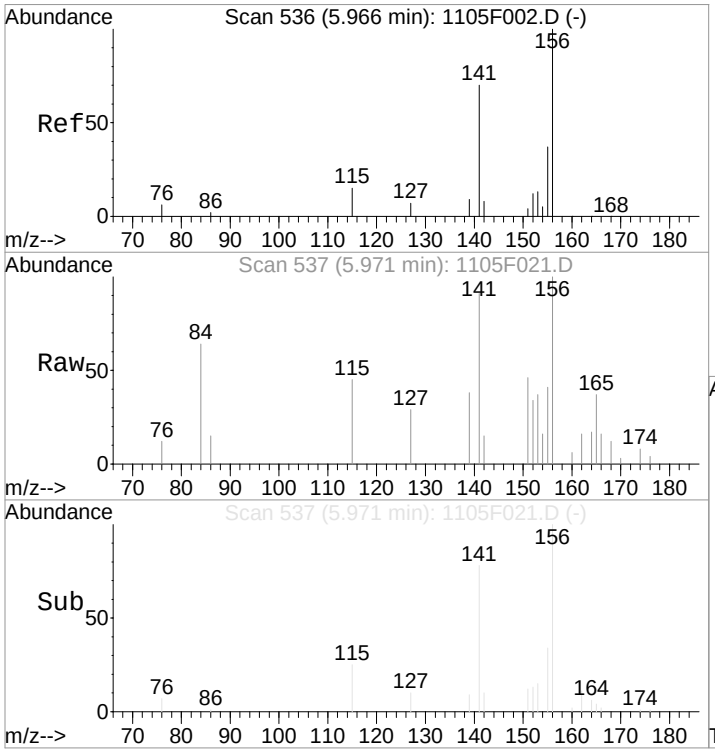
#6
Biphenyl
Concen: 17.16 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:154 Resp: 5319

Ion	Ratio	Lower	Upper
154	100		
153	39.9	11.4	71.4
152	29.9	7.1	47.1



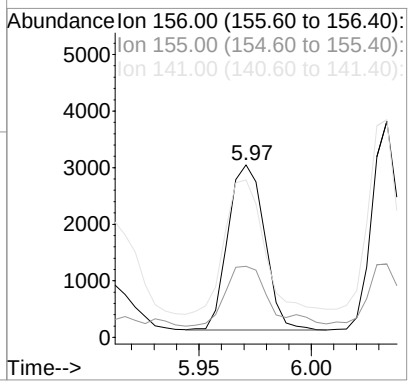
1st 11/16/18
2nd 11/27/18

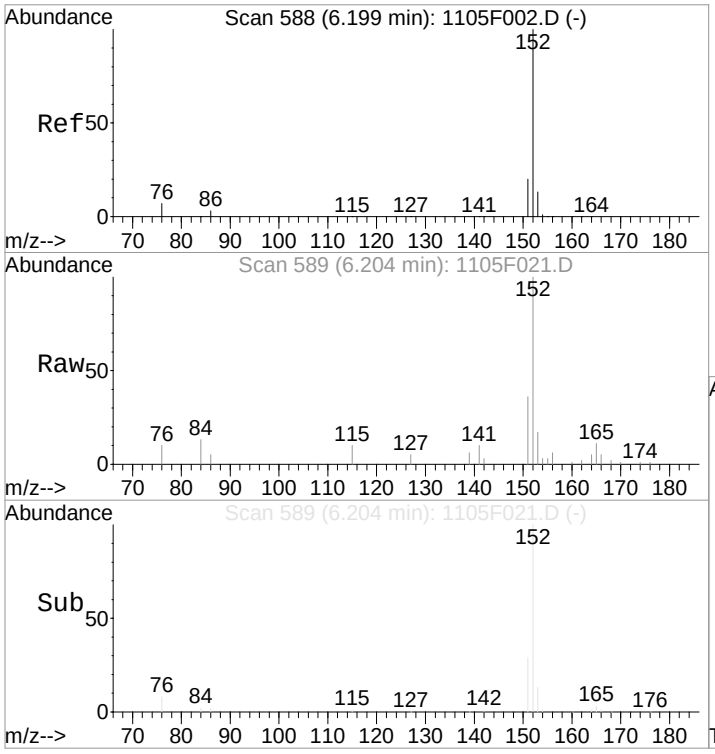


#7
2,6-Dimethylnaphthalene
Concen: 15.53 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:156 Resp: 3312

Ion	Ratio	Lower	Upper
156	100		
155	36.2	7.0	67.0
141	81.5	47.9	87.9

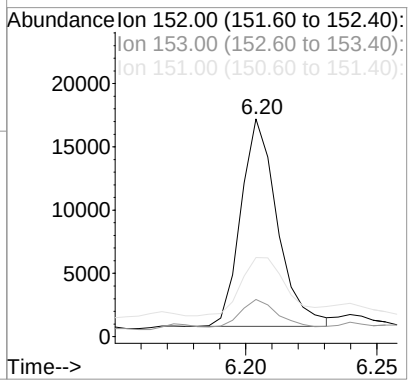




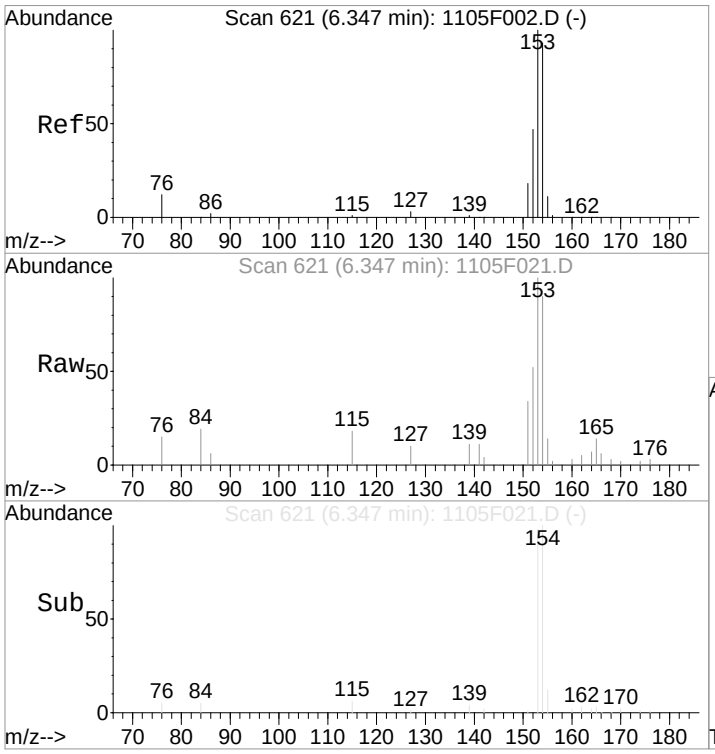
#9
Acenaphthylene
Concen: 40.91 ng/ml
RT: 6.20 min Scan# 589
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:152 Resp: 15918

Ion	Ratio	Lower	Upper
152	100		
153	12.9	0.0	42.9
151	28.1	0.2	40.2



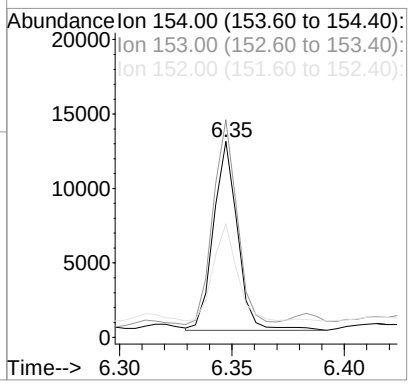
1st 11/16/18
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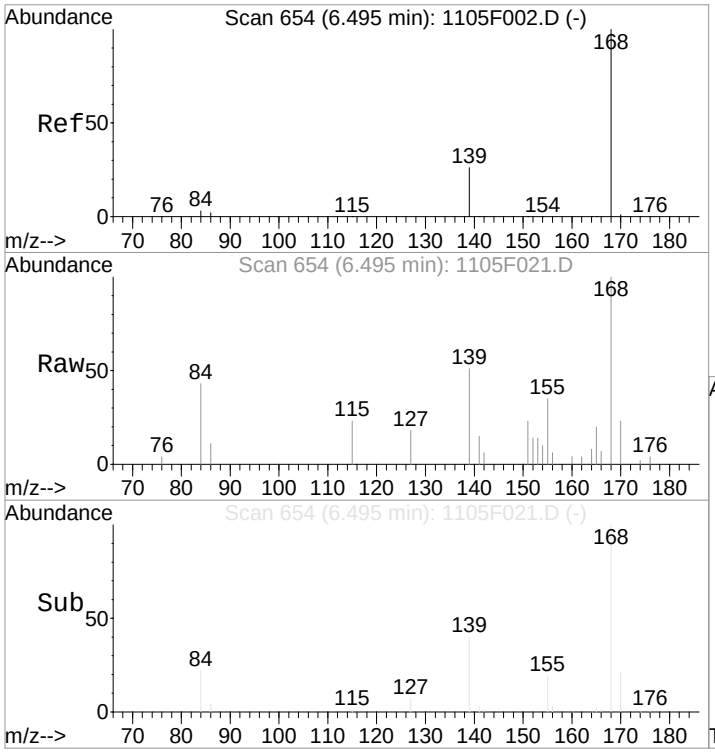


#10
Acenaphthene
Concen: 42.31 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:154 Resp: 9456

Ion	Ratio	Lower	Upper
154	100		
153	108.5	77.1	137.1
152	51.7	19.7	79.7

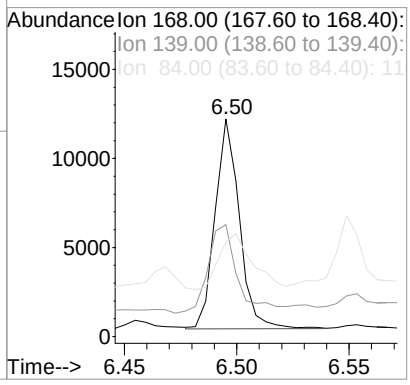




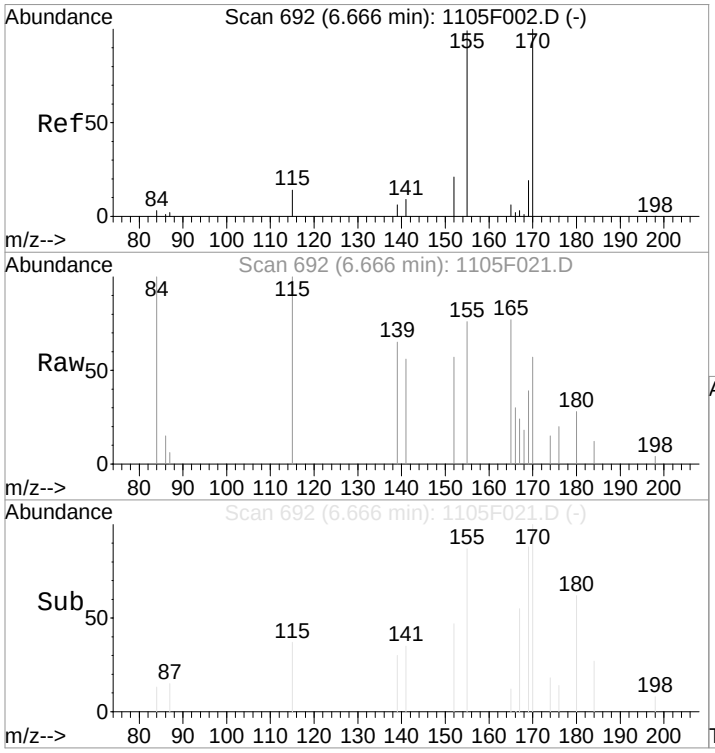
#11
Dibenzofuran
Concen: 24.75 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:168 Resp: 8875

Ion	Ratio	Lower	Upper
168	100		
139	41.3	0.0	55.8
84	21.9	0.0	23.5



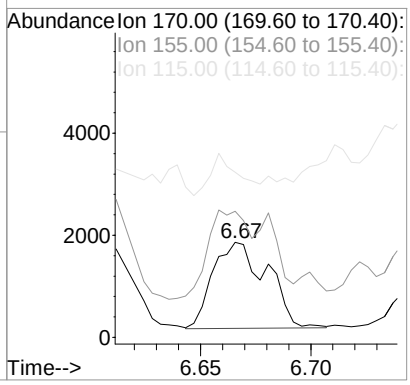
1st 11/16/18
2nd 11/27/18

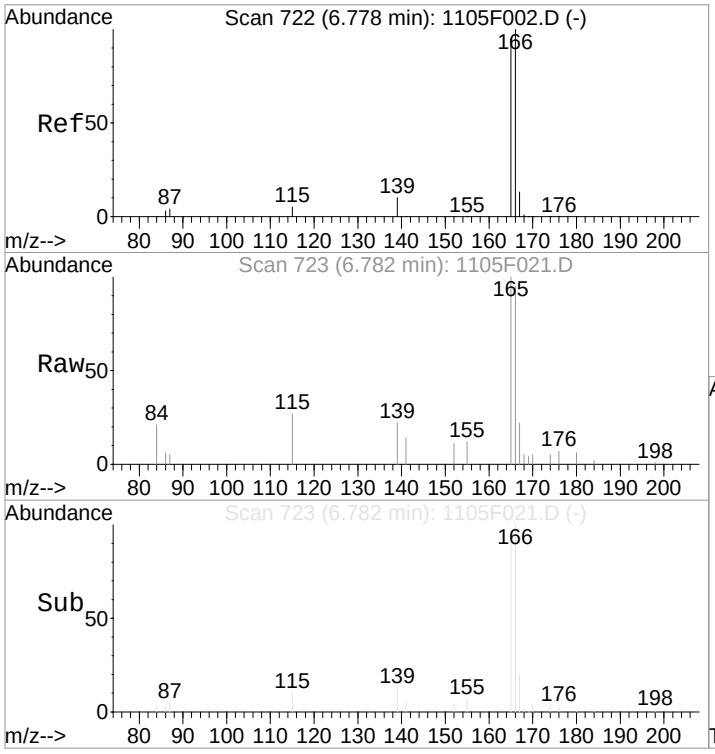


#12
2,3,5-Trimethylnaphthalene
Concen: 14.01 ng/ml
RT: 6.67 min Scan# 692
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:170 Resp: 2896

Ion	Ratio	Lower	Upper
170	100		
155	99.1	59.2	119.2
115	17.3	0.0	30.1

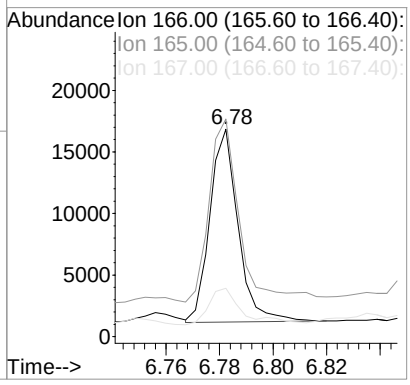


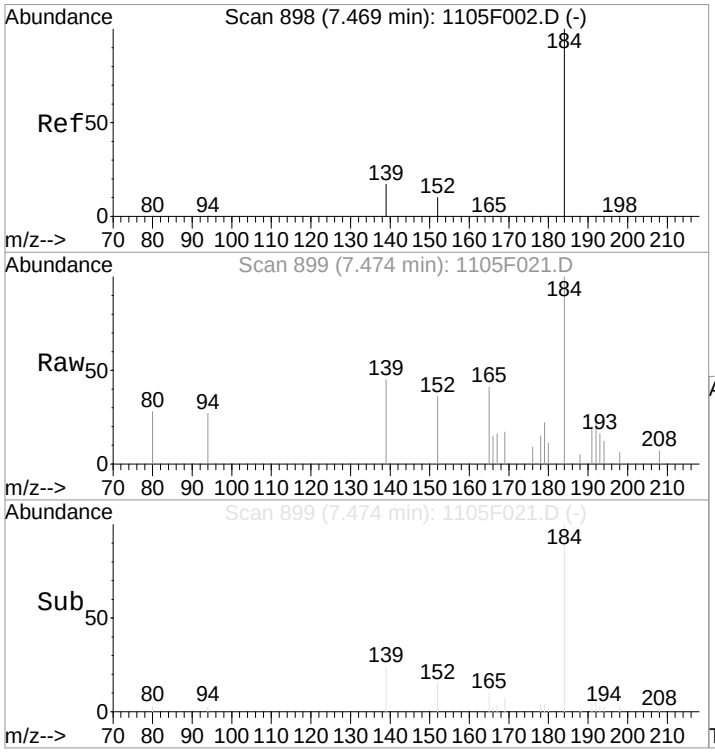


#14
Fluorene
Concen: 42.52 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:166 Resp: 11492

Ion	Ratio	Lower	Upper
166	100		
165	95.4	63.4	123.4
167	19.0	0.0	33.1

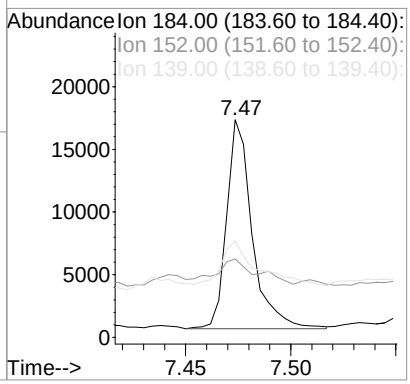


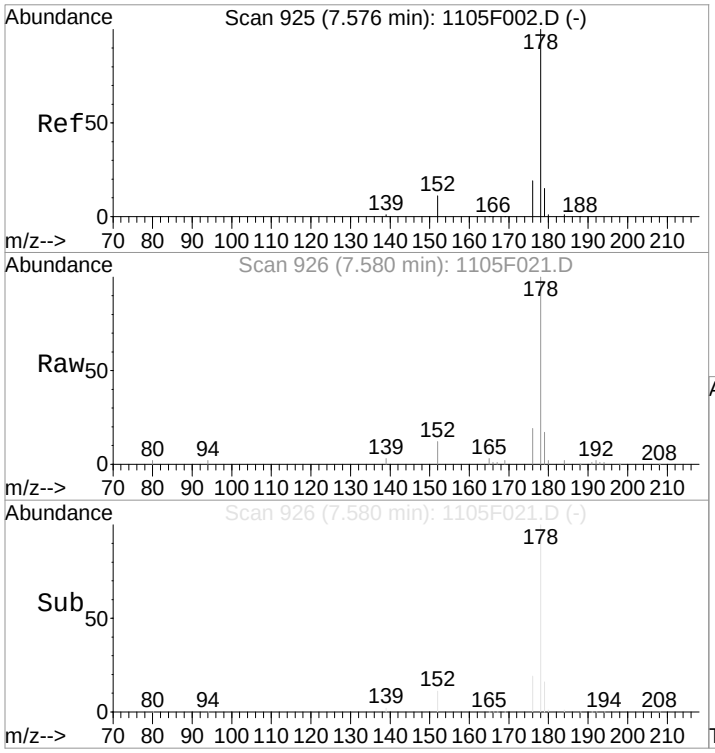


#16
Dibenzothiophene
Concen: 34.57 ng/ml
RT: 7.47 min Scan# 899
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:184 Resp: 14119

Ion	Ratio	Lower	Upper
184	100		
152	12.0	0.0	37.8
139	21.6	0.0	32.6

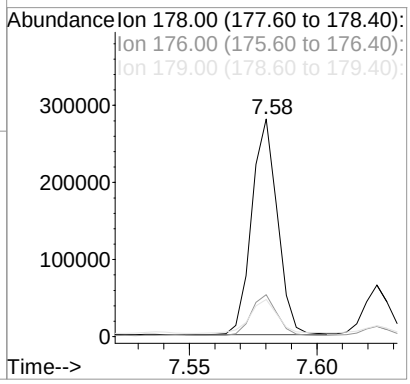




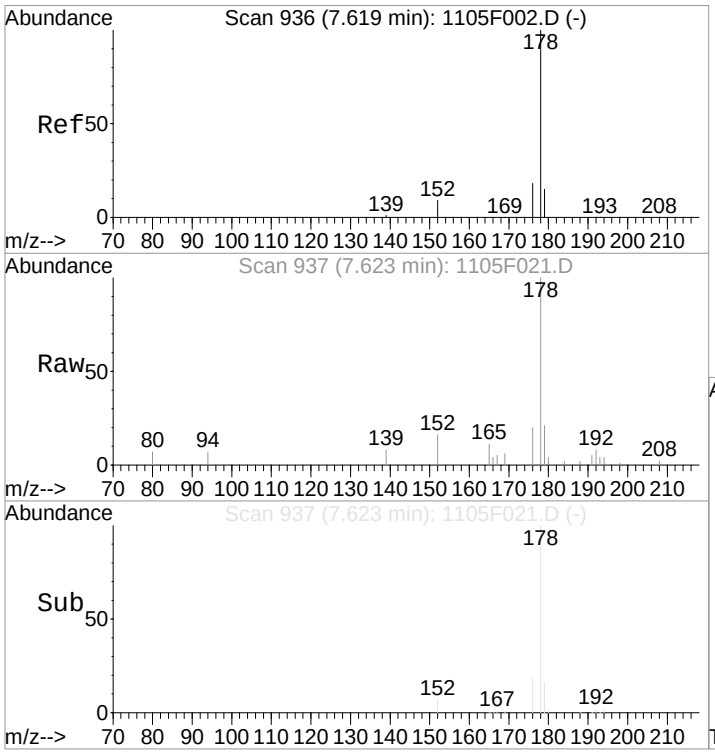
#17
Phenanthrene
Concen: 481.03 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:178 Resp: 196481

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.7
179	15.8	0.0	35.1



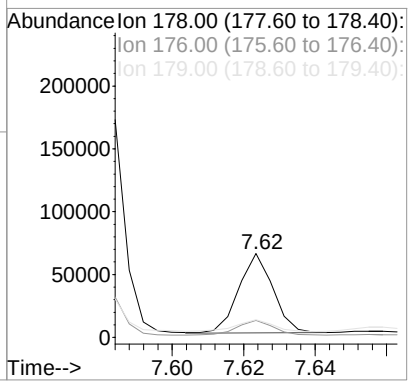
1st 11/16/18
2nd 11/27/18

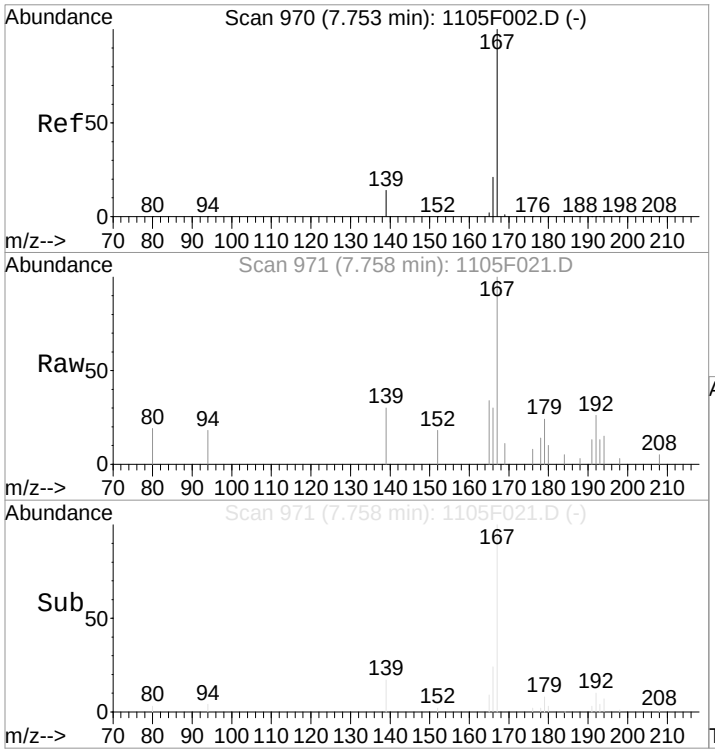


#18
Anthracene
Concen: 109.00 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:178 Resp: 42500

Ion	Ratio	Lower	Upper
178	100		
176	18.5	0.0	48.0
179	14.6	0.0	35.1

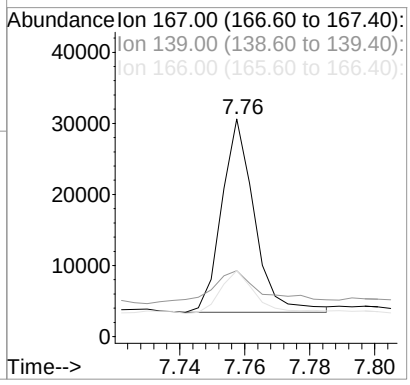




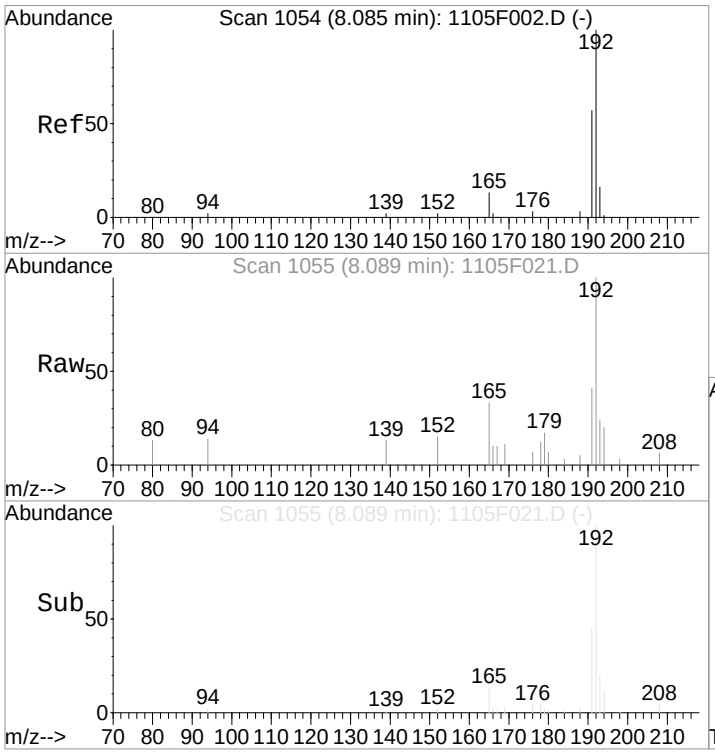
#19
Carbazole
Concen: 49.99 ng/ml
RT: 7.76 min Scan# 971
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:167 Resp: 19021

Ion	Ratio	Lower	Upper
167	100		
139	15.1	0.0	41.5
166	22.2	0.7	40.7



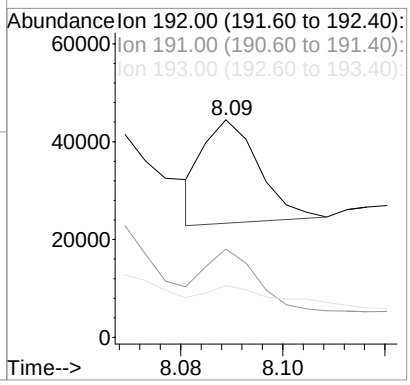
1st 11/16/18
2nd 11/27/18

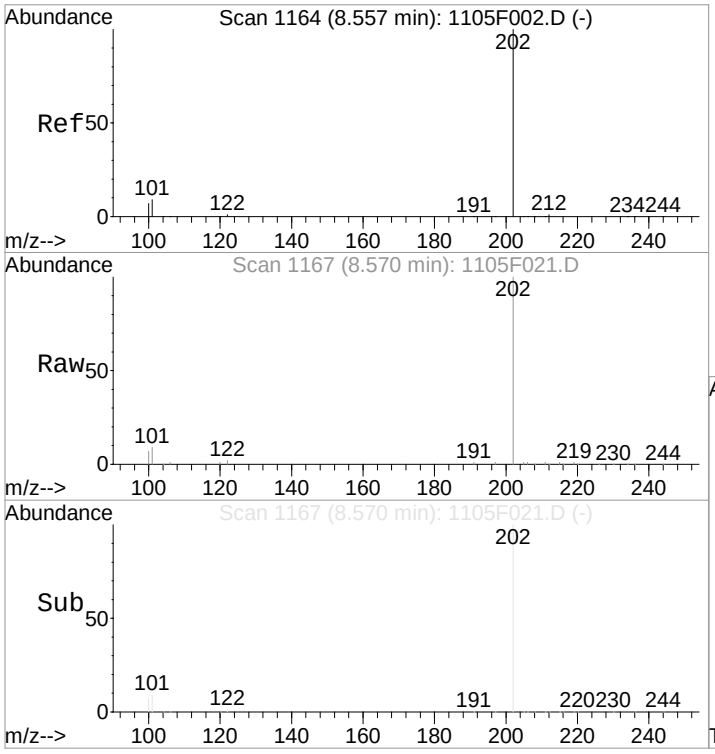


#20
1-Methylphenanthrene
Concen: 51.76 ng/ml
RT: 8.09 min Scan# 1055
Delta R.T. 0.00 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:192 Resp: 16014

Ion	Ratio	Lower	Upper
192	100		
191	63.5	27.7	87.7
193	17.4	0.0	45.4

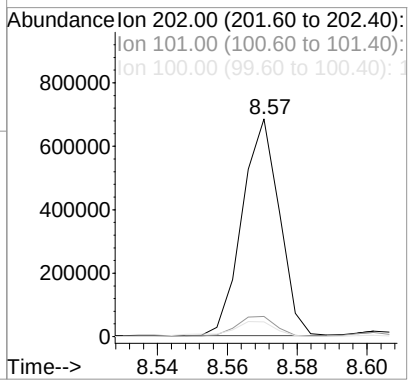




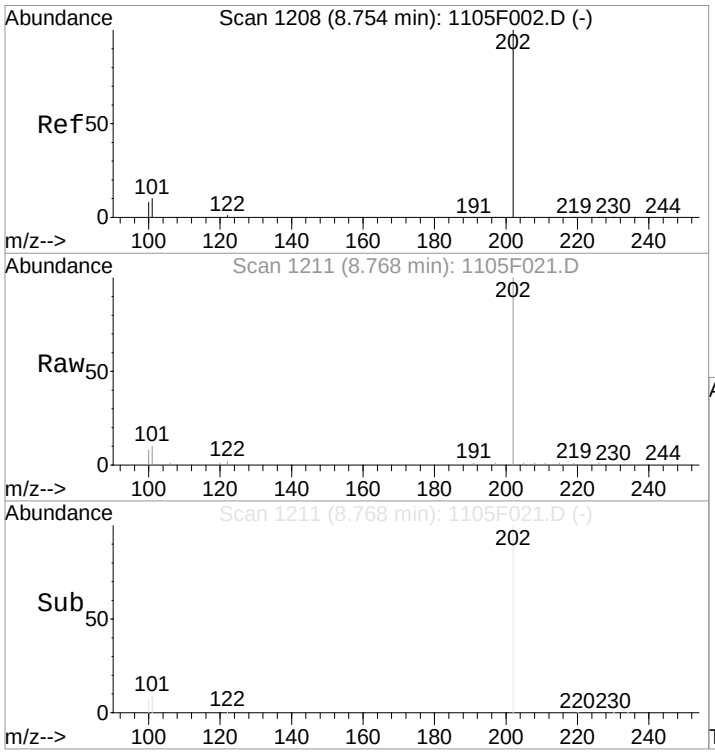
#21
Fluoranthene
Concen: 1001.63 ng/ml
RT: 8.57 min Scan# 1167
Delta R.T. 0.01 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:202 Resp: 505176

Ion	Ratio	Lower	Upper
202	100		
101	9.1	0.0	41.3
100	6.6	0.0	28.6



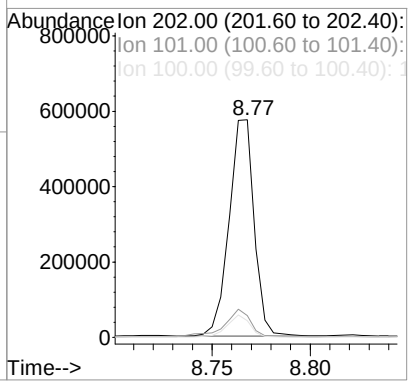
1st 11/16/18
2nd 11/27/18

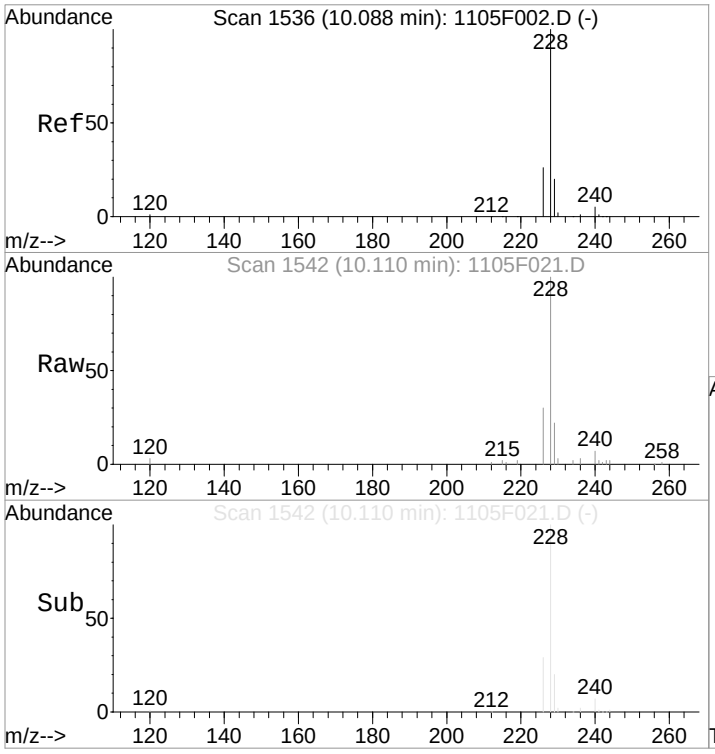


#24
Pyrene
Concen: 915.80 ng/ml
RT: 8.77 min Scan# 1211
Delta R.T. 0.01 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:202 Resp: 511309

Ion	Ratio	Lower	Upper
202	100		
101	9.9	0.0	40.8
100	7.6	0.0	28.5

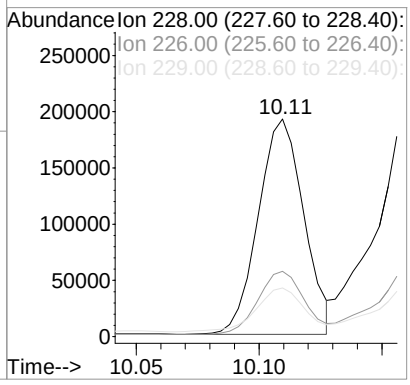




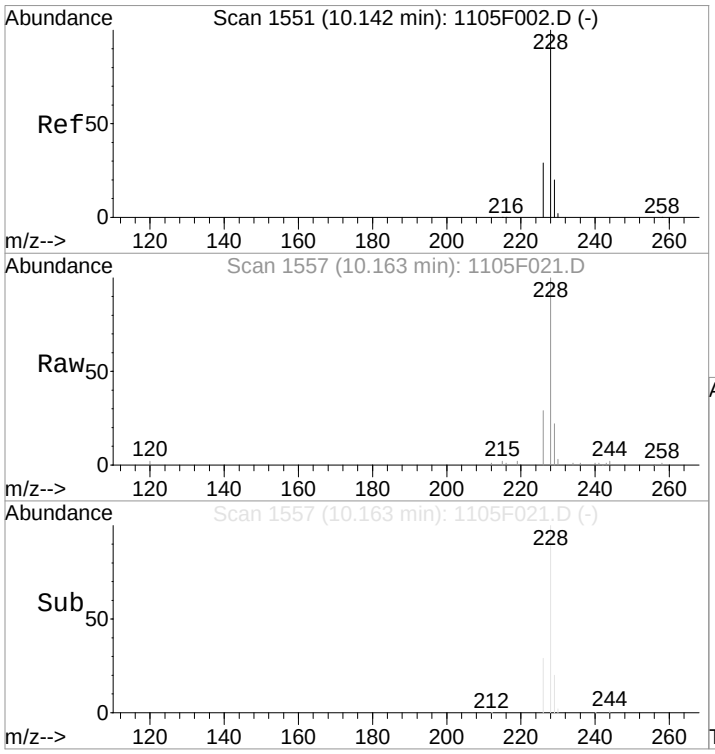
#26
Benz(a)anthracene
Concen: 468.94 ng/ml
RT: 10.11 min Scan# 1542
Delta R.T. 0.02 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:228 Resp: 246721

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	56.3
229	20.2	0.0	39.1



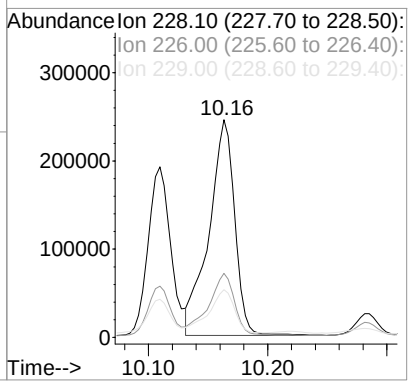
1st 11/16/18
2nd 11/27/18

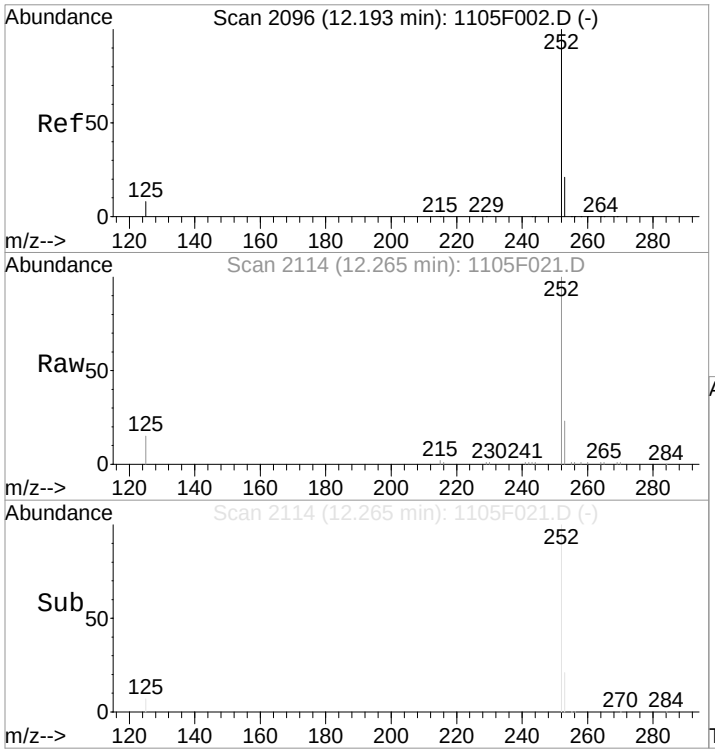


#27
Chrysene
Concen: 730.76 ng/ml
RT: 10.16 min Scan# 1557
Delta R.T. 0.02 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:228 Resp: 368270

Ion	Ratio	Lower	Upper
228	100		
226	28.8	0.0	58.7
229	20.3	0.0	39.2

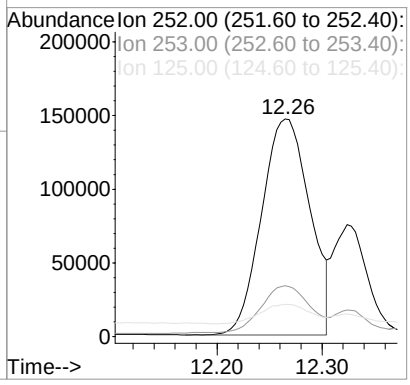




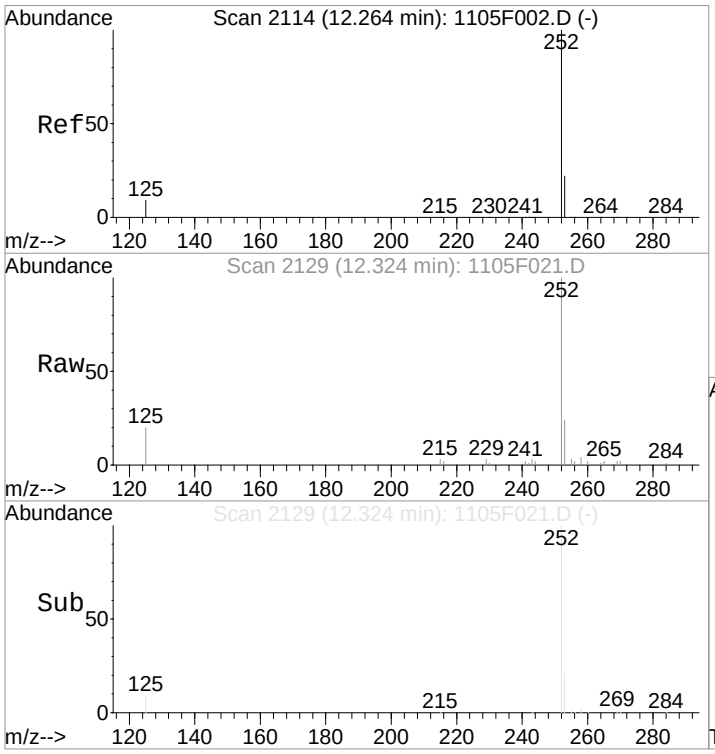
#29
Benzo(b)fluoranthene
Concen: 804.02 ng/ml
RT: 12.26 min Scan# 2114
Delta R.T. 0.07 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:252 Resp: 468949

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.2
125	8.6	0.0	29.5



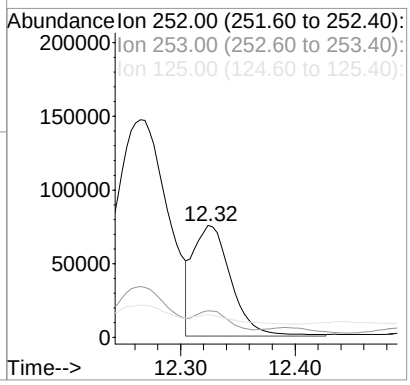
1st 11/16/18
2nd 11/27/18

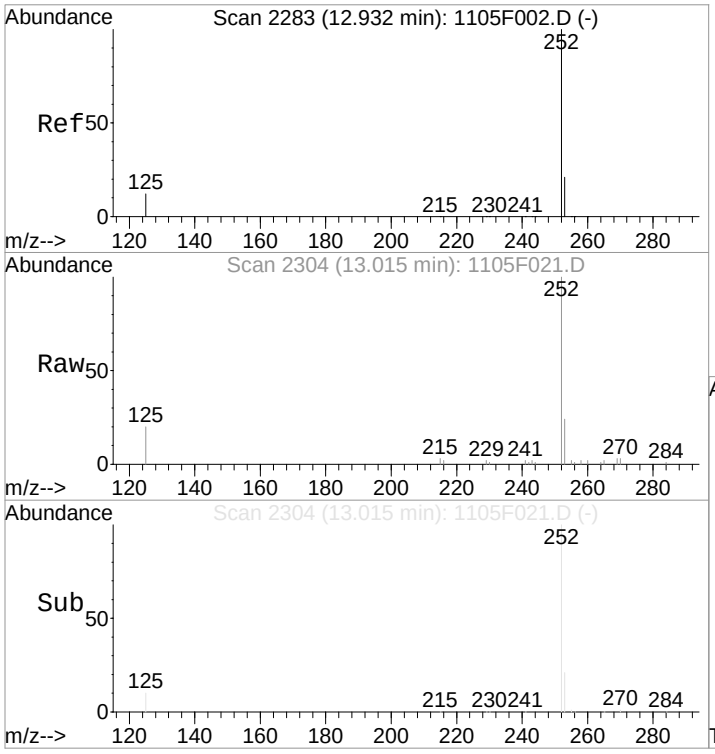


#30
Benzo(k)fluoranthene
Concen: 299.46 ng/ml m
RT: 12.32 min Scan# 2129
Delta R.T. 0.06 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:252 Resp: 173269

Ion	Ratio	Lower	Upper
252	100		
253	23.7	0.0	51.2
125	20.5	0.0	29.7

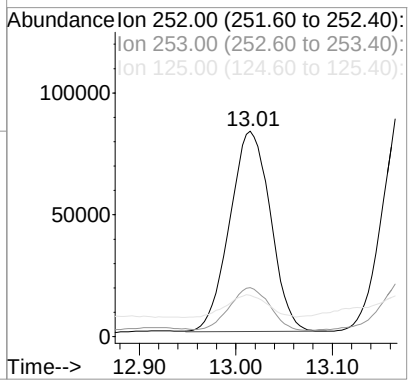




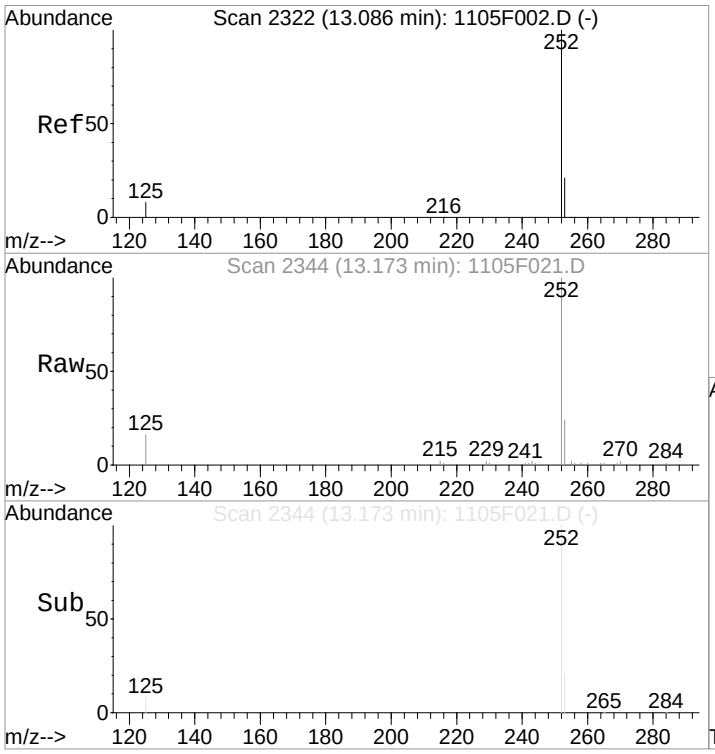
#31
Benzo(e)pyrene
Concen: 434.82 ng/ml
RT: 13.01 min Scan# 2304
Delta R.T. 0.08 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:252 Resp: 241740

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.3
125	11.1	0.0	33.5



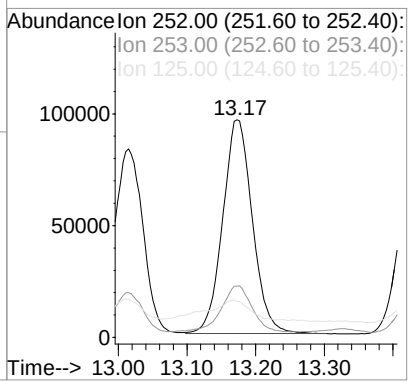
1st 11/16/18
2nd 11/27/18

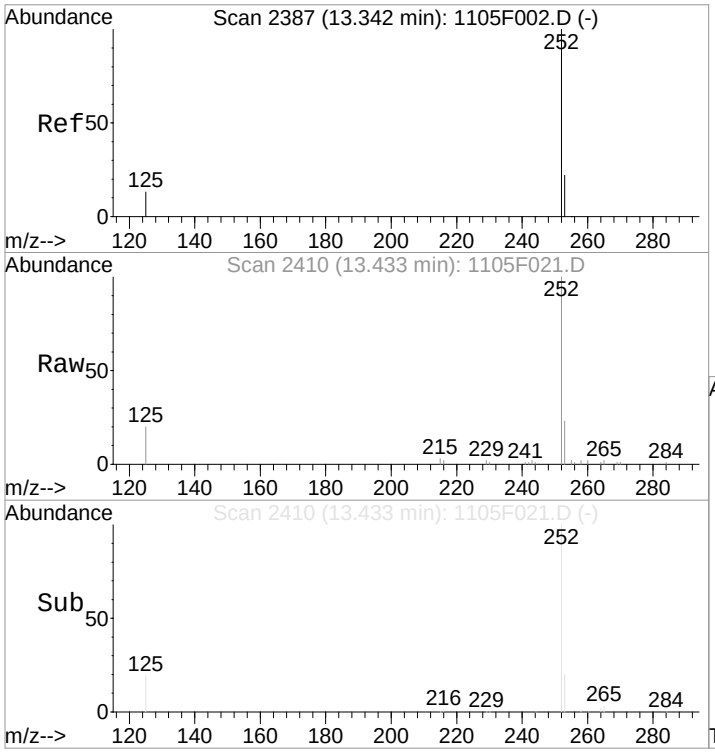


#32
Benzo(a)pyrene
Concen: 561.62 ng/ml
RT: 13.17 min Scan# 2344
Delta R.T. 0.09 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:252 Resp: 287266

Ion	Ratio	Lower	Upper
252	100		
253	21.0	0.0	50.9
125	9.4	0.0	30.3

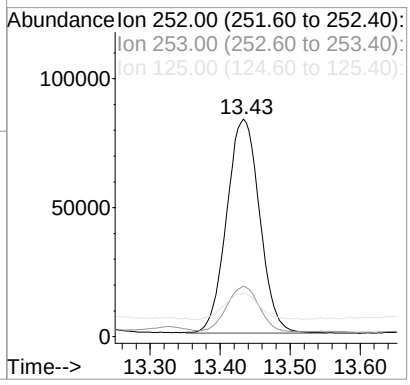




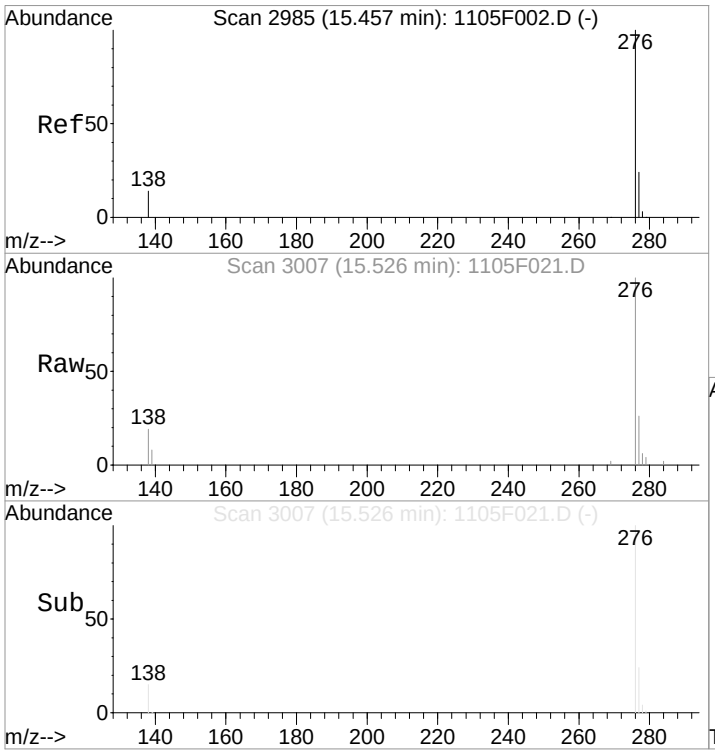
#33
Perylene
Concen: 505.13 ng/ml
RT: 13.43 min Scan# 2410
Delta R.T. 0.09 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:252 Resp: 271037

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	11.8	0.0	33.8



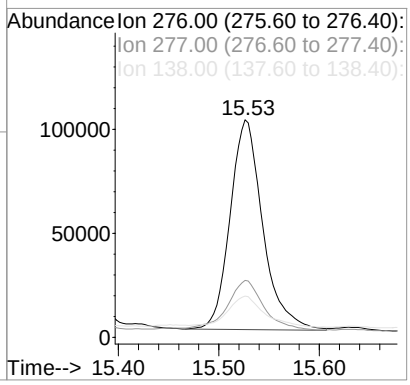
1st 11/16/18
2nd 11/27/18

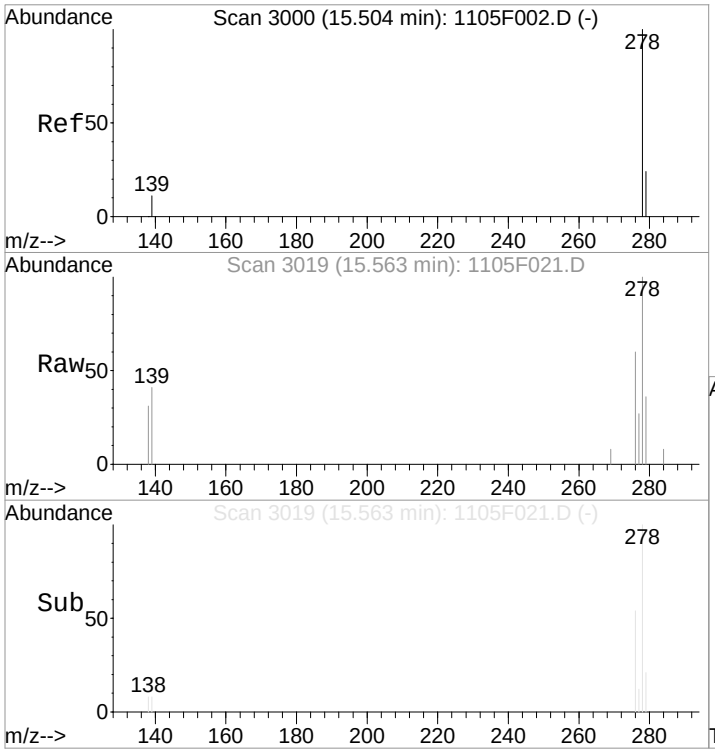


#34
Indeno(1,2,3-cd)pyrene
Concen: 454.65 ng/ml
RT: 15.53 min Scan# 3007
Delta R.T. 0.07 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:276 Resp: 228034

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.4
138	14.7	0.0	37.7

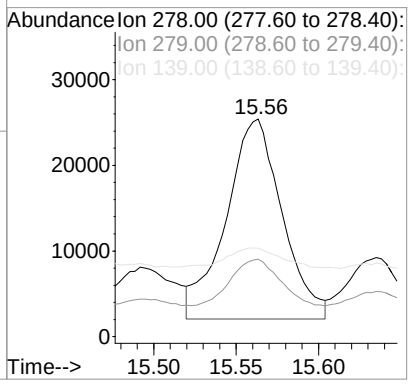




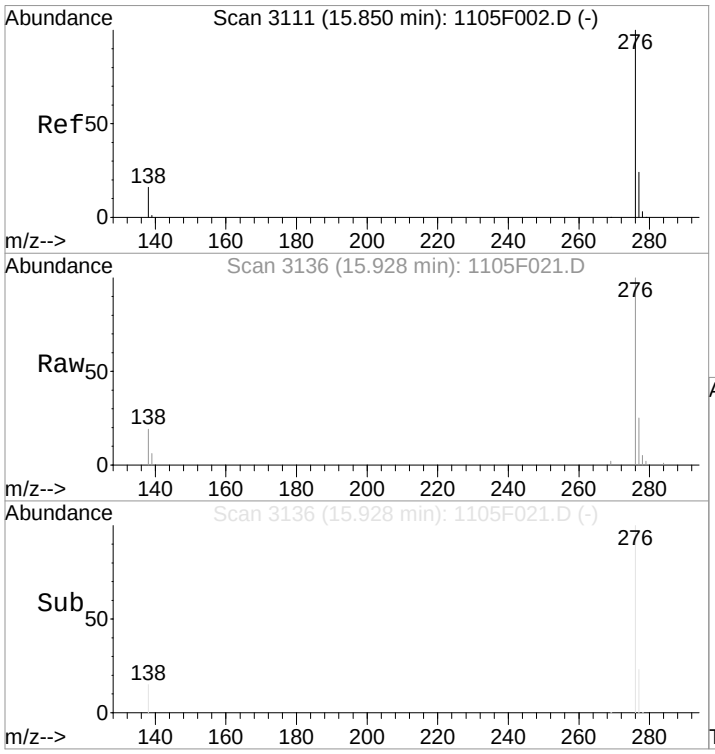
#35
Dibenz(a,h)anthracene
Concen: 108.88 ng/ml m
RT: 15.56 min Scan# 3019
Delta R.T. 0.06 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:278 Resp: 55359

Ion	Ratio	Lower	Upper
278	100		
279	35.6	0.0	53.5
139	40.6	0.0	35.0#



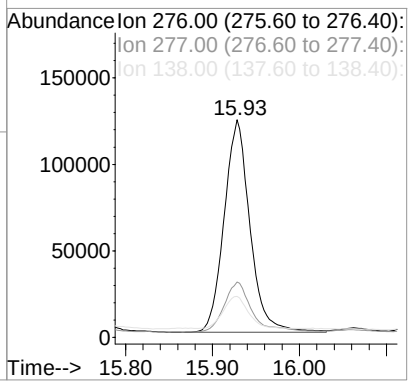
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 432.77 ng/ml
RT: 15.93 min Scan# 3136
Delta R.T. 0.08 min
Lab File: 1105F021.D
Acq: 5 Nov 2018 7:10 pm

Tgt Ion:276 Resp: 254193

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.1
138	15.2	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F021.D Vial: 21
Acq On : 5 Nov 2018 7:10 pm Operator: LWeiskopf
Sample : K1810270-020 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:12 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	71357	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	32606	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	65476	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	81376	200.00	ng/ml	0.02
28) Perylene-d12	13.35	264	94405	200.00	ng/ml	0.08
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	79712	400.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	40.02%		
13) Fluorene-d10	6.76	176	120895	579.88	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	57.99%		
22) Fluoranthene-d10	8.55	212	253539	614.40	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	61.44%		
25) Terphenyl-d14	8.90	244	227891	645.65	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	64.56%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	14744	35.80	ng/ml	99
4) 2-Methylnaphthalene	5.42	142	4749	19.12	ng/ml	95
5) 1-Methylnaphthalene	5.51	142	2872	12.01	ng/ml	92
6) Biphenyl	5.83	154	5319	17.16	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.97	156	3312	15.53	ng/ml	89
9) Acenaphthylene	6.20	152	15918	40.91	ng/ml	90
10) Acenaphthene	6.35	154	9456	42.31	ng/ml	98
11) Dibenzofuran	6.50	168	8875	24.75	ng/ml	67
12) 2,3,5-Trimethylnaphthalene	6.67	170	2896	14.01	ng/ml	89
14) Fluorene	6.78	166	11492	42.52	ng/ml	96
16) Dibenzothiophene	7.47	184	14119	34.57	ng/ml	81
17) Phenanthrene	7.58	178	196481	481.03	ng/ml	99
18) Anthracene	7.62	178	42500	109.00	ng/ml	99
19) Carbazole	7.76	167	19021	49.99	ng/ml	95
20) 1-Methylphenanthrene	8.09	192	16014	51.76	ng/ml	93
21) Fluoranthene	8.57	202	505176	1001.63	ng/ml	94
24) Pyrene	8.77	202	511309	915.80	ng/ml	98
26) Benz(a)anthracene	10.11	228	246721	468.94	ng/ml	96
27) Chrysene	10.16	228	368270	730.76	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	468949	804.02	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	173269m	299.46	ng/ml	
31) Benzo(e)pyrene	13.01	252	241740	434.82	ng/ml	97
32) Benzo(a)pyrene	13.17	252	287266	561.62	ng/ml	99
33) Perylene	13.43	252	271037	505.13	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.53	276	228034	454.65	ng/ml	97
35) Dibenz(a,h)anthracene	15.56	278	55359m	108.88	ng/ml	
36) Benzo(g,h,i)perylene	15.93	276	254193	432.77	ng/ml	95

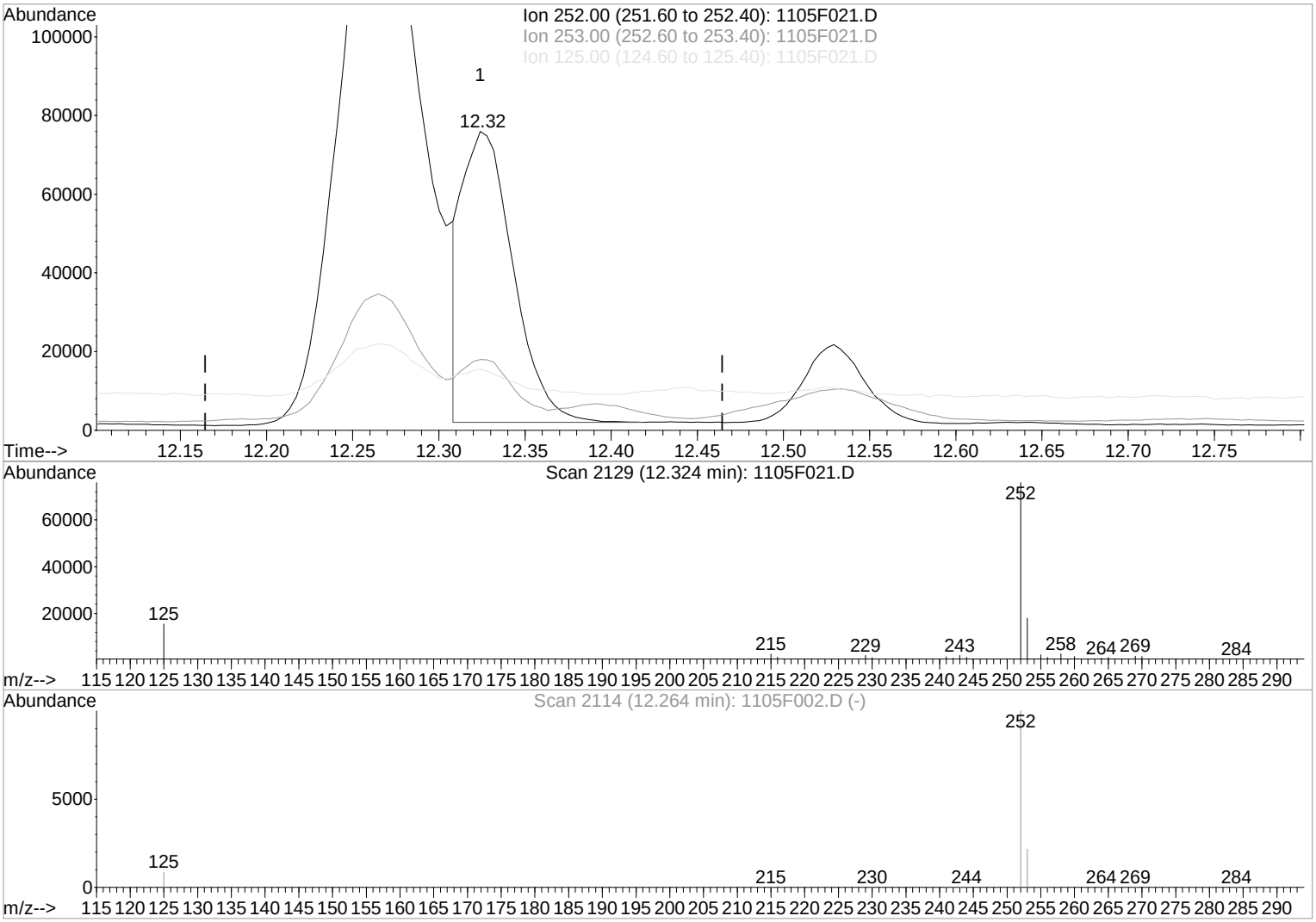
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F021.D Vial: 21
Acq On : 5 Nov 2018 7:10 pm Operator: LWeiskopf
Sample : K1810270-020 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 7:42 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F021.D

(30) Benzo(k)fluoranthene (T)

12.32min 263.89ng/ml

response 152688

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	18.27
125.00	9.70	7.67
0.00	0.00	0.00

Manual Integration:

Before

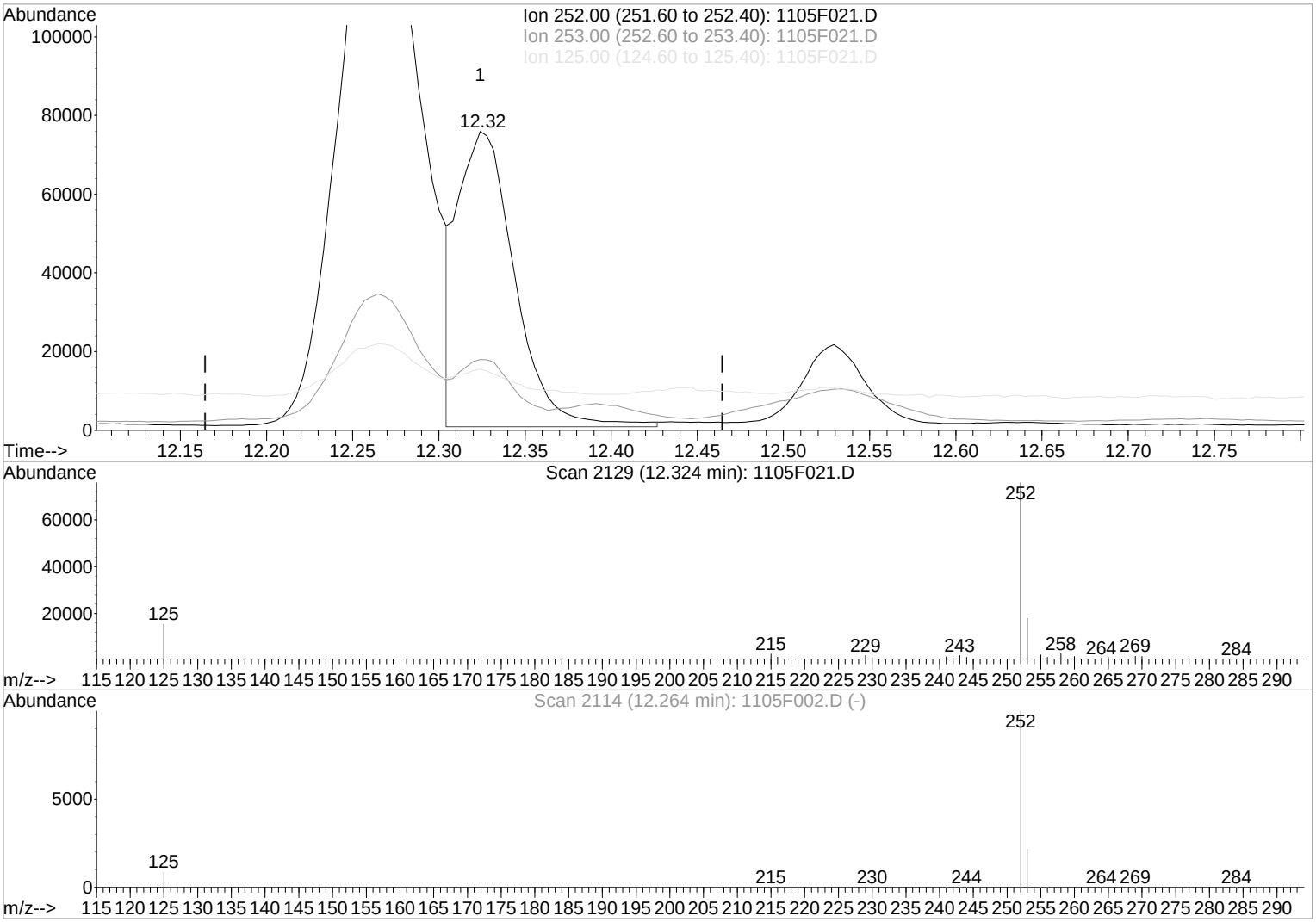
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F021.D Vial: 21
Acq On : 5 Nov 2018 7:10 pm Operator: LWeiskopf
Sample : K1810270-020 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:44 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F021.D

(30) Benzo(k)fluoranthene (T)

12.32min 299.46ng/ml m

response 173269

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	23.68
125.00	9.70	20.47
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

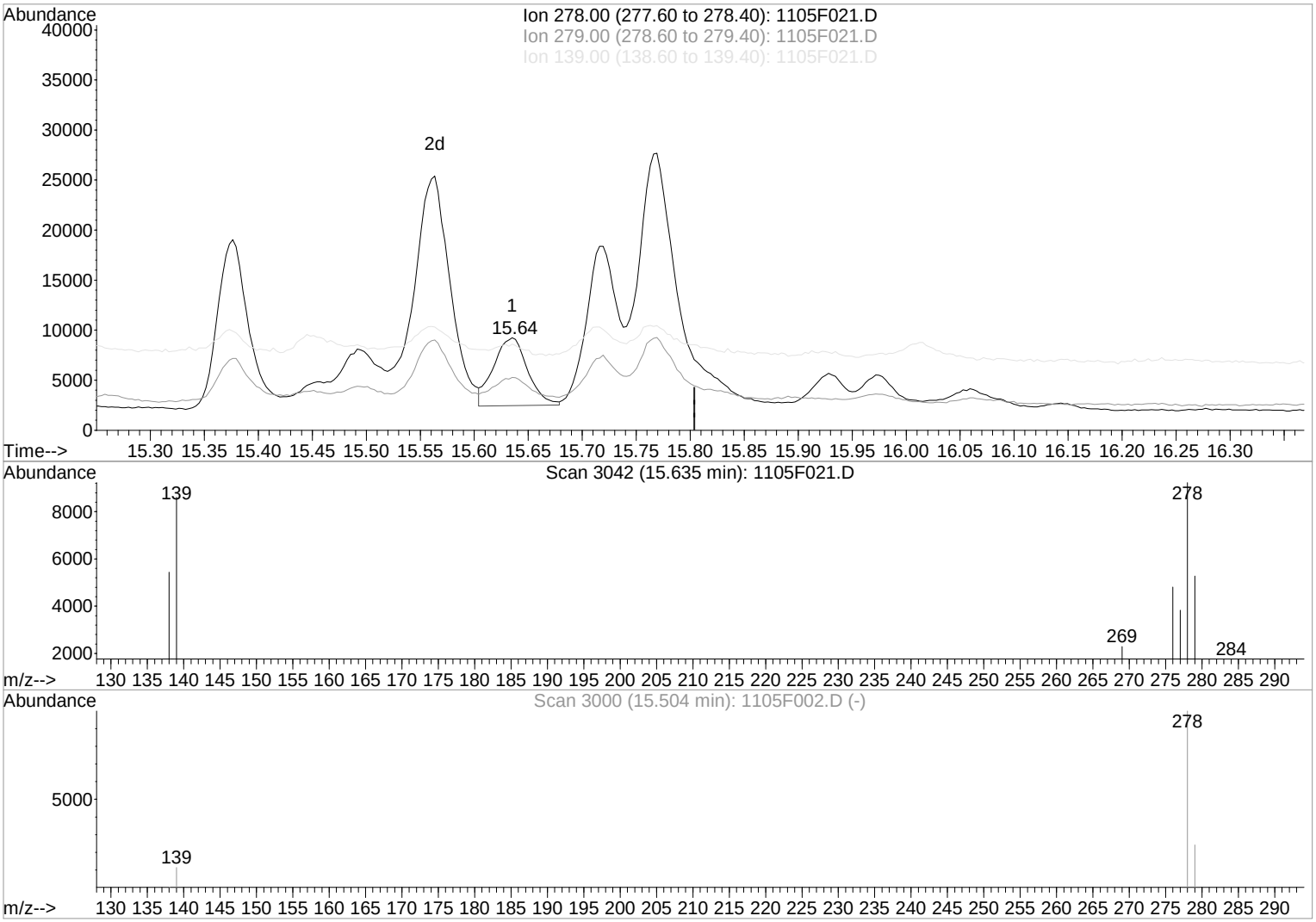
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F021.D Vial: 21
Acq On : 5 Nov 2018 7:10 pm Operator: LWeiskopf
Sample : K1810270-020 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:44 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F021.D

(35) Dibenz(a,h)anthracene (T)

15.64min 29.26ng/ml

response 14879

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	30.79
139.00	15.00	15.39
0.00	0.00	0.00

Manual Integration:

Before

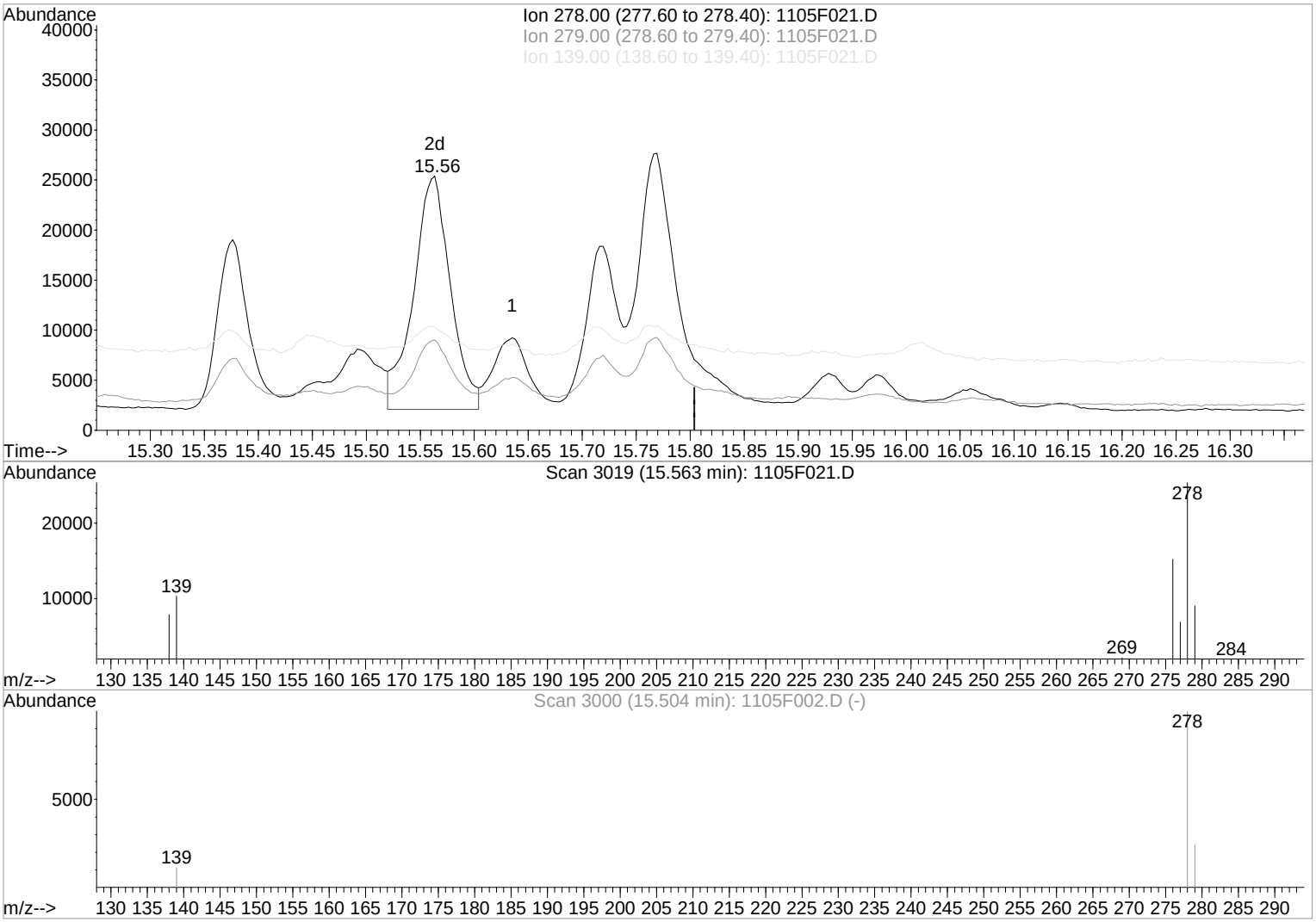
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F021.D Vial: 21
Acq On : 5 Nov 2018 7:10 pm Operator: LWeiskopf
Sample : K1810270-020 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F021.D

(35) Dibenz(a,h)anthracene (T)

15.56min 108.88ng/ml m

response 55359

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	35.56
139.00	15.00	40.59#
0.00	0.00	0.00

Manual Integration:

After

WP

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F022.D
Lab ID: K1810270-029
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/05/2018 19:40
Date Quantitated: 11/16/2018 08:45
Batch ID: KWG1806019
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F022.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 19:40	**Quant Date:**	11/16/2018 08:45	**Vial:**	22
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-029			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/17/2018	**Receive Date:**	10/19/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	K1810270
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700777	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	73213	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	32512	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	66609	200.00	OK
4	Chrysene-d12	10.13	0.03	240	84062	200.00	OK
5	Perylene-d12	13.38	0.12	264	93566	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.76	0.00	0.00	176	136516	656.70	66	26-102	OK	
3	Fluoranthene-d10	8.56	0.02	0.00	212	308090	733.90	73	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	271446	744.48	74	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	30186	71.43	9.8		
1	2-Methylnaphthalene	5.43	0.01	0.00	142	7563	29.68	4.1		
2	Acenaphthylene	6.21	0.01	0.00	152	31826	82.04	11		
2	Acenaphthene	6.35		0.00	154	13638	61.20	8.4		
2	Dibenzofuran	6.50		0.00	168	11728	32.80	4.5		
2	Fluorene	6.78		0.00	166	17721	65.75	9.0		
3	Phenanthrene	7.58		0.00	178	288904	695.28	95		
3	Anthracene	7.62		0.00	178	81104	204.46	28		
3	Fluoranthene	8.57	0.01	0.00	202	781075	1,522	210		
4	Pyrene	8.77	0.02	0.00	202	838221	1,453	200		
4	Benz(a)anthracene	10.12	0.03	0.00	228	424263	780.63	110		
4	Chrysene	10.17	0.03	0.00	228	549327	1,055	140		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F022.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 19:40	**Quant Date:**	11/16/2018 08:45	**Vial:**	22
Run Type:	SMPL	**ListJoinID:**	LJ12908	**Dilution:**	1.0
Lab ID:	K1810270-029			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.29	0.10	0.00	252	683367	1,182	160		
5	Benzo(k)fluoranthene	12.35	0.09	0.00	252	225276**m**	392.83	54		
5	Benzo(a)pyrene	13.20	0.11	0.00	252	455411	898.33	120		
5	Indeno(1,2,3-cd)pyrene	15.55	0.09	0.00	276	326222	656.24	90		
5	Dibenz(a,h)anthracene	15.58	0.08	0.00	278	78217**m**	155.22	21		
5	Benzo(g,h,i)perylene	15.95	0.10	0.00	276	360365	619.03	85		

Prep Amount:	40.487 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	36.1 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

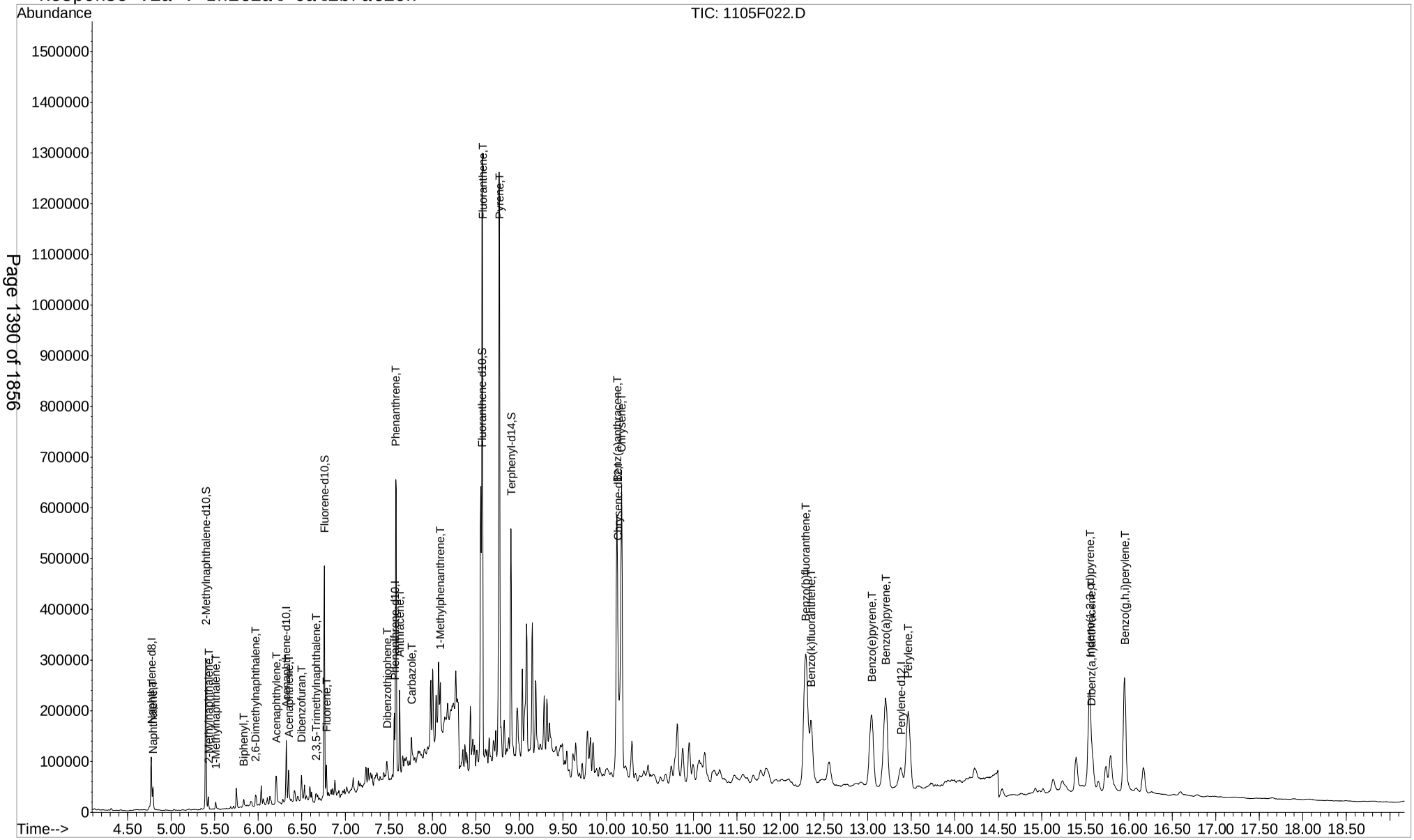
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

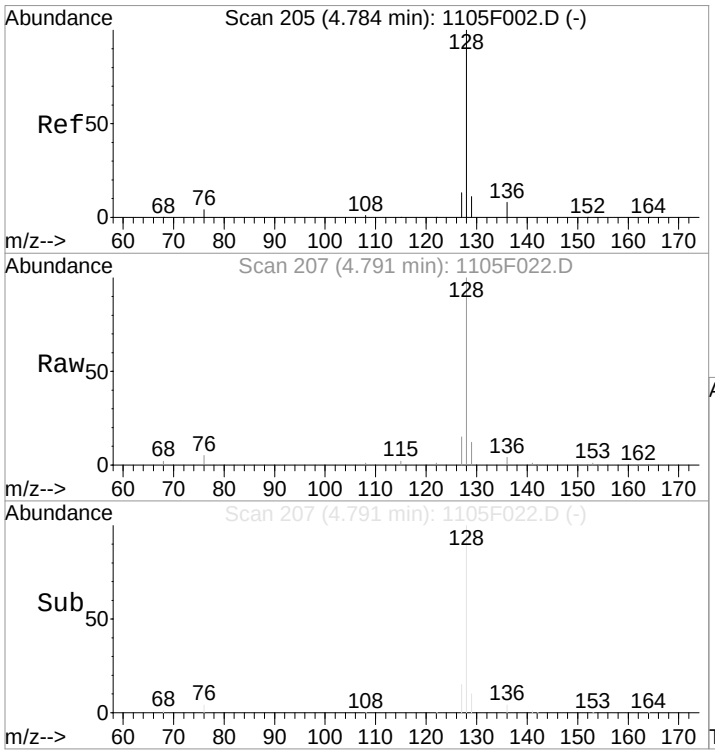
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F022.D Vial: 22
Acq On : 5 Nov 2018 7:40 pm Operator: LWeiskopf
Sample : K1810270-029 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



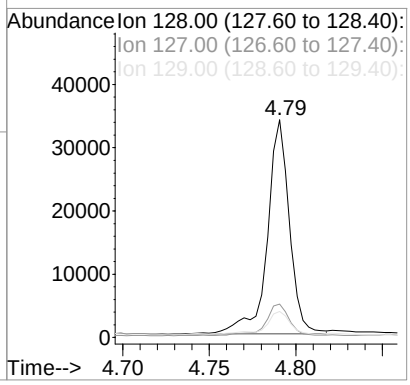
1st 11/16/18
2nd 11/27/18

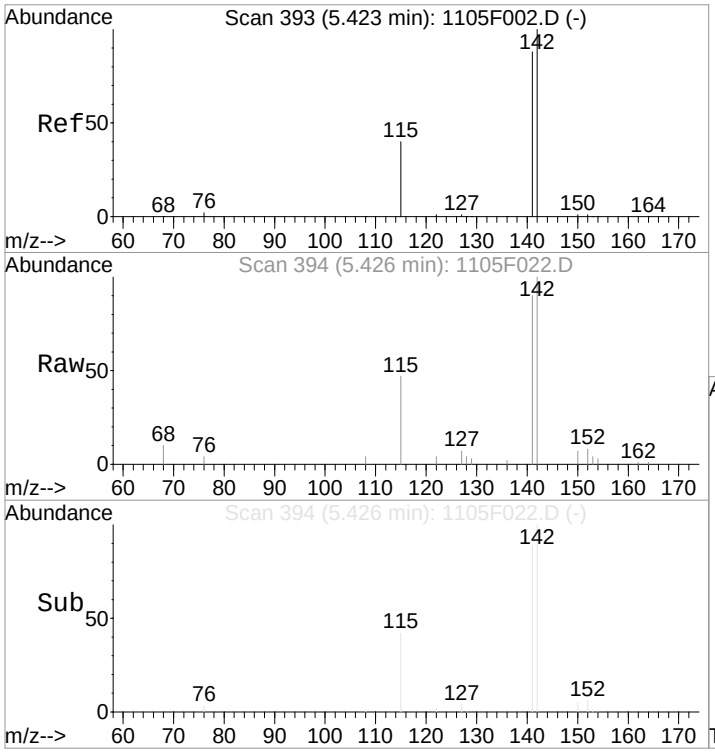


#2
Naphthalene
Concen: 71.43 ng/ml
RT: 4.79 min Scan# 207
Delta R.T. 0.01 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:128 Resp: 30186

Ion	Ratio	Lower	Upper
128	100		
127	14.7	0.0	43.7
129	10.8	0.0	30.8

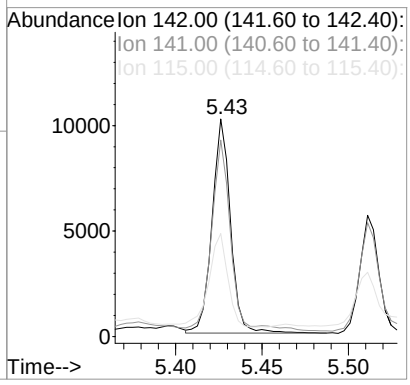




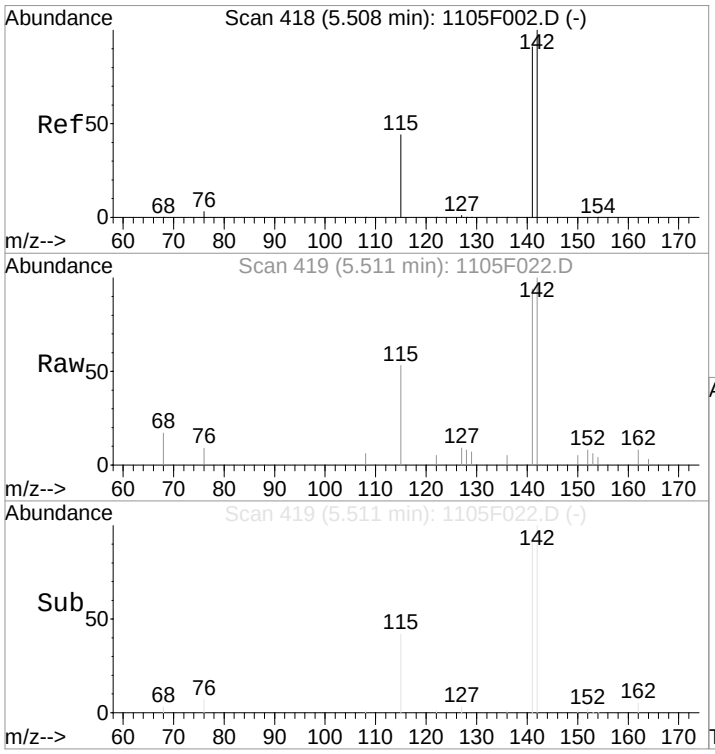
#4
2-Methylnaphthalene
Concen: 29.68 ng/ml
RT: 5.43 min Scan# 394
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:142 Resp: 7563

Ion	Ratio	Lower	Upper
142	100		
141	89.2	56.8	116.8
115	43.0	13.3	53.3



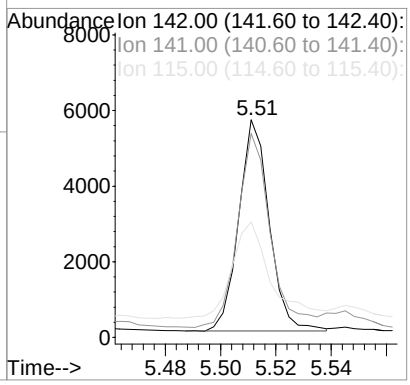
1st 11/16/18
2nd 11/27/18

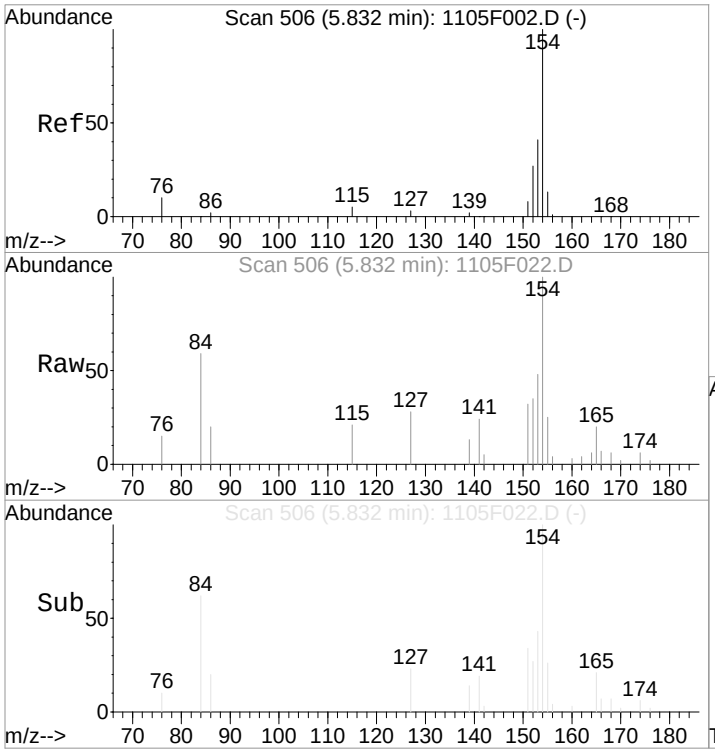


#5
1-Methylnaphthalene
Concen: 17.48 ng/ml
RT: 5.51 min Scan# 419
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:142 Resp: 4288

Ion	Ratio	Lower	Upper
142	100		
141	91.7	59.7	119.7
115	45.5	13.7	53.7

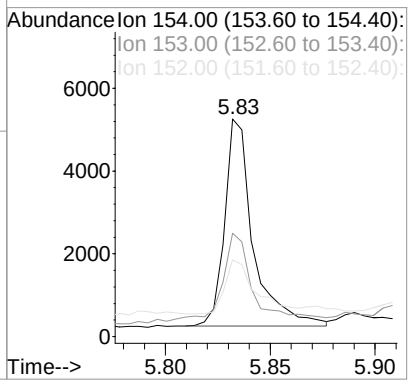




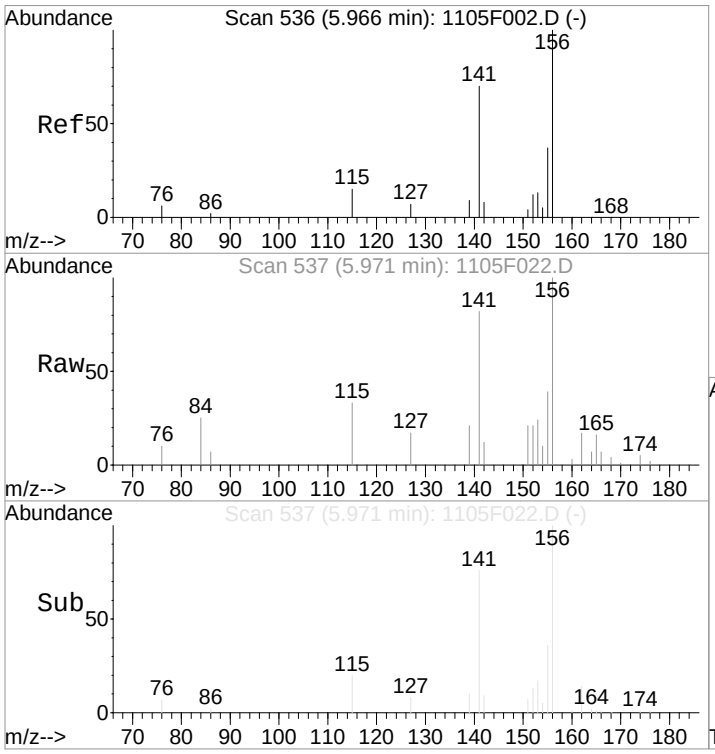
#6
Biphenyl
Concen: 14.96 ng/ml
RT: 5.83 min Scan# 506
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:154 Resp: 4758

Ion	Ratio	Lower	Upper
154	100		
153	40.9	11.4	71.4
152	26.0	7.1	47.1



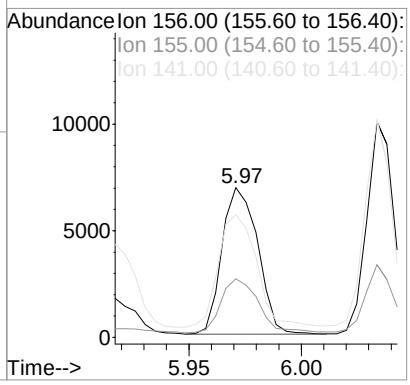
1st 11/16/18
2nd 11/27/18

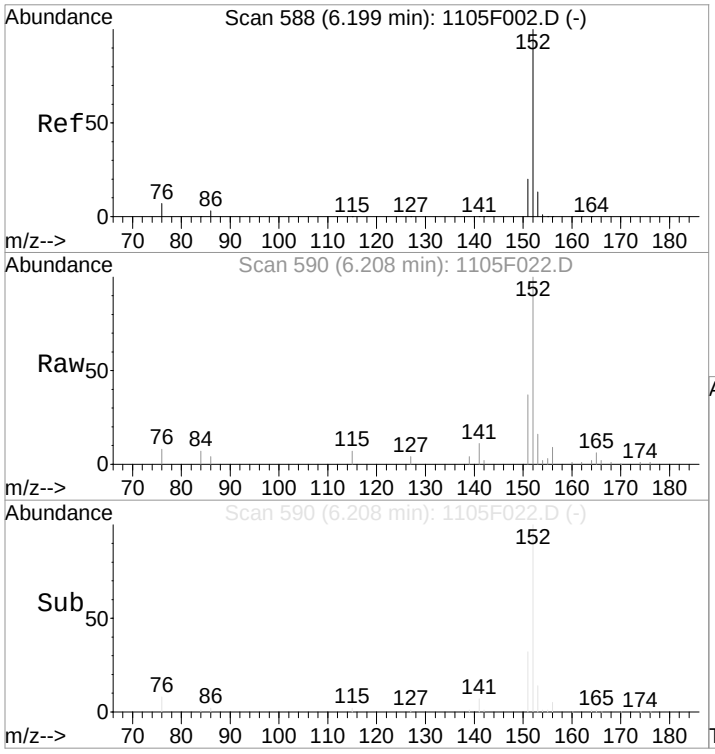


#7
2,6-Dimethylnaphthalene
Concen: 34.78 ng/ml
RT: 5.97 min Scan# 537
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:156 Resp: 7609

Ion	Ratio	Lower	Upper
156	100		
155	36.9	7.0	67.0
141	76.8	47.9	87.9

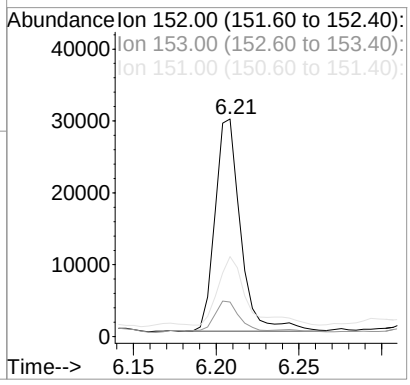




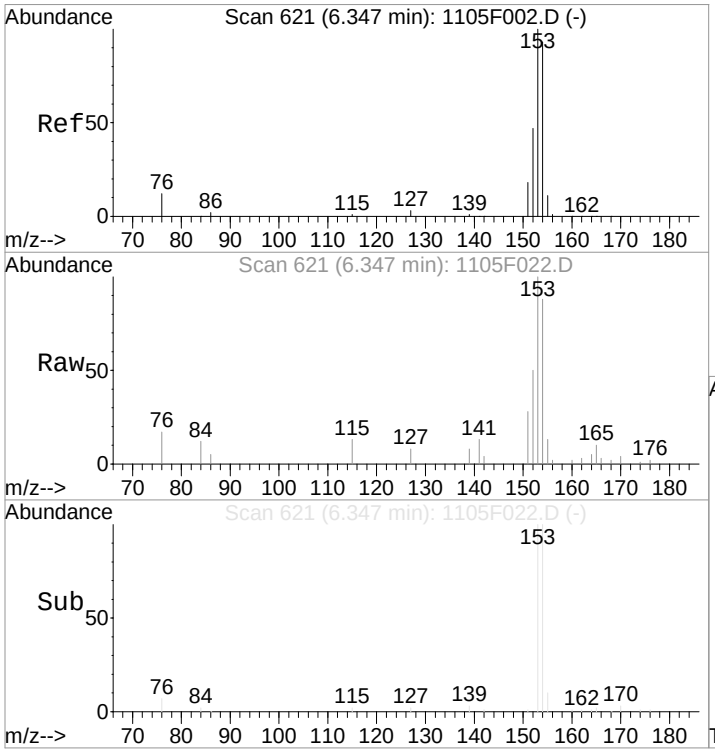
#9
Acenaphthylene
Concen: 82.04 ng/ml
RT: 6.21 min Scan# 590
Delta R.T. 0.01 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:152 Resp: 31826

Ion	Ratio	Lower	Upper
152	100		
153	14.0	0.0	42.9
151	32.2	0.2	40.2



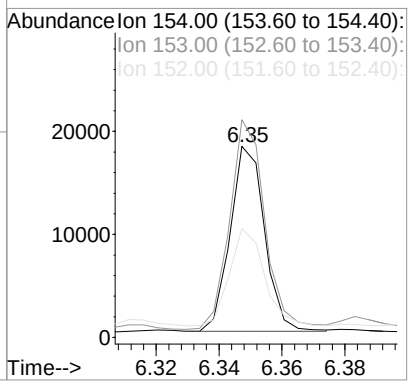
1st 11/16/18
2nd 11/27/18

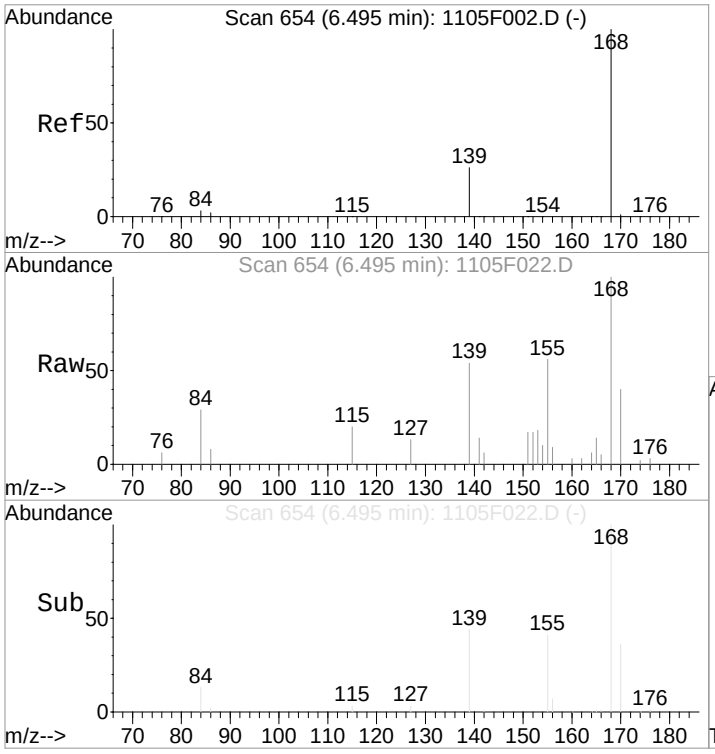


#10
Acenaphthene
Concen: 61.20 ng/ml
RT: 6.35 min Scan# 621
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:154 Resp: 13638

Ion	Ratio	Lower	Upper
154	100		
153	113.3	77.1	137.1
152	52.6	19.7	79.7

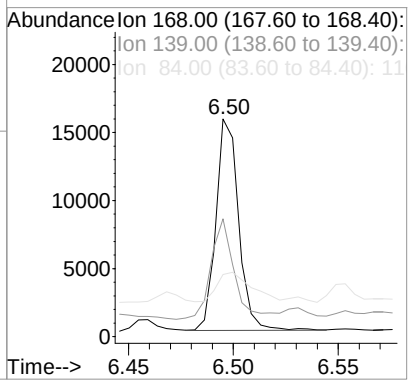




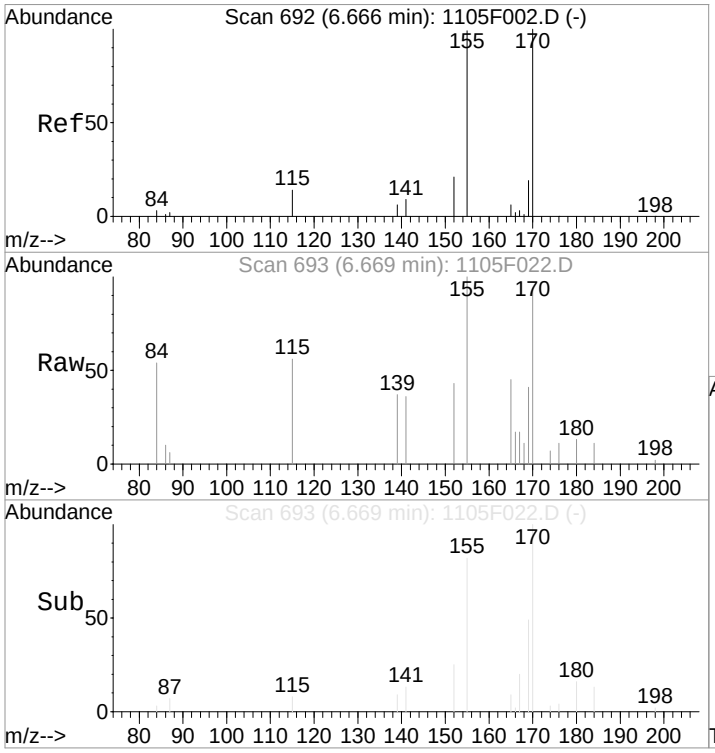
#11
Dibenzofuran
Concen: 32.80 ng/ml
RT: 6.50 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:168 Resp: 11728

Ion	Ratio	Lower	Upper
168	100		
139	46.9	0.0	55.8
84	12.1	0.0	23.5



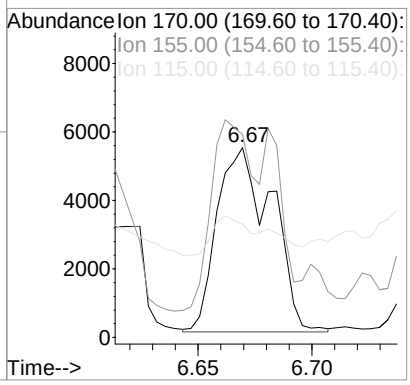
1st 11/16/18
2nd 11/27/18

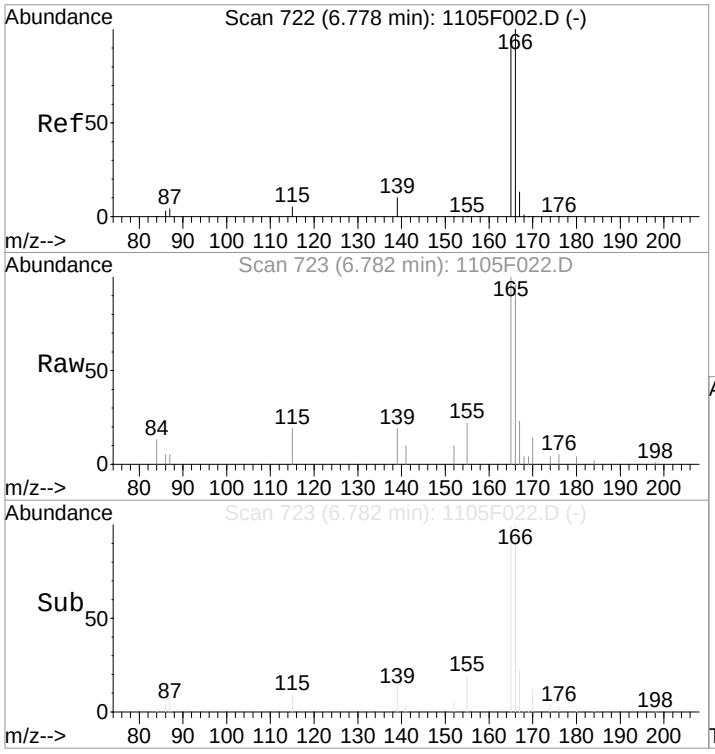


#12
2,3,5-Trimethylnaphthalene
Concen: 43.99 ng/ml m
RT: 6.67 min Scan# 693
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:170 Resp: 9067

Ion	Ratio	Lower	Upper
170	100		
155	106.9	59.2	119.2
115	59.8	0.0	30.1#

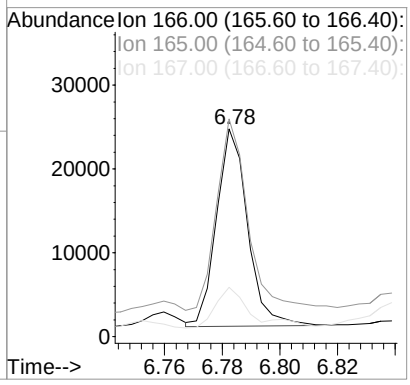




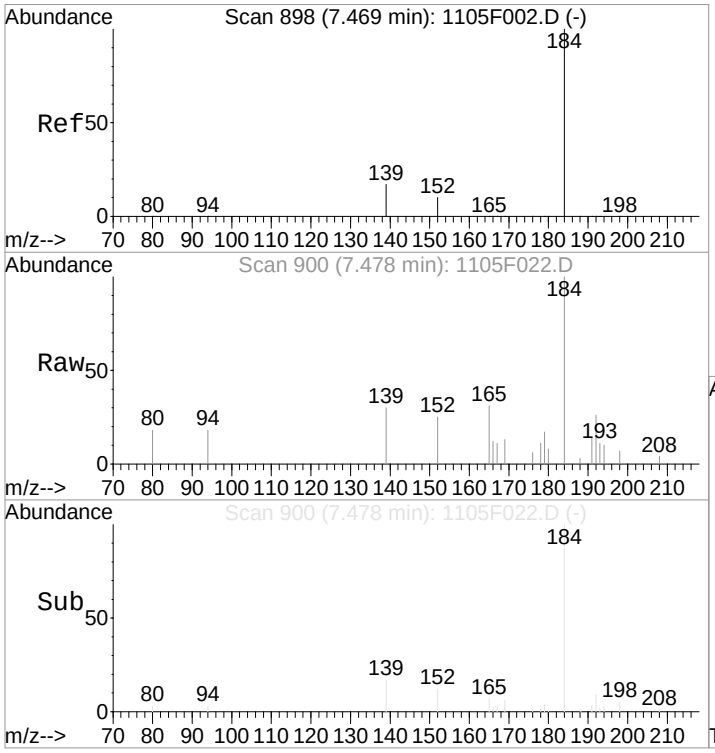
#14
Fluorene
Concen: 65.75 ng/ml
RT: 6.78 min Scan# 723
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:166 Resp: 17721

Ion	Ratio	Lower	Upper
166	100		
165	97.4	63.4	123.4
167	20.7	0.0	33.1



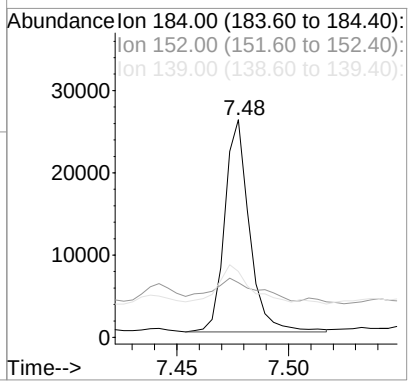
1st 11/16/18
2nd 11/27/18

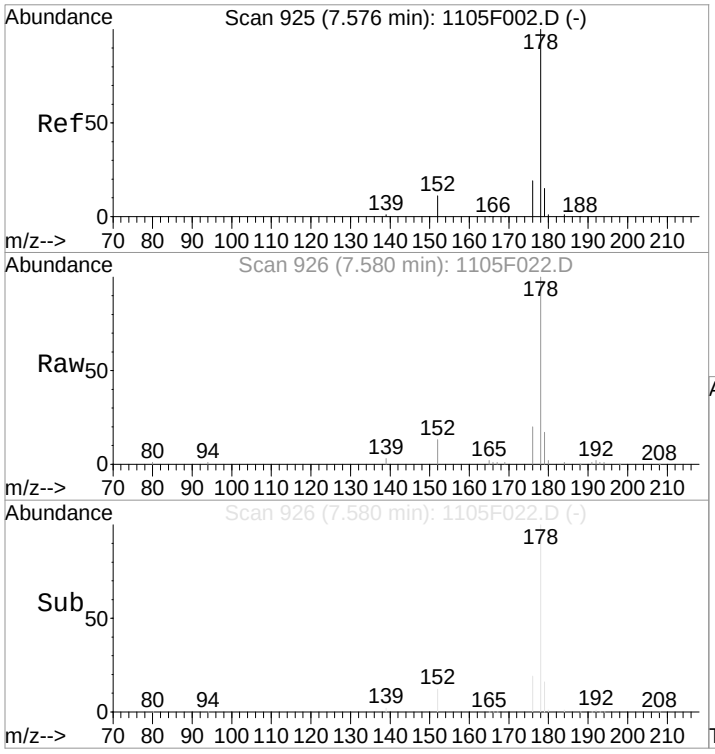


#16
Dibenzothiophene
Concen: 47.74 ng/ml
RT: 7.48 min Scan# 900
Delta R.T. 0.01 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:184 Resp: 19834

Ion	Ratio	Lower	Upper
184	100		
152	9.2	0.0	37.8
139	15.4	0.0	32.6

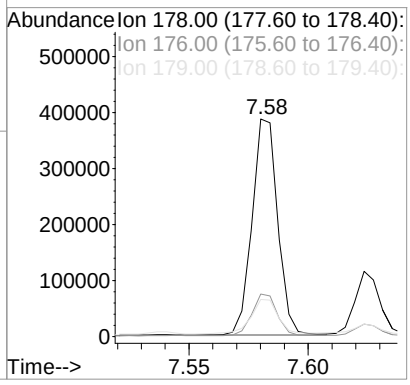




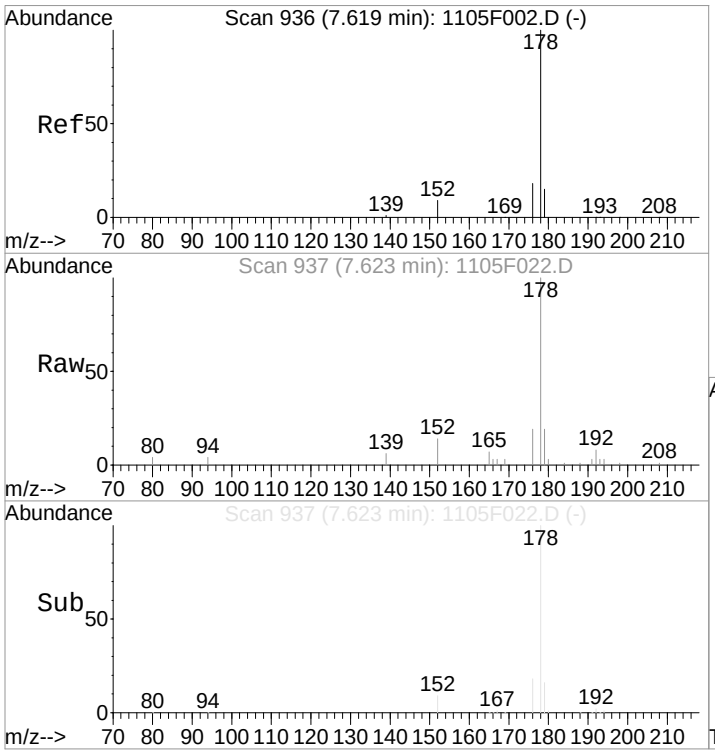
#17
Phenanthrene
Concen: 695.28 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:178 Resp: 288904

Ion	Ratio	Lower	Upper
178	100		
176	19.2	0.0	48.7
179	15.9	0.0	35.1



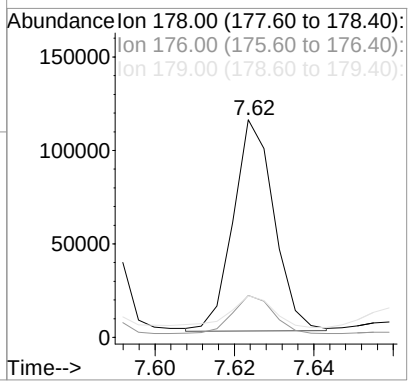
1st 11/16/18
2nd 11/27/18

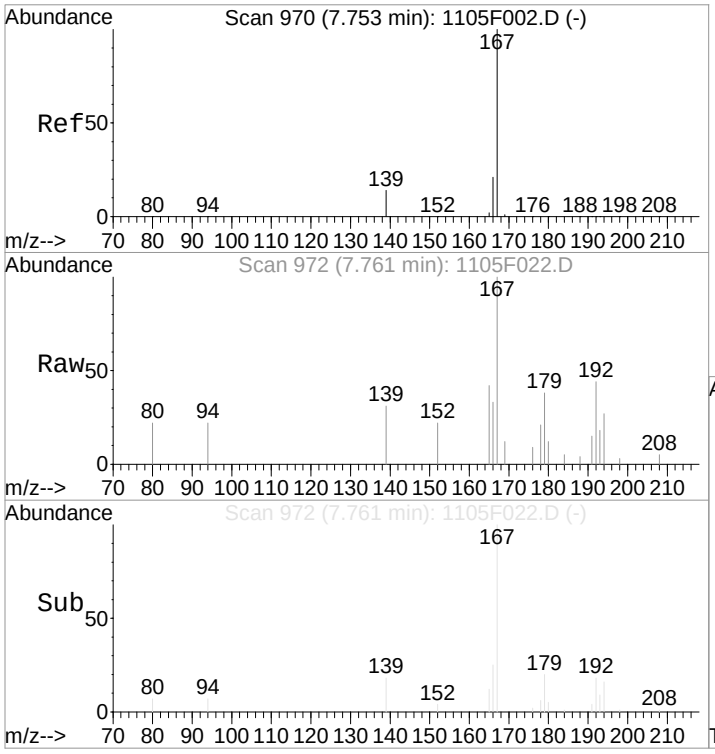


#18
Anthracene
Concen: 204.46 ng/ml
RT: 7.62 min Scan# 937
Delta R.T. 0.00 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:178 Resp: 81104

Ion	Ratio	Lower	Upper
178	100		
176	18.3	0.0	48.0
179	15.1	0.0	35.1

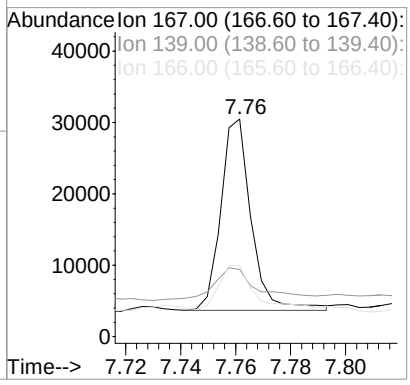




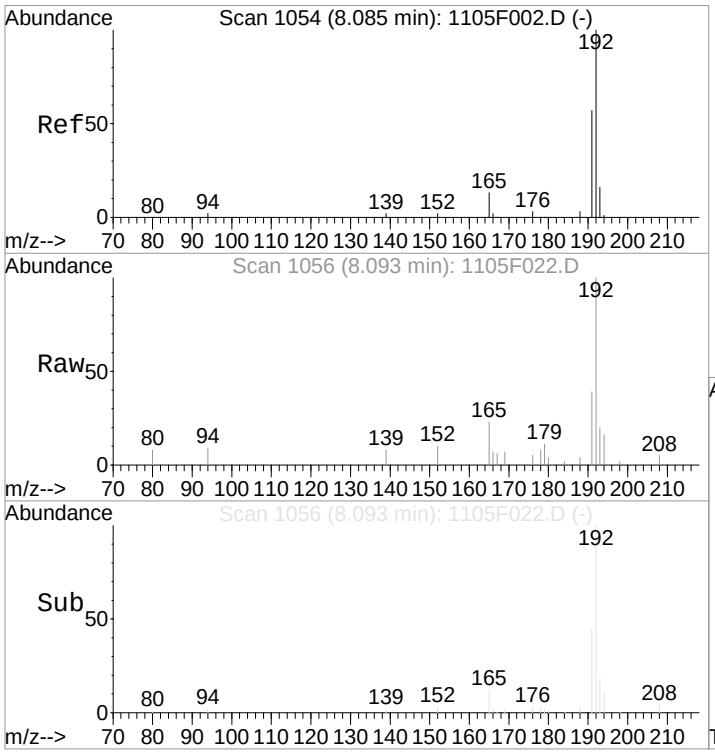
#19
Carbazole
Concen: 53.39 ng/ml
RT: 7.76 min Scan# 972
Delta R.T. 0.01 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:167 Resp: 20666

Ion	Ratio	Lower	Upper
167	100		
139	15.0	0.0	41.5
166	22.6	0.7	40.7



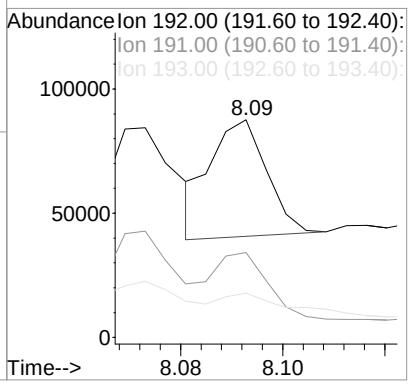
1st 11/16/18
2nd 11/27/18

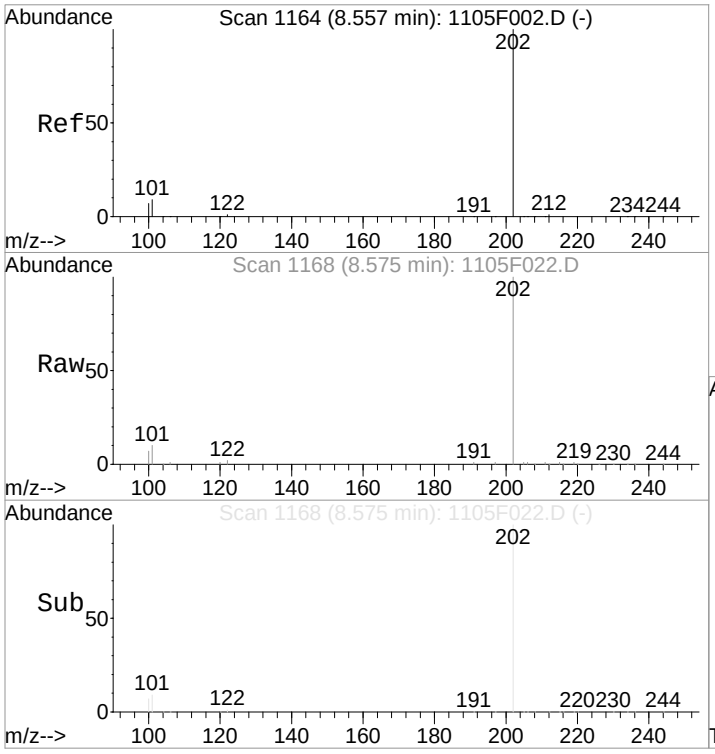


#20
1-Methylphenanthrene
Concen: 114.67 ng/ml
RT: 8.09 min Scan# 1056
Delta R.T. 0.01 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:192 Resp: 36089

Ion	Ratio	Lower	Upper
192	100		
191	59.5	27.7	87.7
193	14.3	0.0	45.4

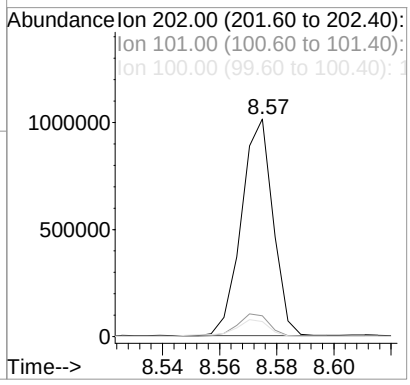




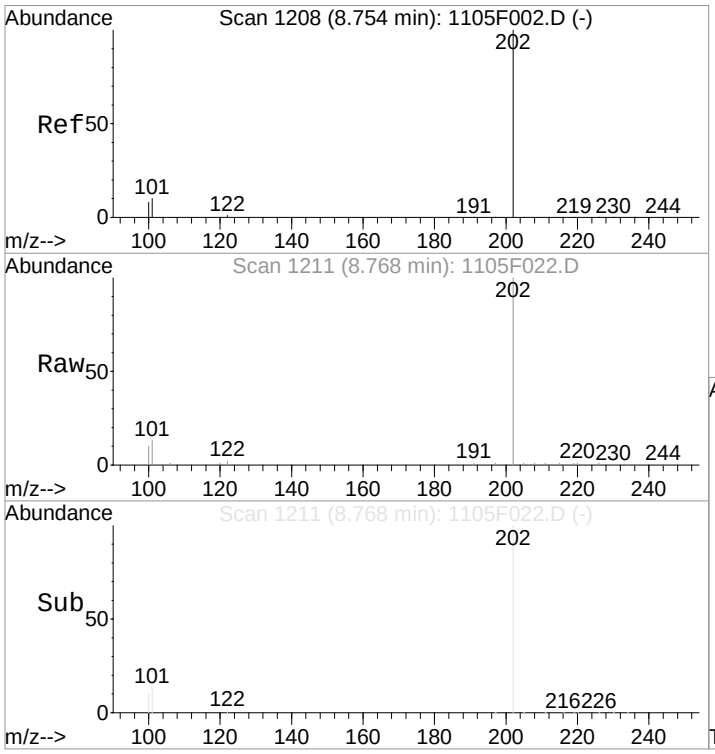
#21
Fluoranthene
Concen: 1522.32 ng/ml
RT: 8.57 min Scan# 1168
Delta R.T. 0.02 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:202 Resp: 781075

Ion	Ratio	Lower	Upper
202	100		
101	9.4	0.0	41.3
100	6.8	0.0	28.6



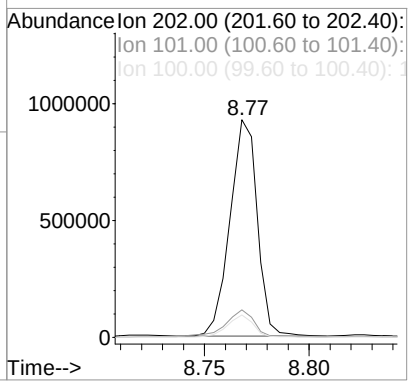
1st 11/16/18
2nd 11/27/18

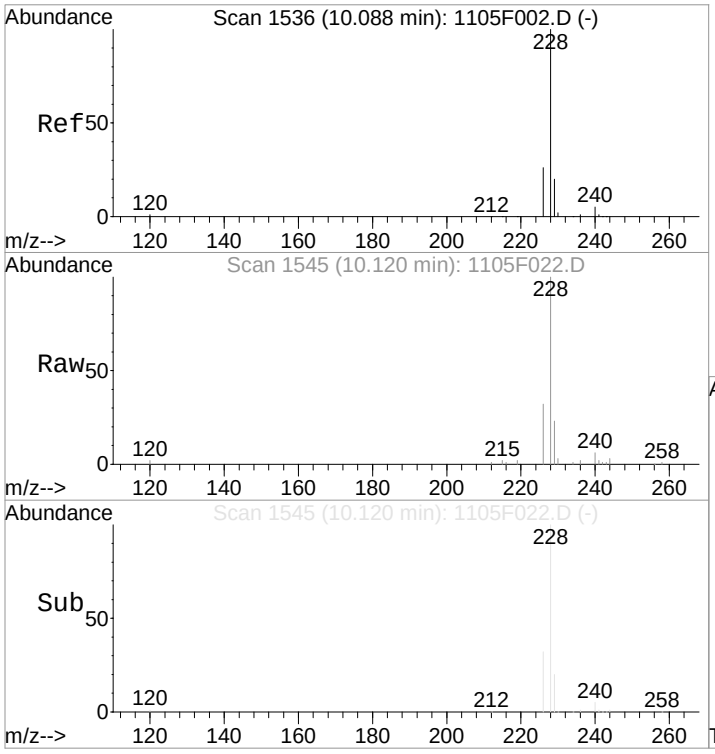


#24
Pyrene
Concen: 1453.36 ng/ml
RT: 8.77 min Scan# 1211
Delta R.T. 0.01 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:202 Resp: 838221

Ion	Ratio	Lower	Upper
202	100		
101	12.5	0.0	40.8
100	10.2	0.0	28.5

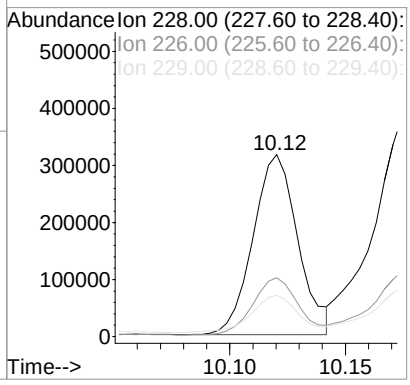




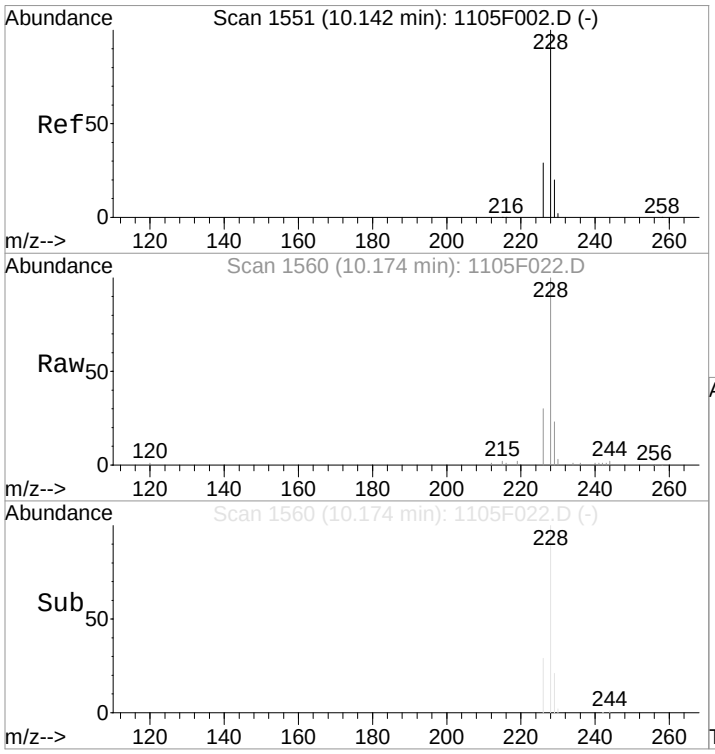
#26
Benz(a)anthracene
Concen: 780.63 ng/ml
RT: 10.12 min Scan# 1545
Delta R.T. 0.03 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:228 Resp: 424263

Ion	Ratio	Lower	Upper
228	100		
226	31.8	0.0	56.3
229	20.6	0.0	39.1



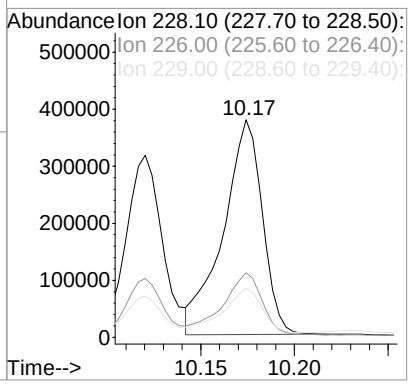
1st 11/16/18
2nd 11/27/18

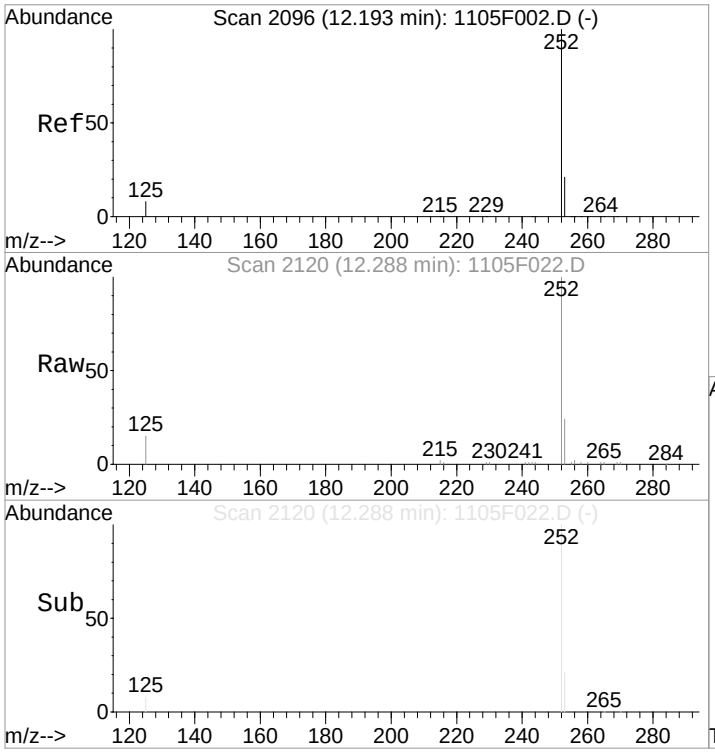


#27
Chrysene
Concen: 1055.20 ng/ml
RT: 10.17 min Scan# 1560
Delta R.T. 0.03 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:228 Resp: 549327

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	58.7
229	20.2	0.0	39.2

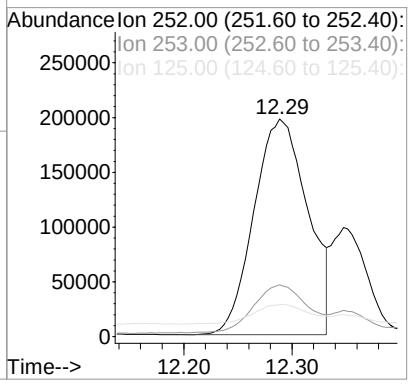




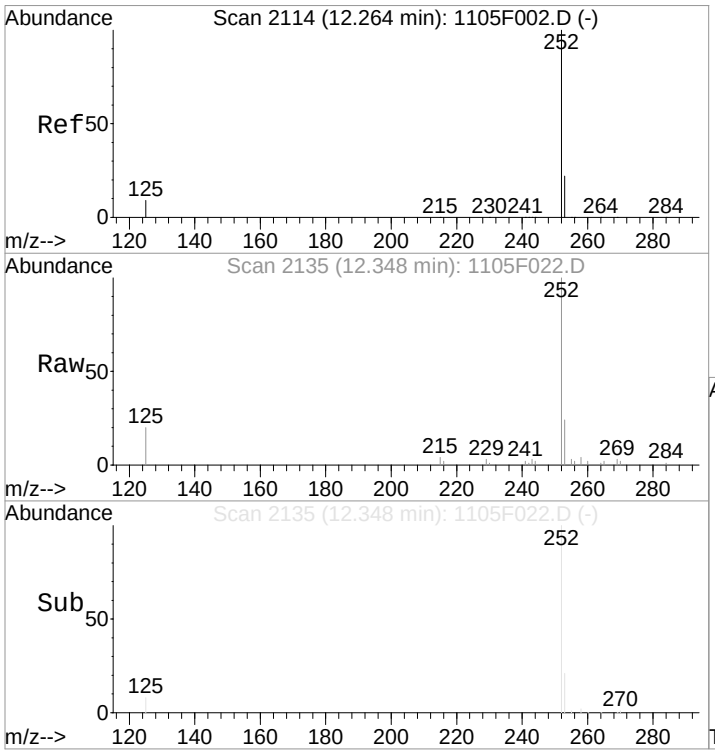
#29
Benzo(b)fluoranthene
Concen: 1182.15 ng/ml
RT: 12.29 min Scan# 2120
Delta R.T. 0.10 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:252 Resp: 683367

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.2
125	8.9	0.0	29.5



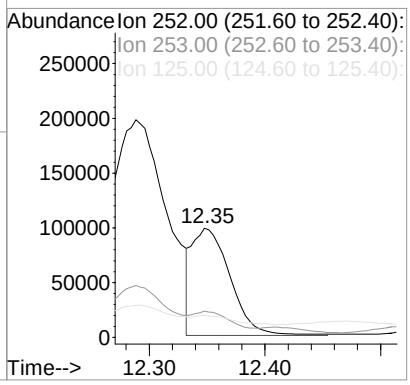
1st 11/16/18
2nd 11/27/18

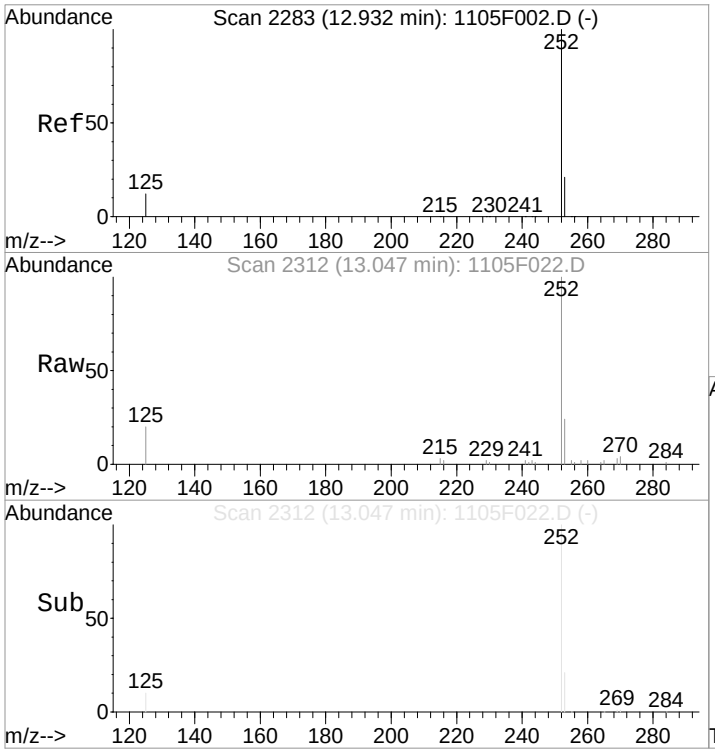


#30
Benzo(k)fluoranthene
Concen: 392.83 ng/ml m
RT: 12.35 min Scan# 2135
Delta R.T. 0.08 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:252 Resp: 225276

Ion	Ratio	Lower	Upper
252	100		
253	24.0	0.0	51.2
125	20.1	0.0	29.7

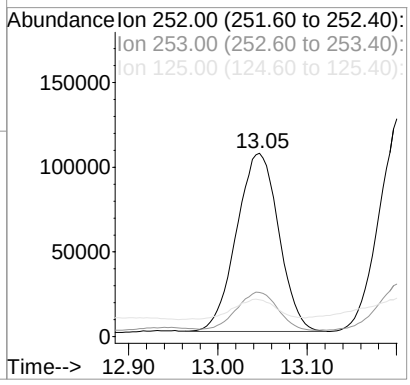




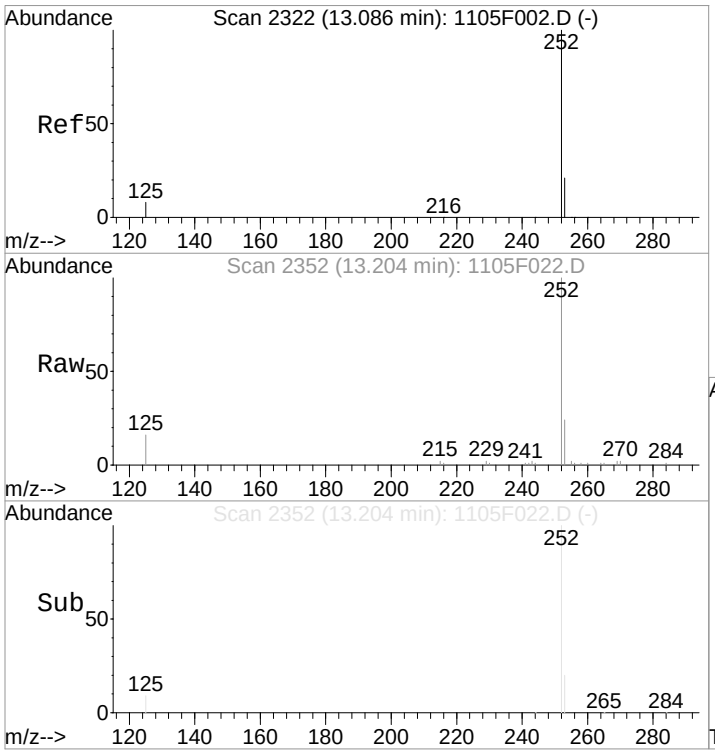
#31
Benzo(e)pyrene
Concen: 628.08 ng/ml
RT: 13.05 min Scan# 2312
Delta R.T. 0.11 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:252 Resp: 346076

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.3
125	11.0	0.0	33.5



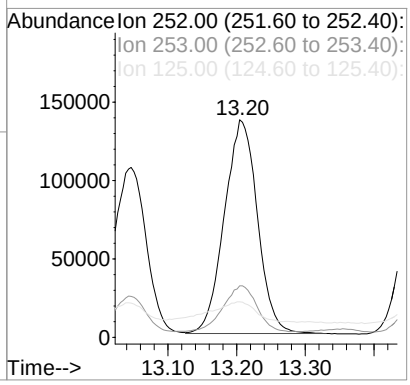
1st 11/16/18
2nd 11/27/18

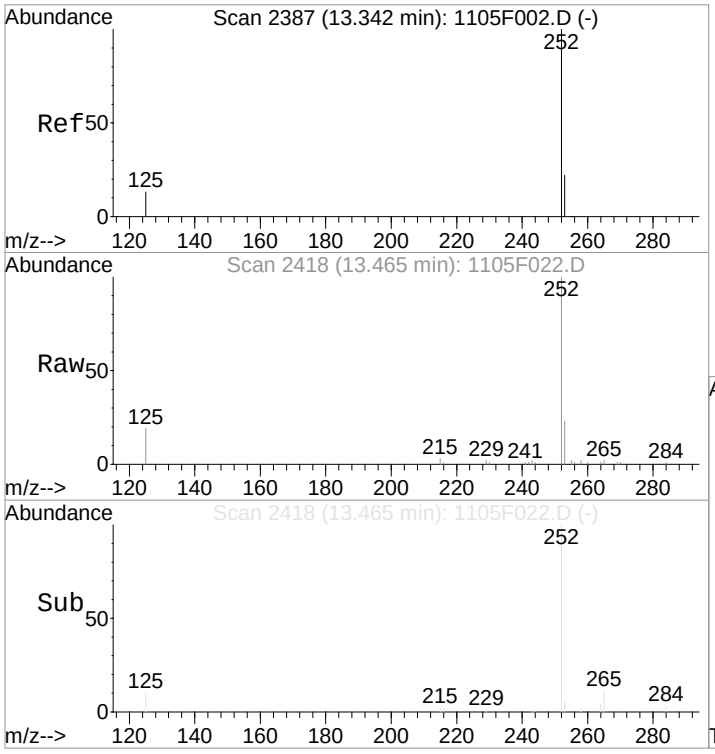


#32
Benzo(a)pyrene
Concen: 898.33 ng/ml
RT: 13.20 min Scan# 2352
Delta R.T. 0.12 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:252 Resp: 455411

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	50.9
125	9.8	0.0	30.3

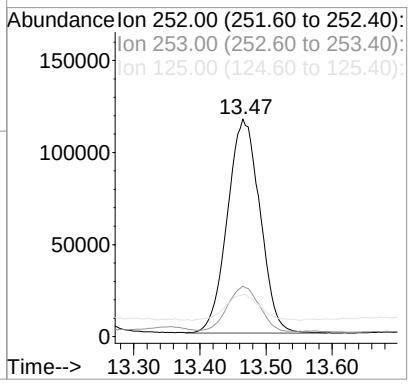




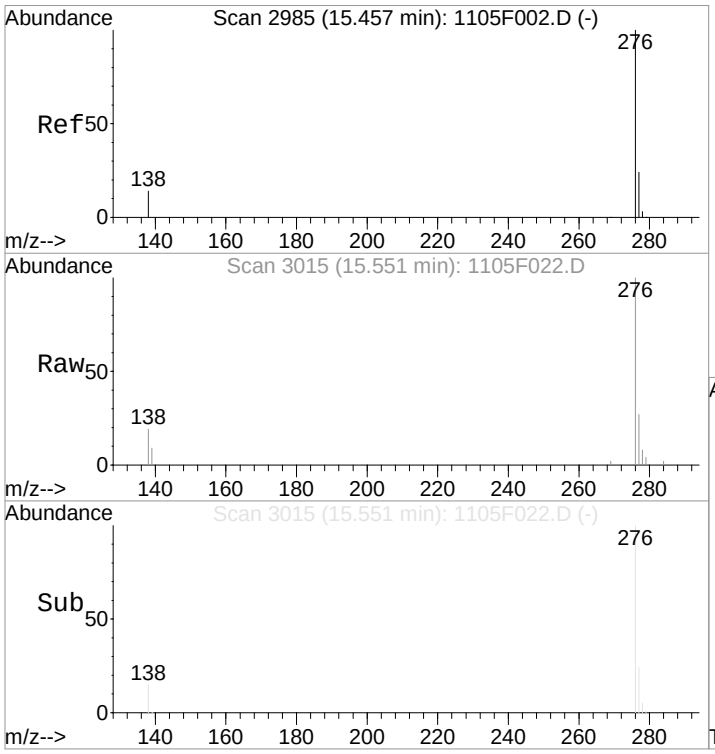
#33
Perylene
Concen: 748.17 ng/ml
RT: 13.47 min Scan# 2418
Delta R.T. 0.12 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:252 Resp: 397878

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	11.8	0.0	33.8



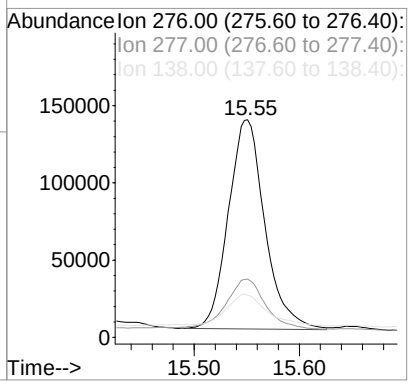
1st 11/16/18
2nd 11/27/18

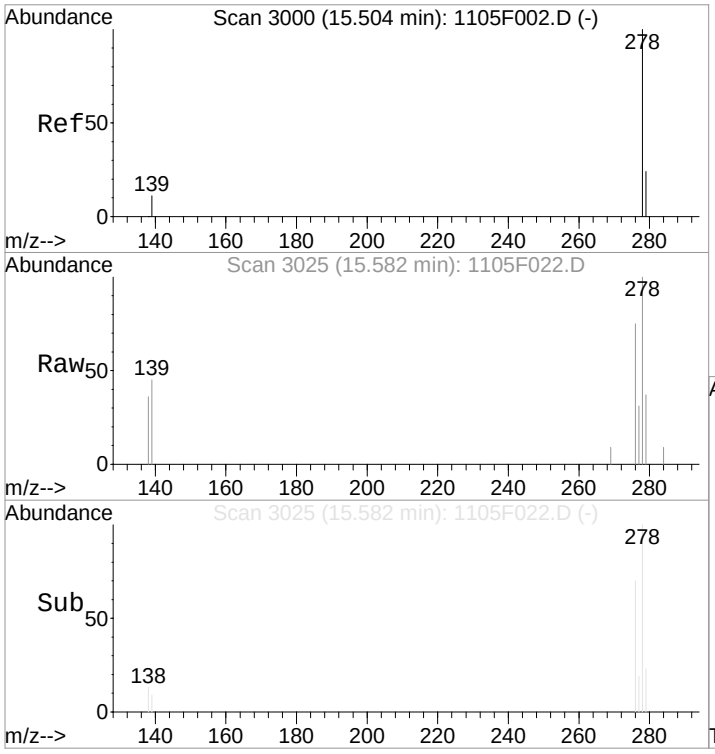


#34
Indeno(1,2,3-cd)pyrene
Concen: 656.24 ng/ml
RT: 15.55 min Scan# 3015
Delta R.T. 0.09 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:276 Resp: 326222

Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	53.4
138	14.7	0.0	37.7

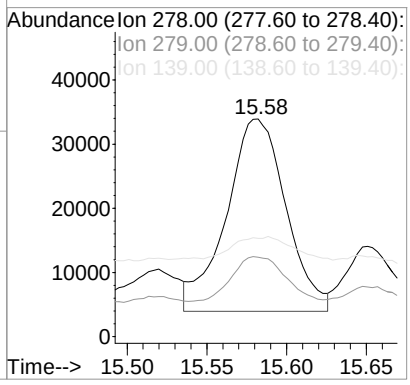




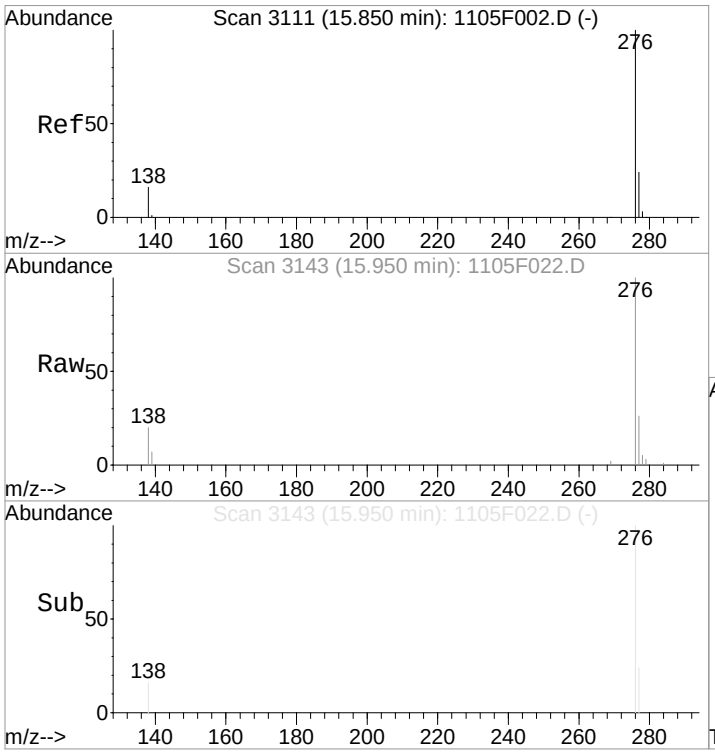
#35
Dibenz(a,h)anthracene
Concen: 155.22 ng/ml m
RT: 15.58 min Scan# 3025
Delta R.T. 0.08 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:278 Resp: 78217

Ion	Ratio	Lower	Upper
278	100		
279	36.5	0.0	53.5
139	45.2	0.0	35.0#



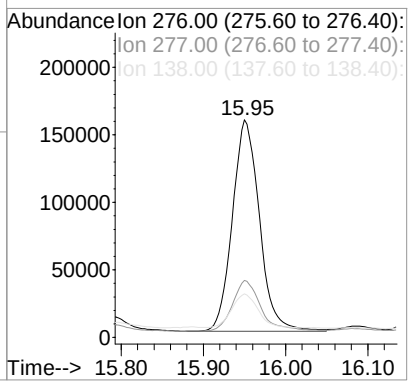
1st 11/16/18
2nd 11/27/18



#36
Benzo(g,h,i)perylene
Concen: 619.03 ng/ml
RT: 15.95 min Scan# 3143
Delta R.T. 0.10 min
Lab File: 1105F022.D
Acq: 5 Nov 2018 7:40 pm

Tgt Ion:276 Resp: 360365

Ion	Ratio	Lower	Upper
276	100		
277	24.1	0.0	53.1
138	16.2	0.0	39.2



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F022.D Vial: 22
Acq On : 5 Nov 2018 7:40 pm Operator: LWeiskopf
Sample : K1810270-029 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:13 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	73213	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	32512	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	66609	200.00	ng/ml	0.00
23) Chrysene-d12	10.13	240	84062	200.00	ng/ml	0.03
28) Perylene-d12	13.38	264	93566	200.00	ng/ml	0.11
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	90811	444.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	44.44%		
13) Fluorene-d10	6.76	176	136516	656.70	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	65.67%		
22) Fluoranthene-d10	8.56	212	308090	733.90	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	73.39%		
25) Terphenyl-d14	8.90	244	271446	744.48	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	74.45%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	30186	71.43	ng/ml	99
4) 2-Methylnaphthalene	5.43	142	7563	29.68	ng/ml	93
5) 1-Methylnaphthalene	5.51	142	4288	17.48	ng/ml	93
6) Biphenyl	5.83	154	4758	14.96	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.97	156	7609	34.78	ng/ml	93
9) Acenaphthylene	6.21	152	31826	82.04	ng/ml	83
10) Acenaphthene	6.35	154	13638	61.20	ng/ml	95
11) Dibenzofuran	6.50	168	11728	32.80	ng/ml	60
12) 2,3,5-Trimethylnaphthalene	6.67	170	9067m	43.99	ng/ml	
14) Fluorene	6.78	166	17721	65.75	ng/ml	94
16) Dibenzothiophene	7.48	184	19834	47.74	ng/ml	94
17) Phenanthrene	7.58	178	288904	695.28	ng/ml	99
18) Anthracene	7.62	178	81104	204.46	ng/ml	100
19) Carbazole	7.76	167	20666	53.39	ng/ml	94
20) 1-Methylphenanthrene	8.09	192	36089	114.67	ng/ml	98
21) Fluoranthene	8.57	202	781075	1522.32	ng/ml	95
24) Pyrene	8.77	202	838221	1453.36	ng/ml	95
26) Benz(a)anthracene	10.12	228	424263	780.63	ng/ml	92
27) Chrysene	10.17	228	549327	1055.20	ng/ml	99
29) Benzo(b)fluoranthene	12.29	252	683367	1182.15	ng/ml	98
30) Benzo(k)fluoranthene	12.35	252	225276m	392.83	ng/ml	
31) Benzo(e)pyrene	13.05	252	346076	628.08	ng/ml	97
32) Benzo(a)pyrene	13.20	252	455411	898.33	ng/ml	99
33) Perylene	13.47	252	397878	748.17	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.55	276	326222	656.24	ng/ml	96
35) Dibenz(a,h)anthracene	15.58	278	78217m	155.22	ng/ml	
36) Benzo(g,h,i)perylene	15.95	276	360365	619.03	ng/ml	96

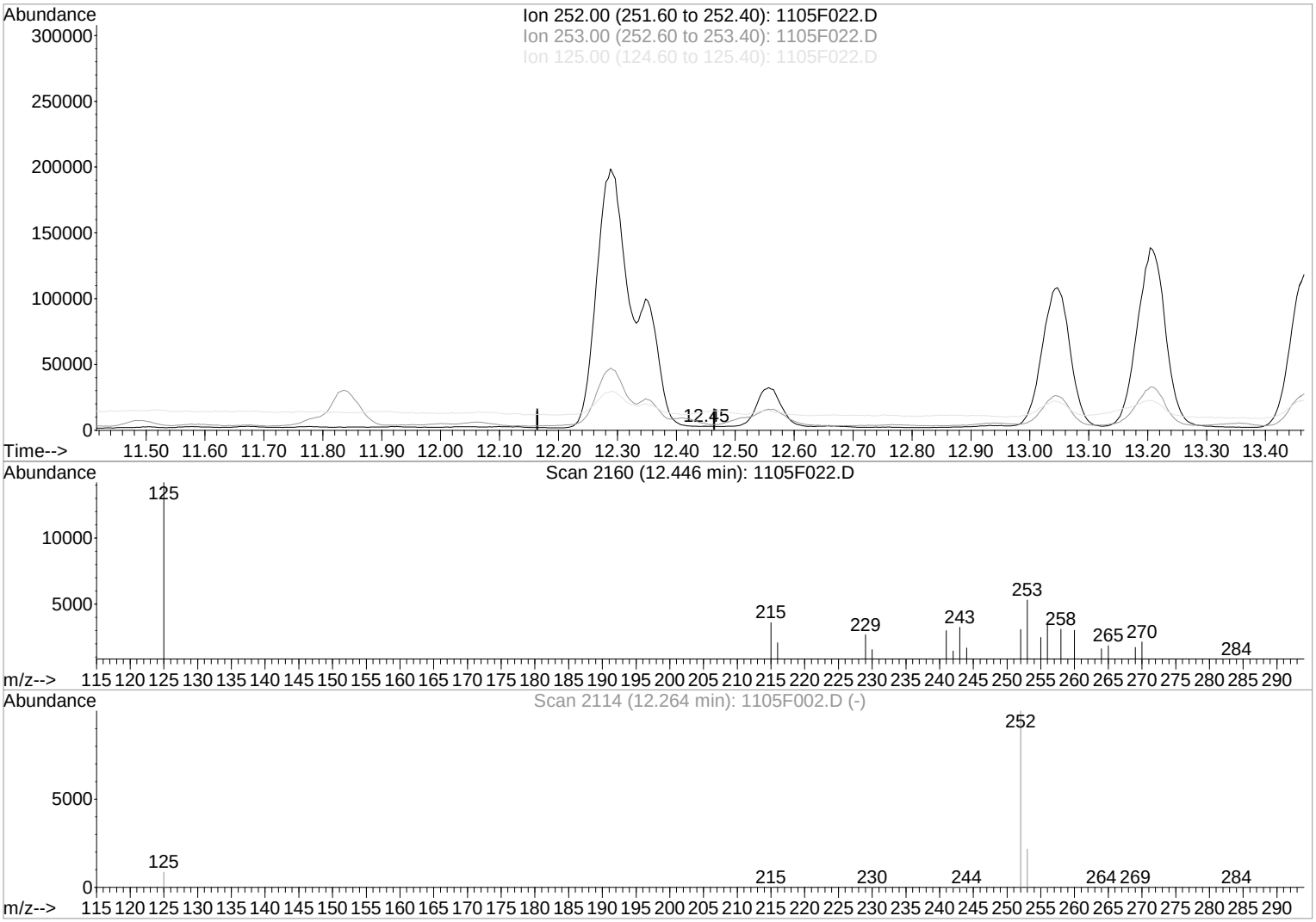
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F022.D Vial: 22
Acq On : 5 Nov 2018 7:40 pm Operator: LWeiskopf
Sample : K1810270-029 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F022.D

(30) Benzo(k)fluoranthene (T)

12.45min 0.36ng/ml

response 206

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	448.97#
125.00	9.70	478.19#
0.00	0.00	0.00

Manual Integration:

Before

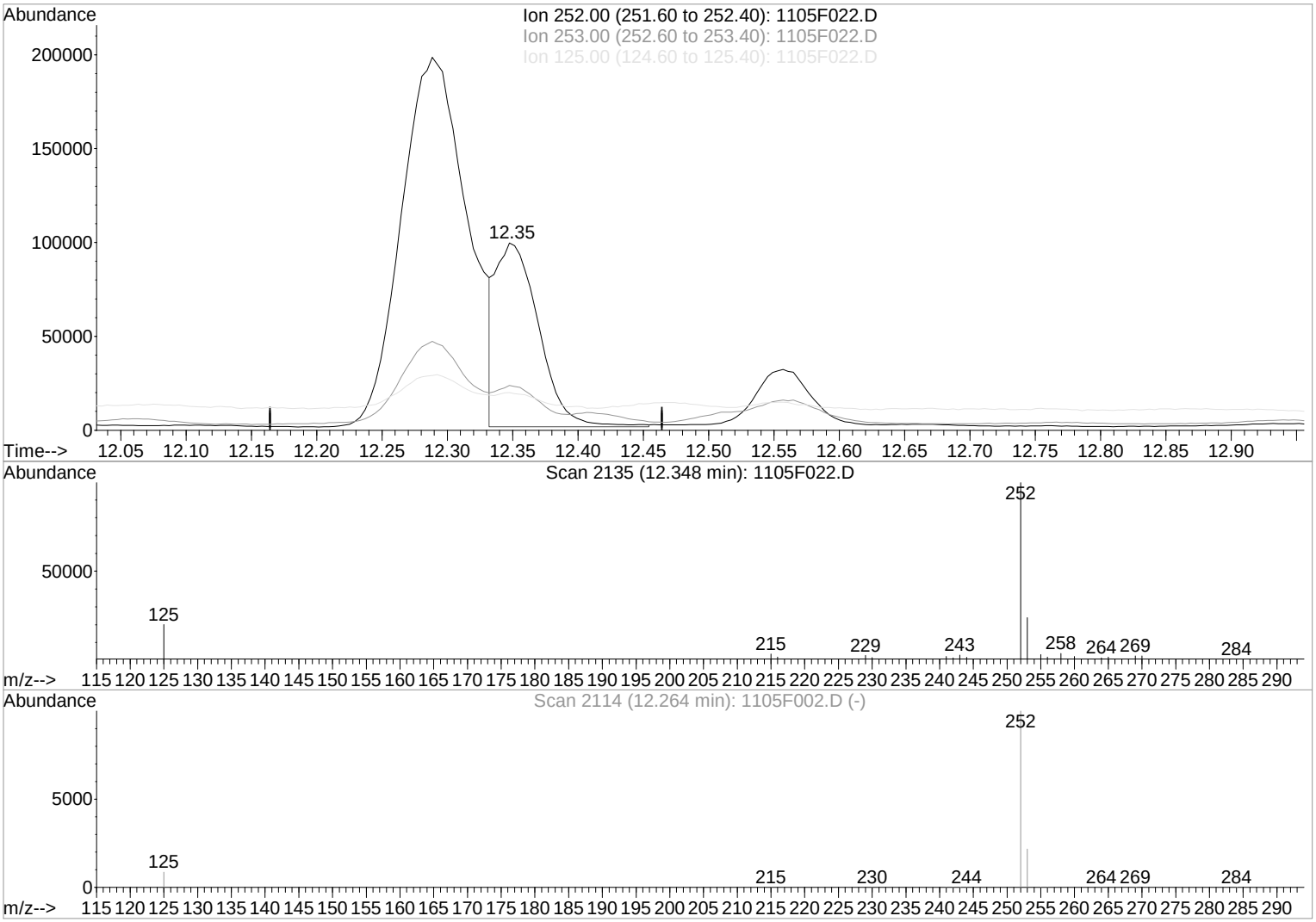
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F022.D Vial: 22
Acq On : 5 Nov 2018 7:40 pm Operator: LWeiskopf
Sample : K1810270-029 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F022.D

(30) Benzo(k)fluoranthene (T)

12.35min 392.83ng/ml m

response 225276

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	23.96
125.00	9.70	20.13
0.00	0.00	0.00

Manual Integration:

After

WP

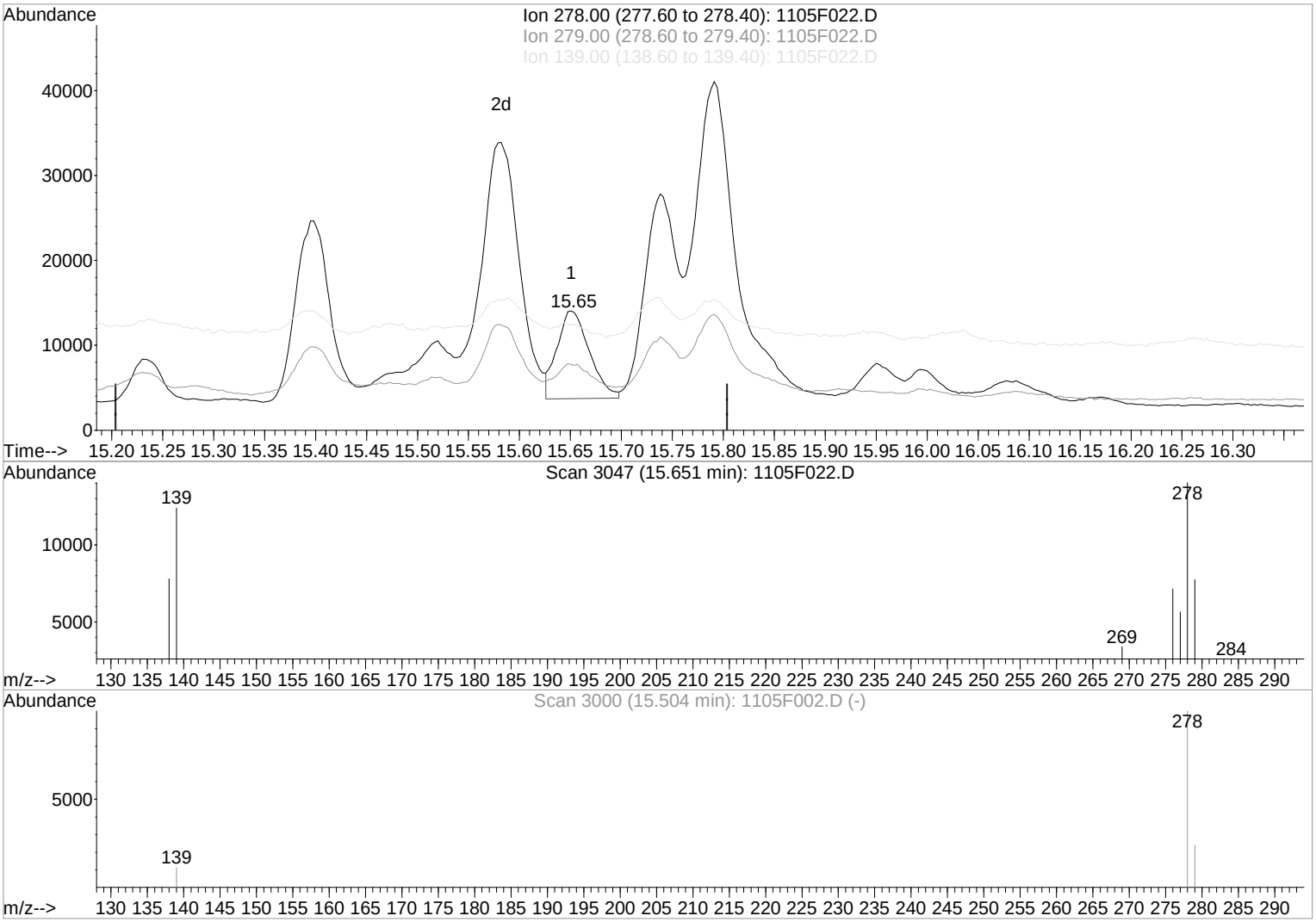
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F022.D Vial: 22
Acq On : 5 Nov 2018 7:40 pm Operator: LWeiskopf
Sample : K1810270-029 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F022.D

(35) Dibenz(a,h)anthracene (T)

15.65min 45.18ng/ml

response 22768

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	27.23
139.00	15.00	10.85
0.00	0.00	0.00

Manual Integration:

Before

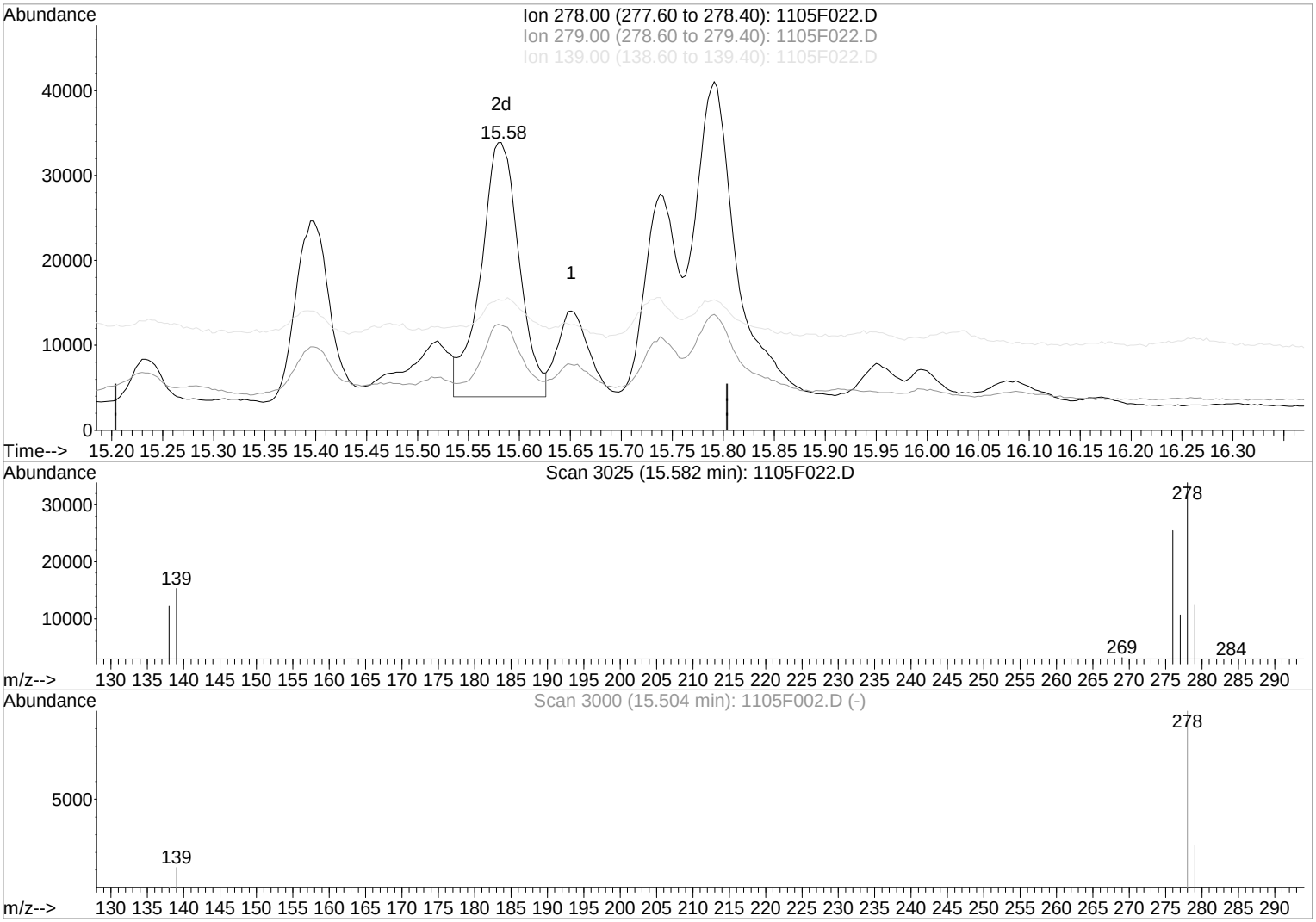
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F022.D Vial: 22
Acq On : 5 Nov 2018 7:40 pm Operator: LWeiskopf
Sample : K1810270-029 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:45 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Multiple Level Calibration



TIC: 1105F022.D

(35) Dibenz(a,h)anthracene (T)

15.58min 155.22ng/ml m

response 78217

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	36.51
139.00	15.00	45.15#
0.00	0.00	0.00

Manual Integration:

After

WP

11/16/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F015.D
Lab ID: KWG1805597-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/05/2018 16:12
Date Quantitated: 11/16/2018 08:38
Batch ID: KWG1806019
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2-Methylnaphthalene-d10	-23.3	NA	20	NT
Surrogates	2-Methylnaphthalene-d10	53	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F015.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 16:12	**Quant Date:**	11/16/2018 08:38	**Vial:**	15
Run Type:	MB	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-4			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/01/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700781	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	76096	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	33148	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	70658	200.00	OK
4	Chrysene-d12	10.11	0.01	240	84189	200.00	OK
5	Perylene-d12	13.29	0.03	264	91029	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.40	0.01	0.00	152	112216	528.32	53	70-130	*	
2	Fluorene-d10	6.76	0.00	0.00	176	138854	655.13	66	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	291905	655.50	66	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	257618	705.49	71	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	735	1.67	0.089	U	
1	2-Methylnaphthalene	5.43	0.01	0.00	142	195	0.7400	0.047	U	
1	1-Methylnaphthalene	5.51		0.00	142	123**m**	0.4800	0.055	U	
1	Biphenyl	5.84	0.01	0.00	154	619	1.87	0.15	U	
1	2,6-Dimethylnaphthalene				156	0**d**		0.055	U	
2	Acenaphthylene				152	0**d**		0.029	U	
2	Acenaphthene	6.35		0.00	154	122	0.5400	0.032	U	
2	Dibenzofuran	6.50		0.00	168	248	0.6800	0.0336	J	
2	2,3,5-Trimethylnaphthalene				170	0**d**		0.034	U	
2	Fluorene	6.79	0.01	0.00	166	218	0.7900	0.0390	J	
3	Dibenzothiophene				184	0**d**		0.049	U	
3	Phenanthrene	7.58		0.00	178	591	1.34	0.0662	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F015.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 16:12	**Quant Date:**	11/16/2018 08:38	**Vial:**	15
Run Type:	MB	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-4			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene				178	0**d**		0.026	U	
3	Carbazole				167	0**d**		0.080	U	
3	1-Methylphenanthrene				192	0**d**		0.041	U	
3	Fluoranthene				202	0**d**		0.032	U	
4	Pyrene				202	0**d**		0.032	U	
4	Benz(a)anthracene				228	0**d**		0.033	U	
4	Chrysene				228	0**d**		0.027	U	
5	Benzo(b)fluoranthene				252	0**d**		0.057	U	
5	Benzo(k)fluoranthene				252	0**d**		0.045	U	
5	Benzo(e)pyrene				252	0		0.051	U	
5	Benzo(a)pyrene				252	0**d**		0.036	U	
5	Perylene				252	0**d**		0.19	U	
5	Indeno(1,2,3-cd)pyrene				276	0**d**		0.064	U	
5	Dibenz(a,h)anthracene				278	0**d**		0.058	U	
5	Benzo(g,h,i)perylene				276	0**d**		0.059	U	

Prep Amount:	40.487 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

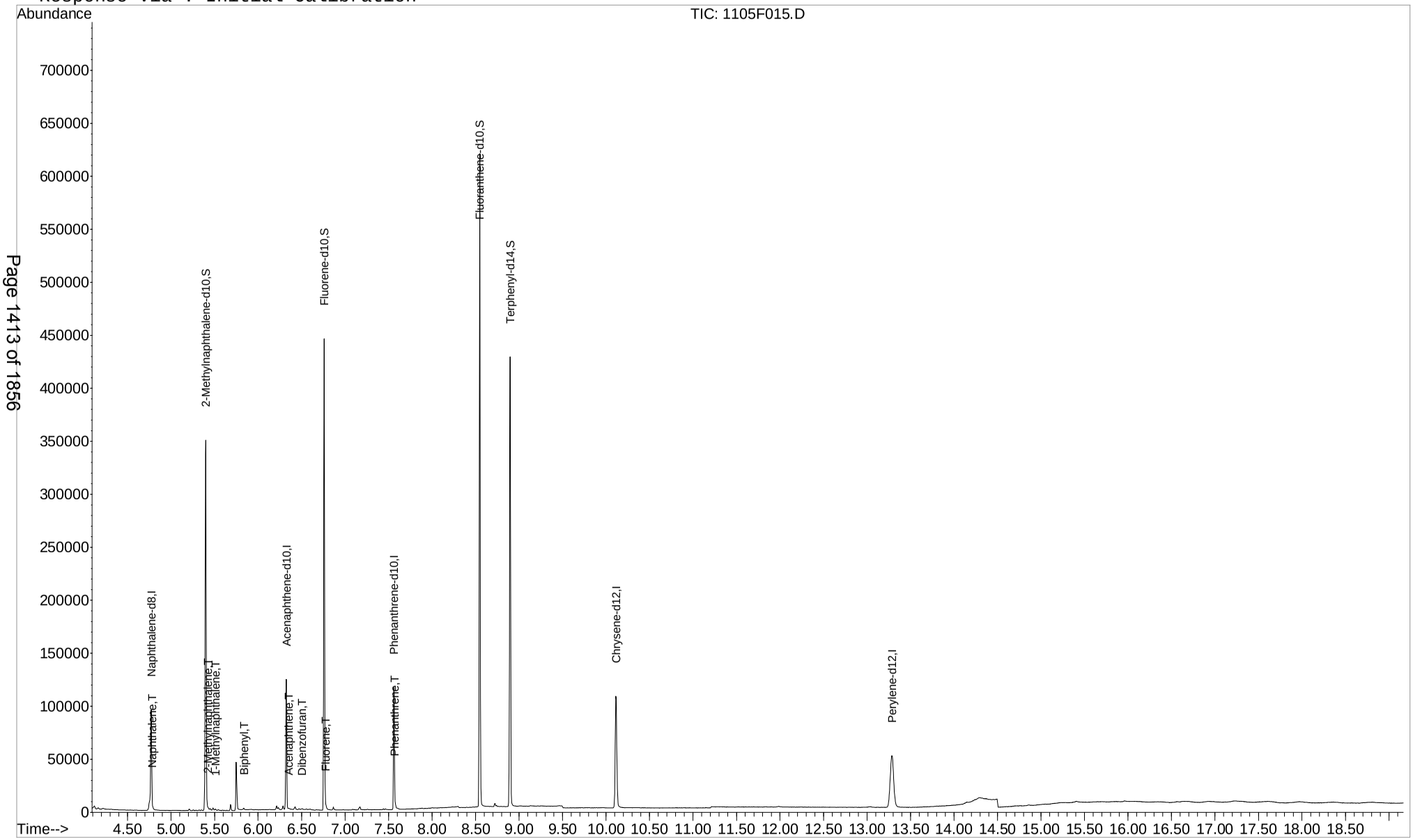
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

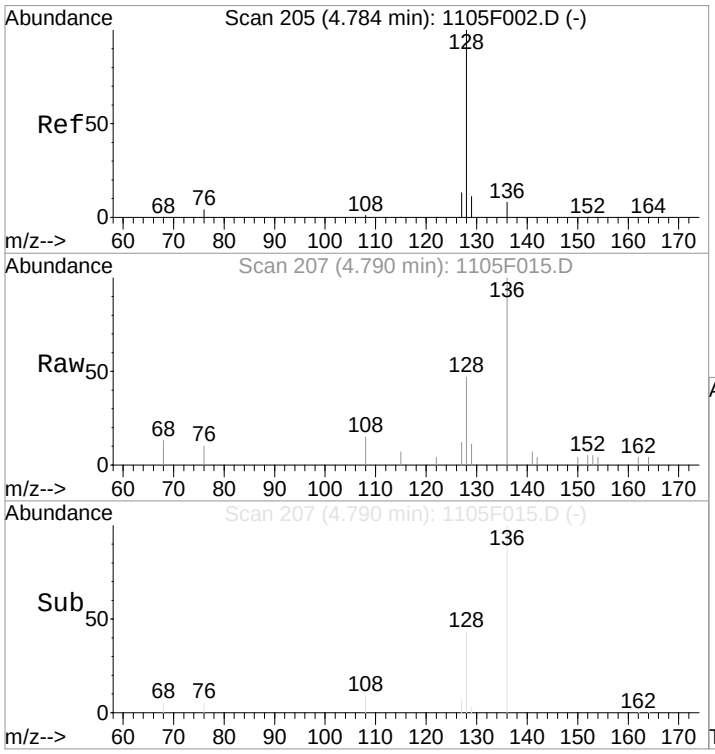
1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F015.D Vial: 15
Acq On : 5 Nov 2018 4:12 pm Operator: LWeiskopf
Sample : KWG1805597-4 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:38 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



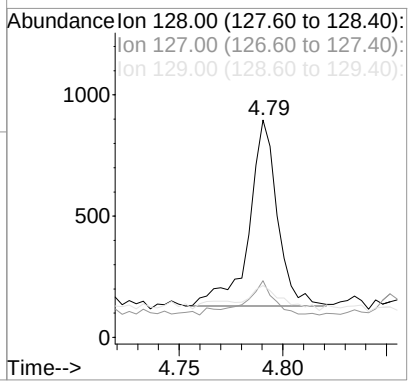
1st 11/16/18
2nd 11/27/18

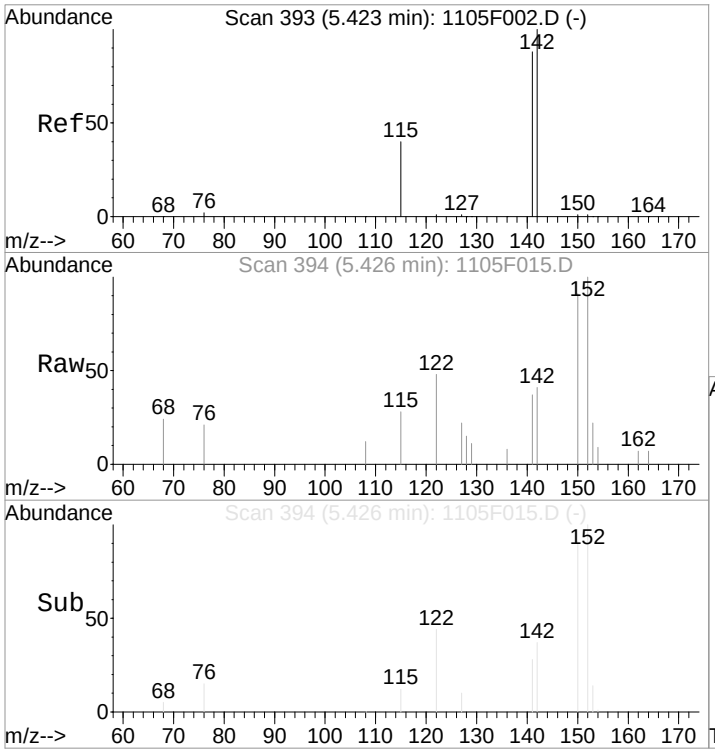


#2
Naphthalene
Concen: 1.67 ng/ml
RT: 4.79 min Scan# 207
Delta R.T. 0.01 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:128 Resp: 735

Ion	Ratio	Lower	Upper
128	100		
127	17.6	0.0	43.7
129	10.4	0.0	30.8

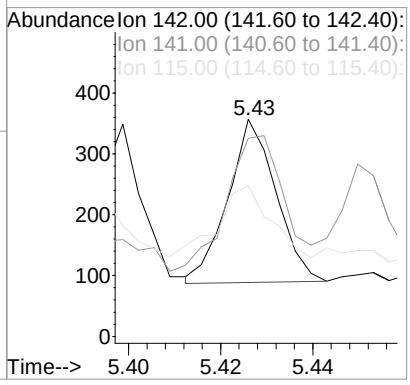




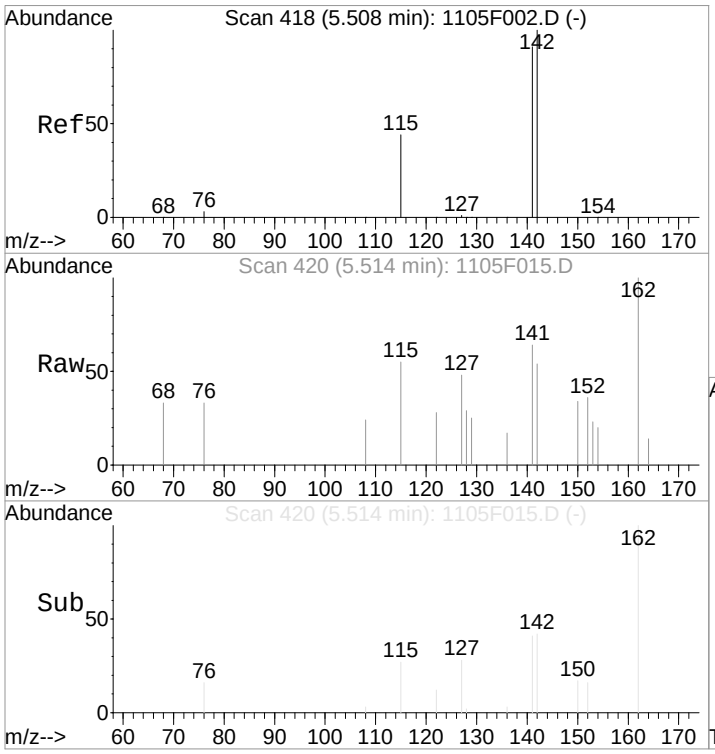
#4
2-Methylnaphthalene
Concen: 0.74 ng/ml
RT: 5.43 min Scan# 394
Delta R.T. 0.00 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:142 Resp: 195

Ion	Ratio	Lower	Upper
142	100		
141	78.6	56.8	116.8
115	38.3	13.3	53.3



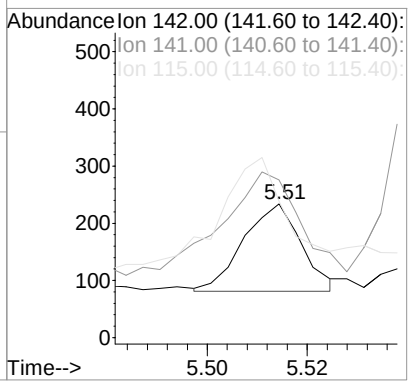
1st 11/16/18
2nd 11/27/18

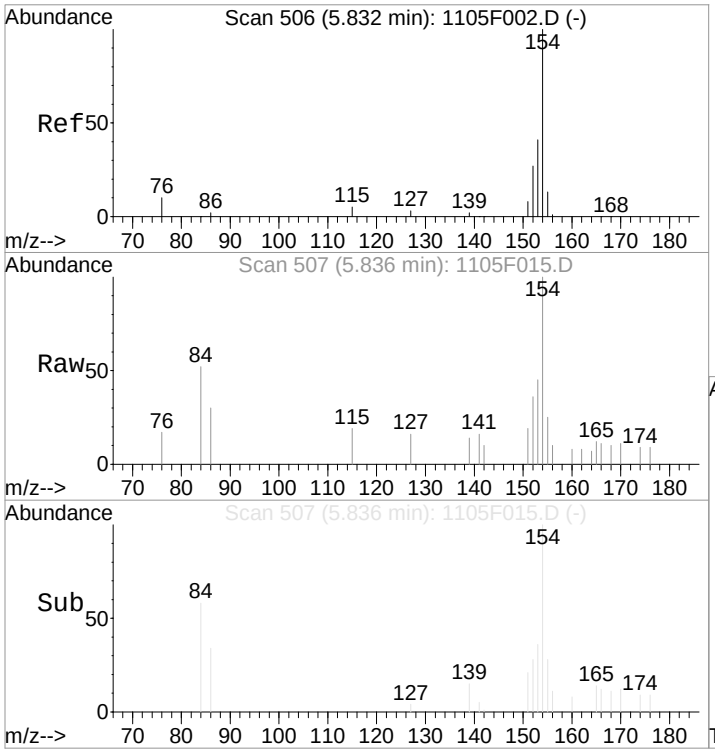


#5
1-Methylnaphthalene
Concen: 0.48 ng/ml m
RT: 5.51 min Scan# 420
Delta R.T. 0.01 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:142 Resp: 123

Ion	Ratio	Lower	Upper
142	100		
141	117.9	59.7	119.7
115	102.1	13.7	53.7#

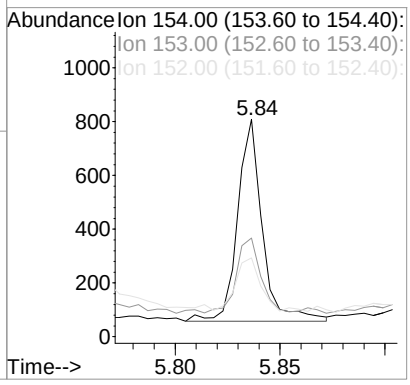




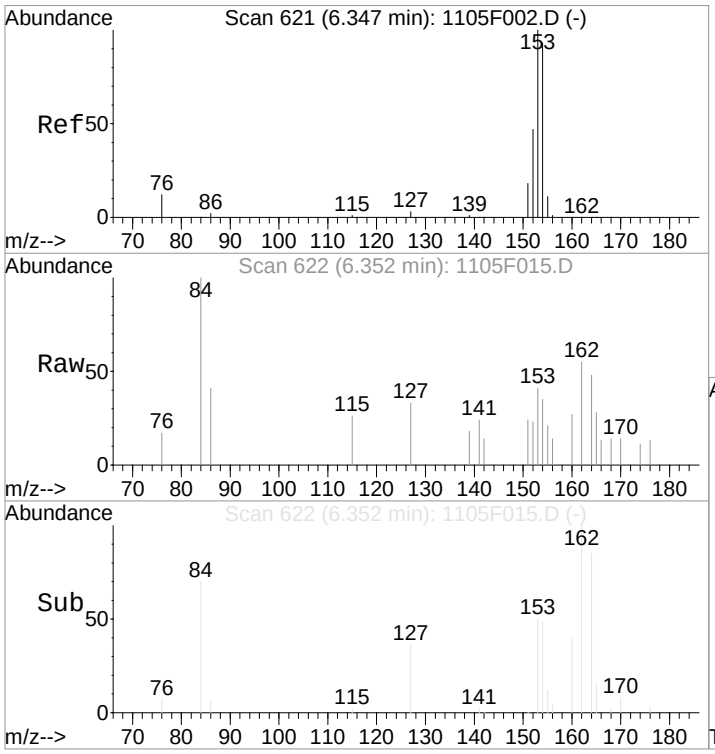
#6
Biphenyl
Concen: 1.87 ng/ml
RT: 5.84 min Scan# 507
Delta R.T. 0.00 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:154 Resp: 619

Ion	Ratio	Lower	Upper
154	100		
153	37.2	11.4	71.4
152	25.7	7.1	47.1



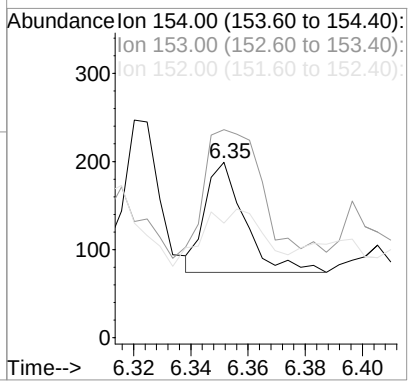
1st 11/16/18
2nd 11/27/18

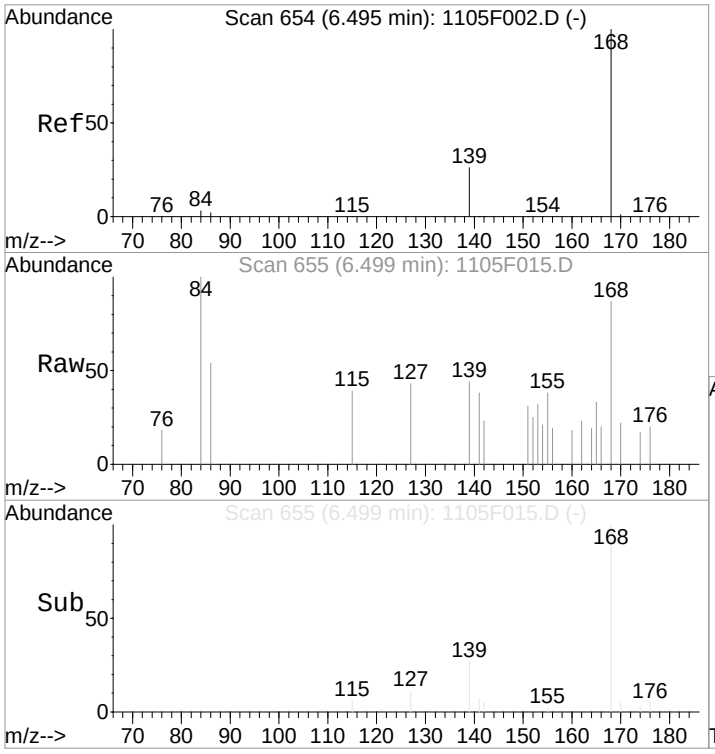


#10
Acenaphthene
Concen: 0.54 ng/ml
RT: 6.35 min Scan# 622
Delta R.T. 0.00 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:154 Resp: 122

Ion	Ratio	Lower	Upper
154	100		
153	111.2	77.1	137.1
152	22.4	19.7	79.7

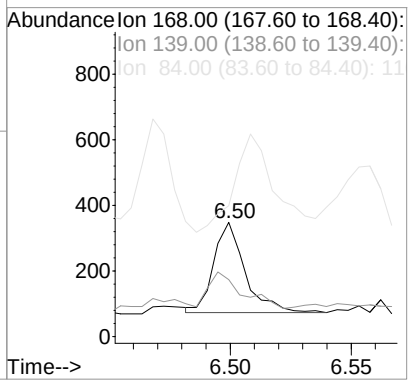




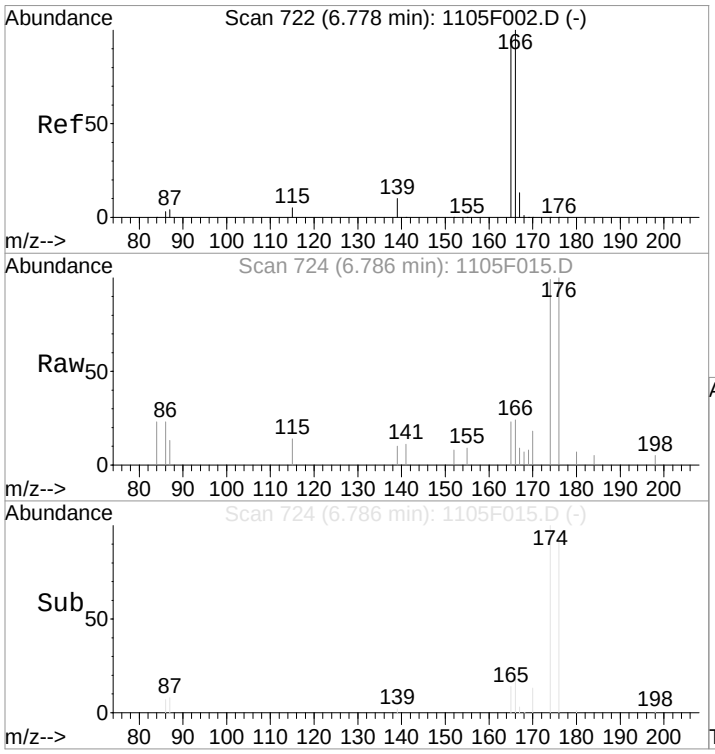
#11
Dibenzofuran
Concen: 0.68 ng/ml
RT: 6.50 min Scan# 655
Delta R.T. 0.00 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:168 Resp: 248

Ion	Ratio	Lower	Upper
168	100		
139	29.8	0.0	55.8
84	17.5	0.0	23.5



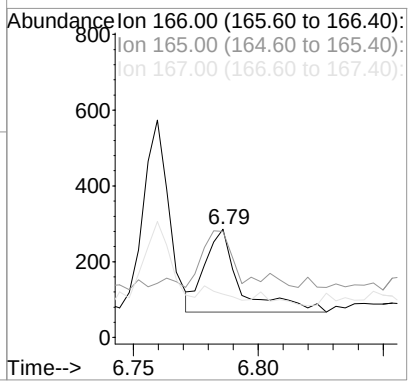
1st 11/16/18
2nd 11/27/18

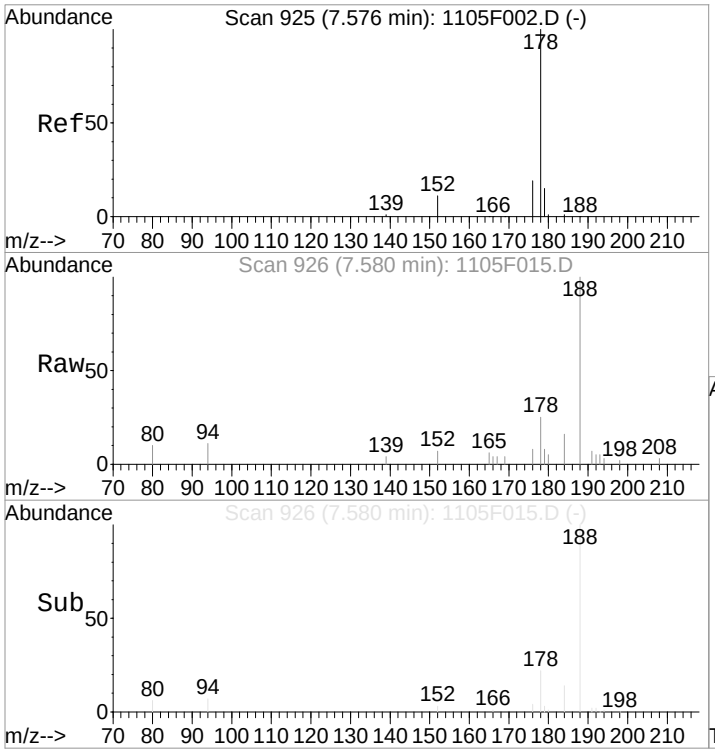


#14
Fluorene
Concen: 0.79 ng/ml
RT: 6.79 min Scan# 724
Delta R.T. 0.01 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:166 Resp: 218

Ion	Ratio	Lower	Upper
166	100		
165	67.6	63.4	123.4
167	0.9	0.0	33.1

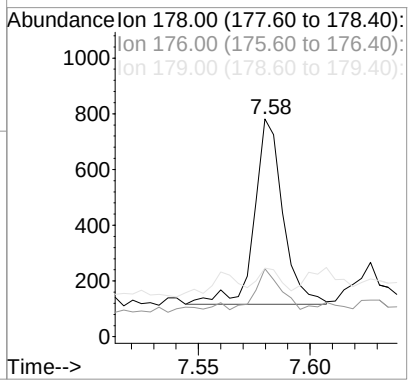




#17
Phenanthrene
Concen: 1.34 ng/ml
RT: 7.58 min Scan# 926
Delta R.T. 0.00 min
Lab File: 1105F015.D
Acq: 5 Nov 2018 4:12 pm

Tgt Ion:178 Resp: 591

Ion	Ratio	Lower	Upper
178	100		
176	20.8	0.0	48.7
179	13.3	0.0	35.1



1st 11/16/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110518\1105F015.D Vial: 15
Acq On : 5 Nov 2018 4:12 pm Operator: LWeiskopf
Sample : KWG1805597-4 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:09 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	76096	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	33148	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	70658	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	84189	200.00	ng/ml	0.01
28) Perylene-d12	13.29	264	91029	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	112216	528.32	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	52.83%		
13) Fluorene-d10	6.76	176	138854	655.13	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	65.51%		
22) Fluoranthene-d10	8.55	212	291905	655.50	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	65.55%		
25) Terphenyl-d14	8.90	244	257618	705.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	70.55%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	735	1.67	ng/ml	94
4) 2-Methylnaphthalene	5.43	142	195	0.74	ng/ml	91
5) 1-Methylnaphthalene	5.51	142	123m	0.48	ng/ml	
6) Biphenyl	5.84	154	619	1.87	ng/ml	95
10) Acenaphthene	6.35	154	122	0.54	ng/ml	85
11) Dibenzofuran	6.50	168	248	0.68	ng/ml	88
14) Fluorene	6.79	166	218	0.79	ng/ml	73
17) Phenanthrene	7.58	178	591	1.34	ng/ml	95

(#) = qualifier out of range (m) = manual integration

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F003.D
Lab ID: KWG1805796-6
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/14/2018 06:42
Date Quantitated: 11/30/2018 10:48
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	61	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F003.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:42	**Quant Date:**	11/30/2018 10:48	**Vial:**	3
Run Type:	MB	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-6			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/12/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702233	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	59123	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	31330	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	73826	200.00	OK
4	Chrysene-d12	10.10	0.00	240	83472	200.00	OK
5	Perylene-d12	13.28	-0.01	264	90973	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.38	0.00	0.00	152	101190	613.17	61	70-130	*
2	Fluorene-d10	6.75	0.00	0.00	176	143673	717.20	72	26-102	OK
3	Fluoranthene-d10	8.53	0.00	0.00	212	309898	666.04	67	23-110	OK
4	Terphenyl-d14	8.88	0.00	0.00	244	272250	751.96	75	27-115	OK

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.76	-0.01	0.00	128	521	1.53	0.089	U	
1	2-Methylnaphthalene	5.41		0.00	142	123	0.6000	0.047	U	
1	1-Methylnaphthalene	5.49	-0.01	0.00	142	104**m**	0.5200	0.055	U	
1	Biphenyl	5.82		0.00	154	427**m**	1.66	0.15	U	
1	2,6-Dimethylnaphthalene				156	0**d**		0.055	U	
2	Acenaphthylene				152	0**d**		0.029	U	
2	Acenaphthene				154	0**d**		0.032	U	
2	Dibenzofuran	6.49		0.00	168	118	0.3400	0.022	U	
2	2,3,5-Trimethylnaphthalene				170	0**d**		0.034	U	
2	Fluorene				166	0**d**		0.039	U	
3	Dibenzothiophene				184	0**d**		0.049	U	
3	Phenanthrene	7.57		0.00	178	185	0.4000	0.033	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F003.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:42	**Quant Date:**	11/30/2018 10:48	**Vial:**	3
Run Type:	MB	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-6			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene				178	0**d**		0.026	U	
3	Carbazole				167	0**d**		0.080	U	
3	1-Methylphenanthrene				192	0**d**		0.041	U	
3	Fluoranthene	8.55		0.00	202	210**m**	0.3700	0.032	U	
4	Pyrene	8.75		0.00	202	218	0.3800	0.032	U	
4	Benz(a)anthracene	10.10	0.01	0.00	228	377	0.7000	0.0347	J	
4	Chrysene	10.14		0.00	228	180**m**	0.3500	0.027	U	
5	Benzo(b)fluoranthene	12.22	0.01	0.00	252	222	0.3900	0.057	U	
5	Benzo(k)fluoranthene				252	0**d**		0.045	U	
5	Benzo(e)pyrene	12.96		0.00	252	405	0.7600	0.051	U	
5	Benzo(a)pyrene	13.11	-0.01	0.00	252	242**m**	0.4900	0.036	U	
5	Perylene	13.36	-0.01	0.00	252	340	0.6600	0.19	U	
5	Indeno(1,2,3-cd)pyrene				276	0**d**		0.064	U	
5	Dibenz(a,h)anthracene				278	0**d**		0.058	U	
5	Benzo(g,h,i)perylene	15.89	0.01	0.00	276	249	0.4400	0.059	U	

Prep Amount:	40.332 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

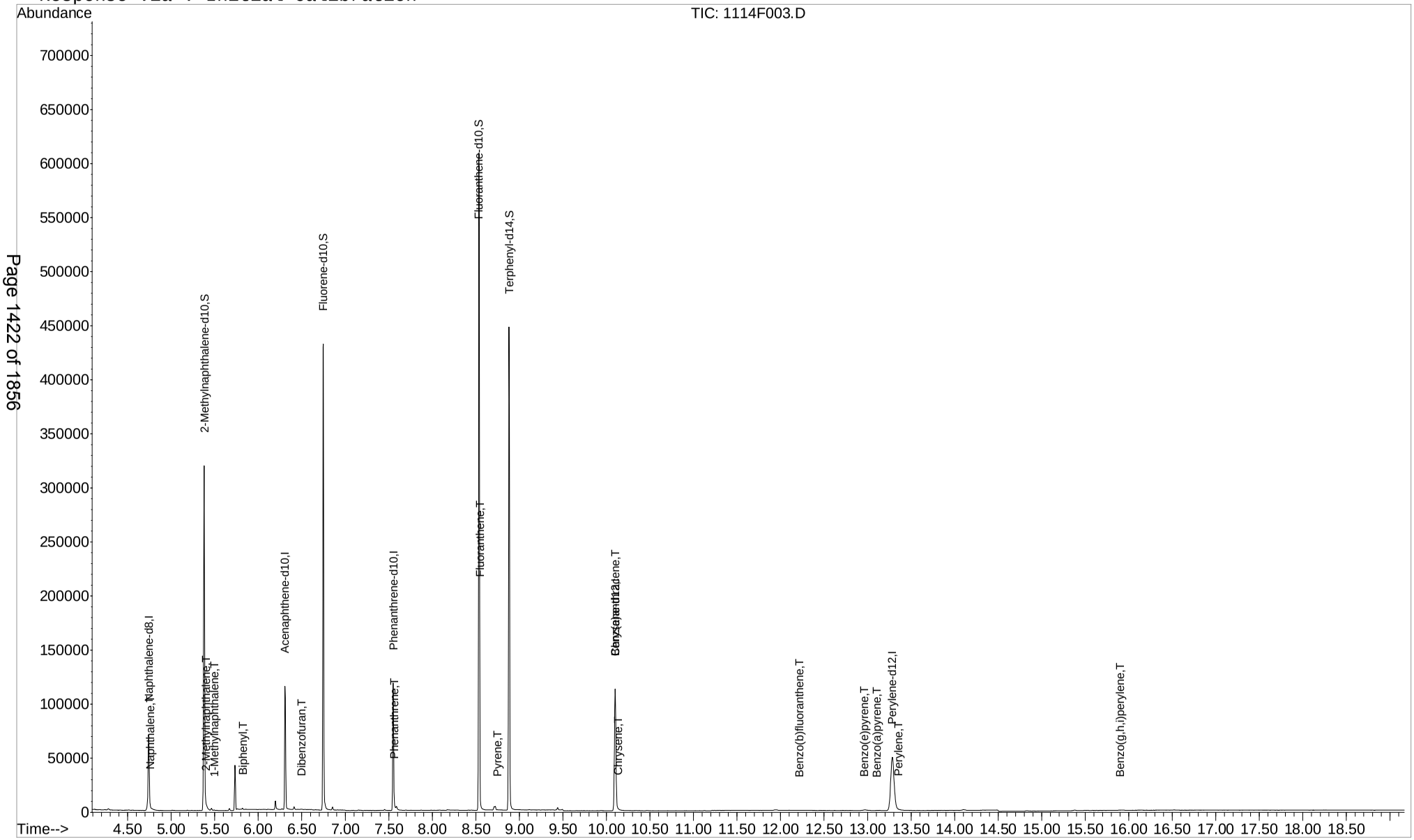
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

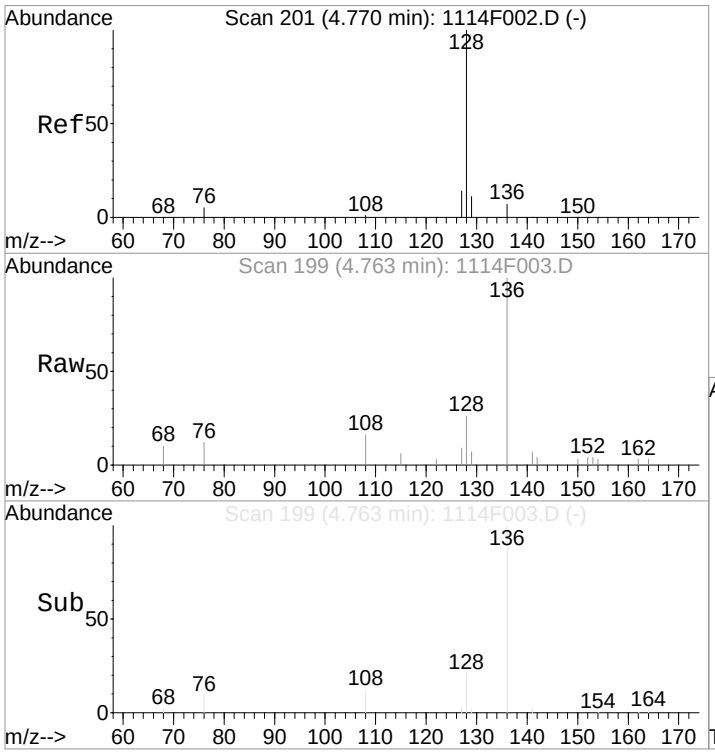
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



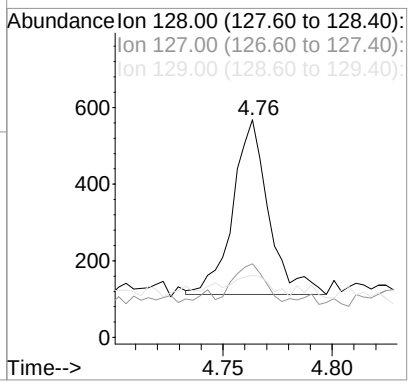
1st 12/03/18
2nd 12/06/18

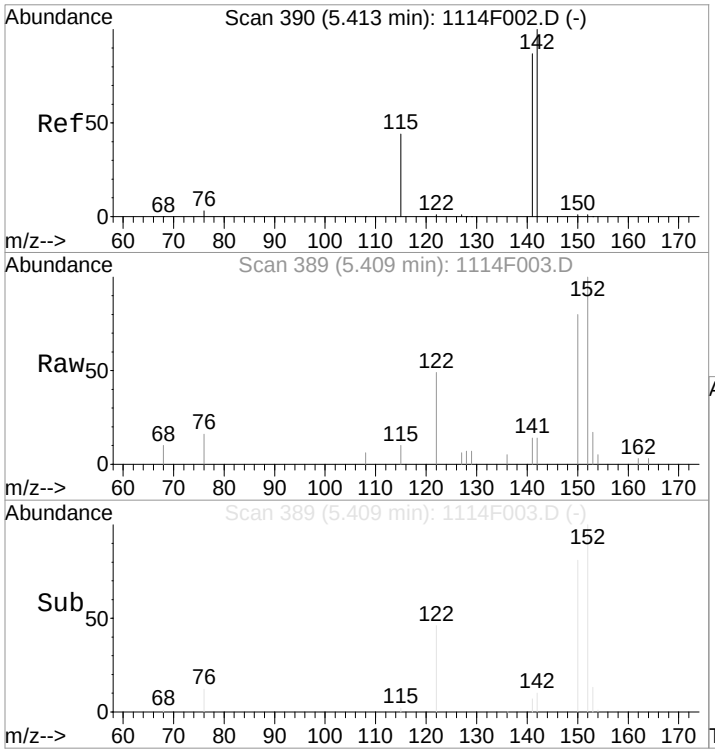


#2
Naphthalene
Concen: 1.53 ng/ml
RT: 4.76 min Scan# 199
Delta R.T. -0.02 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:128 Resp: 521

Ion	Ratio	Lower	Upper
128	100		
127	22.1	0.0	43.7
129	12.7	0.0	30.8

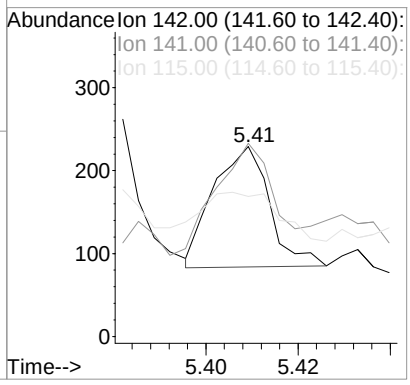




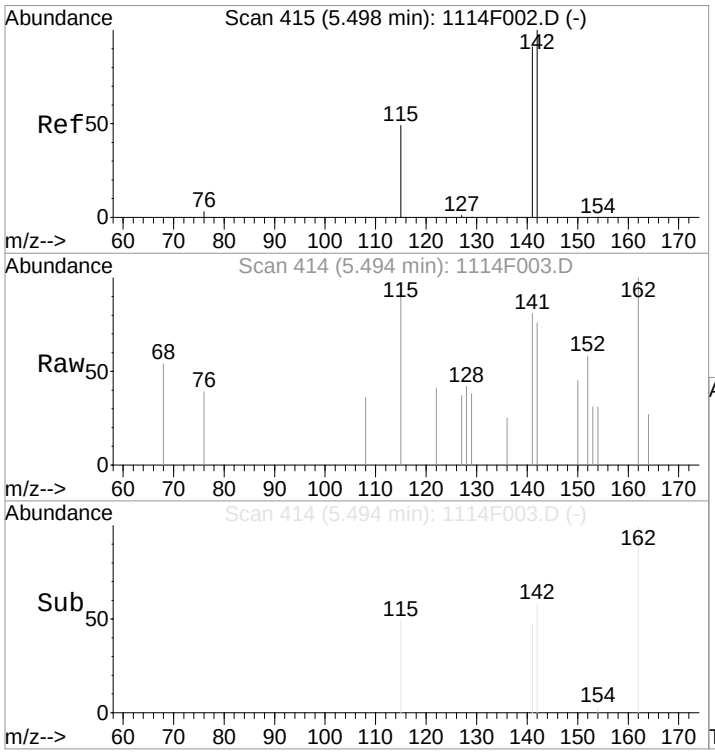
#4
2-Methylnaphthalene
Concen: 0.60 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:142 Resp: 123

Ion	Ratio	Lower	Upper
142	100		
141	88.2	56.8	116.8
115	37.5	13.3	53.3



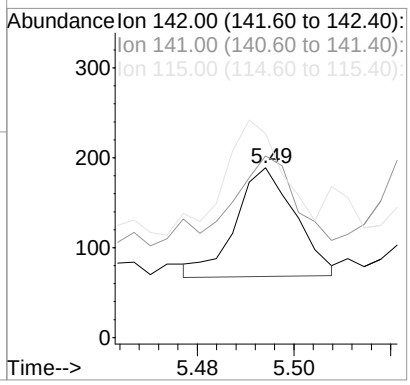
1st 12/03/18
2nd 12/06/18

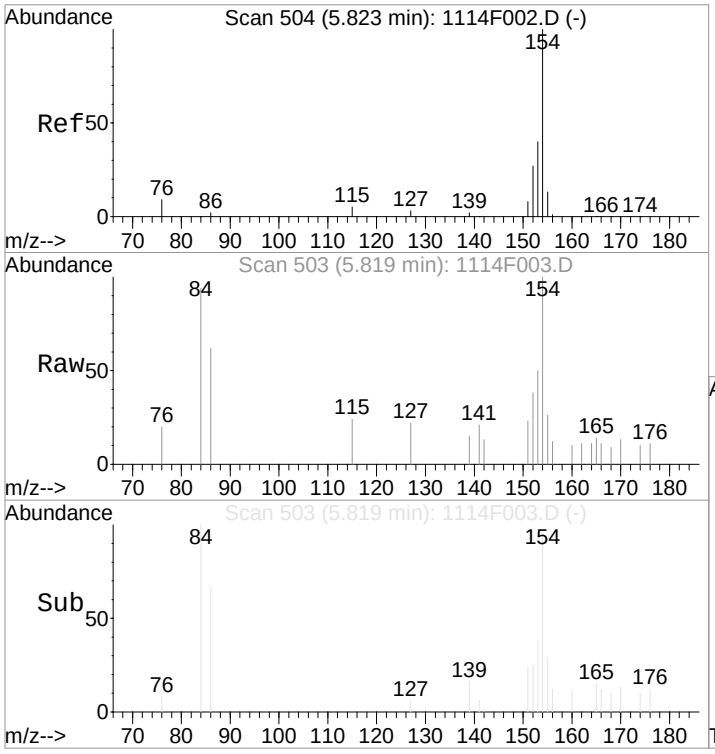


#5
1-Methylnaphthalene
Concen: 0.52 ng/ml m
RT: 5.49 min Scan# 414
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:142 Resp: 104

Ion	Ratio	Lower	Upper
142	100		
141	106.9	59.7	119.7
115	120.1	13.7	53.7#

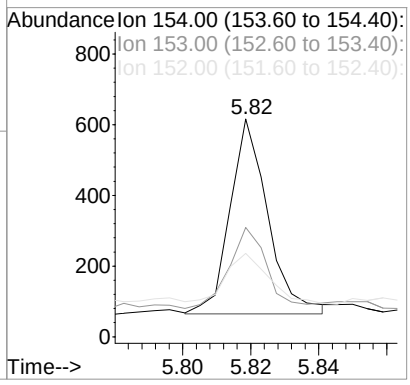




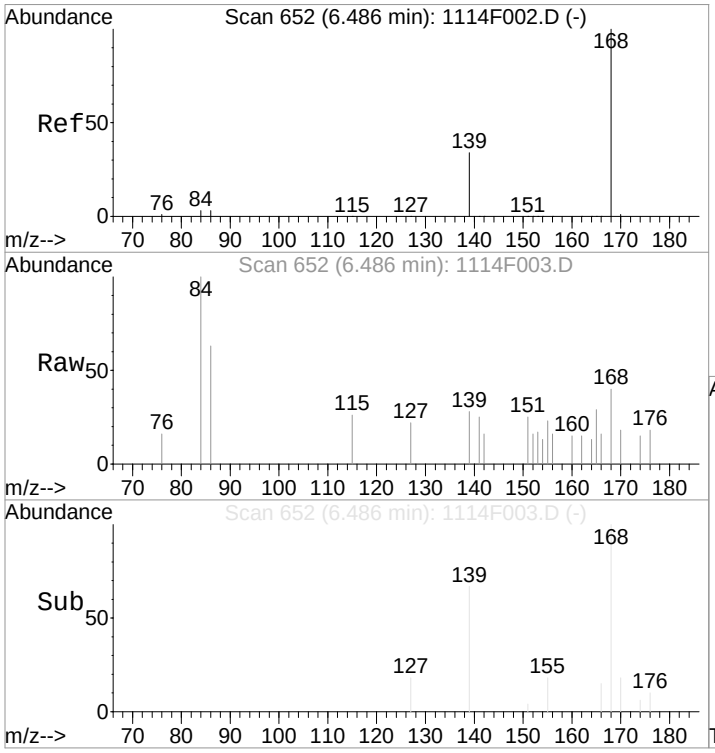
#6
Biphenyl
Concen: 1.66 ng/ml m
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:154 Resp: 427

Ion	Ratio	Lower	Upper
154	100		
153	50.2	11.4	71.4
152	38.3	7.1	47.1



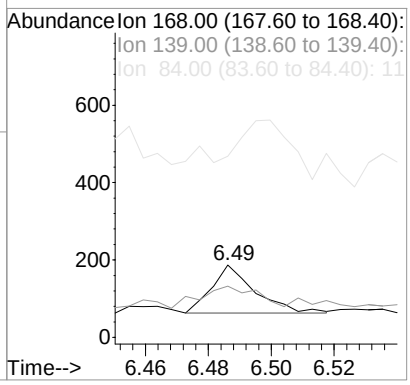
1st 12/03/18
2nd 12/06/18

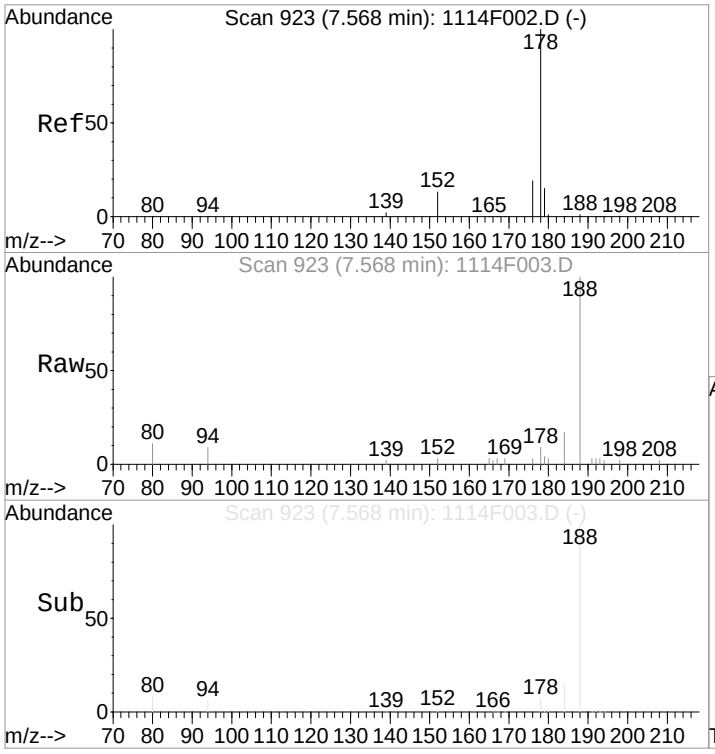


#11
Dibenzofuran
Concen: 0.34 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:168 Resp: 118

Ion	Ratio	Lower	Upper
168	100		
139	29.8	0.0	55.8
84	10.5	0.0	23.5

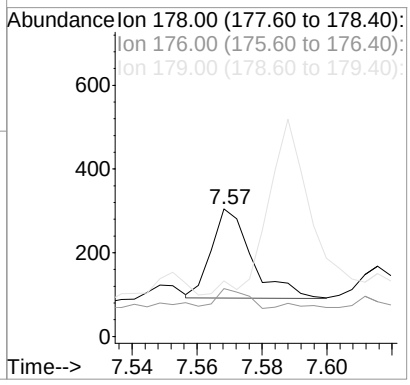




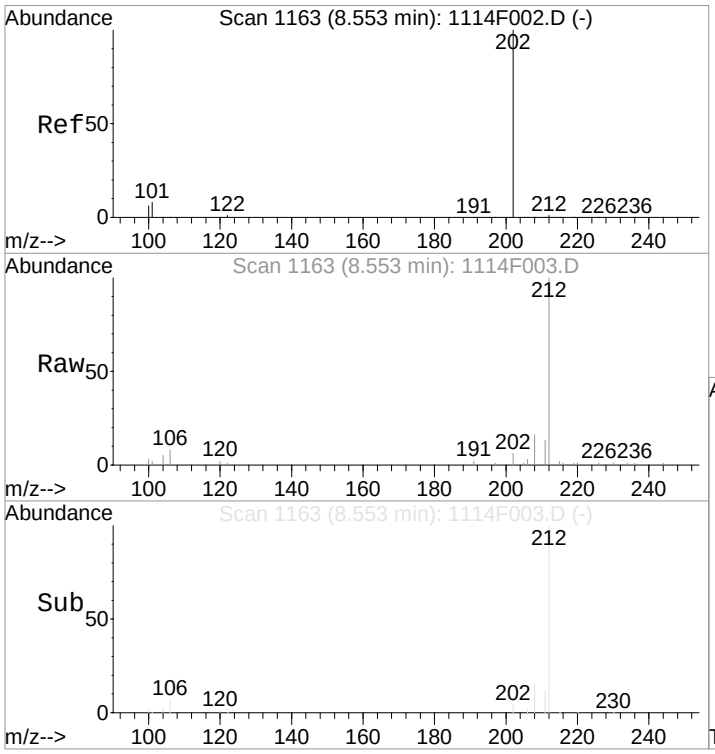
#17
Phenanthrene
Concen: 0.40 ng/ml
RT: 7.57 min Scan# 923
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:178 Resp: 185

Ion	Ratio	Lower	Upper
178	100		
176	21.1	0.0	48.7
179	2.8	0.0	35.1



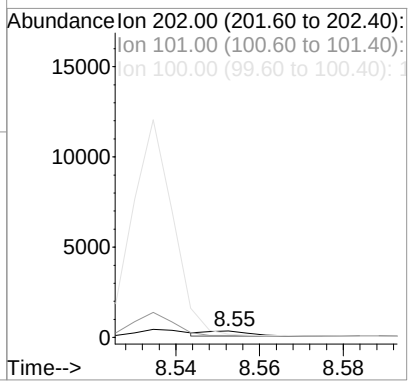
1st 12/03/18
2nd 12/06/18

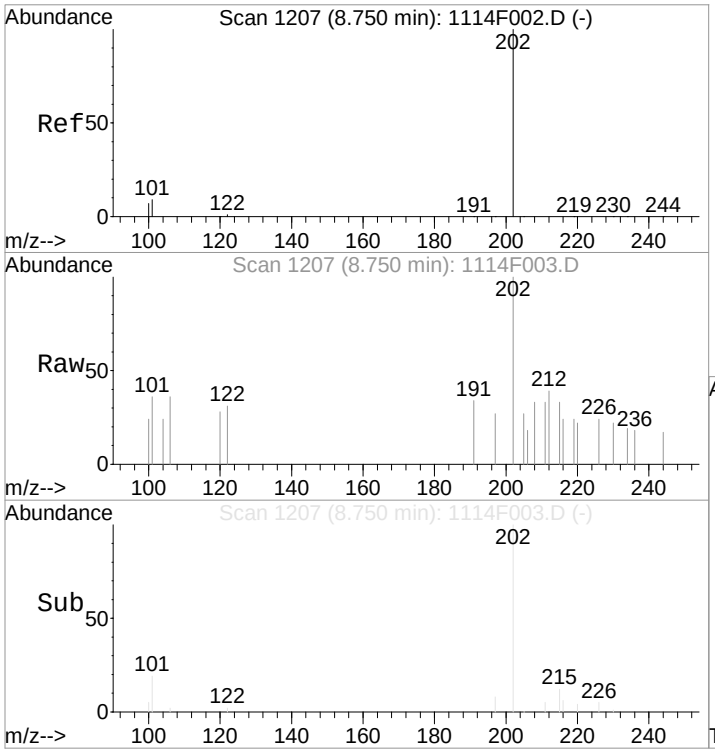


#21
Fluoranthene
Concen: 0.37 ng/ml m
RT: 8.55 min Scan# 1163
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:202 Resp: 210

Ion	Ratio	Lower	Upper
202	100		
101	27.7	0.0	41.3
100	50.7	0.0	28.6#

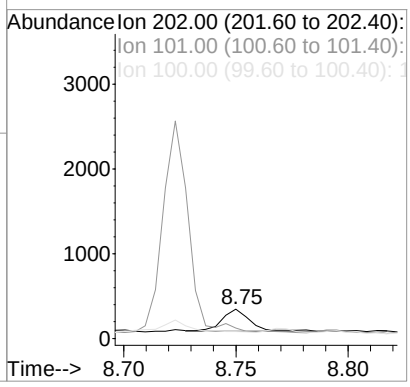




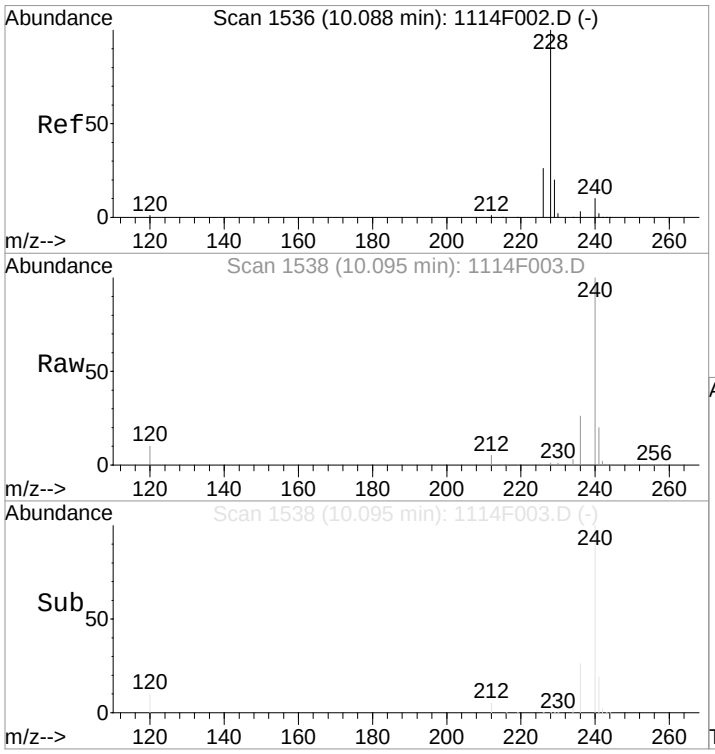
#24
Pyrene
Concen: 0.38 ng/ml
RT: 8.75 min Scan# 1207
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:202 Resp: 218

Ion	Ratio	Lower	Upper
202	100		
101	8.6	0.0	40.8
100	0.0	0.0	28.5



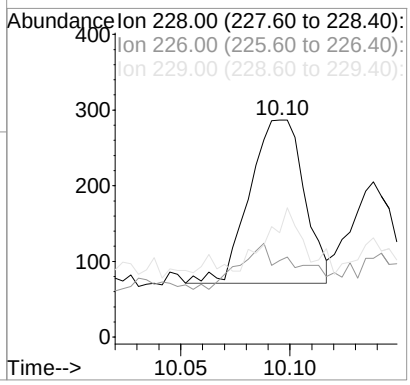
1st 12/03/18
2nd 12/06/18

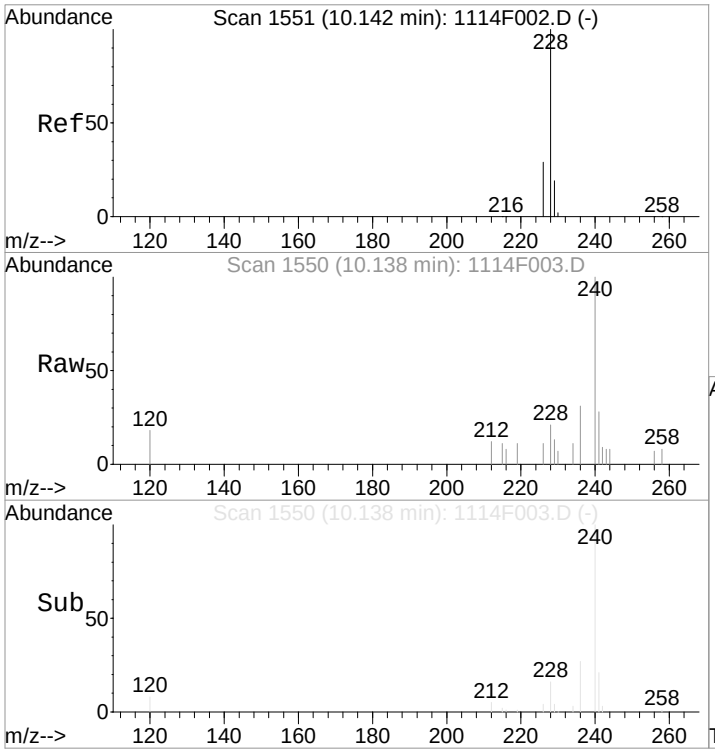


#26
Benz(a)anthracene
Concen: 0.70 ng/ml
RT: 10.10 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:228 Resp: 377

Ion	Ratio	Lower	Upper
228	100		
226	14.8	0.0	56.3
229	23.1	0.0	39.1

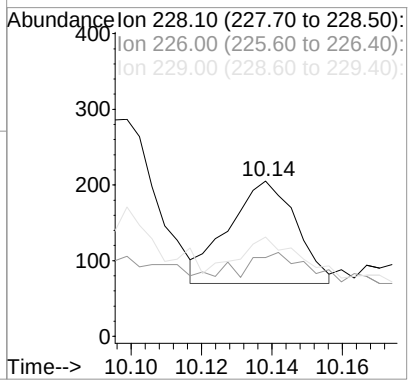




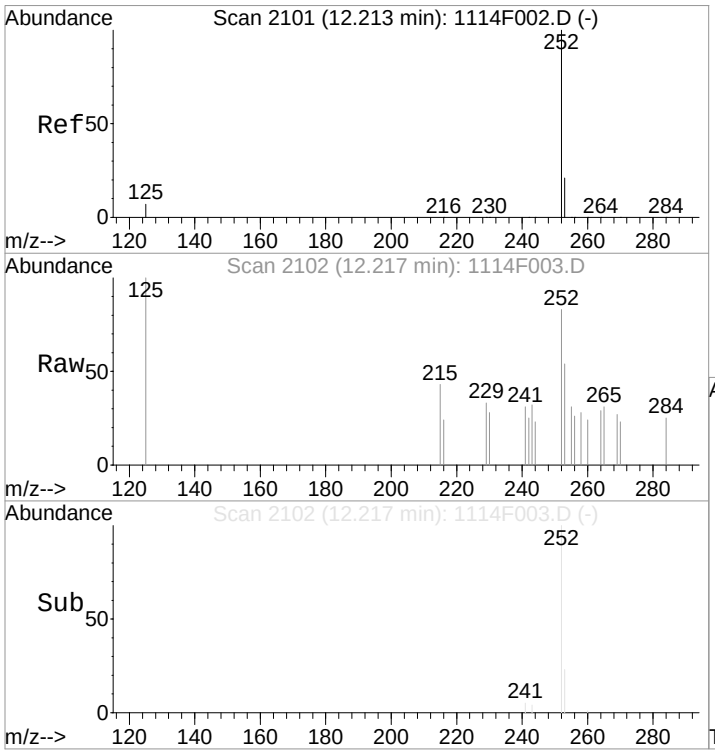
#27
Chrysene
Concen: 0.35 ng/ml m
RT: 10.14 min Scan# 1550
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:228 Resp: 180

Ion	Ratio	Lower	Upper
228	100		
226	50.7	0.0	58.7
229	63.9	0.0	39.2#



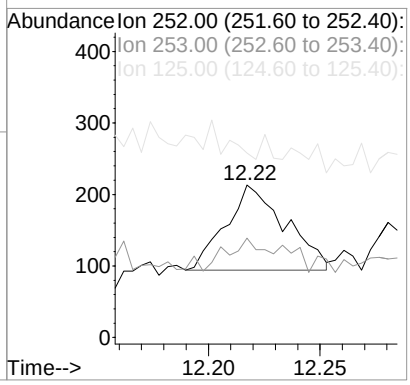
1st 12/03/18
2nd 12/06/18

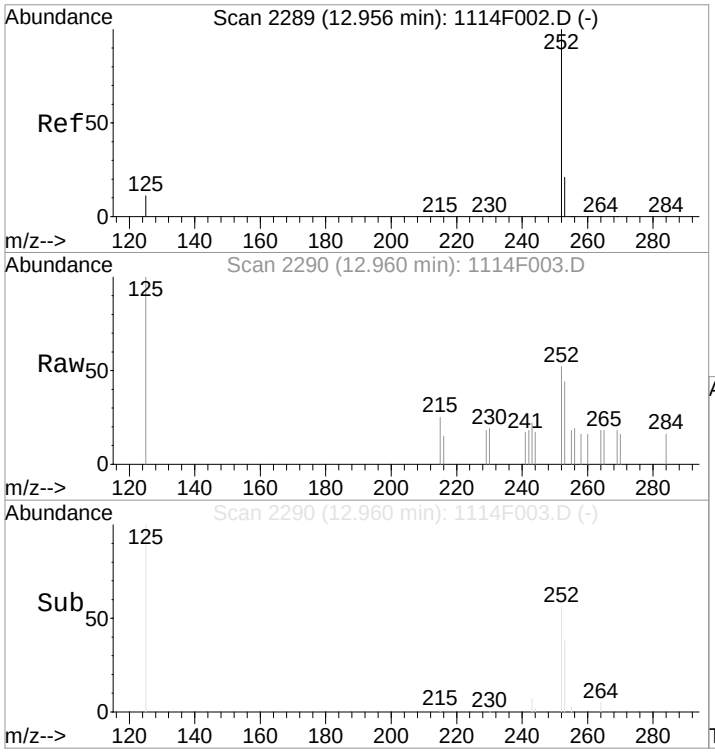


#29
Benzo(b)fluoranthene
Concen: 0.39 ng/ml
RT: 12.22 min Scan# 2102
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 222

Ion	Ratio	Lower	Upper
252	100		
253	36.1	0.0	51.2
125	23.5	0.0	29.5

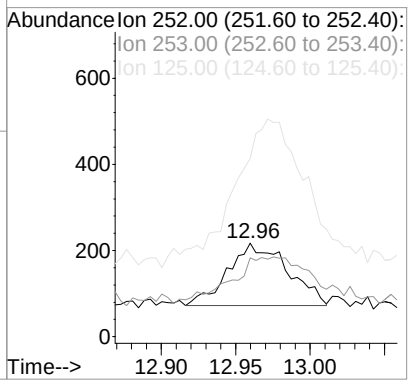




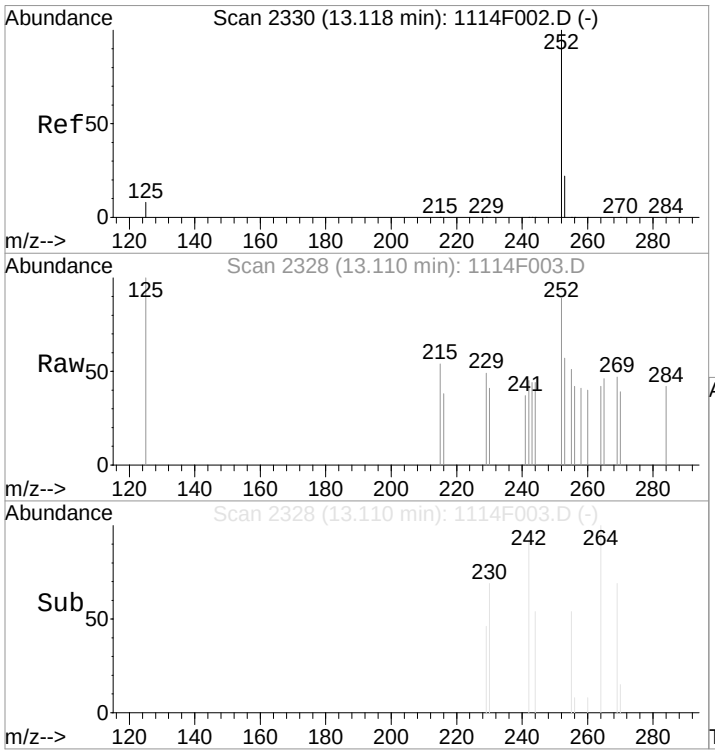
#31
Benzo(e)pyrene
Concen: 0.76 ng/ml
RT: 12.96 min Scan# 2290
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 405

Ion	Ratio	Lower	Upper
252	100		
253	66.9	0.0	51.3#
125	145.5	0.0	33.5#



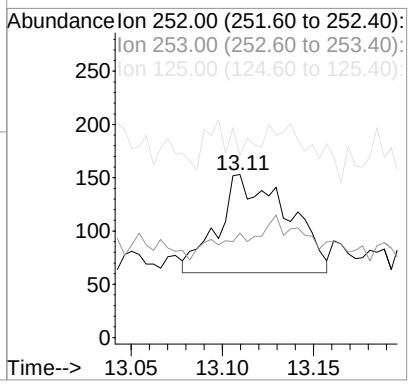
1st 12/03/18
2nd 12/06/18

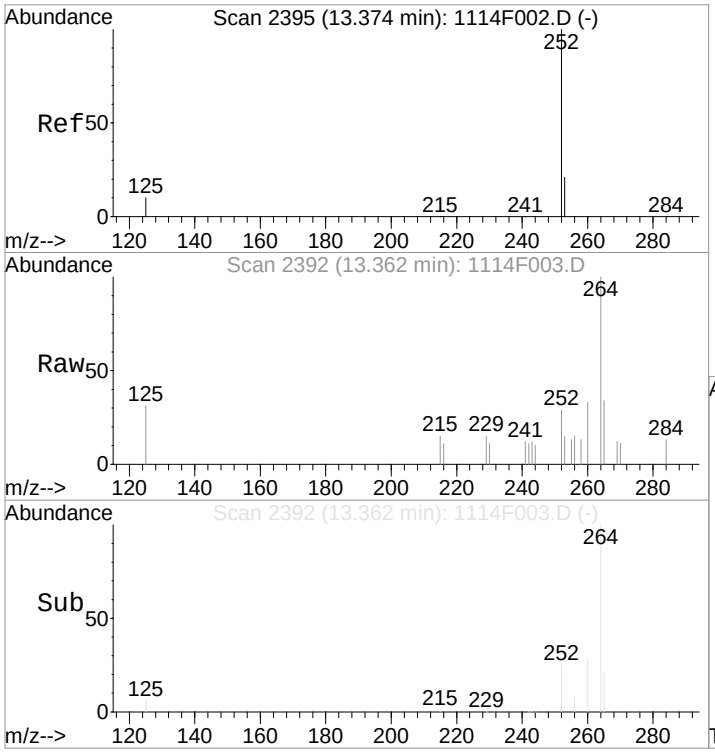


#32
Benzo(a)pyrene
Concen: 0.49 ng/ml m
RT: 13.11 min Scan# 2328
Delta R.T. -0.02 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 242

Ion	Ratio	Lower	Upper
252	100		
253	64.1	0.0	50.9#
125	111.8	0.0	30.3#

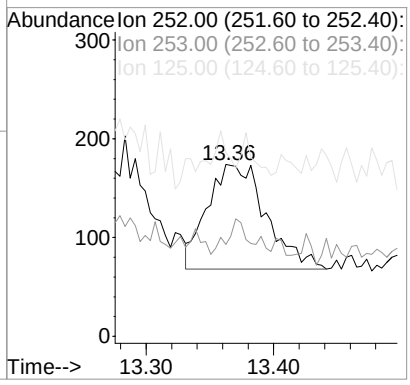




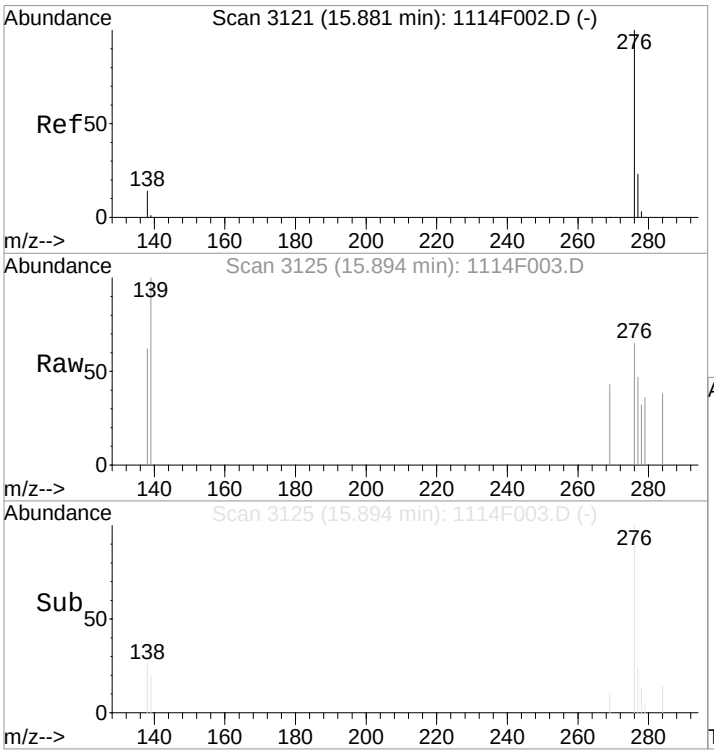
#33
Perylene
Concen: 0.66 ng/ml
RT: 13.36 min Scan# 2392
Delta R.T. -0.02 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 340

Ion	Ratio	Lower	Upper
252	100		
253	2.8	0.0	51.2
125	5.7	0.0	33.8



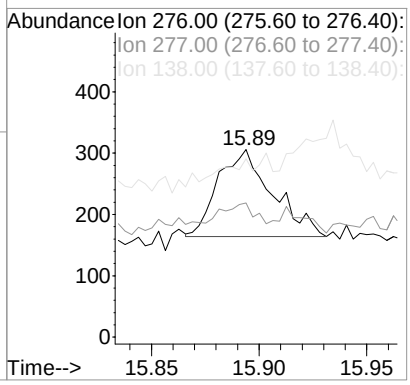
1st 12/03/18
2nd 12/06/18



#36
Benzo(g,h,i)perylene
Concen: 0.44 ng/ml
RT: 15.89 min Scan# 3125
Delta R.T. 0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:276 Resp: 249

Ion	Ratio	Lower	Upper
276	100		
277	34.5	0.0	53.1
138	32.4	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:05:28 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	59123	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	31330	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	73826	200.00	ng/ml	-0.01
23) Chrysene-d12	10.10	240	83472	200.00	ng/ml	-0.01
28) Perylene-d12	13.28	264	90973	200.00	ng/ml	-0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	101190	613.17	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	61.32%		
13) Fluorene-d10	6.75	176	143673	717.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	71.72%		
22) Fluoranthene-d10	8.53	212	309898	666.04	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	66.60%		
25) Terphenyl-d14	8.88	244	272250	751.96	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	75.20%		
Target Compounds						Qvalue
2) Naphthalene	4.76	128	521	1.53	ng/ml	86
4) 2-Methylnaphthalene	5.41	142	123	0.60	ng/ml	97
5) 1-Methylnaphthalene	5.49	142	104m	0.52	ng/ml	
6) Biphenyl	5.82	154	427m	1.66	ng/ml	
11) Dibenzofuran	6.49	168	118	0.34	ng/ml	90
17) Phenanthrene	7.57	178	185	0.40	ng/ml	84
21) Fluoranthene	8.55	202	210m	0.37	ng/ml	
24) Pyrene	8.75	202	218	0.38	ng/ml	86
26) Benz(a)anthracene	10.10	228	377	0.70	ng/ml	83
27) Chrysene	10.14	228	180m	0.35	ng/ml	
29) Benzo(b)fluoranthene	12.22	252	222	0.39	ng/ml	66
31) Benzo(e)pyrene	12.96	252	405	0.76	ng/ml#	1
32) Benzo(a)pyrene	13.11	252	242m	0.49	ng/ml	
33) Perylene	13.36	252	340	0.66	ng/ml	68
36) Benzo(g,h,i)perylene	15.89	276	249	0.44	ng/ml	74

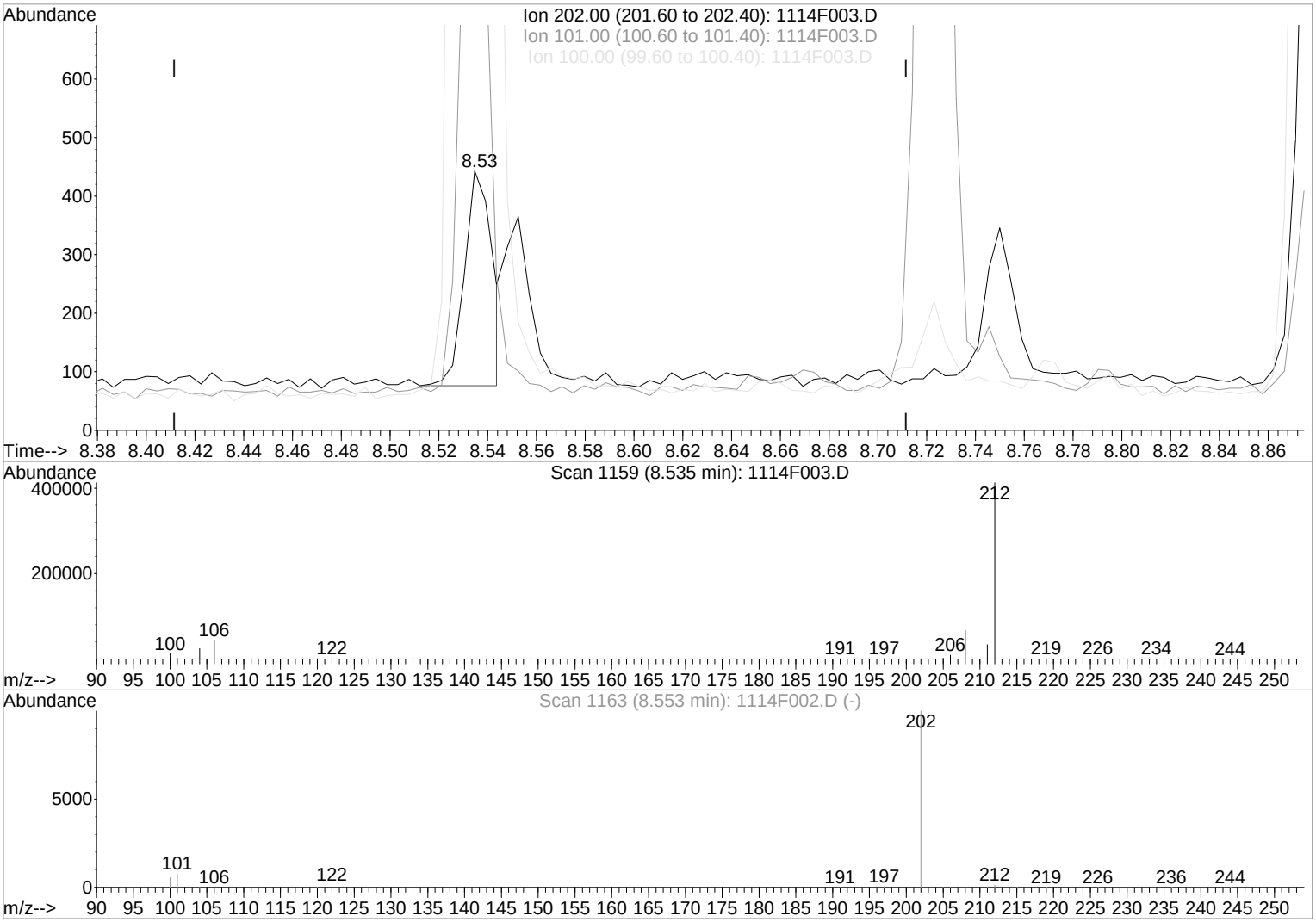
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:47 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(21) Fluoranthene (T)

8.53min 0.51ng/ml

response 291

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	358.31#
100.00	8.60	3265.12#
0.00	0.00	0.00

Manual Integration:

Before

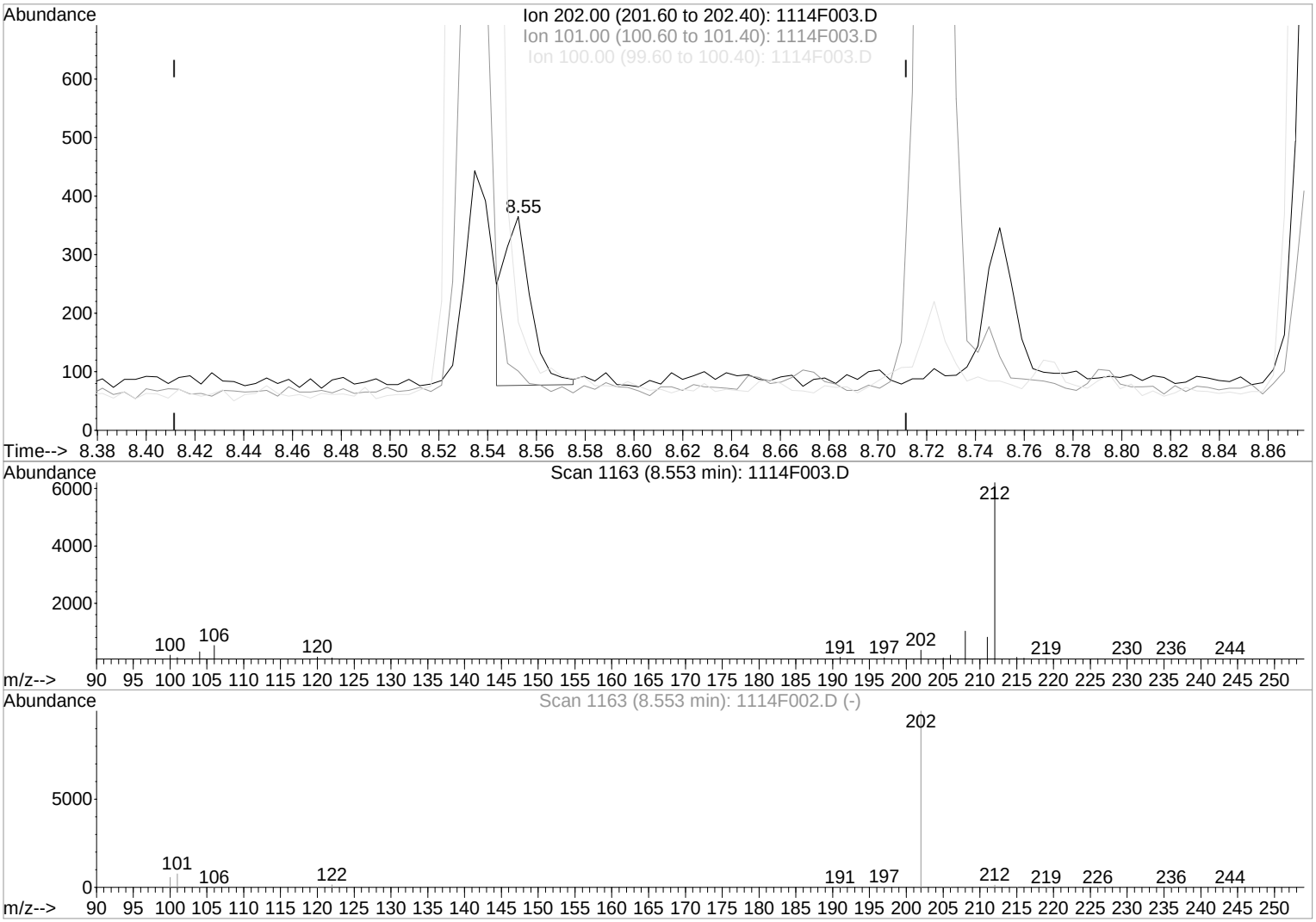
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:47 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(21) Fluoranthene (T)

8.55min 0.37ng/ml m

response 210

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	27.67
100.00	8.60	50.68#
0.00	0.00	0.00

Manual Integration:

After

WP

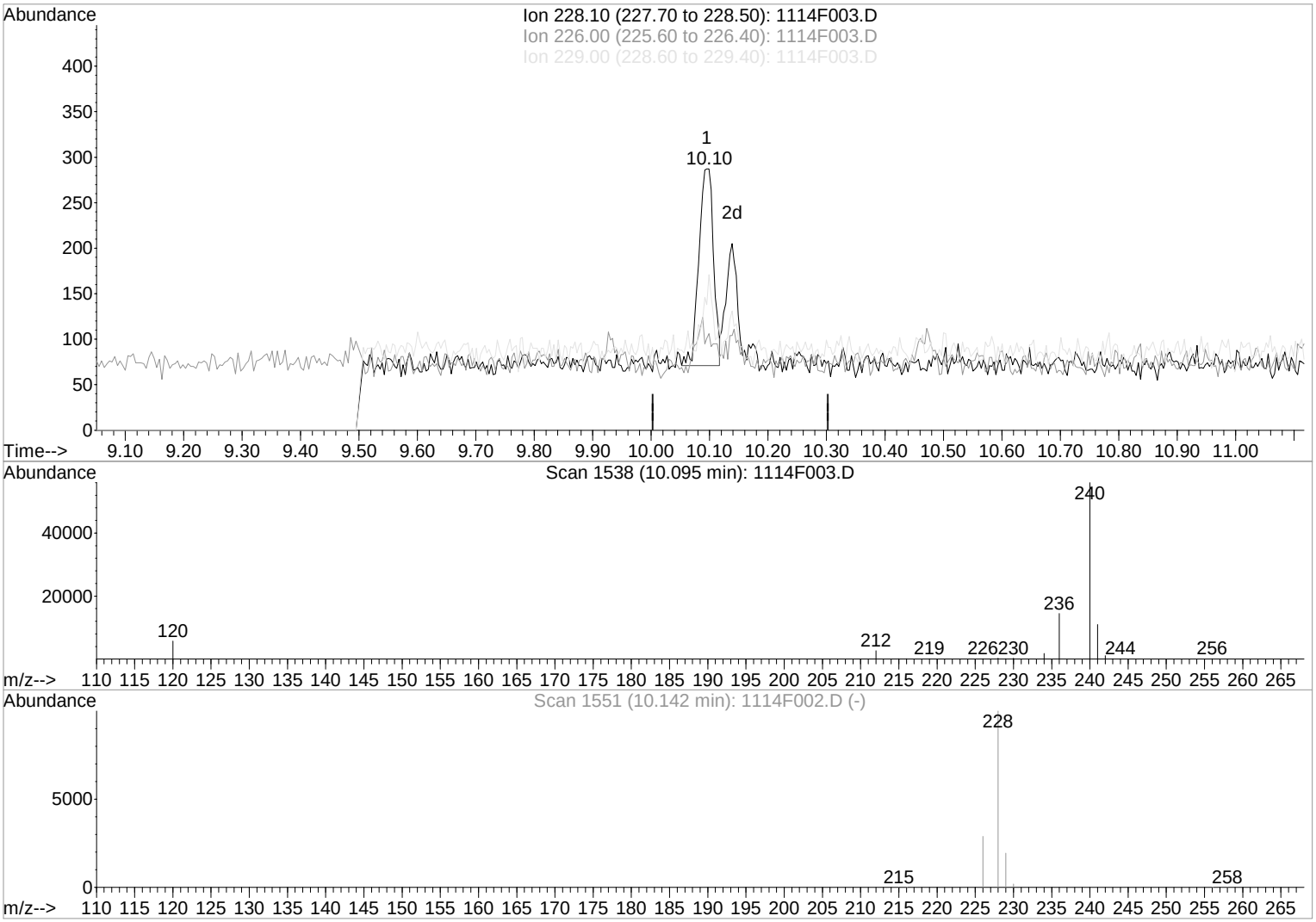
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:47 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(27) Chrysene (T)

10.10min 0.73ng/ml

response 377

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	14.81
229.00	19.20	23.15
0.00	0.00	0.00

Manual Integration:

Before

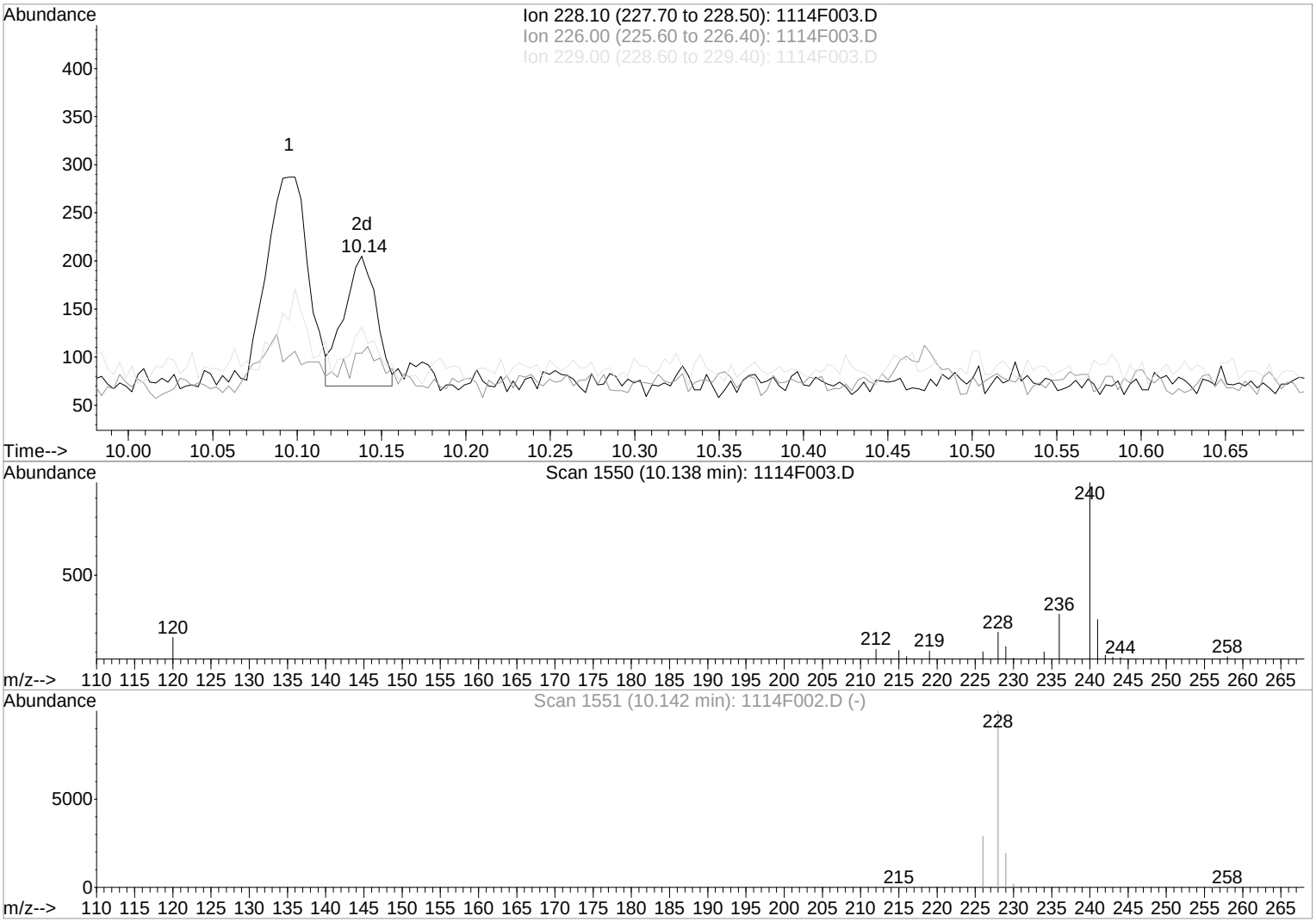
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(27) Chrysene (T)

10.14min 0.35ng/ml m

response 180

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	50.73
229.00	19.20	63.90#
0.00	0.00	0.00

Manual Integration:

After

WP

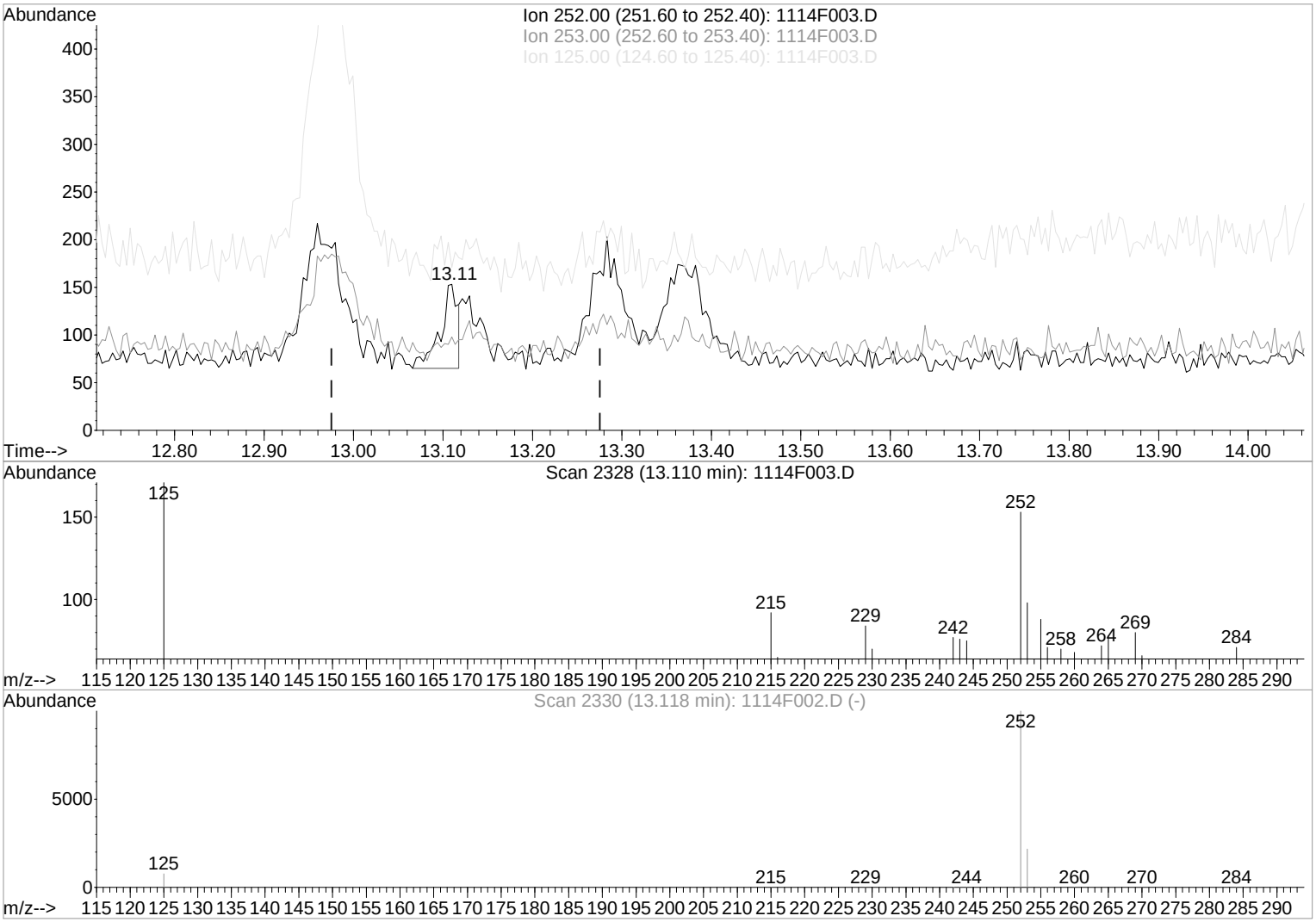
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(32) Benzo(a)pyrene (T)

13.11min 0.24ng/ml

response 120

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	6.82
125.00	10.30	0.00
0.00	0.00	0.00

Manual Integration:

Before

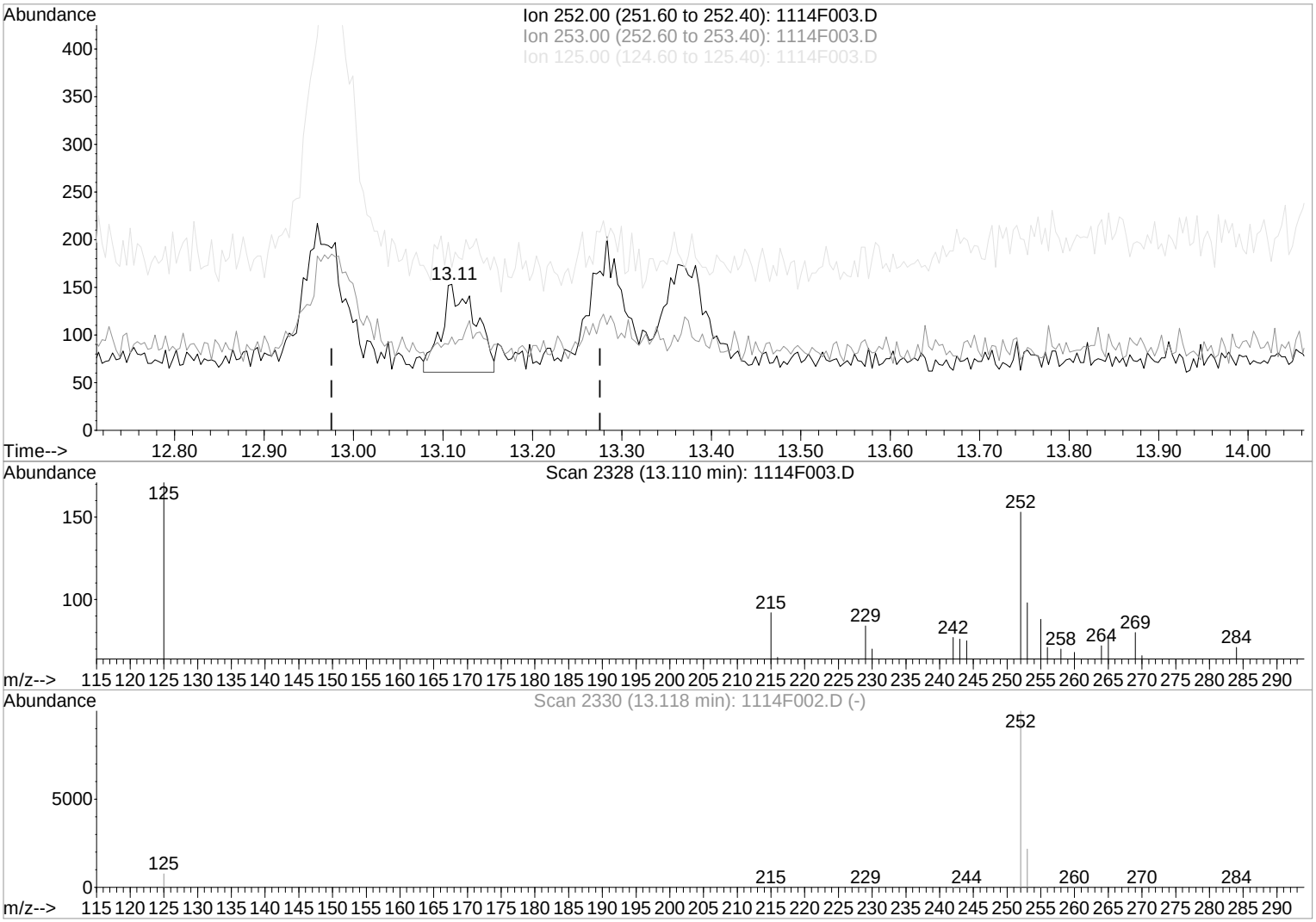
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(32) Benzo(a)pyrene (T)

13.11min 0.49ng/ml m

response 242

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	64.05#
125.00	10.30	111.76#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F017.D
Lab ID: KWG1805597-1 -- K1810270-010MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/05/2018 17:12
Date Quantitated: 11/16/2018 08:39
Batch ID: KWG1806019
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2-Methylnaphthalene-d10	-23.3	NA	20	NT
Surrogates	2-Methylnaphthalene-d10	44	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F017.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 17:12	**Quant Date:**	11/16/2018 08:39	**Vial:**	17
Run Type:	MS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-1 -- K1810270-010MS			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/01/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700778	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	76303	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	30184	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	58895	200.00	OK
4	Chrysene-d12	10.11	0.01	240	77686	200.00	OK
5	Perylene-d12	13.29	0.03	264	89245	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.40	0.01	0.00	152	93808	440.45	44	70-130	*	
2	Fluorene-d10	6.76	0.00	0.00	176	111036	575.33	58	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	216283	582.68	58	23-110	OK	
4	Terphenyl-d14	8.90	0.01	0.00	244	196657	583.63	58	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	228274	518.29	41.1		
1	2-Methylnaphthalene	5.43	0.01	0.00	142	127974	481.81	38.2		
1	1-Methylnaphthalene	5.51		0.00	142	122274	478.27	37.9		
1	Biphenyl	5.83		0.00	154	159180	480.17	38.1		
1	2,6-Dimethylnaphthalene	5.97		0.00	156	112635	493.96	39.2		
2	Acenaphthylene	6.20		0.00	152	208708	579.49	45.9		
2	Acenaphthene	6.35		0.00	154	116092	561.14	44.5		
2	Dibenzofuran	6.50		0.00	168	184958	557.13	44.2		
2	2,3,5-Trimethylnaphthalene	6.67		0.00	170	111851	584.50	46.3		
2	Fluorene	6.78		0.00	166	141792	566.68	44.9		
3	Dibenzothiophene	7.47		0.00	184	204331	556.24	44.1		
3	Phenanthrene	7.58		0.00	178	209879	571.25	45.3		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F017.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 17:12	**Quant Date:**	11/16/2018 08:39	**Vial:**	17
Run Type:	MS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-1 -- K1810270-010MS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62		0.00	178	213313	608.19	48.2		
3	Carbazole	7.76	0.01	0.00	167	205236	599.61	47.5		
3	1-Methylphenanthrene	8.09	0.01	0.00	192	167072**m**	600.37	47.6		
3	Fluoranthene	8.57	0.01	0.00	202	254929	561.93	44.5		
4	Pyrene	8.76	0.01	0.00	202	282230	529.51	42.0		
4	Benz(a)anthracene	10.10	0.01	0.00	228	337301	671.56	53.2		
4	Chrysene	10.15	0.01	0.00	228	311924	648.35	51.4		
5	Benzo(b)fluoranthene	12.22	0.03	0.00	252	368175	667.74	52.9		
5	Benzo(k)fluoranthene	12.29	0.03	0.00	252	350411	640.63	50.8		
5	Benzo(e)pyrene	12.96	0.03	0.00	252	343657	653.88	51.8		
5	Benzo(a)pyrene	13.11	0.02	0.00	252	323726	669.49	53.1		
5	Perylene	13.37	0.03	0.00	252	463825	914.41	72.5		
5	Indeno(1,2,3-cd)pyrene	15.48	0.02	0.00	276	330166	696.33	55.2		
5	Dibenz(a,h)anthracene	15.52	0.02	0.00	278	330576	687.77	54.5		
5	Benzo(g,h,i)perylene	15.87	0.02	0.00	276	348986	628.51	49.8		

Prep Amount:	40.044 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	63 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

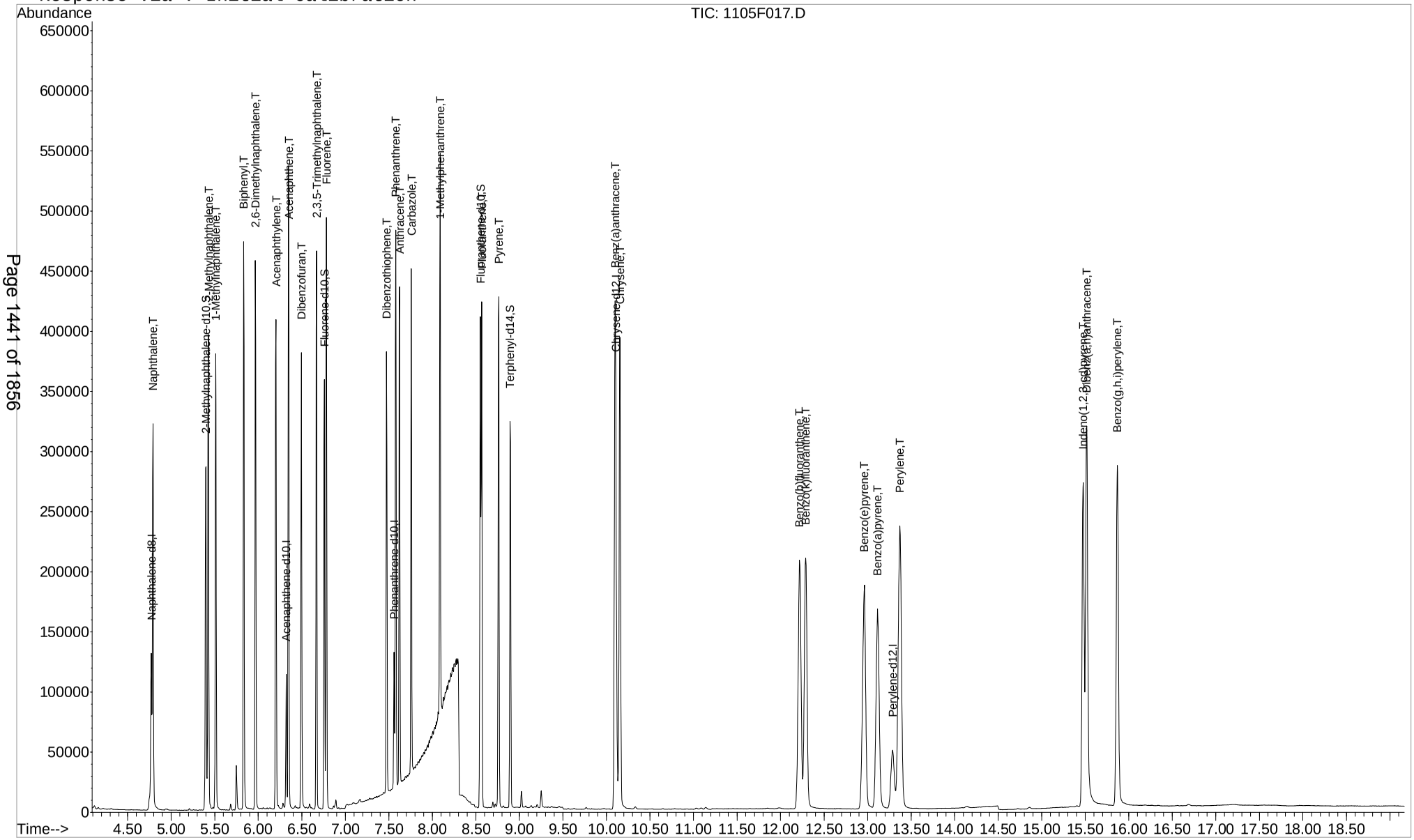
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F017.D Vial: 17
Acq On : 5 Nov 2018 5:12 pm Operator: LWeiskopf
Sample : K1810270-010MS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:39 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F017.D Vial: 17
Acq On : 5 Nov 2018 5:12 pm Operator: LWeiskopf
Sample : K1810270-010MS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:10 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	76303	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	30184	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	58895	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	77686	200.00	ng/ml	0.01
28) Perylene-d12	13.29	264	89245	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	93808	440.45	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	44.05%		
13) Fluorene-d10	6.76	176	111036	575.33	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	57.53%		
22) Fluoranthene-d10	8.55	212	216283	582.68	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	58.27%		
25) Terphenyl-d14	8.90	244	196657	583.63	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	58.36%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	228274	518.29	ng/ml	100
4) 2-Methylnaphthalene	5.43	142	127974	481.81	ng/ml	96
5) 1-Methylnaphthalene	5.51	142	122274	478.27	ng/ml	93
6) Biphenyl	5.83	154	159180	480.17	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.97	156	112635	493.96	ng/ml	87
9) Acenaphthylene	6.20	152	208708	579.49	ng/ml	99
10) Acenaphthene	6.35	154	116092	561.14	ng/ml	98
11) Dibenzofuran	6.50	168	184958	557.13	ng/ml	78
12) 2,3,5-Trimethylnaphthalene	6.67	170	111851	584.50	ng/ml	96
14) Fluorene	6.78	166	141792	566.68	ng/ml	98
16) Dibenzothiophene	7.47	184	204331	556.24	ng/ml	93
17) Phenanthrene	7.58	178	209879	571.25	ng/ml	99
18) Anthracene	7.62	178	213313	608.19	ng/ml	99
19) Carbazole	7.76	167	205236	599.61	ng/ml	97
20) 1-Methylphenanthrene	8.09	192	167072m	600.37	ng/ml	
21) Fluoranthene	8.57	202	254929	561.93	ng/ml	96
24) Pyrene	8.76	202	282230	529.51	ng/ml	96
26) Benz(a)anthracene	10.10	228	337301	671.56	ng/ml	99
27) Chrysene	10.15	228	311924	648.35	ng/ml	99
29) Benzo(b)fluoranthene	12.22	252	368175	667.74	ng/ml	98
30) Benzo(k)fluoranthene	12.29	252	350411	640.63	ng/ml	98
31) Benzo(e)pyrene	12.96	252	343657	653.88	ng/ml	98
32) Benzo(a)pyrene	13.11	252	323726	669.49	ng/ml	97
33) Perylene	13.37	252	463825	914.41	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.48	276	330166	696.33	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	330576	687.77	ng/ml	96
36) Benzo(g,h,i)perylene	15.87	276	348986	628.51	ng/ml	95

(#) = qualifier out of range (m) = manual integration

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F018.D
Lab ID: KWG1805597-2 -- K1810270-010DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/05/2018 17:42
Date Quantitated: 11/16/2018 08:40
Batch ID: KWG1806019
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	2-Methylnaphthalene-d10	-23.3	NA	20	NT
Surrogates	2-Methylnaphthalene-d10	40	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F018.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 17:42	**Quant Date:**	11/16/2018 08:40	**Vial:**	18
Run Type:	DMS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-2 -- K1810270-010DMS			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/01/2018

Analysis Lot:	KWG1806019	**Prep Lot:**	KWG1805597	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700779	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.01	136	76240	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	29904	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	58072	200.00	OK
4	Chrysene-d12	10.11	0.01	240	74436	200.00	OK
5	Perylene-d12	13.28	0.02	264	88810	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.40	0.01	0.00	152	85683	402.64	40	70-130	*	
2	Fluorene-d10	6.76	0.00	0.00	176	101490	530.79	53	26-102	OK	
3	Fluoranthene-d10	8.55	0.01	0.00	212	197813	540.48	54	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	179481	555.91	56	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	209007	474.93	37.6		
1	2-Methylnaphthalene	5.43	0.01	0.00	142	117741	443.65	35.2		
1	1-Methylnaphthalene	5.51		0.00	142	110371	432.07	34.2		
1	Biphenyl	5.83		0.00	154	145580	439.51	34.8		
1	2,6-Dimethylnaphthalene	5.97		0.00	156	102873	451.52	35.8		
2	Acenaphthylene	6.20		0.00	152	190486	533.85	42.3		
2	Acenaphthene	6.35		0.00	154	106228	518.27	41.1		
2	Dibenzofuran	6.50		0.00	168	169236	514.55	40.8		
2	2,3,5-Trimethylnaphthalene	6.67		0.00	170	102113	538.61	42.7		
2	Fluorene	6.78		0.00	166	129725	523.31	41.5		
3	Dibenzothiophene	7.47		0.00	184	188221	519.65	41.2		
3	Phenanthrene	7.58		0.00	178	193479	534.08	42.3		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/16/18
2nd 11/27/18

Data File:	J:\MS14\DATA\110518\1105F018.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 17:42	**Quant Date:**	11/16/2018 08:40	**Vial:**	18
Run Type:	DMS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-2 -- K1810270-010DMS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62		0.00	178	196733	568.87	45.1		
3	Carbazole	7.76	0.01	0.00	167	188254	557.79	44.2		
3	1-Methylphenanthrene	8.09	0.01	0.00	192	146972**m**	535.62	42.5		
3	Fluoranthene	8.57	0.01	0.00	202	232500	519.76	41.2		
4	Pyrene	8.76	0.01	0.00	202	256193	501.65	39.8		
4	Benz(a)anthracene	10.10	0.01	0.00	228	303319	630.27	50.0		
4	Chrysene	10.15	0.01	0.00	228	281143	609.88	48.3		
5	Benzo(b)fluoranthene	12.21	0.02	0.00	252	346048	630.68	50.0		
5	Benzo(k)fluoranthene	12.28	0.02	0.00	252	328159	602.89	47.8		
5	Benzo(e)pyrene	12.96	0.03	0.00	252	320202	612.24	48.5		
5	Benzo(a)pyrene	13.11	0.02	0.00	252	302464	628.59	49.8		
5	Perylene	13.37	0.03	0.00	252	443237	878.10	69.6		
5	Indeno(1,2,3-cd)pyrene	15.47	0.01	0.00	276	311428	660.03	52.3		
5	Dibenz(a,h)anthracene	15.52	0.02	0.00	278	301384	630.11	49.9		
5	Benzo(g,h,i)perylene	15.87	0.02	0.00	276	332319	601.42	47.7		

Prep Amount:	40.056 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	63 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

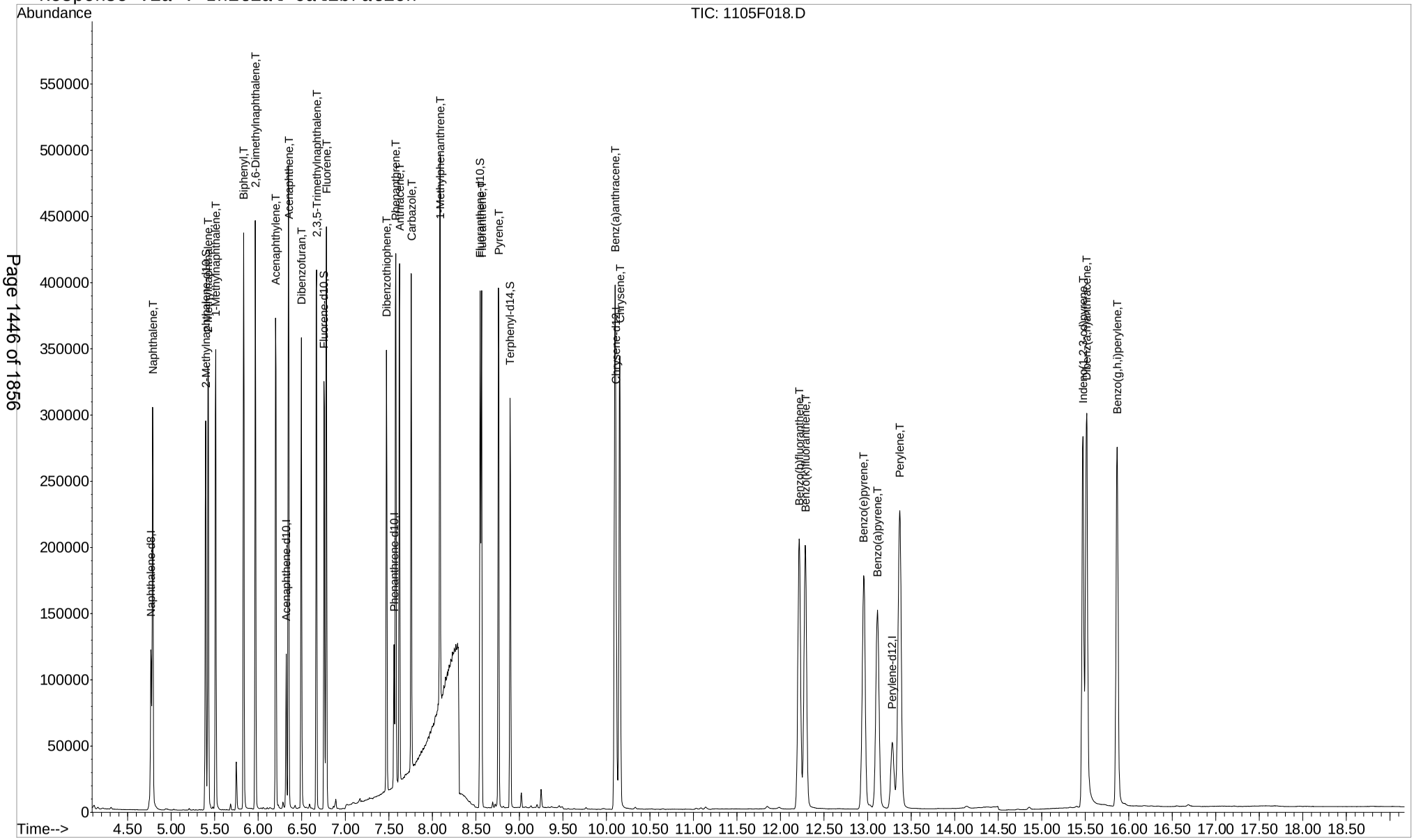
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F018.D Vial: 18
Acq On : 5 Nov 2018 5:42 pm Operator: LWeiskopf
Sample : K1810270-010DMS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 8:40 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F018.D Vial: 18
Acq On : 5 Nov 2018 5:42 pm Operator: LWeiskopf
Sample : K1810270-010DMS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:42:11 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	76240	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	29904	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	58072	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	74436	200.00	ng/ml	0.01
28) Perylene-d12	13.28	264	88810	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.40	152	85683	402.64	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.26%			
13) Fluorene-d10	6.76	176	101490	530.79	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 53.08%			
22) Fluoranthene-d10	8.55	212	197813	540.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 54.05%			
25) Terphenyl-d14	8.89	244	179481	555.91	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 55.59%			
Target Compounds						Qvalue
2) Naphthalene	4.79	128	209007	474.93	ng/ml	100
4) 2-Methylnaphthalene	5.43	142	117741	443.65	ng/ml	97
5) 1-Methylnaphthalene	5.51	142	110371	432.07	ng/ml	95
6) Biphenyl	5.83	154	145580	439.51	ng/ml	100
7) 2,6-Dimethylnaphthalene	5.97	156	102873	451.52	ng/ml	90
9) Acenaphthylene	6.20	152	190486	533.85	ng/ml	99
10) Acenaphthene	6.35	154	106228	518.27	ng/ml	98
11) Dibenzofuran	6.50	168	169236	514.55	ng/ml	81
12) 2,3,5-Trimethylnaphthalene	6.67	170	102113	538.61	ng/ml	98
14) Fluorene	6.78	166	129725	523.31	ng/ml	99
16) Dibenzothiophene	7.47	184	188221	519.65	ng/ml	95
17) Phenanthrene	7.58	178	193479	534.08	ng/ml	99
18) Anthracene	7.62	178	196733	568.87	ng/ml	99
19) Carbazole	7.76	167	188254	557.79	ng/ml	98
20) 1-Methylphenanthrene	8.09	192	146972m	535.62	ng/ml	
21) Fluoranthene	8.57	202	232500	519.76	ng/ml	94
24) Pyrene	8.76	202	256193	501.65	ng/ml	98
26) Benz(a)anthracene	10.10	228	303319	630.27	ng/ml	99
27) Chrysene	10.15	228	281143	609.88	ng/ml	100
29) Benzo(b)fluoranthene	12.21	252	346048	630.68	ng/ml	98
30) Benzo(k)fluoranthene	12.28	252	328159	602.89	ng/ml	98
31) Benzo(e)pyrene	12.96	252	320202	612.24	ng/ml	98
32) Benzo(a)pyrene	13.11	252	302464	628.59	ng/ml	98
33) Perylene	13.37	252	443237	878.10	ng/ml	99
34) Indeno(1,2,3-cd)pyrene	15.47	276	311428	660.03	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	301384	630.11	ng/ml	96
36) Benzo(g,h,i)perylene	15.87	276	332319	601.42	ng/ml	95

(#) = qualifier out of range (m) = manual integration

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F005.D
Lab ID: KWG1805597-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/06/2018 07:01
Date Quantitated: 11/16/2018 09:56
Batch ID: KWG1806026
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	56	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F005.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 07:01	**Quant Date:**	11/16/2018 09:56	**Vial:**	5
Run Type:	LCS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-3			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/01/2018

Analysis Lot:	KWG1806026	**Prep Lot:**	KWG1805597	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1700780	**Prep Date:**	10/29/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\110518\1105F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.01	136	66672	200.00	OK
2	Acenaphthene-d10	6.32	0.00	164	29220	200.00	OK
3	Phenanthrene-d10	7.56	0.00	188	61419	200.00	OK
4	Chrysene-d12	10.11	0.00	240	68916	200.00	OK
5	Perylene-d12	13.27	0.00	264	78051	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.39	0.00	0.00	152	104039	559.06	56	70-130	*	
2	Fluorene-d10	6.76	0.00	0.00	176	128960	690.24	69	26-102	OK	
3	Fluoranthene-d10	8.54	0.00	0.00	212	276153	713.41	71	23-110	OK	
4	Terphenyl-d14	8.89	0.00	0.00	244	234995	786.15	79	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77	-0.01	0.00	128	235169	611.07	61.1		
1	2-Methylnaphthalene	5.42		0.00	142	141213	608.46	60.8		
1	1-Methylnaphthalene	5.50	-0.01	0.00	142	134809	603.47	60.3		
1	Biphenyl	5.83		0.00	154	181656	627.13	62.7		
1	2,6-Dimethylnaphthalene	5.96	-0.01	0.00	156	128796	646.42	64.6		
2	Acenaphthylene	6.19	-0.01	0.00	152	239633	687.31	68.7		
2	Acenaphthene	6.34	-0.01	0.00	154	134835	673.24	67.3		
2	Dibenzofuran	6.49	-0.01	0.00	168	222571	692.55	69.3		
2	2,3,5-Trimethylnaphthalene	6.67		0.00	170	130151	702.57	70.3		
2	Fluorene	6.78		0.00	166	165113	681.66	68.2		
3	Dibenzothiophene	7.47		0.00	184	253545	661.85	66.2		
3	Phenanthrene	7.58		0.00	178	257377	671.75	67.2		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/16/18
2nd 11/27/18

Data File:	J:\MS14\DATA\110618\1106F005.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 07:01	**Quant Date:**	11/16/2018 09:56	**Vial:**	5
Run Type:	LCS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805597-3			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62		0.00	178	263142	719.43	71.9		
3	Carbazole	7.75		0.00	167	251816	705.47	70.5		
3	1-Methylphenanthrene	8.08		0.00	192	206473	711.46	71.1		
3	Fluoranthene	8.56		0.00	202	316676	669.36	66.9		
4	Pyrene	8.75		0.00	202	341024	721.24	72.1		
4	Benz(a)anthracene	10.09		0.00	228	359741	807.38	80.7		
4	Chrysene	10.15		0.00	228	328933	770.71	77.1		
5	Benzo(b)fluoranthene	12.21		0.00	252	402845	835.40	83.5		
5	Benzo(k)fluoranthene	12.28		0.00	252	375827	785.64	78.6		
5	Benzo(e)pyrene	12.94		0.00	252	362445	788.54	78.9		
5	Benzo(a)pyrene	13.10		0.00	252	348318	823.66	82.4		
5	Perylene	13.35		0.00	252	342004	770.94	77.1		
5	Indeno(1,2,3-cd)pyrene	15.47		0.00	276	363068	875.54	87.6		
5	Dibenz(a,h)anthracene	15.51		0.00	278	348509	829.07	82.9		
5	Benzo(g,h,i)perylene	15.86		0.00	276	390092	803.30	80.3		

Prep Amount:	20.000 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

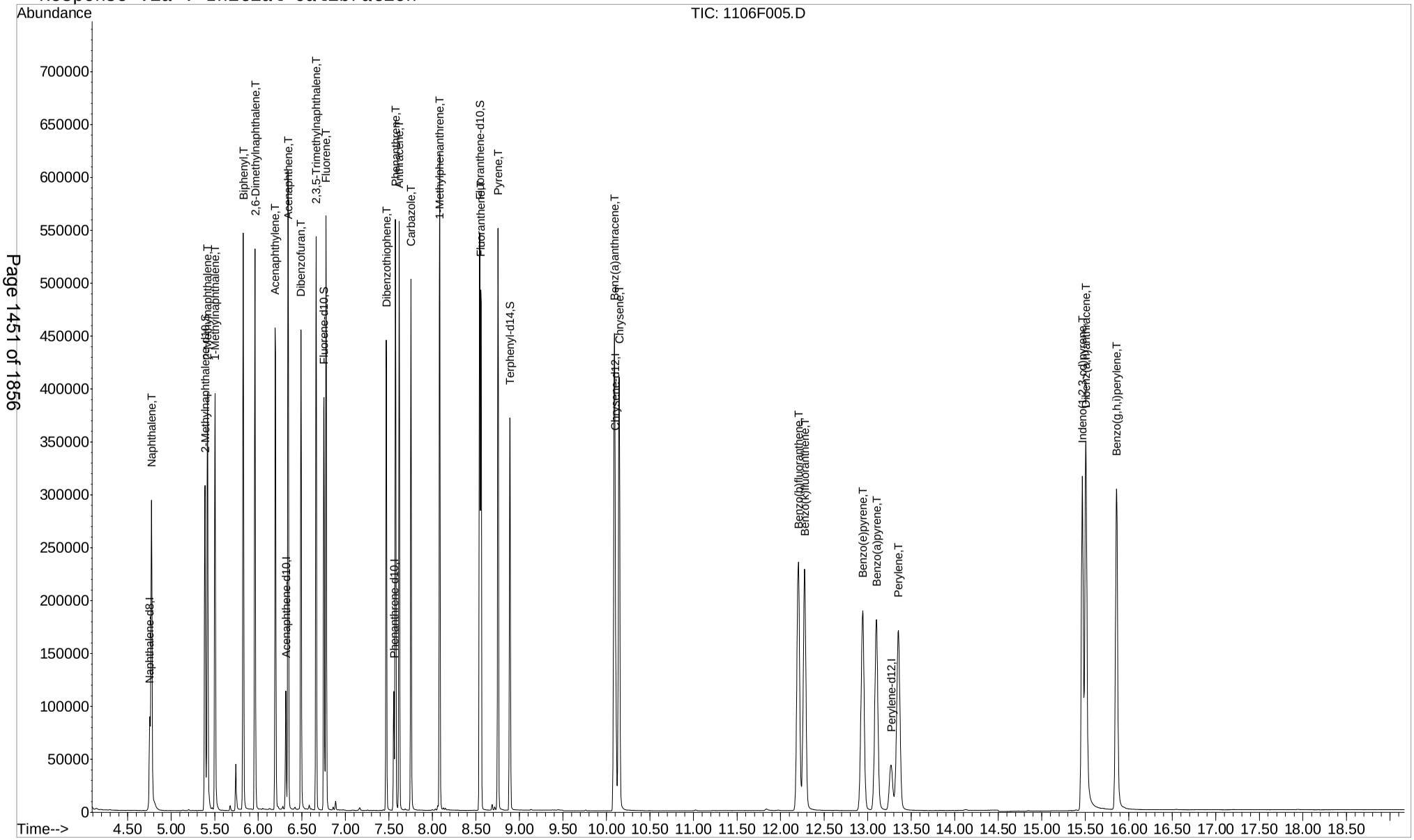
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F005.D Vial: 5
Acq On : 6 Nov 2018 7:01 am Operator: LWeiskopf
Sample : KWG1805597-3 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 9:56 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F005.D Vial: 5
Acq On : 6 Nov 2018 7:01 am Operator: LWeiskopf
Sample : KWG1805597-3 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:56:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	66672	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	29220	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	61419	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	68916	200.00	ng/ml	0.00
28) Perylene-d12	13.27	264	78051	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	104039	559.06	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	55.91%		
13) Fluorene-d10	6.76	176	128960	690.24	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	69.02%		
22) Fluoranthene-d10	8.54	212	276153	713.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	71.34%		
25) Terphenyl-d14	8.89	244	234995	786.15	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	78.61%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	235169	611.07	ng/ml	100
4) 2-Methylnaphthalene	5.42	142	141213	608.46	ng/ml	93
5) 1-Methylnaphthalene	5.50	142	134809	603.47	ng/ml	94
6) Biphenyl	5.83	154	181656	627.13	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.96	156	128796	646.42	ng/ml	92
9) Acenaphthylene	6.19	152	239633	687.31	ng/ml	99
10) Acenaphthene	6.34	154	134835	673.24	ng/ml	97
11) Dibenzofuran	6.49	168	222571	692.55	ng/ml	71
12) 2,3,5-Trimethylnaphthalene	6.67	170	130151	702.57	ng/ml	93
14) Fluorene	6.78	166	165113	681.66	ng/ml	98
16) Dibenzothiophene	7.47	184	253545	661.85	ng/ml	99
17) Phenanthrene	7.58	178	257377	671.75	ng/ml	99
18) Anthracene	7.62	178	263142	719.43	ng/ml	99
19) Carbazole	7.75	167	251816	705.47	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	206473	711.46	ng/ml	99
21) Fluoranthene	8.56	202	316676	669.36	ng/ml	91
24) Pyrene	8.75	202	341024	721.24	ng/ml	100
26) Benz(a)anthracene	10.09	228	359741	807.38	ng/ml	99
27) Chrysene	10.15	228	328933	770.71	ng/ml	99
29) Benzo(b)fluoranthene	12.21	252	402845	835.40	ng/ml	97
30) Benzo(k)fluoranthene	12.28	252	375827	785.64	ng/ml	97
31) Benzo(e)pyrene	12.94	252	362445	788.54	ng/ml	98
32) Benzo(a)pyrene	13.10	252	348318	823.66	ng/ml	98
33) Perylene	13.35	252	342004	770.94	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.47	276	363068	875.54	ng/ml	96
35) Dibenz(a,h)anthracene	15.51	278	348509	829.07	ng/ml	96
36) Benzo(g,h,i)perylene	15.86	276	390092	803.30	ng/ml	96

(#) = qualifier out of range (m) = manual integration

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F004.D
Lab ID: KWG1805796-5
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/14/2018 07:08
Date Quantitated: 11/30/2018 10:48
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	66	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F004.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 07:08	**Quant Date:**	11/30/2018 10:48	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-5			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/12/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702232	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	60453	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	29887	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	65739	200.00	OK
4	Chrysene-d12	10.10	0.00	240	75453	200.00	OK
5	Perylene-d12	13.29	0.00	264	83033	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.38	0.00	0.00	152	110830	656.81	66	70-130	*	
2	Fluorene-d10	6.75	0.00	0.00	176	149121	780.34	78	26-102	OK	
3	Fluoranthene-d10	8.53	0.00	0.00	212	329050	794.20	79	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	286181	874.45	87	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	222429	637.42	63.7		
1	2-Methylnaphthalene	5.41		0.00	142	141523	672.52	67.3		
1	1-Methylnaphthalene	5.49	-0.01	0.00	142	135420	668.56	66.9		
1	Biphenyl	5.82		0.00	154	184459	702.32	70.2		
1	2,6-Dimethylnaphthalene	5.95	-0.01	0.00	156	134472	744.34	74.4		
2	Acenaphthylene	6.19		0.00	152	244630	685.99	68.6		
2	Acenaphthene	6.33	-0.01	0.00	154	140110	683.97	68.4		
2	Dibenzofuran	6.48	-0.01	0.00	168	222985	678.36	67.8		
2	2,3,5-Trimethylnaphthalene	6.66		0.00	170	144184	760.95	76.1		
2	Fluorene	6.77		0.00	166	178420	720.15	72.0		
3	Dibenzothiophene	7.46	-0.01	0.00	184	284989	695.04	69.5		
3	Phenanthrene	7.57		0.00	178	282616	689.15	68.9		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F004.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 07:08	**Quant Date:**	11/30/2018 10:48	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-5			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.61		0.00	178	290483	741.99	74.2		
3	Carbazole	7.75		0.00	167	274075	717.37	71.7		
3	1-Methylphenanthrene	8.08		0.00	192	233036	750.22	75.0		
3	Fluoranthene	8.55		0.00	202	348909	689.02	68.9		
4	Pyrene	8.75		0.00	202	379726	733.52	73.4		
4	Benz(a)anthracene	10.09		0.00	228	400794	821.58	82.2		
4	Chrysene	10.14		0.00	228	369157	790.02	79.0		
5	Benzo(b)fluoranthene	12.21		0.00	252	432975	844.01	84.4		
5	Benzo(k)fluoranthene	12.28		0.00	252	412789	811.13	81.1		
5	Benzo(e)pyrene	12.96		0.00	252	404722	827.68	82.8		
5	Benzo(a)pyrene	13.12		0.00	252	383906	853.35	85.3		
5	Perylene	13.37		0.00	252	373075	790.53	79.1		
5	Indeno(1,2,3-cd)pyrene	15.49		0.00	276	378929**m**	858.96	85.9		
5	Dibenz(a,h)anthracene	15.52		0.00	278	367439	821.66	82.2		
5	Benzo(g,h,i)perylene	15.88		0.00	276	379088	733.80	73.4		

Prep Amount:	20.000 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

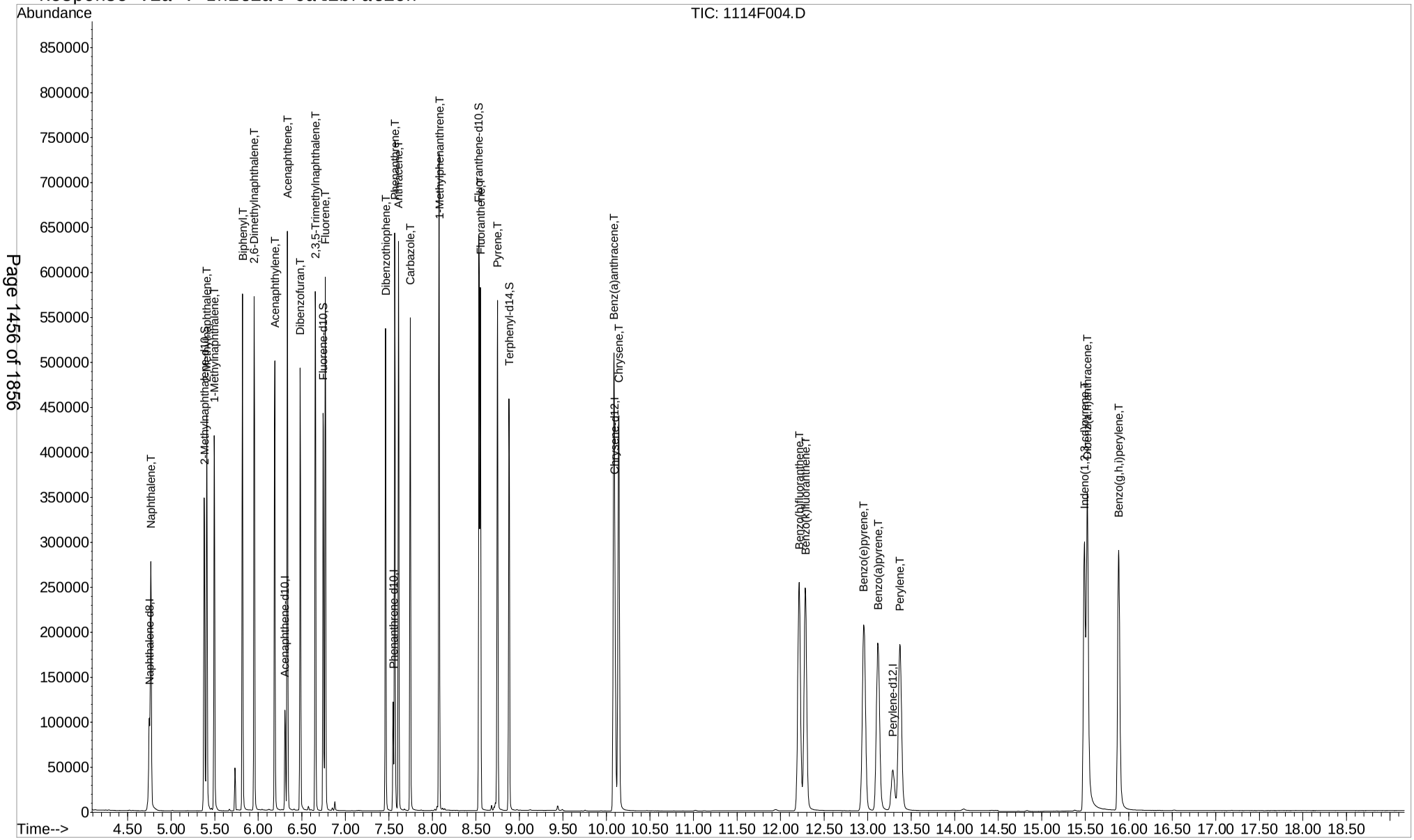
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:05:31 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	60453	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	29887	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	65739	200.00	ng/ml	-0.01
23) Chrysene-d12	10.10	240	75453	200.00	ng/ml	-0.01
28) Perylene-d12	13.29	264	83033	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	110830	656.81	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	65.68%		
13) Fluorene-d10	6.75	176	149121	780.34	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	78.03%		
22) Fluoranthene-d10	8.53	212	329050	794.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	79.42%		
25) Terphenyl-d14	8.88	244	286181	874.45	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	87.45%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	222429	637.42	ng/ml	100
4) 2-Methylnaphthalene	5.41	142	141523	672.52	ng/ml	93
5) 1-Methylnaphthalene	5.49	142	135420	668.56	ng/ml	89
6) Biphenyl	5.82	154	184459	702.32	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.95	156	134472	744.34	ng/ml	87
9) Acenaphthylene	6.19	152	244630	685.99	ng/ml	99
10) Acenaphthene	6.33	154	140110	683.97	ng/ml	97
11) Dibenzofuran	6.48	168	222985	678.36	ng/ml	61
12) 2,3,5-Trimethylnaphthalene	6.66	170	144184	760.95	ng/ml	97
14) Fluorene	6.77	166	178420	720.15	ng/ml	100
16) Dibenzothiophene	7.46	184	284989	695.04	ng/ml	87
17) Phenanthrene	7.57	178	282616	689.15	ng/ml	98
18) Anthracene	7.61	178	290483	741.99	ng/ml	99
19) Carbazole	7.75	167	274075	717.37	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	233036	750.22	ng/ml	100
21) Fluoranthene	8.55	202	348909	689.02	ng/ml	92
24) Pyrene	8.75	202	379726	733.52	ng/ml	96
26) Benz(a)anthracene	10.09	228	400794	821.58	ng/ml	99
27) Chrysene	10.14	228	369157	790.02	ng/ml	99
29) Benzo(b)fluoranthene	12.21	252	432975	844.01	ng/ml	97
30) Benzo(k)fluoranthene	12.28	252	412789	811.13	ng/ml	97
31) Benzo(e)pyrene	12.96	252	404722	827.68	ng/ml	96
32) Benzo(a)pyrene	13.12	252	383906	853.35	ng/ml	97
33) Perylene	13.37	252	373075	790.53	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.49	276	378929m	858.96	ng/ml	
35) Dibenz(a,h)anthracene	15.52	278	367439	821.66	ng/ml	96
36) Benzo(g,h,i)perylene	15.88	276	379088	733.80	ng/ml	94

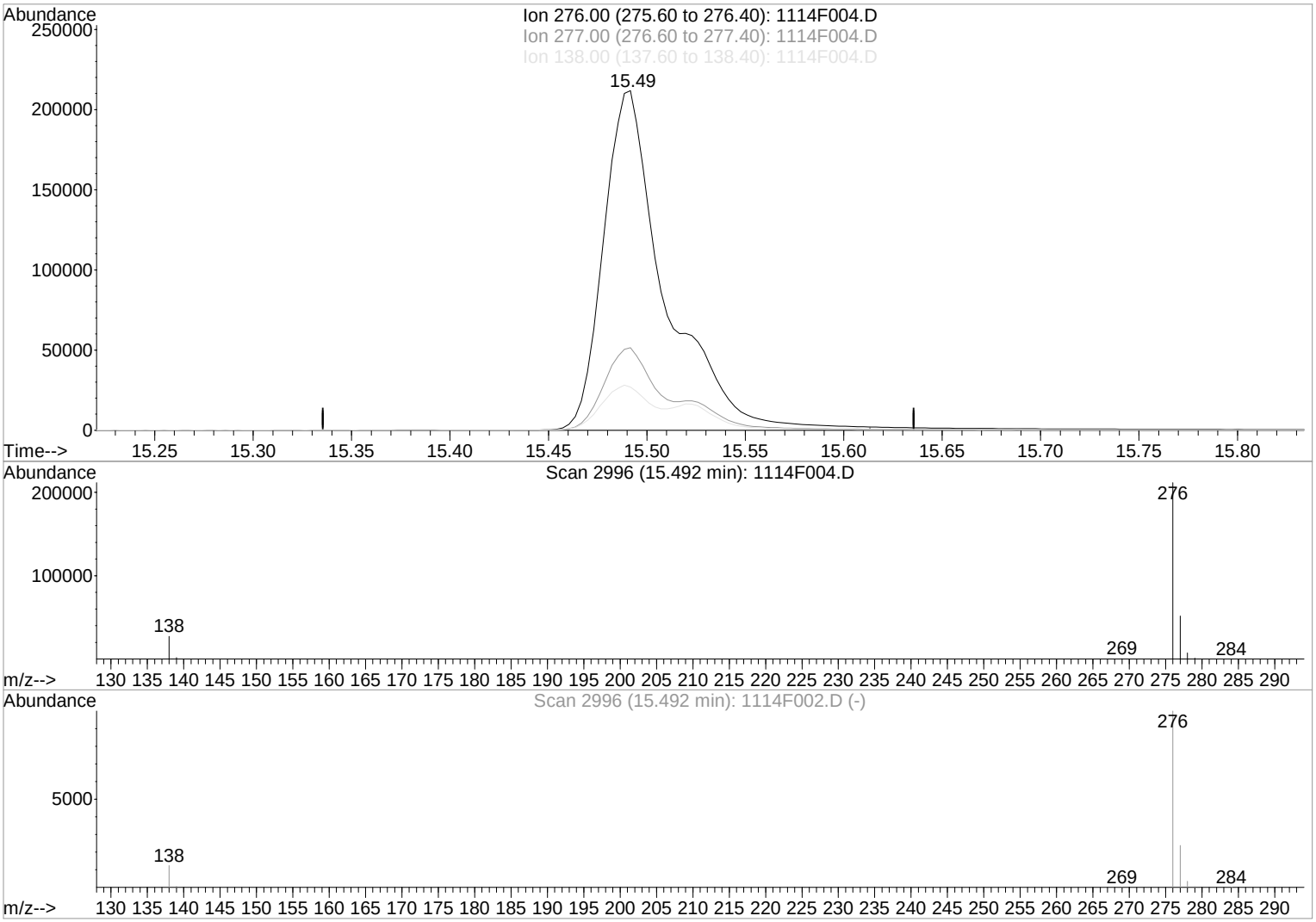
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 5:05 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F004.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 1047.47ng/ml

response 462088

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	24.24
138.00	17.70	12.63
0.00	0.00	0.00

Manual Integration:

Before

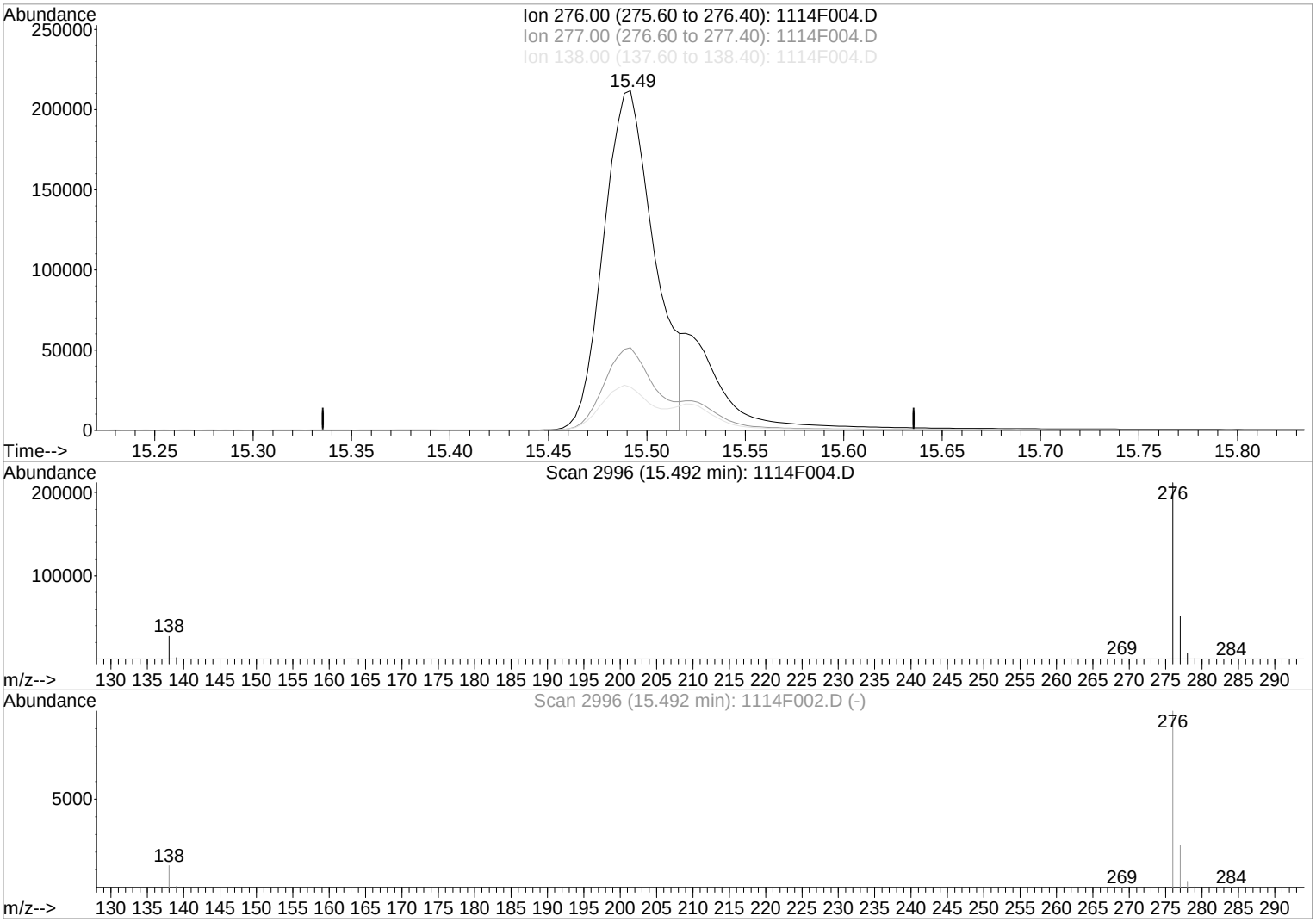
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F004.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 858.96ng/ml m

response 378929

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	24.29
138.00	17.70	12.73
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

11/30/18

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F001.D
Lab ID: KWG1806019-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/05/2018 09:12
Date Quantitated:
Batch ID: KWG1806019
Analysis Method: DFTPP
ListJoinID: LJ1965

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F001.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 09:12	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP	**ListJoinID:**	LJ1965	**Dilution:**	1.0
Lab ID:	KWG1806019-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/16/2018

Analysis Lot:	KWG1806019	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\A_DFTPP.M			**Calibration ID:**	CAL15779
Title:				**Report List ID:**	LJ1965
Tune Ref:				**Method ID:**	MJ190
MB Ref:				**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	44.2	98624	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	46.3	103352	Pass
70	69	0	2	0.8	806	Pass
127	198	10	80	51.3	114608	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	51.7	223210	Pass
199	198	5	9	6.8	15105	Pass
275	198	10	60	34.5	77008	Pass
365	442	1	50	2.8	12239	Pass
441	443	0.01	100	72.4	62621	Pass
442	442	100	100	100.0	431914	Pass
443	442	15	24	20.0	86541	Pass

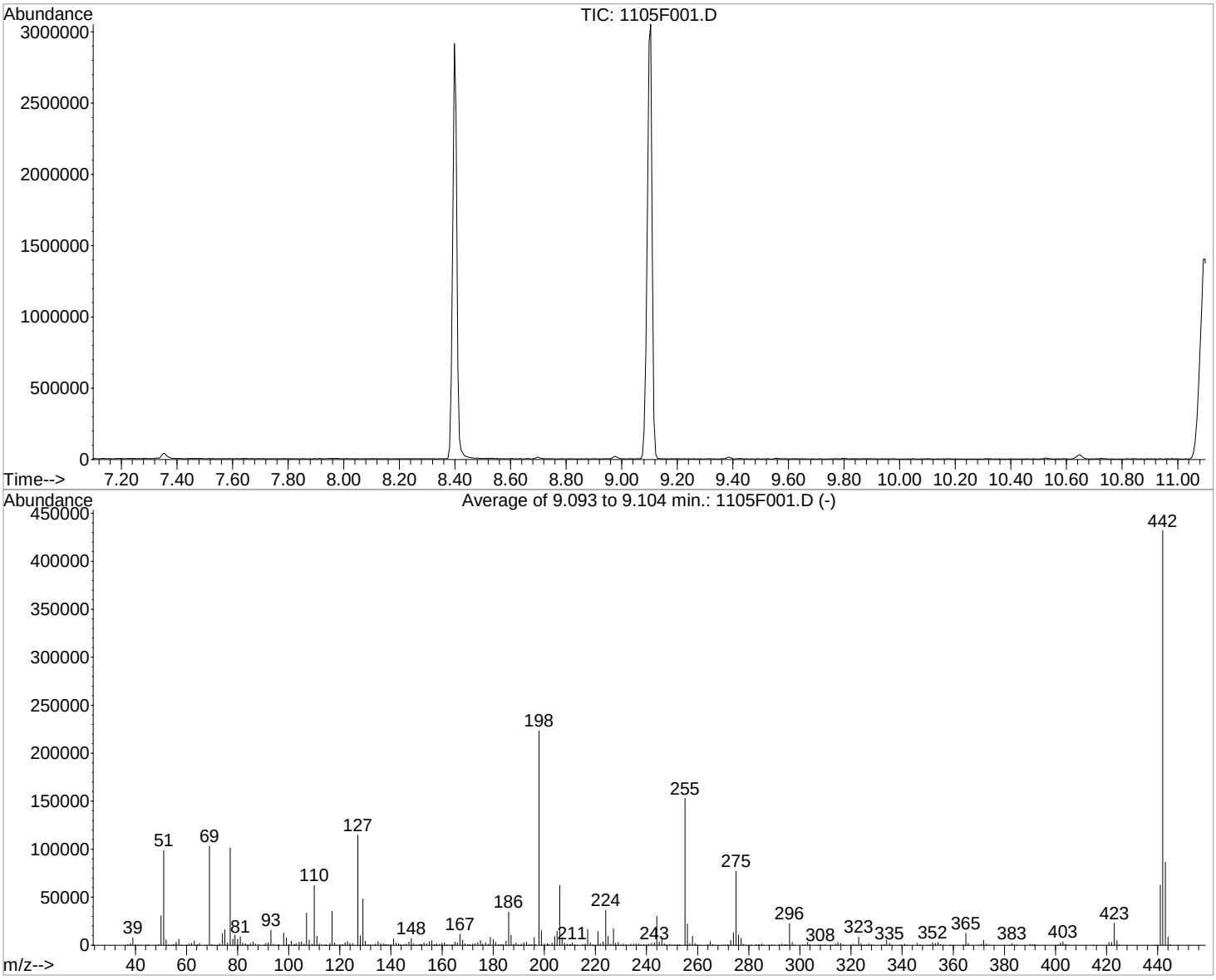
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F001.D Vial: 1
Acq On : 5 Nov 2018 9:12 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 511, 512, 513; Background Corrected with Scan 505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	44.2	98624	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	46.3	103352	PASS
70	69	0.00	2	0.8	806	PASS
127	198	10	80	51.3	114608	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	51.7	223210	PASS
199	198	5	9	6.8	15105	PASS
275	198	10	60	34.5	77008	PASS
365	442	1	50	2.8	12239	PASS
441	443	0.01	100	72.4	62621	PASS
442	442	30	100	100.0	431914	PASS
443	442	15	24	20.0	86541	PASS

1st 11/16/18
2nd 11/27/18

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	792	50.05	30624	61.10	1191	74.05	11940
38.05	1684	51.10	98624	62.05	1859	75.00	16086
39.05	7569	52.05	5391	63.00	4204	76.10	2496
40.00	551	53.05	334	64.15	585	77.05	101320
41.00	138	54.20	59	65.05	1774	78.10	6641
42.00	62	54.95	760	67.30	245	79.00	10405
44.10	116	55.30	238	68.95	103352	80.00	6237
44.90	204	56.00	3082	69.95	806	81.00	8681
45.30	78	57.00	6211	71.00	100	82.00	2156
48.00	93	58.10	210	72.30	82	83.00	1646
49.10	813	60.20	156	73.00	1219	83.95	332

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
84.95	1724	95.95	544	104.95	3491	114.80	107
86.00	3088	96.20	137	106.05	1277	116.10	1766
87.00	1158	98.00	12703	107.00	33376	117.00	35298
88.00	344	99.00	7512	108.00	5349	117.95	2263
88.90	208	100.00	637	109.10	852	118.95	231
90.20	100	100.20	248	110.00	62258	119.95	455
91.00	1911	101.05	4161	111.00	9217	120.90	354
92.00	2611	101.90	70	111.95	1337	121.20	136
93.00	15531	102.35	288	112.95	407	122.00	2715
94.05	883	102.95	1610	114.05	138	123.00	3713
94.95	54	104.00	3229	114.60	85	123.95	1922

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
124.95	1711	137.00	1679	143.95	321	152.95	2248
127.00	114608	137.80	101	145.00	300	154.00	1560
128.00	9524	138.00	321	146.00	1221	155.00	3668
129.00	48242	138.30	91	147.00	3265	156.00	4566
130.00	4012	138.90	320	147.95	7156	157.00	638
131.00	830	139.80	153	148.95	1655	157.20	283
131.95	501	140.00	286	149.90	457	157.95	1271
133.00	221	141.00	6610	150.90	252	158.95	1046
133.95	1376	142.00	2075	151.15	611	159.95	2218
134.95	3867	142.95	1651	151.75	603	160.95	2700
135.95	1471	143.60	73	152.10	445	161.95	719

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
162.95	164	170.90	615	182.00	489	190.95	1198
163.70	140	171.95	1331	182.70	157	191.95	2575
164.00	179	172.95	1412	183.15	389	193.00	3074
164.30	123	174.00	2601	183.90	843	194.00	676
165.00	3241	175.00	4854	185.05	4393	194.70	160
166.00	2598	175.90	1170	186.00	34536	195.15	567
167.00	11239	176.95	2553	186.95	10375	196.00	7892
168.00	5110	178.05	1033	188.05	981	196.60	584
168.95	1198	178.90	8220	188.95	2363	197.95	223210
170.00	408	180.00	5900	189.75	202	198.90	15105
170.30	62	181.00	3056	190.00	265	200.00	1330

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
201.15	1452	210.30	338	221.90	1575	232.05	173
201.50	663	210.95	2315	222.95	3304	232.95	255
202.20	158	211.85	596	224.00	36072	233.85	1086
203.00	2293	212.95	178	225.00	9346	234.95	1164
204.05	8912	214.95	799	226.00	1377	235.90	1198
205.00	14582	216.00	1290	227.00	16933	236.95	1216
206.00	62354	216.95	16385	227.90	1933	237.90	438
207.00	7917	217.95	2353	228.90	3021	238.80	211
207.95	2096	218.90	223	229.95	536	239.00	542
208.90	1005	219.10	88	230.95	1145	240.00	620
210.00	736	221.00	14263	231.80	55	240.90	973

Average of 9.093 to 9.104 min.: 1105F001.D

1st 11/16/18
2nd 11/27/18

DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
241.95	1782	252.00	426	264.95	3706	277.95	1046
243.05	2265	253.00	645	265.85	648	278.90	186
244.00	29965	255.00	152840	267.00	87	280.90	50
245.00	3462	256.00	21974	269.95	146	282.95	681
246.00	6850	256.95	1658	270.80	227	283.90	420
246.95	1483	257.95	9340	271.85	448	284.10	207
247.70	84	258.95	1630	272.95	4752	285.00	1363
247.90	132	259.85	313	273.95	13039	285.85	193
248.95	973	260.95	264	275.00	77008	287.80	84
249.80	302	263.80	101	276.00	10550	288.90	334
250.95	374	263.95	277	277.00	6987	290.05	251

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
291.80	57	301.85	546	315.95	1700	328.80	74
291.95	230	303.00	2786	316.95	419	331.95	547
292.95	1354	303.90	720	319.90	101	332.90	468
293.85	212	307.10	50	320.95	980	333.10	275
294.20	97	308.00	504	321.95	460	333.95	5111
294.50	115	308.90	259	323.00	8444	335.05	1736
295.00	358	309.85	381	323.95	1533	335.90	284
295.95	22299	311.90	121	325.20	78	339.10	72
296.95	3028	312.85	263	326.00	170	339.85	113
297.95	281	313.95	1251	326.95	1562	341.00	1044
301.00	237	314.90	3034	327.90	817	341.90	133

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
345.90	1946	358.95	175	383.90	557	405.00	178
346.80	142	363.85	238	384.95	171	414.90	201
347.10	192	364.95	12239	390.00	855	420.95	2991
349.90	51	365.90	1704	390.95	606	421.95	2929
350.80	84	369.85	261	391.80	319	423.00	22875
351.00	130	370.90	827	392.10	95	424.00	4938
351.95	2772	371.95	4964	401.10	359	424.90	424
353.00	1836	372.95	1375	402.00	2240	439.10	56
354.00	2876	374.05	195	402.95	3519	441.00	62621
354.90	667	381.90	67	403.80	482	442.00	431914
356.10	120	382.95	1617	404.00	1070	443.00	86541

Average of 9.093 to 9.104 min.: 1105F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
444.00	8409						
445.00	656						

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F001.D
Lab ID: KWG1806026-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/06/2018 05:06
Date Quantitated:
Batch ID: KWG1806026
Analysis Method: DFTPP
ListJoinID: LJ1965

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F001.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 05:06	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP	**ListJoinID:**	LJ1965	**Dilution:**	1.0
Lab ID:	KWG1806026-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/16/2018

Analysis Lot:	KWG1806026	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\A_DFTPP.M			**Calibration ID:**	CAL15779
Title:				**Report List ID:**	LJ1965
Tune Ref:				**Method ID:**	MJ190
MB Ref:				**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.1	96829	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	42.3	99561	Pass
70	69	0	2	0.8	792	Pass
127	198	10	80	48.1	113298	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	43.7	235477	Pass
199	198	5	9	6.7	15817	Pass
275	198	10	60	36.8	86610	Pass
365	442	1	50	2.7	14505	Pass
441	443	0.01	100	73.5	78210	Pass
442	442	100	100	100.0	539029	Pass
443	442	15	24	19.7	106368	Pass

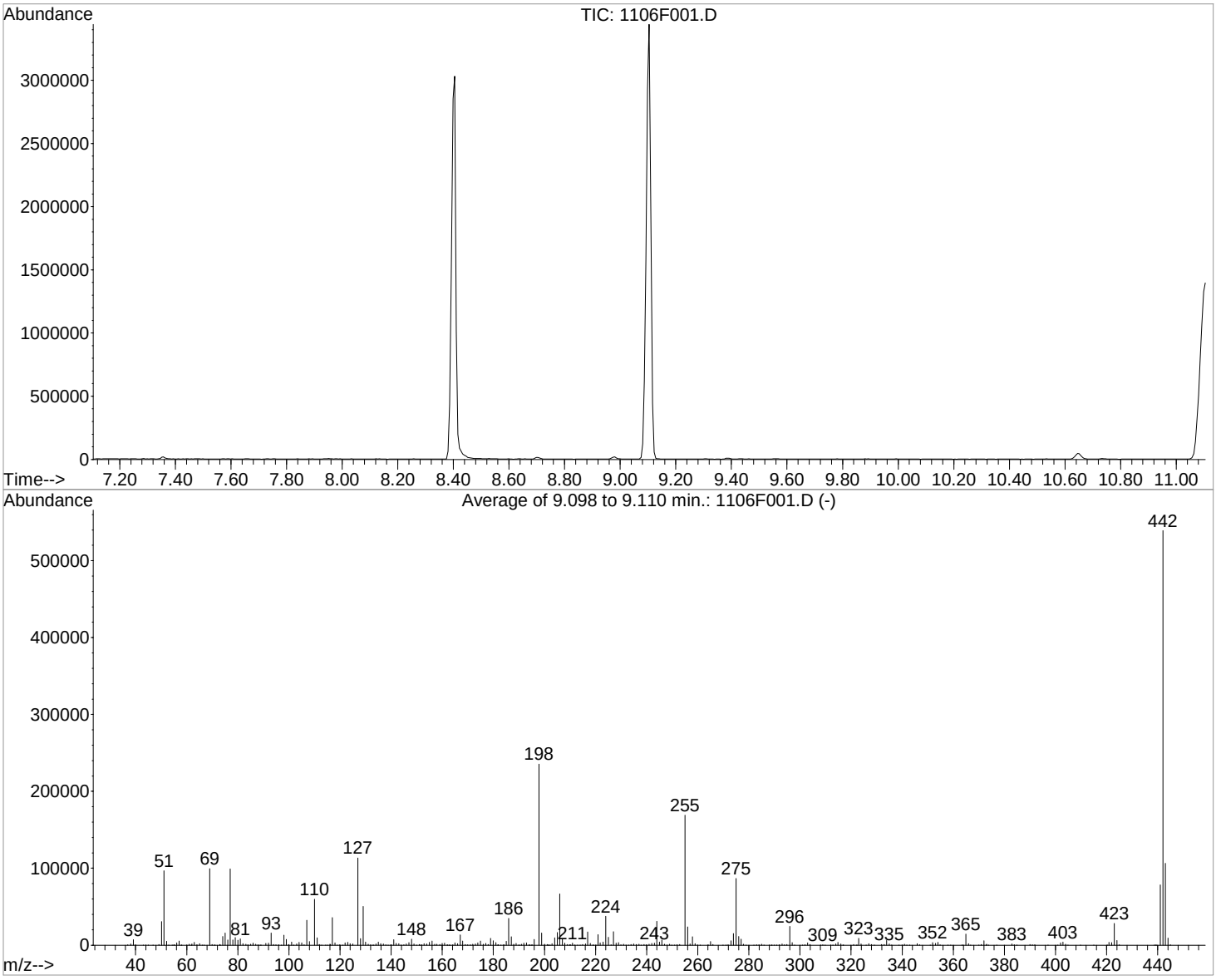
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F001.D Vial: 1
Acq On : 6 Nov 2018 5:06 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 512, 513, 514; Background Corrected with Scan 505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.1	96829	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.3	99561	PASS
70	69	0.00	2	0.8	792	PASS
127	198	10	80	48.1	113298	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	43.7	235477	PASS
199	198	5	9	6.7	15817	PASS
275	198	10	60	36.8	86610	PASS
365	442	1	50	2.7	14505	PASS
441	443	0.01	100	73.5	78210	PASS
442	442	30	100	100.0	539029	PASS
443	442	15	24	19.7	106368	PASS

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	698	52.10	5208	61.80	173	72.95	982
38.10	1745	52.95	297	62.05	1483	73.20	275
39.10	7119	54.30	70	63.00	3685	74.10	11214
40.00	639	54.90	152	63.95	559	75.00	15698
43.05	202	55.15	426	65.05	1845	76.10	6789
44.00	148	56.05	2861	66.05	195	77.05	99283
44.90	163	57.00	5255	66.85	229	78.05	6934
46.80	62	57.90	161	69.00	99561	79.00	9998
49.10	711	58.10	115	69.95	792	80.00	6506
50.10	30777	60.05	176	70.90	63	81.00	8247
51.10	96829	61.00	1199	71.10	84	82.00	2100

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.10	1395	92.00	2583	103.00	1700	114.40	86
83.90	144	93.00	15805	104.00	3663	115.05	251
84.05	228	93.95	941	105.00	3078	116.00	1125
85.00	1214	94.95	418	105.90	416	116.20	748
86.00	2712	96.00	672	107.00	32405	117.00	35656
87.00	1298	97.05	39	108.00	4832	118.00	2817
87.80	136	98.00	12902	110.00	59845	119.00	254
88.05	295	99.00	7339	111.00	9539	119.85	388
88.80	55	99.90	837	111.90	1051	121.05	156
89.05	343	101.00	3915	112.10	235	121.95	3058
91.00	2233	101.85	209	112.85	325	123.00	3622

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
124.00	1868	135.00	3879	144.95	405	154.95	3524
124.95	1517	135.95	1781	145.95	1428	156.00	5297
127.00	113298	137.00	1606	147.00	3240	157.10	1114
128.00	8656	137.90	430	147.95	7690	157.90	1266
129.00	50520	138.85	285	148.95	1459	159.05	908
130.00	3994	139.80	111	150.00	361	160.00	2199
131.00	1069	140.05	666	151.05	801	160.95	2652
131.95	522	141.00	6946	151.40	146	161.90	610
132.95	208	141.95	2126	152.00	503	162.10	177
133.20	100	142.95	1769	152.90	2051	162.80	119
134.00	1757	143.85	357	153.95	1543	163.00	77

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
164.10	386	175.00	5220	184.20	269	194.00	545
164.95	3114	176.05	1330	185.00	4899	194.20	141
166.00	2067	177.00	2303	186.00	34952	194.80	114
167.00	13441	178.00	944	187.00	10883	195.15	511
168.00	5296	178.95	8908	188.00	1274	195.95	7508
169.05	1040	180.00	5874	188.95	2401	197.90	235477
170.00	570	181.00	3148	189.90	185	198.90	15817
170.95	615	181.70	88	190.20	270	200.00	1238
171.90	1312	181.95	419	190.95	1085	201.10	799
173.00	1488	182.95	370	191.95	2542	201.40	341
173.95	2863	184.00	406	193.00	2821	201.80	229

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
202.20	205	211.80	219	221.75	3072	232.95	249
202.95	2092	212.95	169	222.95	4090	233.90	937
204.00	9522	213.95	213	224.00	37458	234.95	1492
205.00	16535	214.95	979	225.00	10299	235.90	970
206.00	66600	216.05	1689	226.10	631	236.95	1270
207.00	7738	216.95	17071	227.00	17370	237.85	241
207.95	2766	217.95	2240	228.00	2489	239.00	776
208.95	867	218.95	178	228.95	3429	239.90	558
209.90	590	219.20	86	229.90	516	240.90	1086
210.10	599	220.10	293	231.00	1374	242.00	2204
211.00	2714	221.00	13680	231.90	300	243.05	2545

Average of 9.098 to 9.110 min.: 1106F001.D

1st 11/16/18
2nd 11/27/18

DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
244.00	30906	256.00	23594	271.00	289	283.95	618
245.00	4166	256.95	1451	271.90	490	285.00	1117
245.95	6928	257.95	11098	273.00	5664	285.95	285
246.95	1105	259.00	1920	273.95	15001	287.95	127
248.00	223	259.85	315	275.00	86610	288.80	120
249.00	1170	260.90	363	276.00	11345	289.05	141
249.80	218	263.85	288	276.95	7909	289.95	224
250.90	197	264.20	101	277.90	1144	290.90	106
251.90	441	264.95	4573	278.95	333	292.00	430
252.95	832	265.90	787	282.00	122	292.95	1625
255.00	169024	269.90	52	282.95	679	293.95	485

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
294.90	726	312.00	52	323.95	1546	339.90	88
296.00	24416	312.90	214	325.90	51	340.90	1206
296.90	3411	314.00	1439	326.90	1900	341.85	348
297.90	165	314.90	3596	327.95	1007	343.00	63
301.05	296	316.00	1684	329.10	64	345.85	2012
301.95	612	316.80	52	331.90	722	346.85	471
303.00	2896	317.05	347	332.95	953	350.95	220
303.95	894	320.95	1021	333.95	6197	351.95	3289
308.05	154	322.00	267	334.95	1480	353.00	2267
308.95	404	322.30	173	335.85	197	354.00	3493
309.85	363	323.00	8985	338.75	155	354.85	577

Average of 9.098 to 9.110 min.: 1106F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
357.90	53	373.00	1178	402.00	2787	424.95	598
359.00	58	373.80	95	402.90	3870	438.70	54
363.40	51	376.95	209	404.00	1329	439.10	78
363.90	85	382.90	1747	404.85	207	439.40	108
364.95	14505	383.90	388	409.80	54	441.00	78210
365.95	2026	384.90	85	414.95	212	442.00	539029
366.80	168	390.00	895	420.30	88	443.00	106368
370.05	355	390.90	609	420.95	3504	444.00	9305
370.95	1020	391.90	439	421.95	3365	444.95	616
372.00	5875	397.10	105	423.00	28202		
372.80	297	400.95	264	424.00	6024		

1st 11/19/18
2nd 12/05/18

Exception Report

Data File: J:\MS14\DATA\110718\1107F001.D
Lab ID: KWG1806028-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/07/2018 04:55
Date Quantitated:
Batch ID: KWG1806028
Analysis Method: DFTPP
ListJoinID: LJ1965

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/19/18
2nd 12/05/18

Quantitation Report

Data File:	J:\MS14\DATA\110718\1107F001.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 04:55	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP	**ListJoinID:**	LJ1965	**Dilution:**	1.0
Lab ID:	KWG1806028-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/16/2018

Analysis Lot:	KWG1806028	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\A_DFTPP.M			**Calibration ID:**	CAL15779
Title:				**Report List ID:**	LJ1965
Tune Ref:				**Method ID:**	MJ190
MB Ref:				**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	40.7	98834	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	42.4	103141	Pass
70	69	0	2	0.8	832	Pass
127	198	10	80	47.9	116466	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	44.4	243029	Pass
199	198	5	9	7.1	17181	Pass
275	198	10	60	37.9	92040	Pass
365	442	1	50	2.8	15565	Pass
441	443	0.01	100	75.3	79482	Pass
442	442	100	100	100.0	547541	Pass
443	442	15	24	19.3	105498	Pass

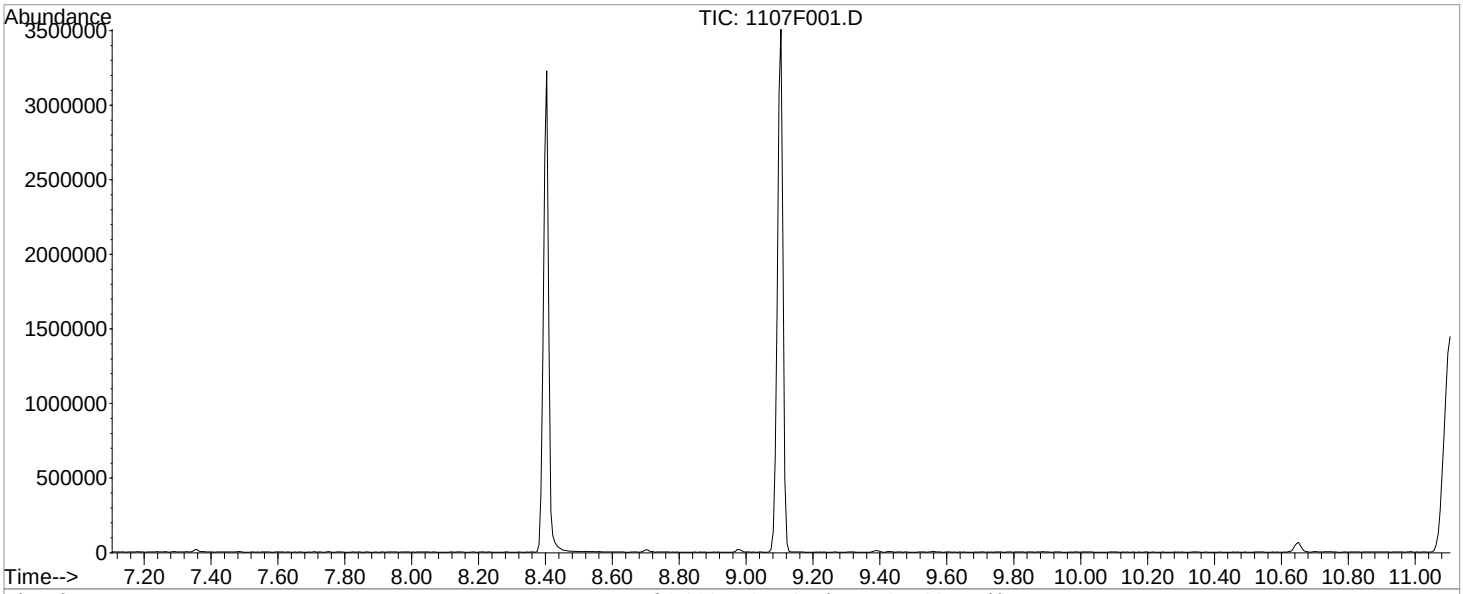
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

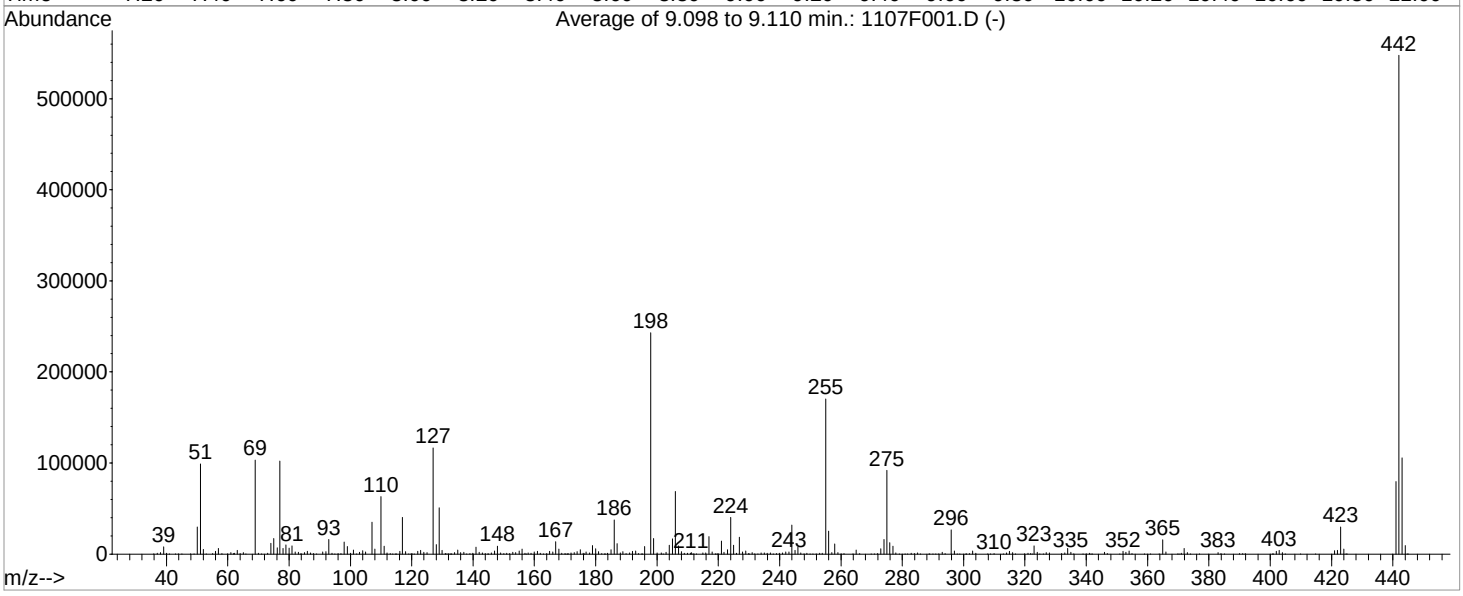
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F001.D Vial: 1
Acq On : 7 Nov 2018 4:55 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix





AutoFind: Scans 512, 513, 514; Background Corrected with Scan 505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	40.7	98834	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.4	103141	PASS
70	69	0.00	2	0.8	832	PASS
127	198	10	80	47.9	116466	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	44.4	243029	PASS
199	198	5	9	7.1	17181	PASS
275	198	10	60	37.9	92040	PASS
365	442	1	50	2.8	15565	PASS
441	443	0.01	100	75.3	79482	PASS
442	442	30	100	100.0	547541	PASS
443	442	15	24	19.3	105498	PASS

1st 11/19/18
2nd 12/05/18

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	61	50.05	29609	62.15	902	76.15	6939
37.00	791	51.10	98834	63.10	4121	77.00	102022
38.10	1670	52.05	5205	64.00	463	78.05	6042
39.10	8016	52.95	228	65.10	1666	79.00	10150
40.00	772	55.05	567	65.90	221	80.00	6610
41.00	278	56.05	3109	69.00	103141	81.00	8812
43.00	189	57.00	6106	70.00	832	81.95	2161
43.90	111	58.05	405	71.05	205	83.05	2018
45.00	304	60.00	50	73.00	1044	83.80	90
47.90	124	61.00	1493	74.05	11715	84.05	221
49.00	375	61.90	582	75.00	17026	85.00	1508

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.95	2904	98.00	13099	111.00	8778	120.05	423
87.00	1179	99.00	8311	111.95	1115	120.80	87
87.90	441	100.00	742	112.95	524	121.95	2979
89.00	210	101.00	4367	113.80	51	122.95	4041
90.95	2250	102.00	360	114.70	99	123.95	1863
92.00	2751	103.00	1964	115.10	113	125.00	1733
93.00	16034	104.00	3561	116.15	2986	127.00	116466
94.00	1024	105.00	2451	117.00	40378	128.00	10311
94.90	370	107.00	34962	118.00	2565	129.00	50858
95.95	503	108.00	5397	119.00	361	129.90	4201
96.90	482	110.00	63114	119.80	100	130.90	500

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
131.10	445	139.95	794	150.00	596	159.95	2202
131.90	386	141.00	7616	151.00	978	160.95	3021
132.50	73	142.00	2107	151.95	610	161.95	970
132.80	165	143.00	1358	153.00	2101	163.00	339
133.00	96	144.00	435	153.95	1629	164.00	564
134.00	1553	144.80	169	155.00	3275	165.00	2855
135.00	4274	145.00	247	156.00	5579	166.00	2311
136.00	1637	146.00	1396	156.95	853	167.00	13500
137.00	1976	147.00	3510	157.30	276	168.00	5588
137.95	364	148.00	8706	157.95	1405	168.95	1007
139.00	583	149.00	1393	158.95	950	170.00	491

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.30	173	178.95	9220	188.90	2551	200.00	1370
170.80	208	180.00	5832	189.90	563	201.35	1192
171.05	443	180.95	2618	191.10	1236	202.00	176
171.95	1282	182.00	492	191.95	2878	202.95	1828
172.95	1650	182.90	89	193.00	3440	204.00	9809
173.95	2680	183.15	210	193.95	706	205.00	16803
175.00	4865	183.90	748	195.00	261	206.00	68626
175.95	962	185.00	4923	195.20	92	207.00	9009
176.30	369	186.00	37573	196.00	8365	207.95	2739
176.90	2366	187.00	11375	197.90	243029	208.90	912
178.00	1176	188.05	1205	198.90	17181	209.95	894

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
210.90	904	219.80	122	229.90	386	239.95	769
211.15	1634	220.00	201	230.10	140	240.90	1150
211.70	164	221.00	14284	231.00	1514	241.95	2377
212.00	123	221.85	1869	231.90	254	243.05	2389
212.90	145	223.00	4640	232.95	300	244.00	31882
214.95	1173	224.00	40168	233.95	1273	245.00	4232
215.90	1210	225.00	9584	234.95	1170	245.95	7554
216.90	19137	225.95	866	235.90	1018	246.85	1255
217.95	2281	226.90	18371	237.00	1276	247.95	251
219.00	120	227.95	2458	237.95	193	248.90	1035
219.20	97	228.95	3434	238.95	646	249.90	229

Average of 9.098 to 9.110 min.: 1107F001.D

1st 11/19/18
2nd 12/05/18

DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
250.90	286	263.90	154	277.90	1250	290.90	154
251.90	347	264.95	4533	279.05	132	291.90	272
253.05	889	266.05	681	280.90	62	293.00	1850
253.90	958	269.85	163	281.80	120	293.95	472
255.00	170136	270.85	322	282.95	911	295.95	26674
256.00	24992	271.95	655	283.90	549	296.95	3535
257.00	1604	273.00	5675	284.95	1290	297.90	169
258.00	10921	274.00	15871	285.90	77	298.80	57
258.95	1500	275.00	92040	288.70	54	300.70	59
260.00	319	275.95	12496	289.00	123	301.00	151
260.95	452	276.95	8617	289.95	319	301.85	542

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
302.95	3214	321.00	928	333.95	6075	351.95	3093
304.00	1017	321.85	666	335.00	1900	352.95	2132
307.85	313	322.30	136	335.90	128	354.00	3428
308.80	266	323.00	9109	338.90	60	354.95	648
309.95	486	324.00	1908	339.95	191	358.95	211
313.00	304	324.85	292	341.00	899	361.00	59
313.95	1357	326.05	231	341.60	79	363.80	138
314.90	3169	326.90	1717	342.00	233	364.90	15565
315.95	1634	327.95	1111	345.95	2093	366.00	2260
316.90	259	331.90	652	346.90	406	369.85	261
319.85	144	333.00	1157	350.90	266	370.20	82

Average of 9.098 to 9.110 min.: 1107F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
370.95	931	400.75	209	424.00	5386		
371.95	6272	401.00	232	424.75	309		
372.95	1623	401.95	2941	425.00	222		
374.05	235	402.95	4165	441.00	79482		
376.90	145	403.95	1537	442.00	547541		
382.95	1771	404.85	207	443.00	105498		
383.90	649	409.90	110	444.00	9272		
385.05	153	414.80	203	444.70	69		
389.95	714	421.00	3559	445.00	355		
391.00	621	421.95	3955				
391.85	485	423.00	29885				

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F001.D
Lab ID: KWG1806235-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/14/2018 05:51
Date Quantitated:
Batch ID: KWG1806235
Analysis Method: DFTPP
ListJoinID: LJ1965

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F001.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 05:51	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP	**ListJoinID:**	LJ1965	**Dilution:**	1.0
Lab ID:	KWG1806235-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH ALK S	**Collect Date:**		**Receive Date:**	11/30/2018

Analysis Lot:	KWG1806235	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\A_DFTPP.M			**Calibration ID:**	CAL15779
Title:				**Report List ID:**	LJ1965
Tune Ref:				**Method ID:**	MJ190
MB Ref:				**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.5	157589	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	46.9	158868	Pass
70	69	0	2	0.7	1054	Pass
127	198	10	80	51.6	174890	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	48.5	339050	Pass
199	198	5	9	6.8	22890	Pass
275	198	10	60	35.0	118562	Pass
365	442	1	50	3.4	24040	Pass
441	443	0.01	100	75.3	101050	Pass
442	442	100	100	100.0	698368	Pass
443	442	15	24	19.2	134280	Pass

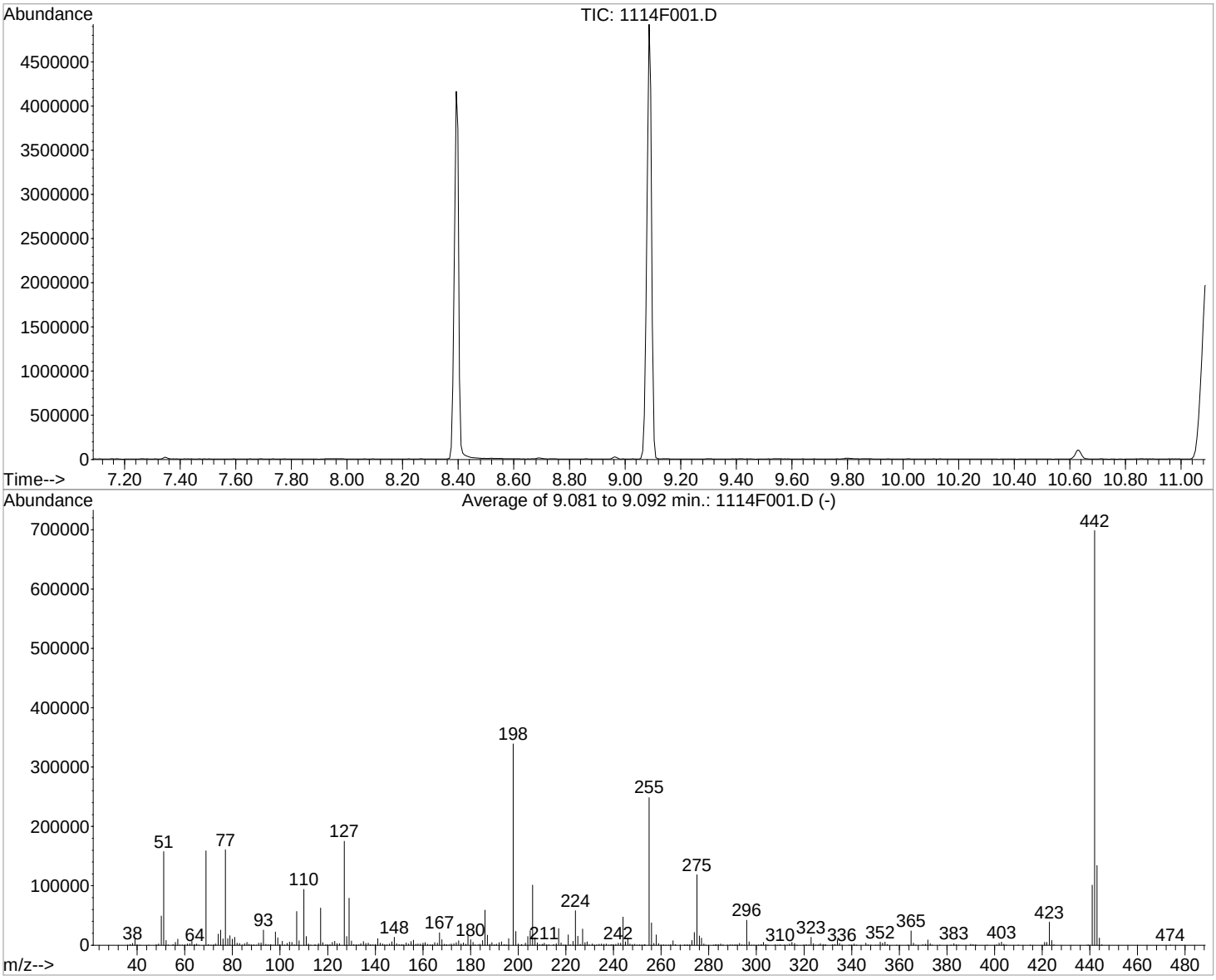
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F001.D Vial: 1
Acq On : 14 Nov 2018 5:51 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 509, 510, 511; Background Corrected with Scan 501

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.5	157589	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	46.9	158868	PASS
70	69	0.00	2	0.7	1054	PASS
127	198	10	80	51.6	174890	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	48.5	339050	PASS
199	198	5	9	6.8	22890	PASS
275	198	10	60	35.0	118562	PASS
365	442	1	50	3.4	24040	PASS
441	443	0.01	100	75.3	101050	PASS
442	442	30	100	100.0	698368	PASS
443	442	15	24	19.2	134280	PASS

1st 12/03/18
2nd 12/06/18

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	54	51.10	157589	63.00	6729	74.05	18702
37.05	1127	52.10	7821	64.00	244	75.00	25458
38.10	2961	53.05	424	64.25	513	76.10	10756
39.10	11503	55.05	1362	65.00	2207	77.10	160853
40.00	644	56.05	4752	65.90	330	78.10	11158
41.05	91	57.05	9931	68.95	158868	79.00	16037
44.90	304	57.95	338	69.95	1054	80.00	10218
47.80	187	59.00	71	71.00	347	81.00	13400
48.30	169	60.10	172	72.10	118	82.00	3294
49.05	1918	61.05	2128	72.30	70	83.00	2896
50.10	49018	62.05	2412	73.05	2032	84.10	283

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.05	2564	95.00	494	105.00	4957	117.00	62536
86.05	4657	95.95	671	106.00	836	117.95	4094
87.00	1795	96.15	625	107.00	56888	119.10	579
87.90	550	97.15	264	108.00	7629	119.95	799
88.85	245	98.00	22288	110.00	93861	120.85	261
89.15	131	99.00	12569	110.95	14505	121.20	78
90.10	81	100.00	1149	111.95	2086	121.95	4734
91.00	3371	101.00	6696	112.90	470	123.00	6482
92.05	3666	101.95	382	114.50	91	124.00	2659
93.00	25130	103.00	3040	114.90	163	124.95	2440
94.00	1565	104.00	5160	116.15	2621	127.00	174890

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	14618	137.80	172	147.00	5815	157.00	1683
129.00	79189	138.00	579	147.95	13293	157.95	2238
130.00	7078	139.05	663	148.95	2281	158.95	1861
130.95	1234	140.00	1255	150.00	957	160.00	3424
132.00	669	141.00	10813	150.95	1104	160.95	4290
132.90	172	142.00	3452	151.70	420	161.95	1584
133.10	310	143.00	2082	152.00	61	162.95	337
133.95	2378	144.00	480	152.95	3742	163.30	120
135.00	6291	144.80	141	153.95	2097	164.00	754
136.00	2730	145.00	335	155.00	6195	164.95	4344
137.00	3312	146.00	2206	156.05	8400	166.00	3492

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
167.00	20890	177.00	3879	188.00	1503	200.00	1875
168.00	9298	177.95	1463	189.00	4510	201.30	374
168.95	1811	178.95	15646	189.95	730	201.50	1246
169.80	149	180.00	9295	190.90	1612	203.00	3403
170.00	563	181.00	4781	191.95	4470	204.00	14520
170.95	747	181.95	747	193.00	5427	205.00	24413
171.90	1960	183.10	545	194.05	1158	206.00	101250
172.95	2360	183.95	1565	194.95	562	207.00	12791
174.00	4263	185.05	7816	196.00	11029	208.00	3841
175.00	7346	186.00	58829	197.90	339050	208.95	1254
176.00	2018	187.00	16665	198.95	22890	210.00	1559

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
210.30	501	221.90	859	233.00	573	244.00	47106
210.95	3492	223.00	6561	233.95	1554	245.00	5624
211.95	746	224.00	58229	234.95	1867	246.00	11411
212.90	497	225.00	15068	235.95	1702	246.90	2025
214.90	1313	226.05	1687	236.95	1897	247.90	523
216.00	2489	227.00	27306	238.00	312	248.95	1666
216.95	28066	228.00	4098	238.95	1261	249.95	269
217.95	3794	228.90	5597	239.85	937	250.80	165
218.95	409	229.85	735	240.95	1633	251.00	430
219.80	200	231.00	2060	242.00	3525	251.95	430
221.00	17179	231.85	183	243.05	3609	252.95	957

Average of 9.081 to 9.092 min.: 1114F001.D

1st 12/03/18
2nd 12/06/18

DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
253.30	272	264.95	7543	276.00	15515	288.95	574
255.00	248768	265.95	1076	276.95	11685	289.95	482
256.00	37472	268.00	84	278.00	1913	290.90	175
257.00	2759	269.80	204	278.85	333	291.10	97
258.00	17138	270.05	158	281.95	428	291.95	695
258.95	2534	270.90	265	282.90	840	292.95	2804
260.00	383	271.10	198	283.10	496	293.90	607
260.95	553	272.05	906	283.95	1302	294.90	380
262.00	92	272.95	7955	285.00	1972	295.95	42088
263.10	55	273.95	21347	286.00	486	296.95	5681
263.95	839	275.00	118562	287.80	81	297.90	469

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
298.95	131	312.90	446	325.90	149	335.90	388
300.90	549	313.95	1953	326.20	87	338.90	205
302.00	598	314.95	4860	326.90	2631	339.85	228
302.20	200	316.00	3070	327.95	1325	341.00	1912
302.95	4801	317.00	441	328.70	96	342.00	403
303.95	1097	319.85	164	329.00	95	345.95	3474
304.90	196	321.00	1048	329.15	226	346.90	663
307.90	634	322.05	861	332.00	1079	348.10	77
309.00	454	323.00	13435	332.95	1270	349.95	137
310.00	569	323.95	2670	334.00	9310	351.05	324
311.80	61	324.95	261	334.95	2725	352.00	5015

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
352.95	3183	372.95	2340	400.95	724	424.95	757
354.00	5035	373.90	248	401.95	3376	438.85	149
355.05	1006	376.95	210	402.95	5239	439.40	131
358.95	243	381.70	51	403.95	1787	441.00	101050
363.60	119	382.90	2478	404.95	167	442.00	698368
364.95	24040	383.95	770	410.00	126	443.00	134280
365.95	3212	384.90	304	415.00	298	444.00	11847
366.95	170	390.00	1501	421.00	4522	444.90	361
369.90	543	390.95	1067	421.95	4628	445.10	327
371.00	1464	392.05	756	423.00	38762	473.85	110
372.00	8654	396.90	54	424.00	7704		

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110518\1105F002.D
Lab ID: KWG1806019-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/05/2018 09:41
Date Quantitated: 11/16/2018 07:41
Batch ID: KWG1806019
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110518\1105F002.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 09:41	**Quant Date:**	11/16/2018 07:41	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806019-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/16/2018

Analysis Lot:	KWG1806019	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110518\1105F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	-0.04	136	68045	200.00	OK
2	Acenaphthene-d10	6.32	-0.03	164	28083	200.00	OK
3	Phenanthrene-d10	7.56	-0.03	188	57938	200.00	OK
4	Chrysene-d12	10.10	-0.05	240	79003	200.00	OK
5	Perylene-d12	13.26	-0.04	264	92808	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.39			152	58260	306.74		70-130	NA	
2	Fluorene-d10	6.76			176	65864	366.80		26-102	NA	
3	Fluoranthene-d10	8.54			212	150517	412.20		23-110	NA	
4	Terphenyl-d14	8.89			244	128800	375.87		27-115	NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78			128	151781	386.43			
1	2-Methylnaphthalene	5.42			142	89157	376.41			
1	1-Methylnaphthalene	5.51			142	83539	366.41			
1	Biphenyl	5.83			154	108576	367.27			
1	2,6-Dimethylnaphthalene	5.97			156	76315	375.29			
2	Acenaphthylene	6.20			152	139605	416.62			
2	Acenaphthene	6.35			154	78037	405.42			
2	Dibenzofuran	6.50			168	121798	394.33			
2	2,3,5-Trimethylnaphthalene	6.67			170	73507	412.86			
2	Fluorene	6.78			166	93658	402.31			
3	Dibenzothiophene	7.47			184	152898	423.10			
3	Phenanthrene	7.58			178	145619	402.90			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110518\1105F002.D			**Instrument:**	MS14
Acqu Date:	11/05/2018 09:41	**Quant Date:**	11/16/2018 07:41	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806019-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62			178	126655	367.08			
3	Carbazole	7.75			167	137790	409.21			
3	1-Methylphenanthrene	8.08			192	121888	445.23			
3	Fluoranthene	8.56			202	192644	431.66			
4	Pyrene	8.75			202	206853	381.62			
4	Benz(a)anthracene	10.09			228	213641	418.26			
4	Chrysene	10.14			228	197663	404.00			
5	Benzo(b)fluoranthene	12.19			252	238816	416.50			
5	Benzo(k)fluoranthene	12.26			252	227992	400.82			
5	Benzo(e)pyrene	12.93			252	231936	424.37			
5	Benzo(a)pyrene	13.09			252	219907	437.33			
5	Perylene	13.34			252	212677	403.19			
5	Indeno(1,2,3-cd)pyrene	15.46			276	228972	464.37			
5	Dibenz(a,h)anthracene	15.50			278	226979**m**	454.11			
5	Benzo(g,h,i)perylene	15.85			276	244806	423.96			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

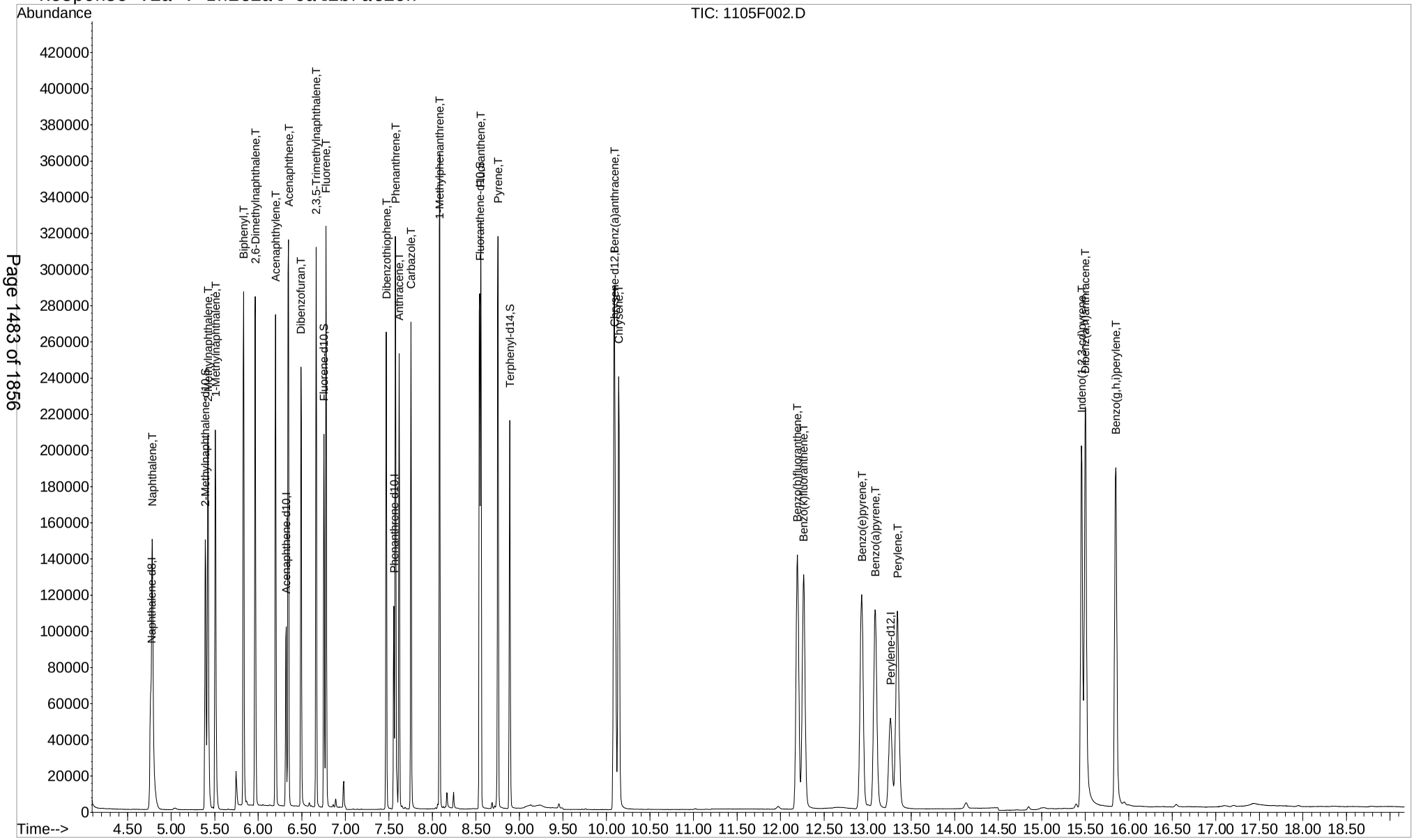
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F002.D Vial: 2
Acq On : 5 Nov 2018 9:41 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 7:41 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:40 2018
Response via : Initial Calibration



1st 11/16/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110518\1105F002.D Vial: 2
Acq On : 5 Nov 2018 9:41 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 07:41:04 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 06:56:43 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	68045	200.00	ng/ml	-0.03
8) Acenaphthene-d10	6.32	164	28083	200.00	ng/ml	-0.03
15) Phenanthrene-d10	7.56	188	57938	200.00	ng/ml	-0.04
23) Chrysene-d12	10.10	240	79003	200.00	ng/ml	-0.06
28) Perylene-d12	13.26	264	92808	200.00	ng/ml	-0.12
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	58260	306.74	ng/ml	-0.03
Spiked Amount 1000.000			Recovery =	30.67%		
13) Fluorene-d10	6.76	176	65864	366.80	ng/ml	-0.03
Spiked Amount 1000.000			Recovery =	36.68%		
22) Fluoranthene-d10	8.54	212	150517	412.20	ng/ml	-0.04
Spiked Amount 1000.000			Recovery =	41.22%		
25) Terphenyl-d14	8.89	244	128800	375.87	ng/ml	-0.04
Spiked Amount 1000.000			Recovery =	37.59%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	151781	386.43	ng/ml	99
4) 2-Methylnaphthalene	5.42	142	89157	376.41	ng/ml	96
5) 1-Methylnaphthalene	5.51	142	83539	366.41	ng/ml	94
6) Biphenyl	5.83	154	108576	367.27	ng/ml	100
7) 2,6-Dimethylnaphthalene	5.97	156	76315	375.29	ng/ml	98
9) Acenaphthylene	6.20	152	139605	416.62	ng/ml	100
10) Acenaphthene	6.35	154	78037	405.42	ng/ml	99
11) Dibenzofuran	6.50	168	121798	394.33	ng/ml	99
12) 2,3,5-Trimethylnaphthalene	6.67	170	73507	412.86	ng/ml	90
14) Fluorene	6.78	166	93658	402.31	ng/ml	98
16) Dibenzothiophene	7.47	184	152898	423.10	ng/ml	91
17) Phenanthrene	7.58	178	145619	402.90	ng/ml	100
18) Anthracene	7.62	178	126655	367.08	ng/ml	100
19) Carbazole	7.75	167	137790	409.21	ng/ml	97
20) 1-Methylphenanthrene	8.08	192	121888	445.23	ng/ml	99
21) Fluoranthene	8.56	202	192644	431.66	ng/ml	95
24) Pyrene	8.75	202	206853	381.62	ng/ml	98
26) Benz(a)anthracene	10.09	228	213641	418.26	ng/ml	99
27) Chrysene	10.14	228	197663	404.00	ng/ml	99
29) Benzo(b)fluoranthene	12.19	252	238816	416.50	ng/ml	98
30) Benzo(k)fluoranthene	12.26	252	227992	400.82	ng/ml	98
31) Benzo(e)pyrene	12.93	252	231936	424.37	ng/ml	98
32) Benzo(a)pyrene	13.09	252	219907	437.33	ng/ml	98
33) Perylene	13.34	252	212677	403.19	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.46	276	228972	464.37	ng/ml	96
35) Dibenz(a,h)anthracene	15.50	278	226979m	454.11	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	244806	423.96	ng/ml	97

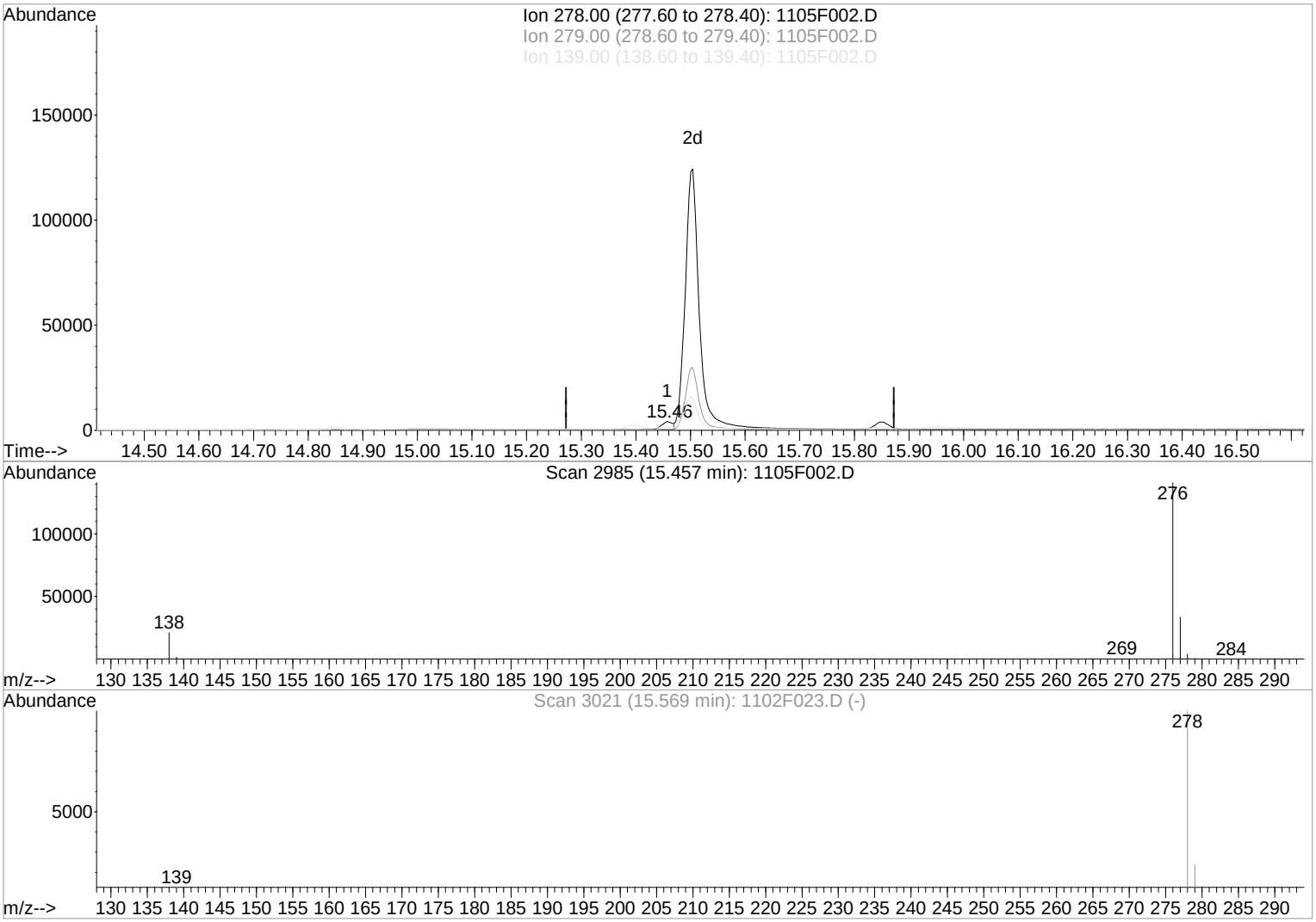
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F002.D Vial: 2
Acq On : 5 Nov 2018 9:41 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 7:41 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 06:56:43 2018
Response via : Multiple Level Calibration



TIC: 1105F002.D

(35) Dibenz(a,h)anthracene (T)

15.46min 11.21ng/ml

response 5601

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	6.44
139.00	15.00	9.97
0.00	0.00	0.00

Manual Integration:

Before

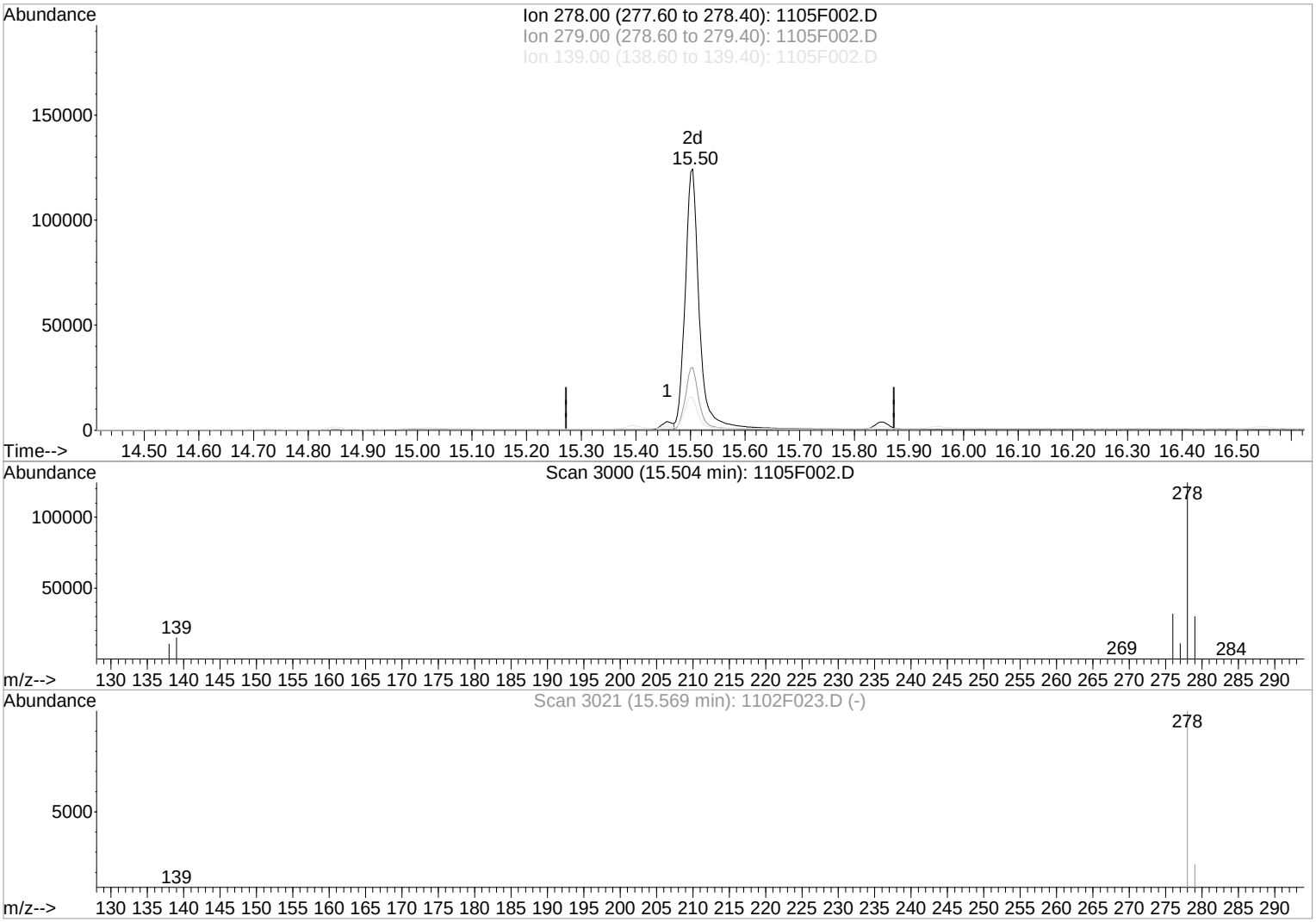
11/16/18

Quantitation Report (Qedit)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F002.D Vial: 2
Acq On : 5 Nov 2018 9:41 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 7:41 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 06:56:43 2018
Response via : Multiple Level Calibration



TIC: 1105F002.D

(35) Dibenz(a,h)anthracene (T)

15.50min 454.11ng/ml m

response 226979

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	24.02
139.00	15.00	12.16
0.00	0.00	0.00

Manual Integration:

After

WP

11/16/18

Evaluate Continuing Calibration Report

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110518\1105F002.D Vial: 2
Acq On : 5 Nov 2018 9:41 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 07:41:36 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	1.000	1.000	0.0	112	0.00
2	T	Naphthalene	1.154	1.115	3.4	115	0.00
3	S	2-Methylnaphthalene-d10	0.558	0.428	23.3#	90	0.00
4	T	2-Methylnaphthalene	0.696	0.655	5.9	111	0.00
5	T	1-Methylnaphthalene	0.670	0.614	8.4	110	0.00
6	T	Biphenyl	0.869	0.798	8.2	111	0.00
7	T	2,6-Dimethylnaphthalene	0.598	0.561	6.2	111	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	108	0.00
9	T	Acenaphthylene	2.386	2.486	-4.2	111	0.00
10	T	Acenaphthene	1.371	1.389	-1.3	109	0.00
11	T	Dibenzofuran	2.200	2.169	1.4	105	0.00
12	T	2,3,5-Trimethylnaphthalene	1.268	1.309	-3.2	110	0.00
13	S	Fluorene-d10	1.279	1.173	8.3	101	0.00
14	T	Fluorene	1.658	1.668	-0.6	108	0.00
15	I	Phenanthrene-d10	1.000	1.000	0.0	107	0.00
16	T	Dibenzothiophene	1.247	1.319	-5.8	112	0.00
17	T	Phenanthrene	1.248	1.257	-0.7	110	0.00
18	T	Anthracene	1.191	1.093	8.2	96	0.00
19	T	Carbazole	1.162	1.189	-2.3	107	0.00
20	T	1-Methylphenanthrene	0.945	1.052	-11.3	118	0.00
21	T	Fluoranthene	1.541	1.663	-7.9	113	0.00
22	S	Fluoranthene-d10	1.260	1.299	-3.1	107	0.00
23	I	Chrysene-d12	1.000	1.000	0.0	115	0.00
24	T	Pyrene	1.372	1.309	4.6	114	0.00
25	S	Terphenyl-d14	0.867	0.815	6.0	112	0.00
26	T	Benz(a)anthracene	1.293	1.352	-4.6	122	0.00
27	T	Chrysene	1.239	1.251	-1.0	114	0.00
28	I	Perylene-d12	1.000	1.000	0.0	126	0.00
29	T	Benzo(b)fluoranthene	1.236	1.287	-4.1	125	0.00
30	T	Benzo(k)fluoranthene	1.226	1.228	-0.2	120	0.00
31	T	Benzo(e)pyrene	1.178	1.250	-6.1	131	0.00
32	T	Benzo(a)pyrene	1.084	1.185	-9.3	134	0.00
33	T	Perylene	1.137	1.146	-0.8	124	0.00
34	T	Indeno(1,2,3-cd)pyrene	1.063	1.234	-16.1	147	0.00
35	T	Dibenz(a,h)anthracene	1.077	1.223	-13.6	144	0.00
36	T	Benzo(g,h,i)perylene	1.244	1.319	-6.0	137	0.00

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

1st 11/16/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110618\1106F002.D
Lab ID: KWG1806026-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/06/2018 05:35
Date Quantitated: 11/16/2018 09:55
Batch ID: KWG1806026
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/16/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110618\1106F002.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 05:35	**Quant Date:**	11/16/2018 09:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806026-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/16/2018

Analysis Lot:	KWG1806026	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110618\1106F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	-0.04	136	65709	200.00	OK
2	Acenaphthene-d10	6.32	-0.03	164	29101	200.00	OK
3	Phenanthrene-d10	7.56	-0.03	188	61986	200.00	OK
4	Chrysene-d12	10.11	-0.04	240	76116	200.00	OK
5	Perylene-d12	13.27	-0.03	264	89350	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.39			152	58526	319.10		70-130	NA
2	Fluorene-d10	6.76			176	71302	383.20		26-102	NA
3	Fluoranthene-d10	8.54			212	147363	377.21		23-110	NA
4	Terphenyl-d14	8.89			244	125738	380.85		27-115	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78			128	145952	384.80			
1	2-Methylnaphthalene	5.42			142	88322	386.14			
1	1-Methylnaphthalene	5.51			142	83257	378.16			
1	Biphenyl	5.83			154	110641	387.56			
1	2,6-Dimethylnaphthalene	5.97			156	78212	398.30			
2	Acenaphthylene	6.20			152	145461	418.92			
2	Acenaphthene	6.35			154	81657	409.39			
2	Dibenzofuran	6.50			168	135179	422.34			
2	2,3,5-Trimethylnaphthalene	6.67			170	78844	427.35			
2	Fluorene	6.78			166	100909	418.30			
3	Dibenzothiophene	7.47			184	165376	427.75			
3	Phenanthrene	7.58			178	152887	395.38			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110618\1106F002.D			**Instrument:**	MS14
Acqu Date:	11/06/2018 05:35	**Quant Date:**	11/16/2018 09:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806026-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62			178	134576	364.56			
3	Carbazole	7.75			167	140098	388.90			
3	1-Methylphenanthrene	8.08			192	121533	414.95			
3	Fluoranthene	8.56			202	187747	393.21			
4	Pyrene	8.75			202	199059	381.17			
4	Benz(a)anthracene	10.09			228	203889	414.31			
4	Chrysene	10.15			228	188955	400.85			
5	Benzo(b)fluoranthene	12.21			252	228905	414.66			
5	Benzo(k)fluoranthene	12.28			252	217675	397.49			
5	Benzo(e)pyrene	12.94			252	222863	423.55			
5	Benzo(a)pyrene	13.10			252	213029	440.04			
5	Perylene	13.35			252	203121	399.97			
5	Indeno(1,2,3-cd)pyrene	15.47			276	219681	462.77			
5	Dibenz(a,h)anthracene	15.51			278	211683	439.89			
5	Benzo(g,h,i)perylene	15.86			276	236042	424.60			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

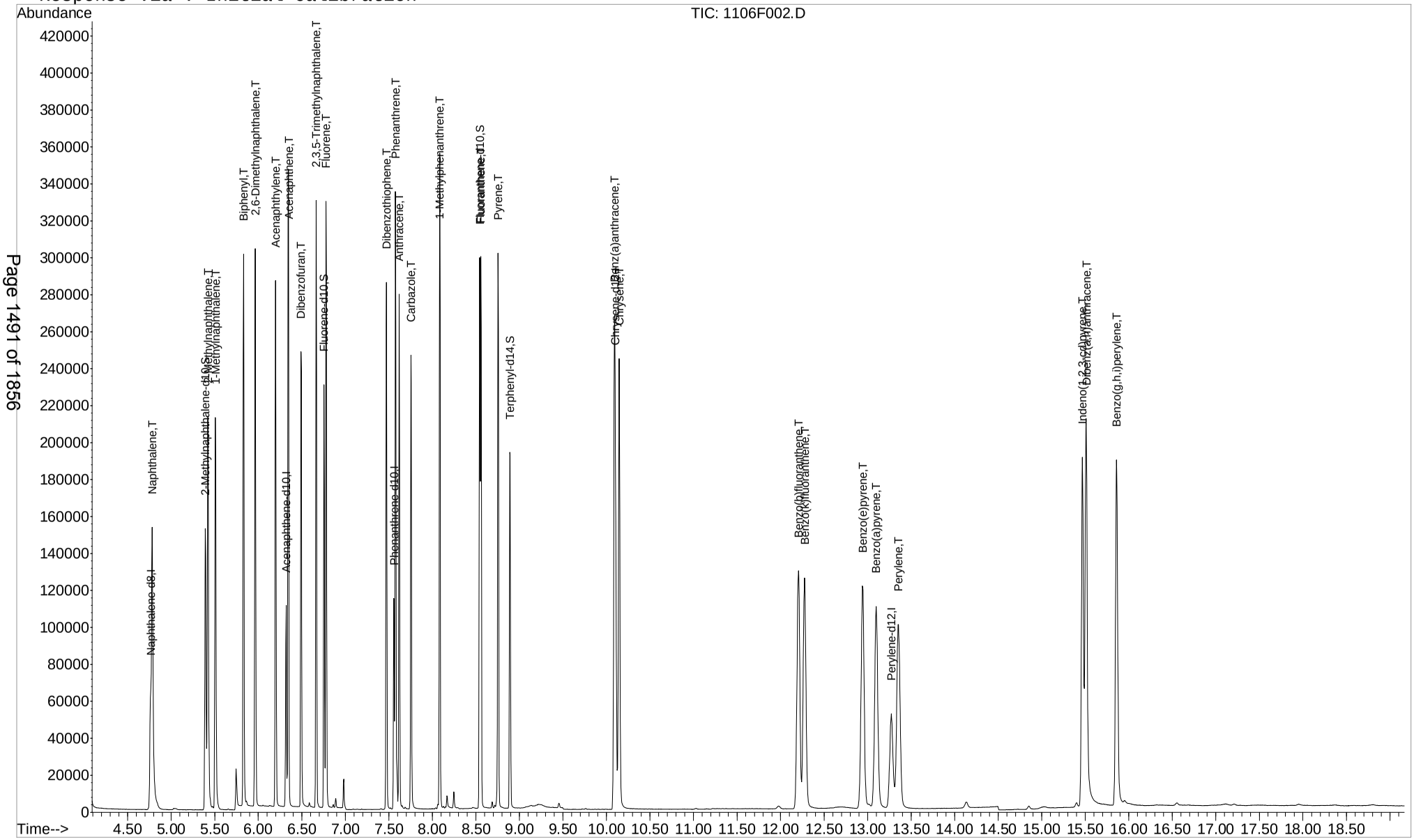
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F002.D Vial: 2
Acq On : 6 Nov 2018 5:35 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 9:55 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration



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1st 11/16/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110618\1106F002.D Vial: 2
Acq On : 6 Nov 2018 5:35 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 09:55:51 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:55:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	65709	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	29101	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	61986	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	76116	200.00	ng/ml	0.00
28) Perylene-d12	13.27	264	89350	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	58526	319.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	31.91%		
13) Fluorene-d10	6.76	176	71302	383.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	38.32%		
22) Fluoranthene-d10	8.54	212	147363	377.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	37.72%		
25) Terphenyl-d14	8.89	244	125738	380.85	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	38.09%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	145952	384.80	ng/ml	100
4) 2-Methylnaphthalene	5.42	142	88322	386.14	ng/ml	96
5) 1-Methylnaphthalene	5.51	142	83257	378.16	ng/ml	94
6) Biphenyl	5.83	154	110641	387.56	ng/ml	100
7) 2,6-Dimethylnaphthalene	5.97	156	78212	398.30	ng/ml	96
9) Acenaphthylene	6.20	152	145461	418.92	ng/ml	100
10) Acenaphthene	6.35	154	81657	409.39	ng/ml	99
11) Dibenzofuran	6.50	168	135179	422.34	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.67	170	78844	427.35	ng/ml	89
14) Fluorene	6.78	166	100909	418.30	ng/ml	97
16) Dibenzothiophene	7.47	184	165376	427.75	ng/ml	98
17) Phenanthrene	7.58	178	152887	395.38	ng/ml	99
18) Anthracene	7.62	178	134576	364.56	ng/ml	100
19) Carbazole	7.75	167	140098	388.90	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	121533	414.95	ng/ml	99
21) Fluoranthene	8.56	202	187747	393.21	ng/ml	96
24) Pyrene	8.75	202	199059	381.17	ng/ml	99
26) Benz(a)anthracene	10.09	228	203889	414.31	ng/ml	100
27) Chrysene	10.15	228	188955	400.85	ng/ml	99
29) Benzo(b)fluoranthene	12.21	252	228905	414.66	ng/ml	98
30) Benzo(k)fluoranthene	12.28	252	217675	397.49	ng/ml	98
31) Benzo(e)pyrene	12.94	252	222863	423.55	ng/ml	98
32) Benzo(a)pyrene	13.10	252	213029	440.04	ng/ml	98
33) Perylene	13.35	252	203121	399.97	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.47	276	219681	462.77	ng/ml	96
35) Dibenz(a,h)anthracene	15.51	278	211683	439.89	ng/ml	96
36) Benzo(g,h,i)perylene	15.86	276	236042	424.60	ng/ml	96

(#) = qualifier out of range (m) = manual integration

Evaluate Continuing Calibration Report

1st 11/16/18
2nd 11/27/18

Data File : J:\MS14\DATA\110618\1106F002.D Vial: 2
Acq On : 6 Nov 2018 5:35 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:03 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	1.000	1.000	0.0	108	0.00
2	T	Naphthalene	1.154	1.111	3.7	110	0.00
3	S	2-Methylnaphthalene-d10	0.558	0.445	20.3#	90	0.00
4	T	2-Methylnaphthalene	0.696	0.672	3.4	110	0.00
5	T	1-Methylnaphthalene	0.670	0.634	5.4	110	0.00
6	T	Biphenyl	0.869	0.842	3.1	113	0.00
7	T	2,6-Dimethylnaphthalene	0.598	0.595	0.5	114	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	112	0.00
9	T	Acenaphthylene	2.386	2.499	-4.7	116	0.00
10	T	Acenaphthene	1.371	1.403	-2.3	114	0.00
11	T	Dibenzofuran	2.200	2.323	-5.6	116	0.00
12	T	2,3,5-Trimethylnaphthalene	1.268	1.355	-6.9	118	0.00
13	S	Fluorene-d10	1.279	1.225	4.2	110	0.00
14	T	Fluorene	1.658	1.734	-4.6	116	0.00
15	I	Phenanthrene-d10	1.000	1.000	0.0	115	0.00
16	T	Dibenzothiophene	1.247	1.334	-7.0	121	0.00
17	T	Phenanthrene	1.248	1.233	1.2	116	0.00
18	T	Anthracene	1.191	1.086	8.8	102	0.00
19	T	Carbazole	1.162	1.130	2.8	108	0.00
20	T	1-Methylphenanthrene	0.945	0.980	-3.7	117	0.00
21	T	Fluoranthene	1.541	1.514	1.8	110	0.00
22	S	Fluoranthene-d10	1.260	1.189	5.6	105	0.00
23	I	Chrysene-d12	1.000	1.000	0.0	110	0.00
24	T	Pyrene	1.372	1.308	4.7	110	0.00
25	S	Terphenyl-d14	0.867	0.826	4.7	109	0.00
26	T	Benz(a)anthracene	1.293	1.339	-3.6	116	0.00
27	T	Chrysene	1.239	1.241	-0.2	109	0.00
28	I	Perylene-d12	1.000	1.000	0.0	121	0.00
29	T	Benzo(b)fluoranthene	1.236	1.281	-3.6	119	0.00
30	T	Benzo(k)fluoranthene	1.226	1.218	0.7	115	0.00
31	T	Benzo(e)pyrene	1.178	1.247	-5.9	125	0.00
32	T	Benzo(a)pyrene	1.084	1.192	-10.0	130	0.00
33	T	Perylene	1.137	1.137	0.0	119	0.00
34	T	Indeno(1,2,3-cd)pyrene	1.063	1.229	-15.6	141	0.00
35	T	Dibenz(a,h)anthracene	1.077	1.185	-10.0	135	0.00
36	T	Benzo(g,h,i)perylene	1.244	1.321	-6.2	132	0.00

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

1st 11/19/18
2nd 12/05/18

Exception Report

Data File: J:\MS14\DATA\110718\1107F002.D
Lab ID: KWG1806028-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/07/2018 05:26
Date Quantitated: 11/16/2018 12:55
Batch ID: KWG1806028
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/19/18
2nd 12/05/18

Quantitation Report

Data File:	J:\MS14\DATA\110718\1107F002.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 05:26	**Quant Date:**	11/16/2018 12:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806028-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/16/2018

Analysis Lot:	KWG1806028	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110718\1107F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	-0.04	136	68316	200.00	OK
2	Acenaphthene-d10	6.32	-0.03	164	31023	200.00	OK
3	Phenanthrene-d10	7.56	-0.03	188	63263	200.00	OK
4	Chrysene-d12	10.11	-0.04	240	75807	200.00	OK
5	Perylene-d12	13.28	-0.02	264	86791	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.39			152	62299	326.71		70-130	NA
2	Fluorene-d10	6.76			176	73911	372.61		26-102	NA
3	Fluoranthene-d10	8.54			212	145918	365.97		23-110	NA
4	Terphenyl-d14	8.89			244	123575	375.83		27-115	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78			128	149841	379.98			
1	2-Methylnaphthalene	5.42			142	93220	392.00			
1	1-Methylnaphthalene	5.51			142	88191	385.28			
1	Biphenyl	5.83			154	118200	398.24			
1	2,6-Dimethylnaphthalene	5.97			156	83780	410.37			
2	Acenaphthylene	6.20			152	152688	412.49			
2	Acenaphthene	6.35			154	85533	402.25			
2	Dibenzofuran	6.50			168	139349	408.40			
2	2,3,5-Trimethylnaphthalene	6.67			170	80585	409.73			
2	Fluorene	6.78			166	103003	400.53			
3	Dibenzothiophene	7.47			184	166368	421.63			
3	Phenanthrene	7.58			178	155064	392.92			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110718\1107F002.D			**Instrument:**	MS14
Acqu Date:	11/07/2018 05:26	**Quant Date:**	11/16/2018 12:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806028-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62			178	134206	356.22			
3	Carbazole	7.75			167	140041	380.89			
3	1-Methylphenanthrene	8.08			192	120245	402.26			
3	Fluoranthene	8.56			202	184216	378.03			
4	Pyrene	8.75			202	195079	375.07			
4	Benz(a)anthracene	10.10			228	200914	409.93			
4	Chrysene	10.15			228	187783	399.99			
5	Benzo(b)fluoranthene	12.21			252	223123	416.11			
5	Benzo(k)fluoranthene	12.28			252	210863	396.40			
5	Benzo(e)pyrene	12.96			252	218732	427.95			
5	Benzo(a)pyrene	13.11			252	208139	442.62			
5	Perylene	13.37			252	197097	399.55			
5	Indeno(1,2,3-cd)pyrene	15.48			276	211767	459.25			
5	Dibenz(a,h)anthracene	15.52			278	205558	439.76			
5	Benzo(g,h,i)perylene	15.87			276	229531	425.06			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

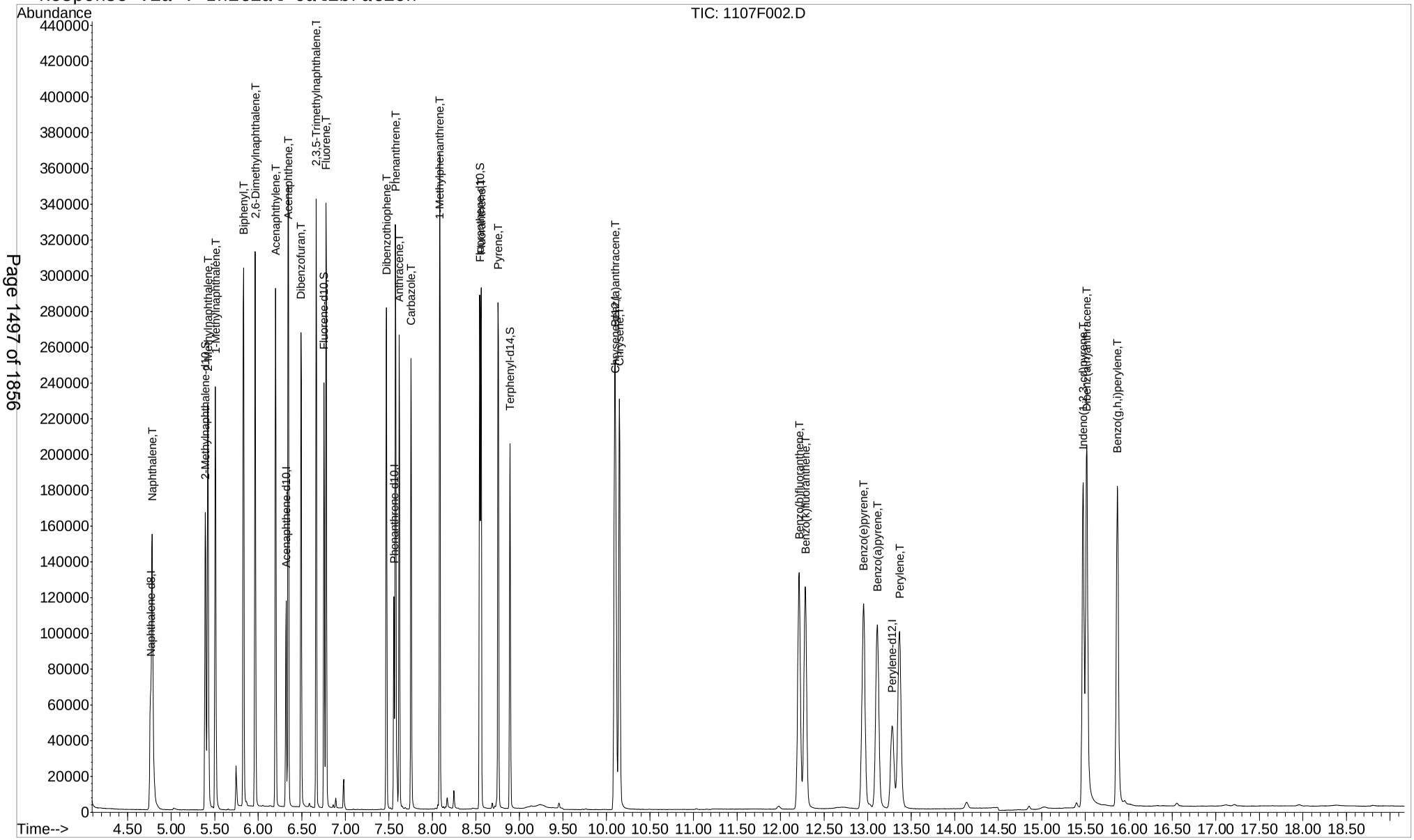
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F002.D Vial: 2
Acq On : 7 Nov 2018 5:26 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:55 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 12:55:36 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F002.D Vial: 2
Acq On : 7 Nov 2018 5:26 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 16 12:55:22 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	68316	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.32	164	31023	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	63263	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	75807	200.00	ng/ml	0.00
28) Perylene-d12	13.28	264	86791	200.00	ng/ml	0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	62299	326.71	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	32.67%		
13) Fluorene-d10	6.76	176	73911	372.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	37.26%		
22) Fluoranthene-d10	8.54	212	145918	365.97	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	36.60%		
25) Terphenyl-d14	8.89	244	123575	375.83	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	37.58%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	149841	379.98	ng/ml	100
4) 2-Methylnaphthalene	5.42	142	93220	392.00	ng/ml	96
5) 1-Methylnaphthalene	5.51	142	88191	385.28	ng/ml	93
6) Biphenyl	5.83	154	118200	398.24	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.97	156	83780	410.37	ng/ml	99
9) Acenaphthylene	6.20	152	152688	412.49	ng/ml	99
10) Acenaphthene	6.35	154	85533	402.25	ng/ml	99
11) Dibenzofuran	6.50	168	139349	408.40	ng/ml	96
12) 2,3,5-Trimethylnaphthalene	6.67	170	80585	409.73	ng/ml	85
14) Fluorene	6.78	166	103003	400.53	ng/ml	97
16) Dibenzothiophene	7.47	184	166368	421.63	ng/ml	98
17) Phenanthrene	7.58	178	155064	392.92	ng/ml	99
18) Anthracene	7.62	178	134206	356.22	ng/ml	99
19) Carbazole	7.75	167	140041	380.89	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	120245	402.26	ng/ml	100
21) Fluoranthene	8.56	202	184216	378.03	ng/ml	91
24) Pyrene	8.75	202	195079	375.07	ng/ml	99
26) Benz(a)anthracene	10.10	228	200914	409.93	ng/ml	100
27) Chrysene	10.15	228	187783	399.99	ng/ml	100
29) Benzo(b)fluoranthene	12.21	252	223123	416.11	ng/ml	98
30) Benzo(k)fluoranthene	12.28	252	210863	396.40	ng/ml	98
31) Benzo(e)pyrene	12.96	252	218732	427.95	ng/ml	97
32) Benzo(a)pyrene	13.11	252	208139	442.62	ng/ml	97
33) Perylene	13.37	252	197097	399.55	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	211767	459.25	ng/ml	95
35) Dibenz(a,h)anthracene	15.52	278	205558	439.76	ng/ml	96
36) Benzo(g,h,i)perylene	15.87	276	229531	425.06	ng/ml	96

(#) = qualifier out of range (m) = manual integration

Evaluate Continuing Calibration Report

1st 11/19/18
2nd 12/05/18

Data File : J:\MS14\DATA\110718\1107F002.D Vial: 2
Acq On : 7 Nov 2018 5:26 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 16 09:56:19 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	1.000	1.000	0.0	112	0.00
2	T	Naphthalene	1.154	1.097	4.9	113	0.00
3	S	2-Methylnaphthalene-d10	0.558	0.456	18.3	96	0.00
4	T	2-Methylnaphthalene	0.696	0.682	2.0	116	0.00
5	T	1-Methylnaphthalene	0.670	0.645	3.7	116	0.00
6	T	Biphenyl	0.869	0.865	0.5	121	0.00
7	T	2,6-Dimethylnaphthalene	0.598	0.613	-2.5	122	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	120	0.00
9	T	Acenaphthylene	2.386	2.461	-3.1	121	0.00
10	T	Acenaphthene	1.371	1.379	-0.6	120	0.00
11	T	Dibenzofuran	2.200	2.246	-2.1	120	0.00
12	T	2,3,5-Trimethylnaphthalene	1.268	1.299	-2.4	121	0.00
13	S	Fluorene-d10	1.279	1.191	6.9	114	0.00
14	T	Fluorene	1.658	1.660	-0.1	119	0.00
15	I	Phenanthrene-d10	1.000	1.000	0.0	117	0.00
16	T	Dibenzothiophene	1.247	1.315	-5.5	122	0.00
17	T	Phenanthrene	1.248	1.226	1.8	118	0.00
18	T	Anthracene	1.191	1.061	10.9	102	0.00
19	T	Carbazole	1.162	1.107	4.7	108	0.00
20	T	1-Methylphenanthrene	0.945	0.950	-0.5	116	0.00
21	T	Fluoranthene	1.541	1.456	5.5	108	0.00
22	S	Fluoranthene-d10	1.260	1.153	8.5	104	0.00
23	I	Chrysene-d12	1.000	1.000	0.0	110	0.00
24	T	Pyrene	1.372	1.287	6.2	107	0.00
25	S	Terphenyl-d14	0.867	0.815	6.0	107	0.00
26	T	Benz(a)anthracene	1.293	1.325	-2.5	115	0.00
27	T	Chrysene	1.239	1.239	0.0	109	0.00
28	I	Perylene-d12	1.000	1.000	0.0	118	0.01
29	T	Benzo(b)fluoranthene	1.236	1.285	-4.0	116	0.00
30	T	Benzo(k)fluoranthene	1.226	1.215	0.9	111	0.00
31	T	Benzo(e)pyrene	1.178	1.260	-7.0	123	0.02
32	T	Benzo(a)pyrene	1.084	1.199	-10.6	127	0.01
33	T	Perylene	1.137	1.135	0.2	115	0.02
34	T	Indeno(1,2,3-cd)pyrene	1.063	1.220	-14.8	136	0.00
35	T	Dibenz(a,h)anthracene	1.077	1.184	-9.9	131	0.00
36	T	Benzo(g,h,i)perylene	1.244	1.322	-6.3	128	0.00

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

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F002.D
Lab ID: KWG1806235-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/14/2018 06:17
Date Quantitated: 11/30/2018 10:35
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH ALK S	**Collect Date:**		**Receive Date:**	11/30/2018

Analysis Lot:	KWG1806235	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.05	136	58386	200.00	OK
2	Acenaphthene-d10	6.31	-0.04	164	27245	200.00	OK
3	Phenanthrene-d10	7.55	-0.04	188	66920	200.00	OK
4	Chrysene-d12	10.10	-0.05	240	75302	200.00	OK
5	Perylene-d12	13.29	-0.01	264	83299	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.38			152	66335	407.04		70-130	NA
2	Fluorene-d10	6.75			176	76649	439.99		26-102	NA
3	Fluoranthene-d10	8.53			212	162469	385.22		23-110	NA
4	Terphenyl-d14	8.88			244	130789	400.44		27-115	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77			128	116359	345.26			
1	2-Methylnaphthalene	5.41			142	71082	349.74			
1	1-Methylnaphthalene	5.50			142	67138	343.19			
1	Biphenyl	5.82			154	89673	353.51			
1	2,6-Dimethylnaphthalene	5.96			156	64326	368.67			
2	Acenaphthylene	6.19			152	115986	356.78			
2	Acenaphthene	6.34			154	66455	355.87			
2	Dibenzofuran	6.49			168	106893	356.72			
2	2,3,5-Trimethylnaphthalene	6.66			170	69748	403.80			
2	Fluorene	6.77			166	88590	392.25			
3	Dibenzothiophene	7.47			184	148749	356.37			
3	Phenanthrene	7.57			178	143132	342.86			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.61			178	142658	357.96			
3	Carbazole	7.75			167	126017	324.02			
3	1-Methylphenanthrene	8.08			192	113785	359.85			
3	Fluoranthene	8.55			202	170329	330.43			
4	Pyrene	8.75			202	179644	347.71			
4	Benz(a)anthracene	10.09			228	176058	361.62			
4	Chrysene	10.14			228	165336	354.54			
5	Benzo(b)fluoranthene	12.21			252	195878	380.61			
5	Benzo(k)fluoranthene	12.28			252	186893	366.07			
5	Benzo(e)pyrene	12.96			252	184653	376.42			
5	Benzo(a)pyrene	13.12			252	173681	384.83			
5	Perylene	13.37			252	171111	361.42			
5	Indeno(1,2,3-cd)pyrene	15.49			276	161015**m**	363.83			
5	Dibenz(a,h)anthracene	15.52			278	161474	359.93			
5	Benzo(g,h,i)perylene	15.88			276	167493	323.18			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1651	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH ALK S	**Collect Date:**		**Receive Date:**	11/30/2018

Analysis Lot:	KWG1806235	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1651
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.05	136	58386	200.00	OK
2	Acenaphthene-d10	6.31	-0.04	164	27245	200.00	OK
3	Phenanthrene-d10	7.55	-0.04	188	66920	200.00	OK
4	Chrysene-d12	10.10	-0.05	240	75302	200.00	OK
5	Perylene-d12	13.29	-0.01	264	83299	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.38			152	66335	407.04		70-130	NA
2	Fluorene-d10	6.75			176	76649	439.99		38-104	NA
3	Fluoranthene-d10	8.53			212	162469	385.22		39-109	NA
4	Terphenyl-d14	8.88			244	130789	400.44		38-113	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77			128	116359	345.26			
1	2-Methylnaphthalene	5.41			142	71082	349.74			
1	1-Methylnaphthalene	5.50			142	67138	343.19			
1	Biphenyl	5.82			154	89673	353.51			
1	2,6-Dimethylnaphthalene	5.96			156	64326	368.67			
2	Acenaphthylene	6.19			152	115986	356.78			
2	Acenaphthene	6.34			154	66455	355.87			
2	Dibenzofuran	6.49			168	106893	356.72			
2	2,3,5-Trimethylnaphthalene	6.66			170	69748	403.80			
2	Fluorene	6.77			166	88590	392.25			
3	Dibenzothiophene	7.47			184	148749	356.37			
3	Phenanthrene	7.57			178	143132	342.86			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1651	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.61			178	142658	357.96			
3	Carbazole	7.75			167	126017	324.02			
3	1-Methylphenanthrene	8.08			192	113785	359.85			
3	Fluoranthene	8.55			202	170329	330.43			
4	Pyrene	8.75			202	179644	347.71			
4	Benz(a)anthracene	10.09			228	176058	361.62			
4	Chrysene	10.14			228	165336	354.54			
5	Benzo(b)fluoranthene	12.21			252	195878	380.61			
5	Benzo(k)fluoranthene	12.28			252	186893	366.07			
5	Benzo(e)pyrene	12.96			252	184653	376.42			
5	Benzo(a)pyrene	13.12			252	173681	384.83			
5	Perylene	13.37			252	171111	361.42			
5	Indeno(1,2,3-cd)pyrene	15.49			276	161015**m**	363.83			
5	Dibenz(a,h)anthracene	15.52			278	161474	359.93			
5	Benzo(g,h,i)perylene	15.88			276	167493	323.18			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

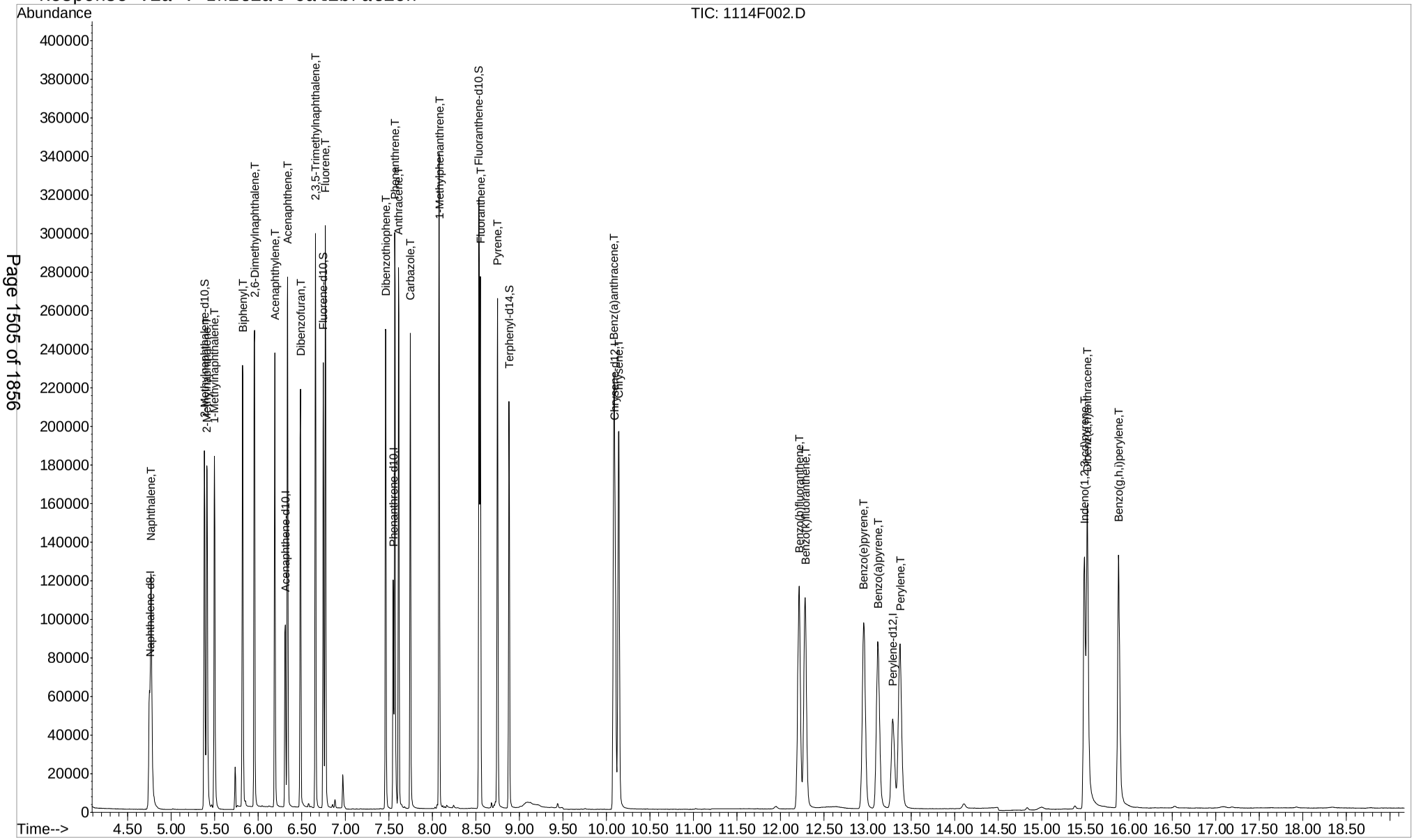
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 14 06:55:51 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	58386	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	27245	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	66920	200.00	ng/ml	-0.01
23) Chrysene-d12	10.10	240	75302	200.00	ng/ml	-0.01
28) Perylene-d12	13.29	264	83299	200.00	ng/ml	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	66335	407.04	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	40.70%		
13) Fluorene-d10	6.75	176	76649	439.99	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	44.00%		
22) Fluoranthene-d10	8.53	212	162469	385.22	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	38.52%		
25) Terphenyl-d14	8.88	244	130789	400.44	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	40.04%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	116359	345.26	ng/ml	100
4) 2-Methylnaphthalene	5.41	142	71082	349.74	ng/ml	95
5) 1-Methylnaphthalene	5.50	142	67138	343.19	ng/ml	91
6) Biphenyl	5.82	154	89673	353.51	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.96	156	64326	368.67	ng/ml	97
9) Acenaphthylene	6.19	152	115986	356.78	ng/ml	100
10) Acenaphthene	6.34	154	66455	355.87	ng/ml	98
11) Dibenzofuran	6.49	168	106893	356.72	ng/ml	86
12) 2,3,5-Trimethylnaphthalene	6.66	170	69748	403.80	ng/ml	90
14) Fluorene	6.77	166	88590	392.25	ng/ml	98
16) Dibenzothiophene	7.47	184	148749	356.37	ng/ml	98
17) Phenanthrene	7.57	178	143132	342.86	ng/ml	99
18) Anthracene	7.61	178	142658	357.96	ng/ml	99
19) Carbazole	7.75	167	126017	324.02	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	113785	359.85	ng/ml	100
21) Fluoranthene	8.55	202	170329	330.43	ng/ml	91
24) Pyrene	8.75	202	179644	347.71	ng/ml	95
26) Benz(a)anthracene	10.09	228	176058	361.62	ng/ml	99
27) Chrysene	10.14	228	165336	354.54	ng/ml	100
29) Benzo(b)fluoranthene	12.21	252	195878	380.61	ng/ml	98
30) Benzo(k)fluoranthene	12.28	252	186893	366.07	ng/ml	97
31) Benzo(e)pyrene	12.96	252	184653	376.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	173681	384.83	ng/ml	97
33) Perylene	13.37	252	171111	361.42	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.49	276	161015m	363.83	ng/ml	
35) Dibenz(a,h)anthracene	15.52	278	161474	359.93	ng/ml	95
36) Benzo(g,h,i)perylene	15.88	276	167493	323.18	ng/ml	94

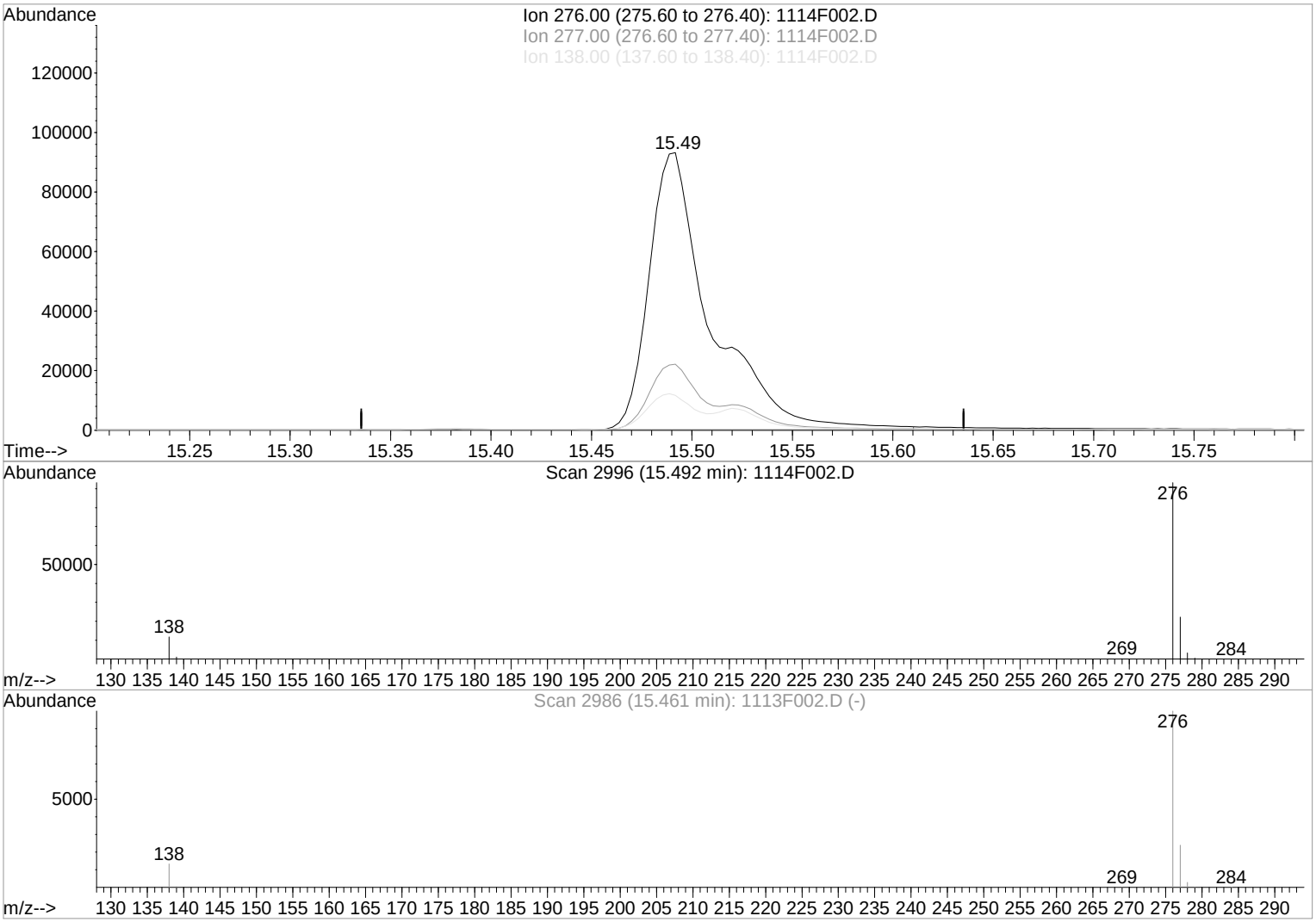
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 14 6:55 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F002.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 449.59ng/ml

response 198972

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	23.62
138.00	17.70	12.27
0.00	0.00	0.00

Manual Integration:

Before

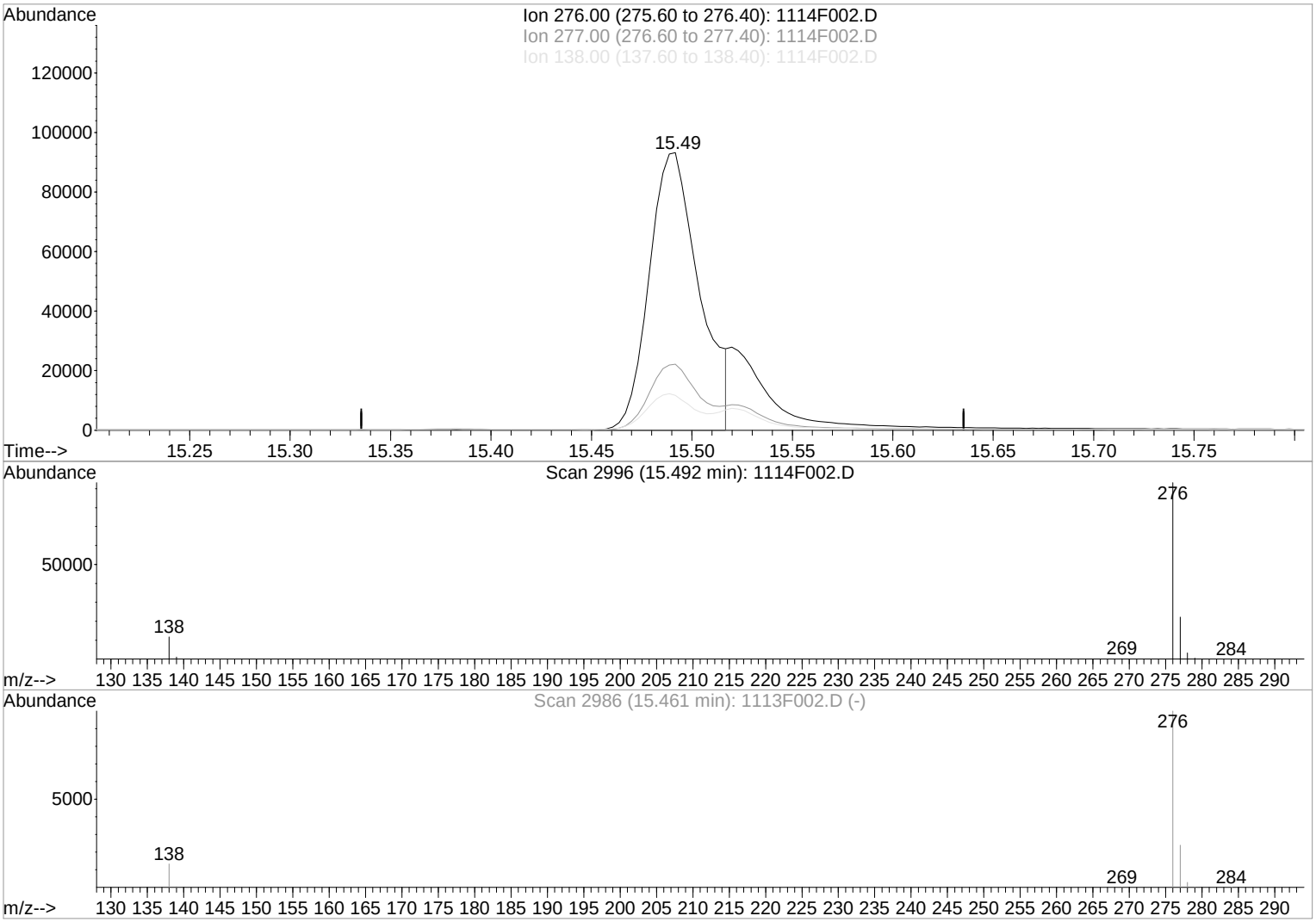
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F002.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 363.83ng/ml m

response 161015

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	23.77
138.00	17.70	12.59
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

11/30/18

Evaluate Continuing Calibration Report

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00
2	T	Naphthalene	1.154	0.996	13.7	88	-0.01
3	S	2-Methylnaphthalene-d10	0.558	0.568	-1.8	102	-0.01
4	T	2-Methylnaphthalene	0.696	0.609	12.5	88	0.00
5	T	1-Methylnaphthalene	0.670	0.575	14.2	88	0.00
6	T	Biphenyl	0.869	0.768	11.6	91	0.00
7	T	2,6-Dimethylnaphthalene	0.598	0.551	7.9	94	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00
9	T	Acenaphthylene	2.386	2.129	10.8	92	0.00
10	T	Acenaphthene	1.371	1.220	11.0	93	0.00
11	T	Dibenzofuran	2.200	1.962	10.8	92	0.00
12	T	2,3,5-Trimethylnaphthalene	1.268	1.280	-0.9	105	0.00
13	S	Fluorene-d10	1.279	1.407	-10.0	118	0.00
14	T	Fluorene	1.658	1.626	1.9	102	0.00
15	I	Phenanthrene-d10	1.000	1.000	0.0	124	0.00
16	T	Dibenzothiophene	1.247	1.111	10.9	109	0.00
17	T	Phenanthrene	1.248	1.069	14.3	108	0.00
18	T	Anthracene	1.191	1.066	10.5	108	0.00
19	T	Carbazole	1.162	0.942	18.9	98	0.00
20	T	1-Methylphenanthrene	0.945	0.850	10.1	110	0.00
21	T	Fluoranthene	1.541	1.273	17.4	100	0.00
22	S	Fluoranthene-d10	1.260	1.214	3.7	115	0.00
23	I	Chrysene-d12	1.000	1.000	0.0	109	0.00
24	T	Pyrene	1.372	1.193	13.0	99	0.00
25	S	Terphenyl-d14	0.867	0.868	-0.1	114	-0.01
26	T	Benz(a)anthracene	1.293	1.169	9.6	100	0.00
27	T	Chrysene	1.239	1.098	11.4	96	0.00
28	I	Perylene-d12	1.000	1.000	0.0	113	0.02
29	T	Benzo(b)fluoranthene	1.236	1.176	4.9	102	0.00
30	T	Benzo(k)fluoranthene	1.226	1.122	8.5	99	0.00
31	T	Benzo(e)pyrene	1.178	1.108	5.9	104	0.02
32	T	Benzo(a)pyrene	1.084	1.043	3.8	106	0.02
33	T	Perylene	1.137	1.027	9.7	100	0.02
34	T	Indeno(1,2,3-cd)pyrene	1.063	0.966	9.1	104	0.03
35	T	Dibenz(a,h)anthracene	1.077	0.969	10.0	103	0.01
36	T	Benzo(g,h,i)perylene	1.244	1.005	19.2	94	0.02

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

Injection Log

Directory: J:\MS14\DATA\071118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
20	20	0711F020.D	1.	K1805517-004		11 Jul 2018 15:40
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

SIM-PAH ICAL

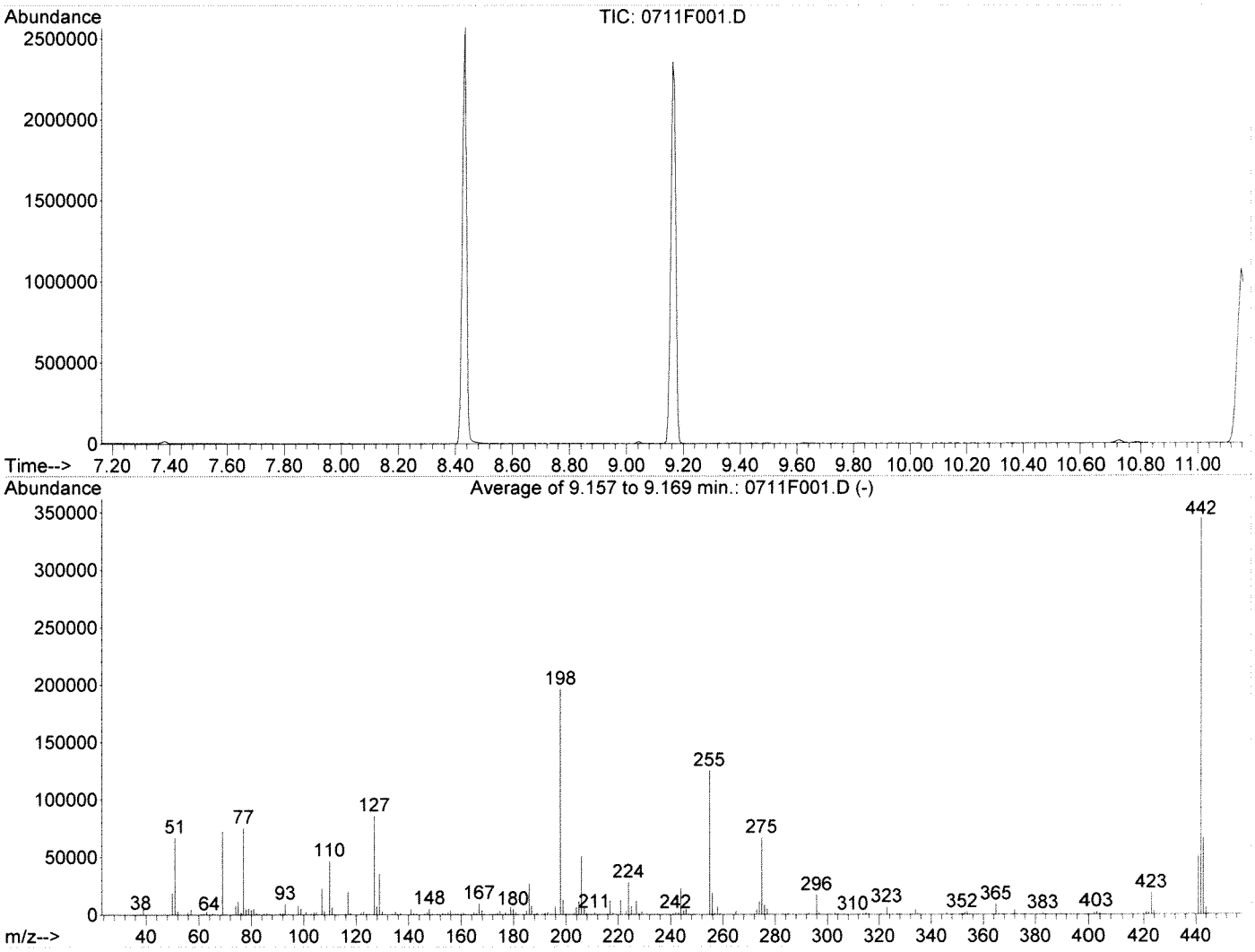
CAL15779

JUL 16 2018

JUL 27 2018

DFTPP

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

JUL 16 2018

JUL 27 2018

J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

JUL 16 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

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229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

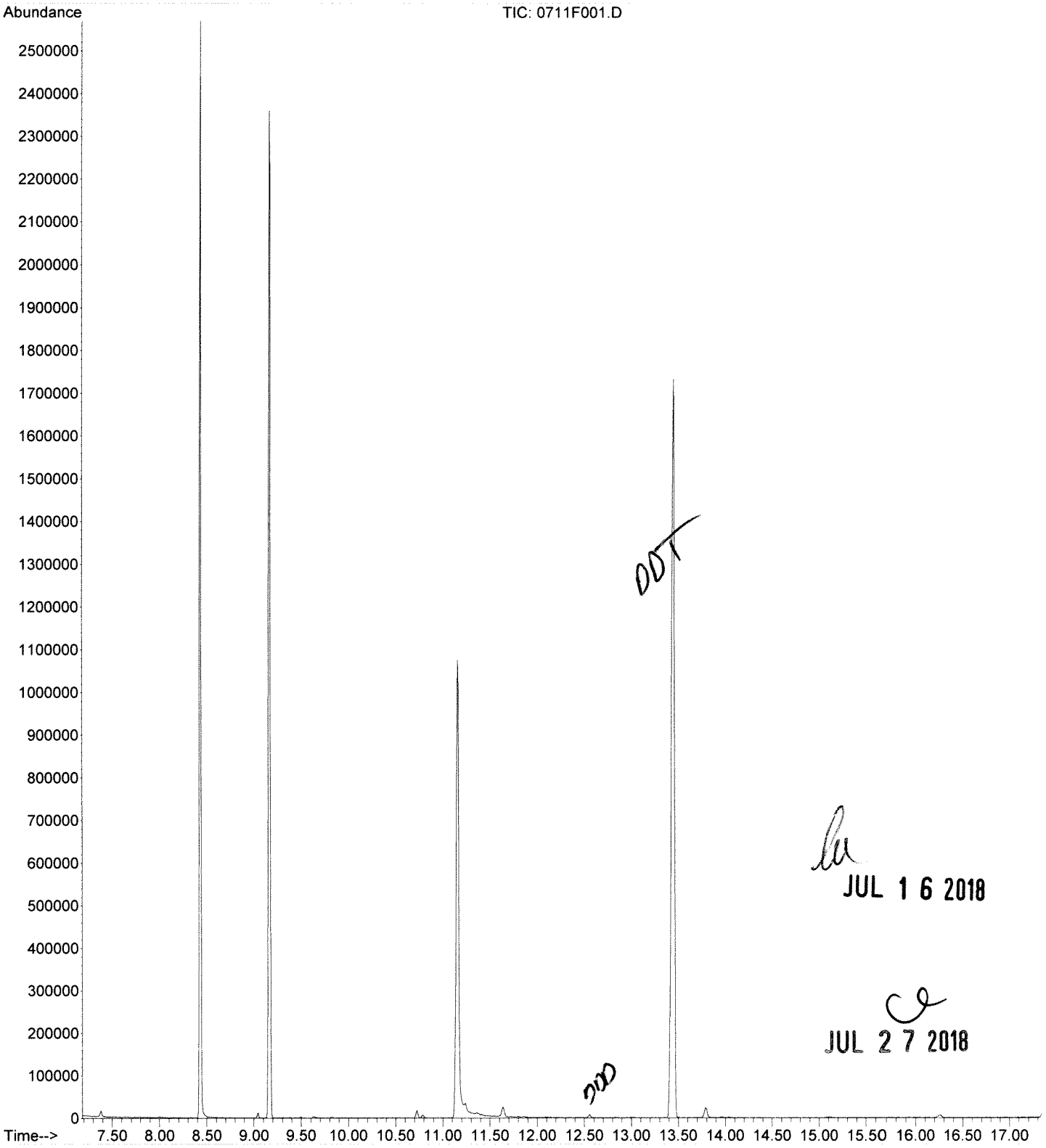
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

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File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



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1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	ODD	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

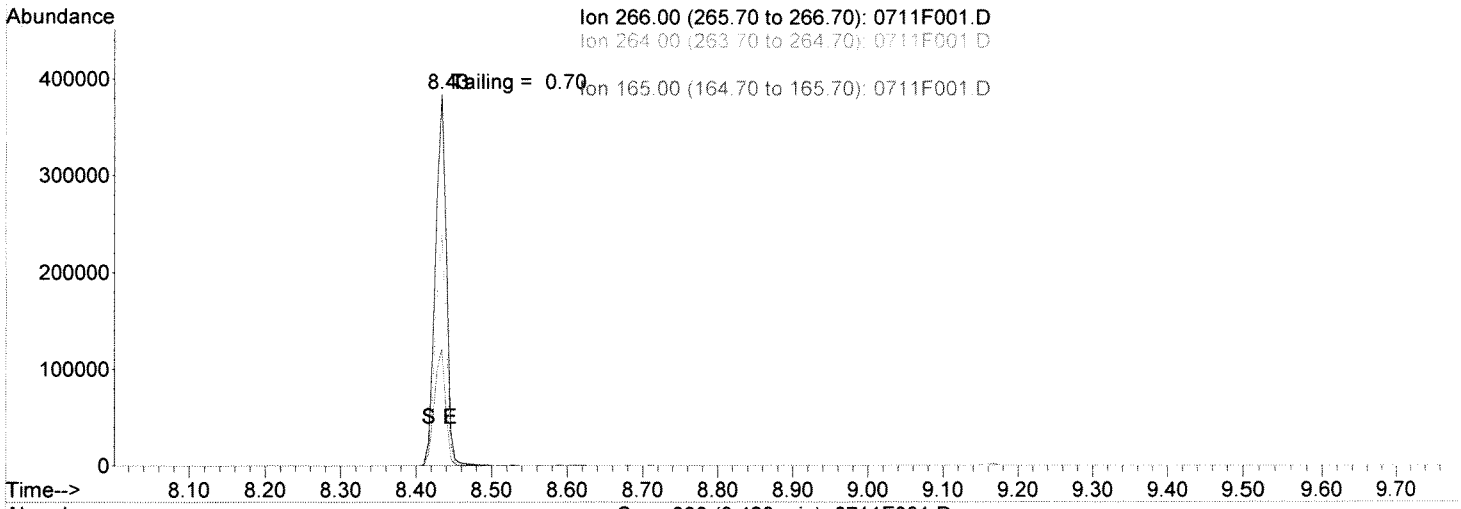
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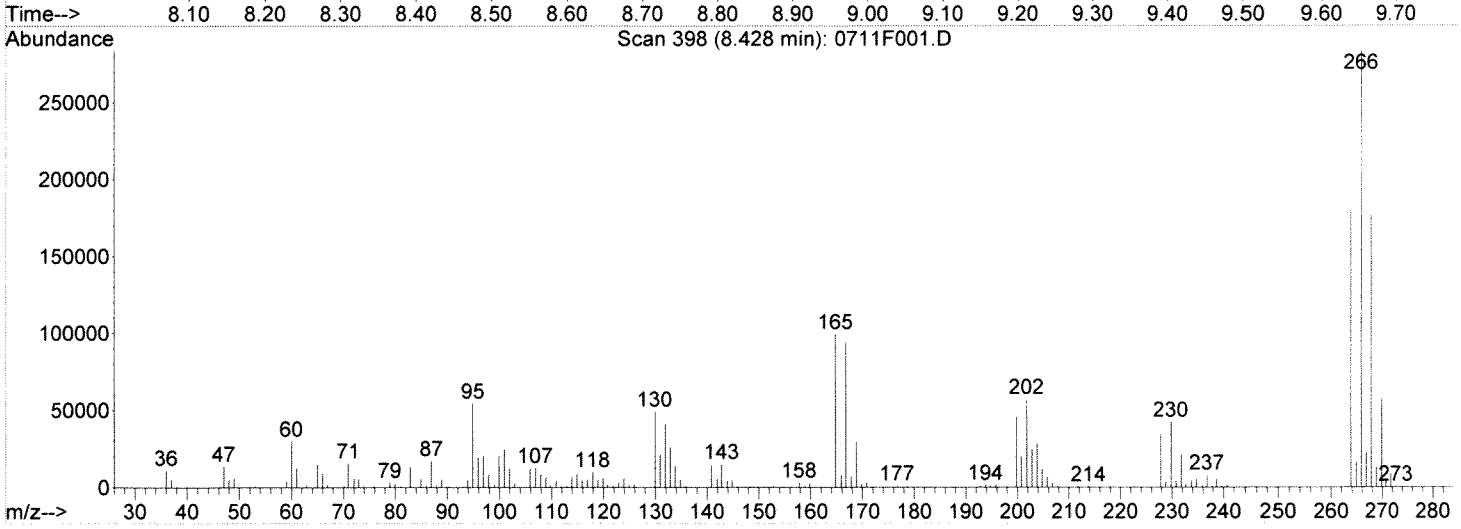
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -2%

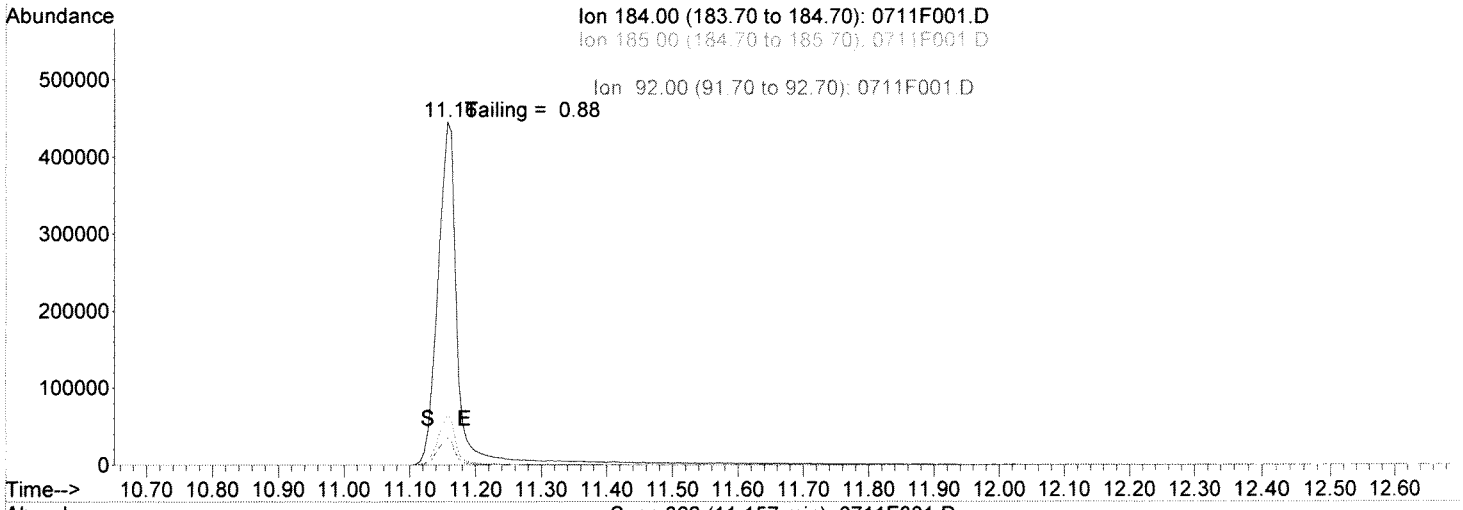
JUL 16 2018

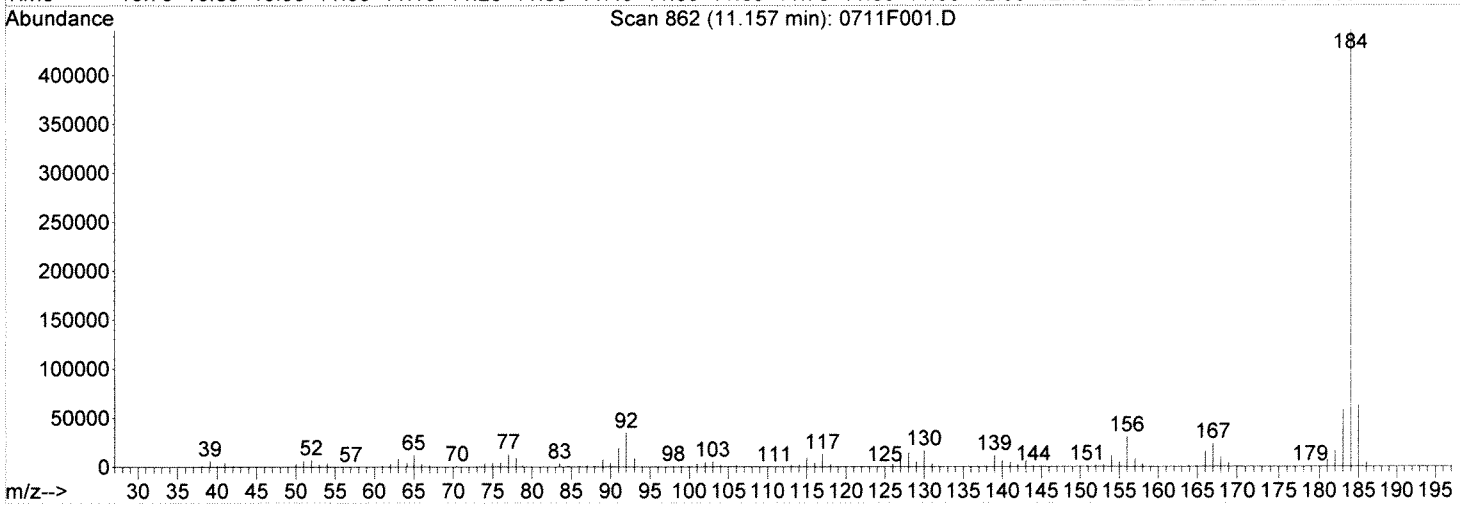
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

JUL 16 2018

JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

7/16/18

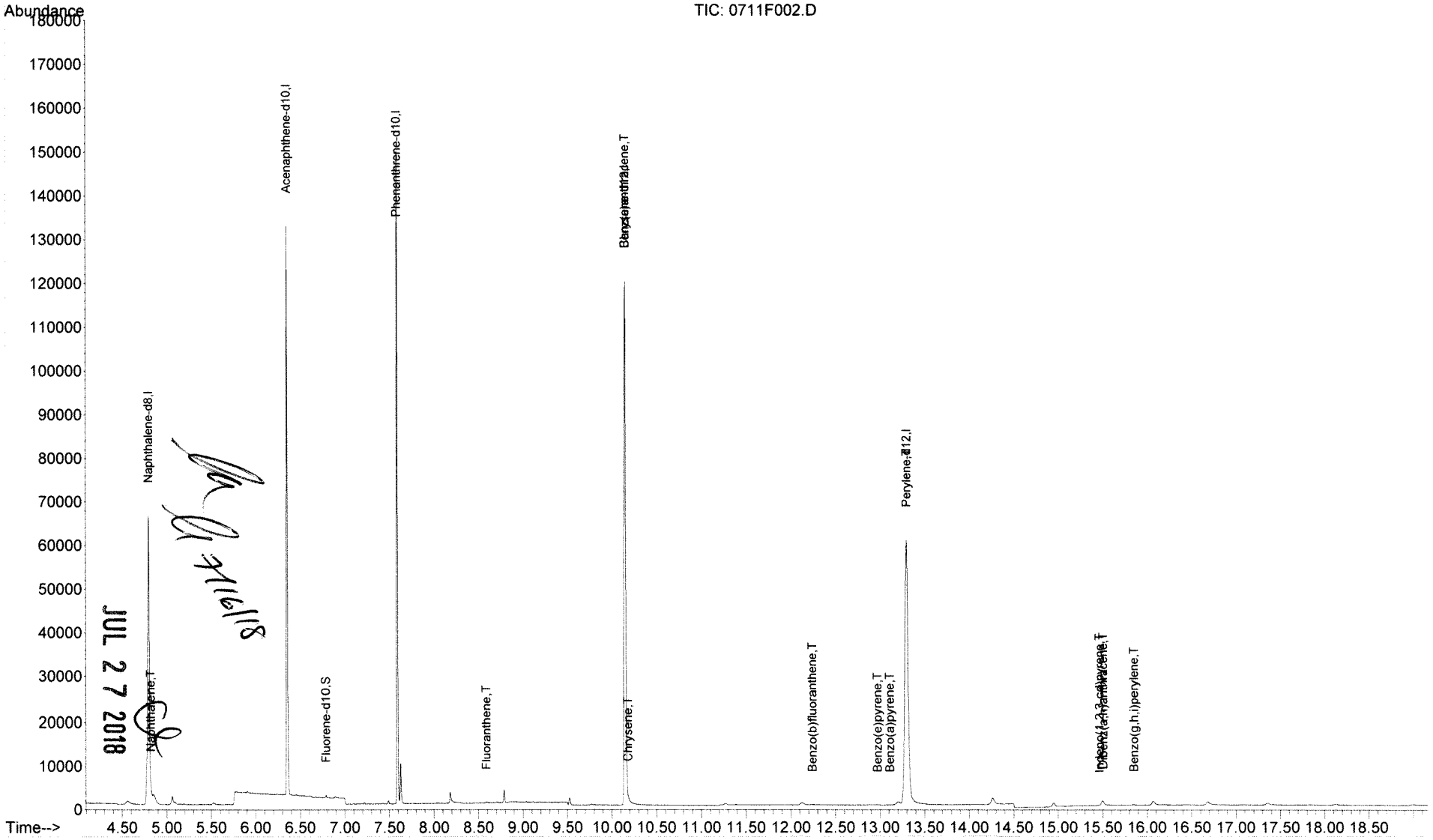
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

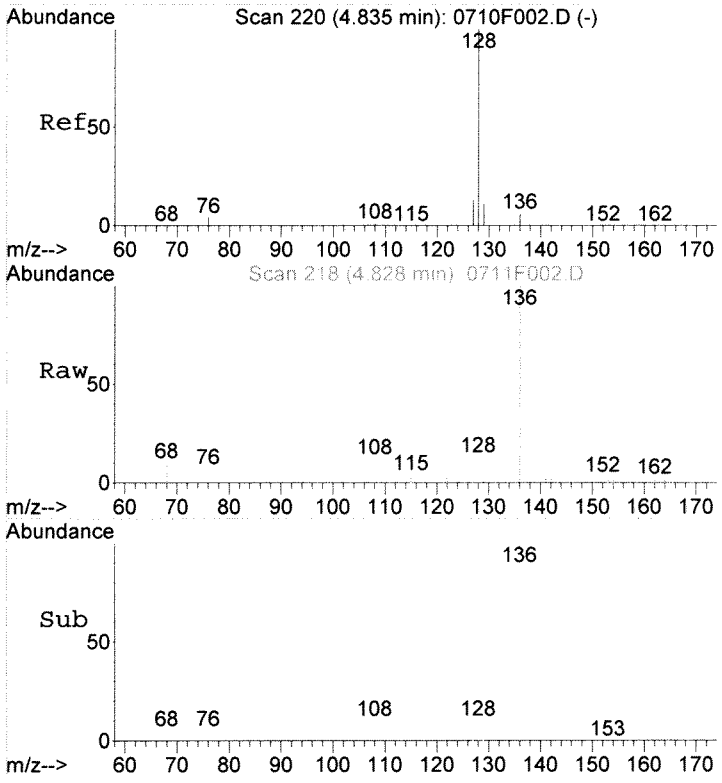
Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



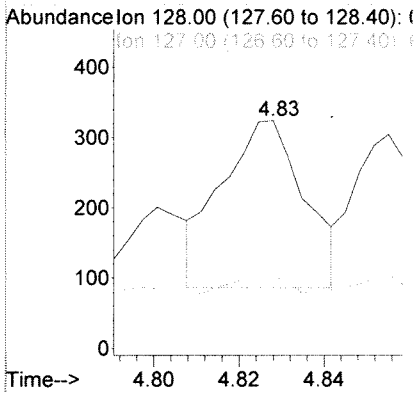
JUL 27 2018

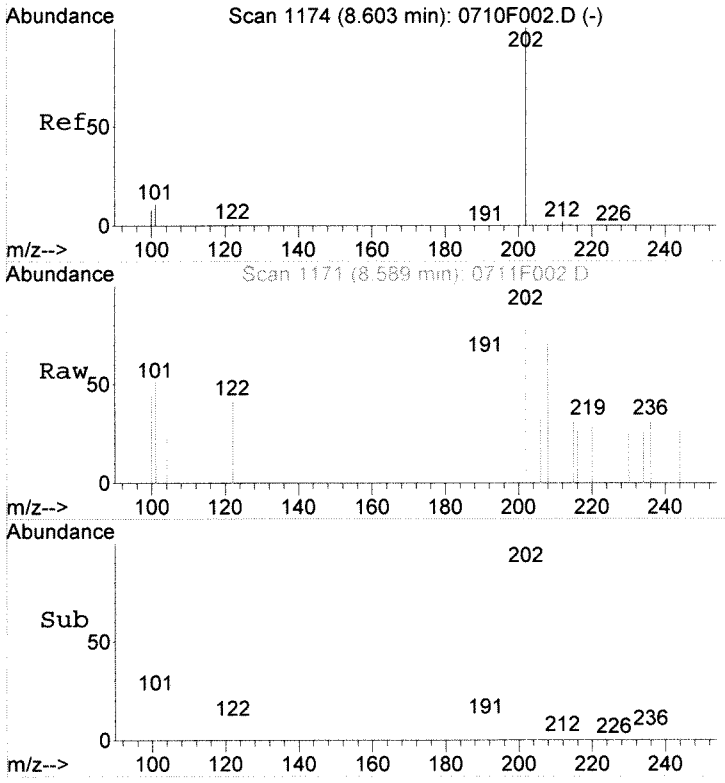


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

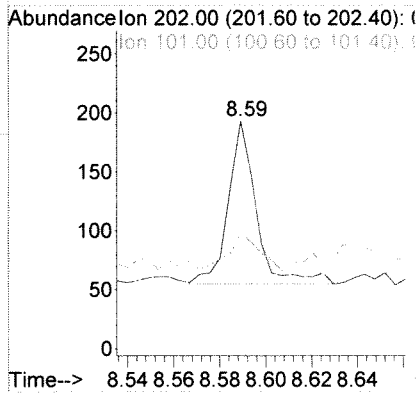




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

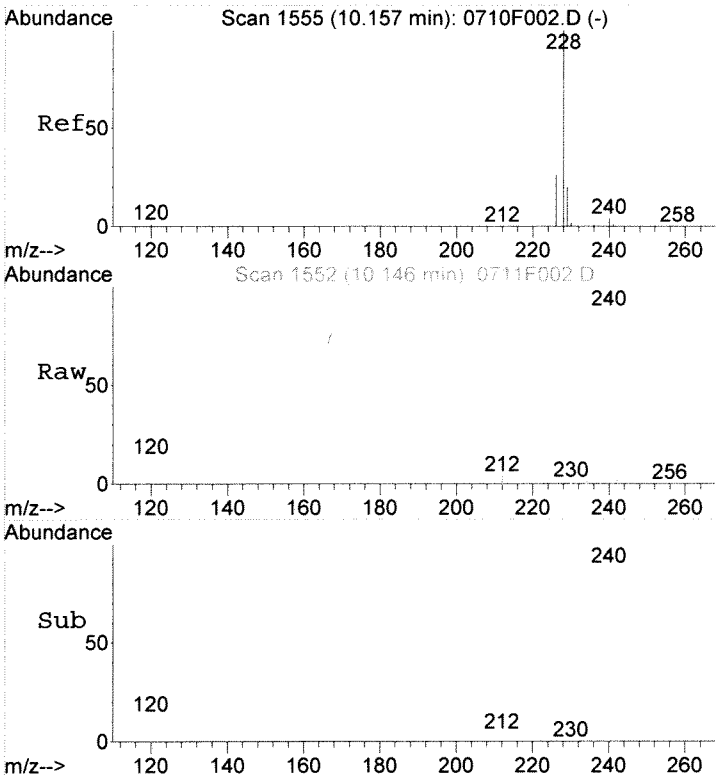
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

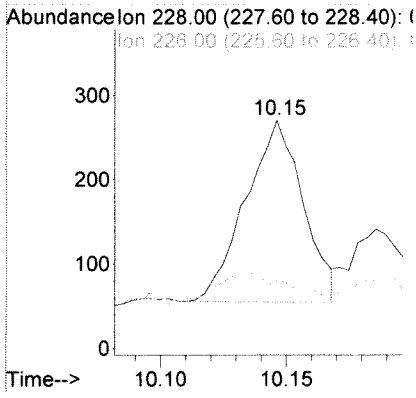
JUL 27 2018

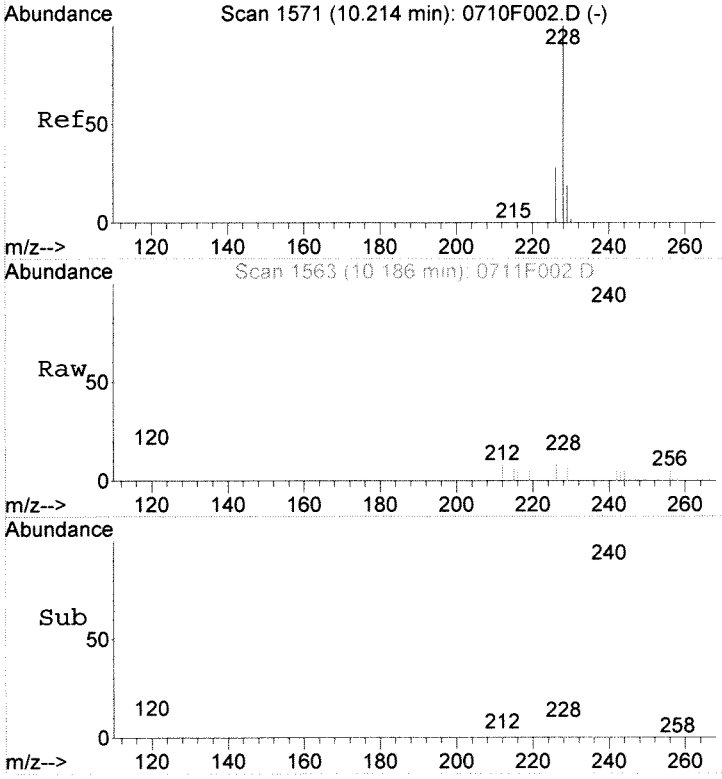


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

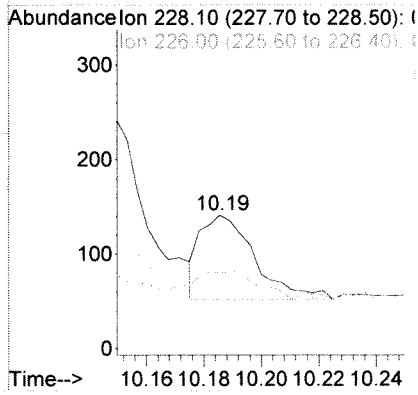




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

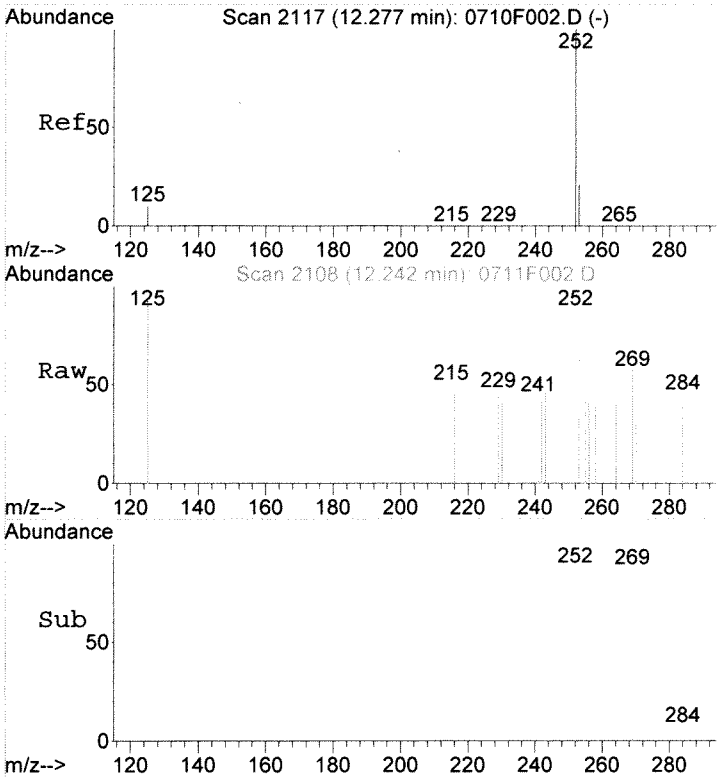
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

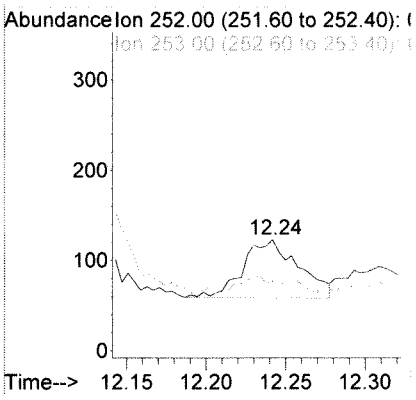
JUL 27 2018

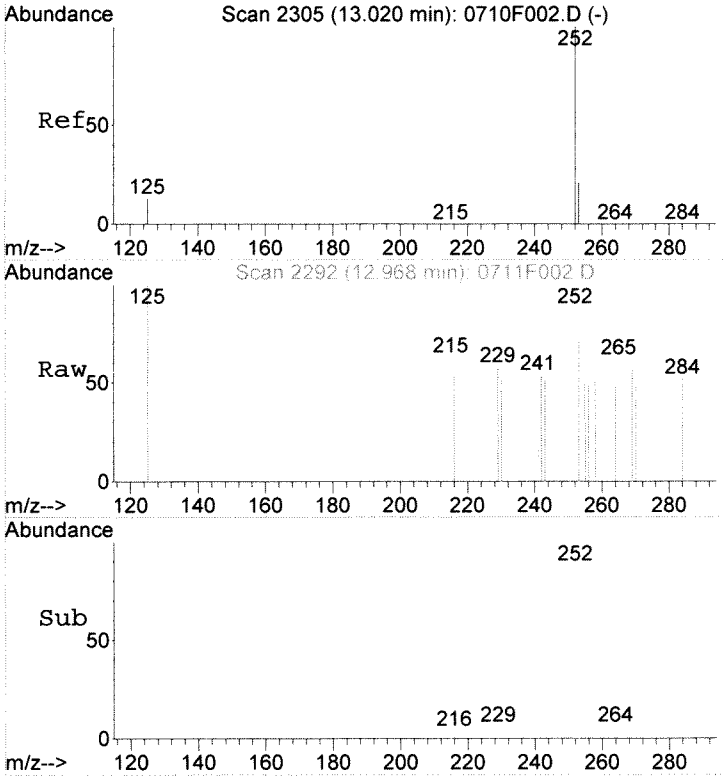


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

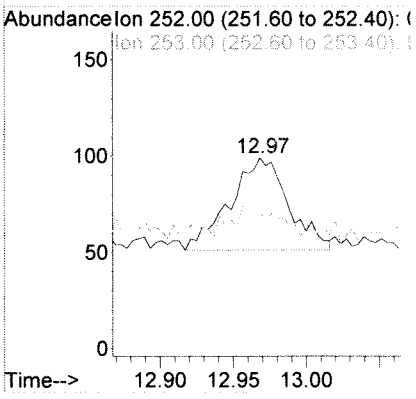




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

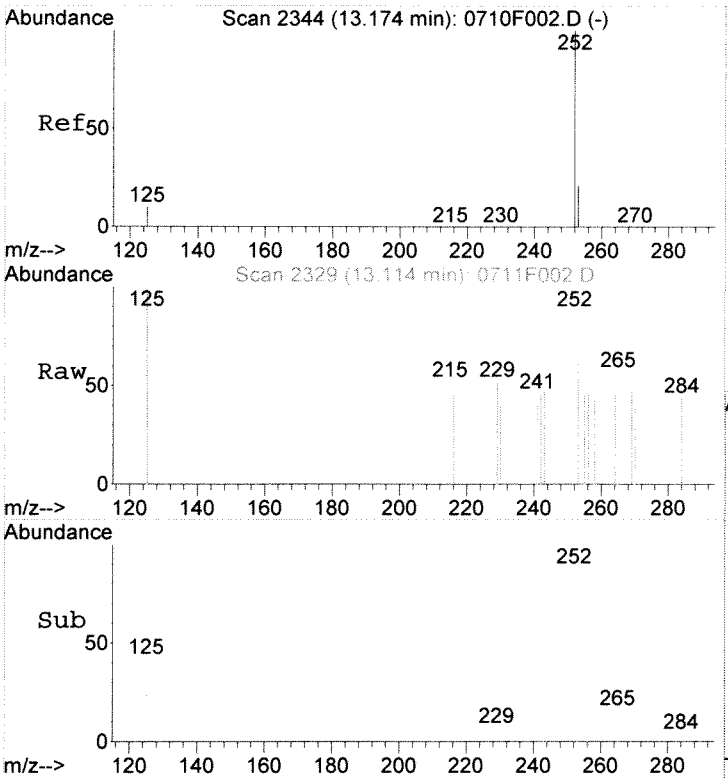
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



7/16/18

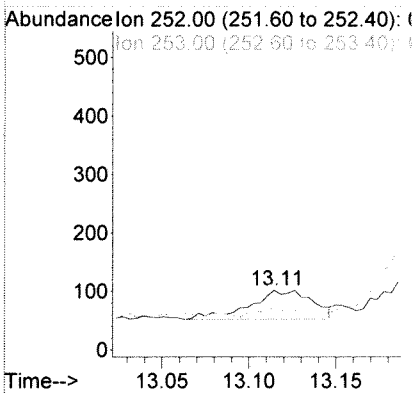
JUL 27 2018

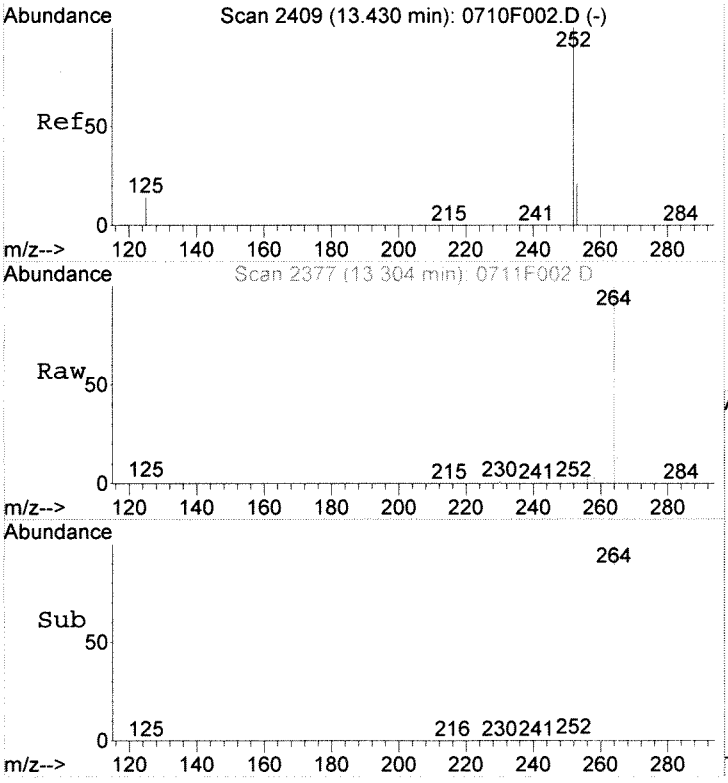


#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 126

Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1

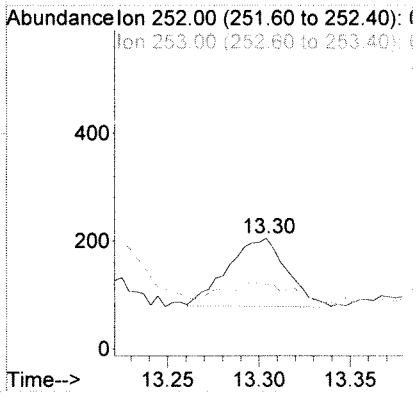




#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

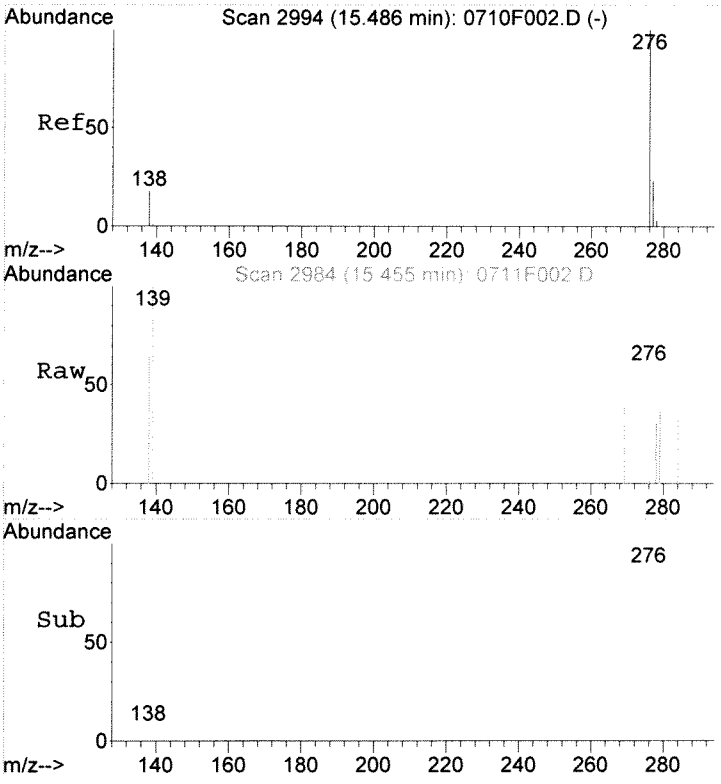
Tgt Ion:252 Resp: 287

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

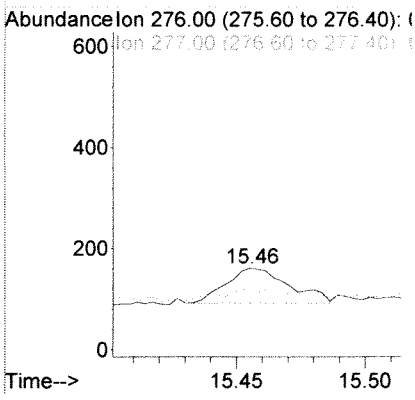
JUL 27 2018

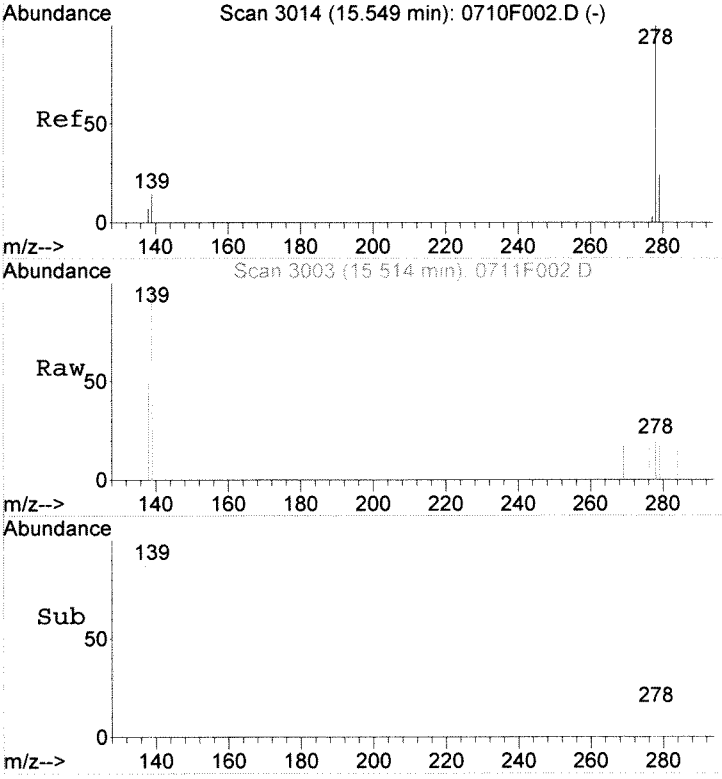


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

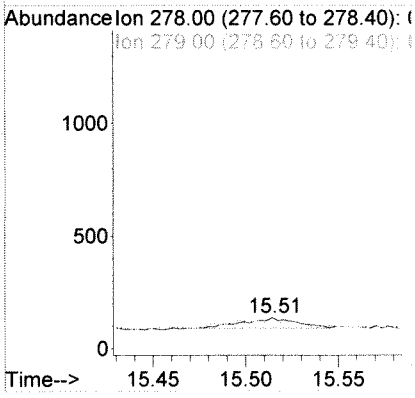




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

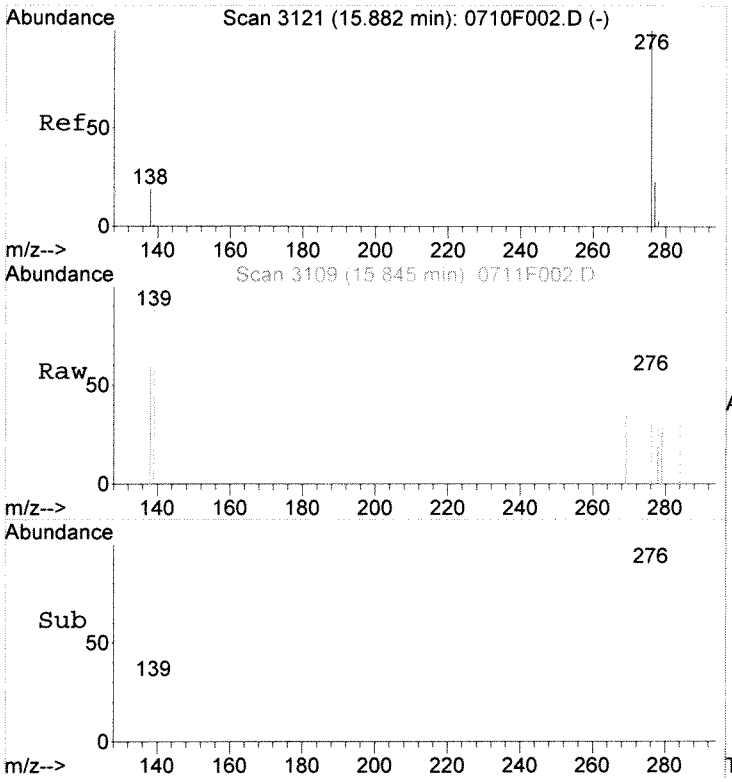
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

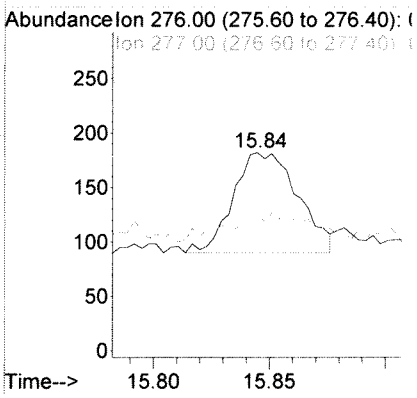
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.22%		
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.28%		
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.19%		
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.30%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

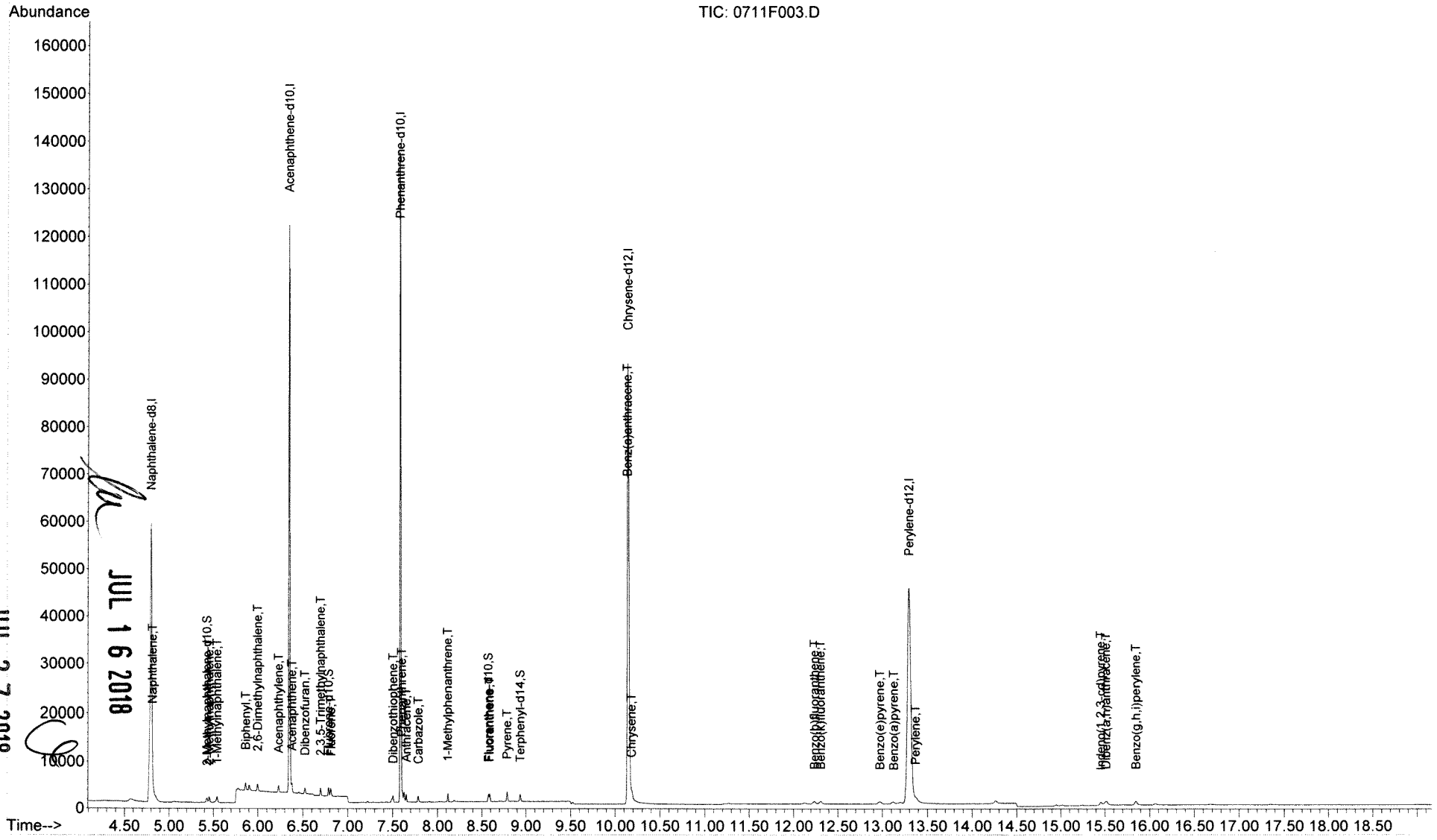
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

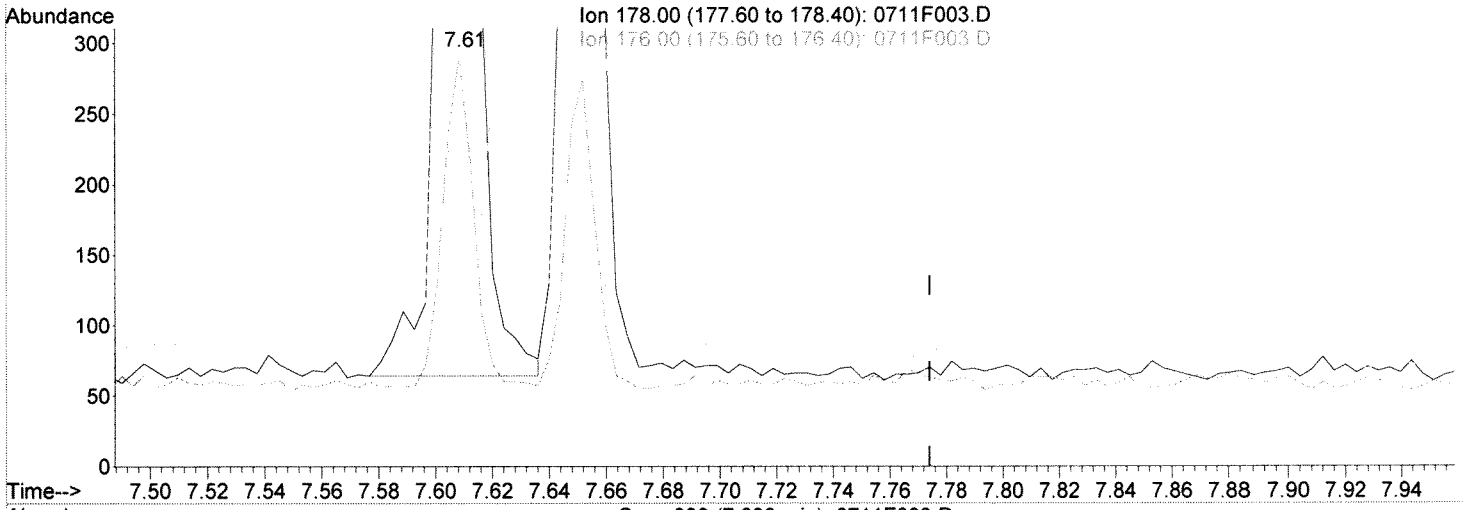
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

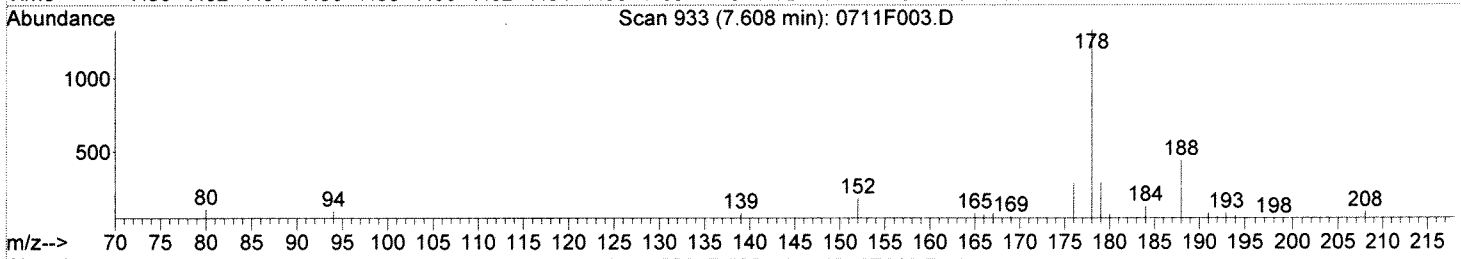


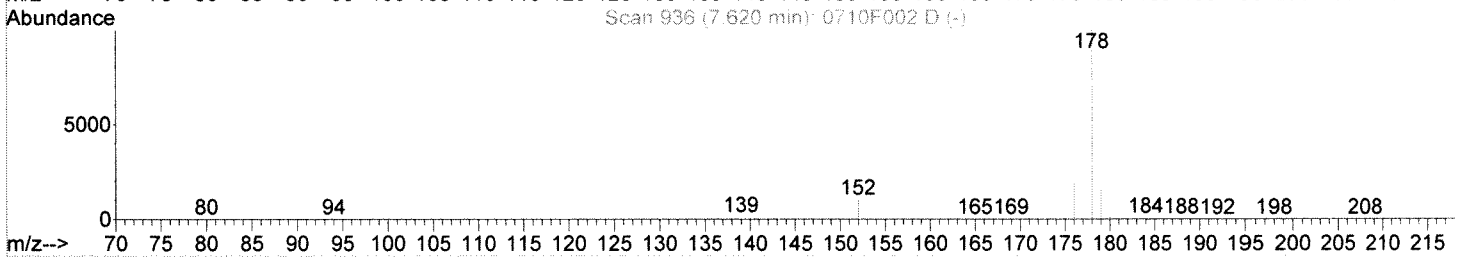
JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

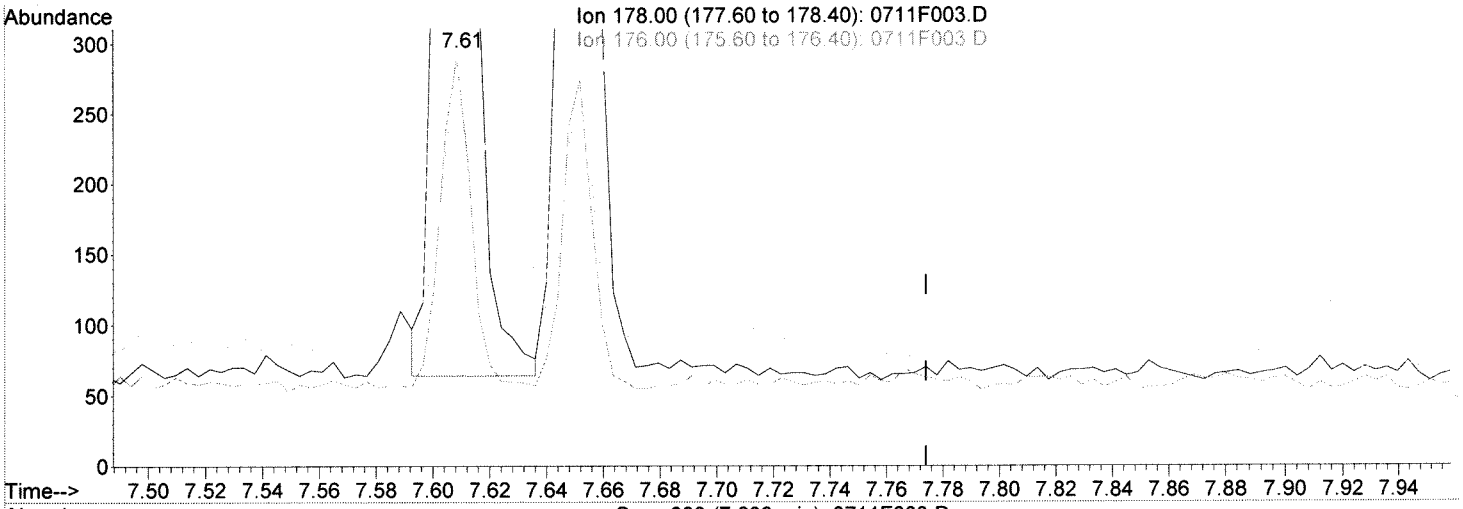
JUL 2 7 2018

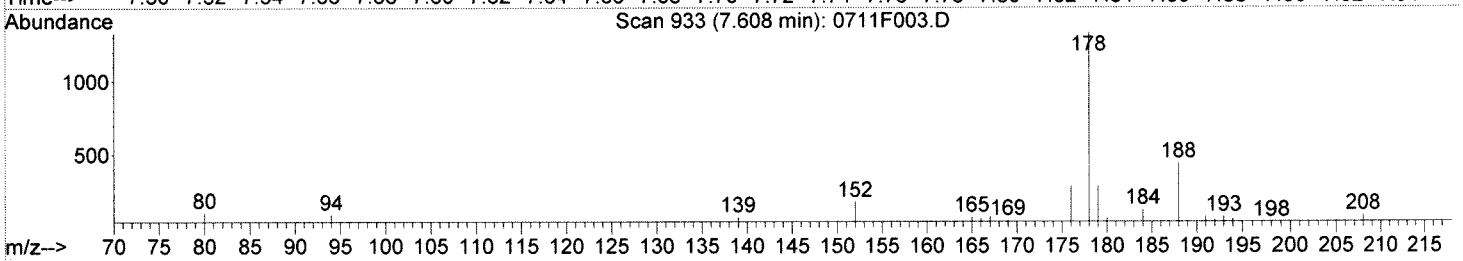
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

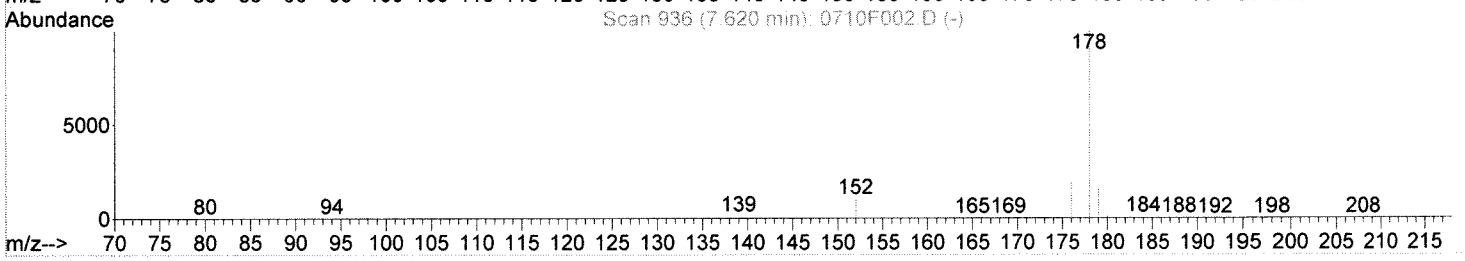
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

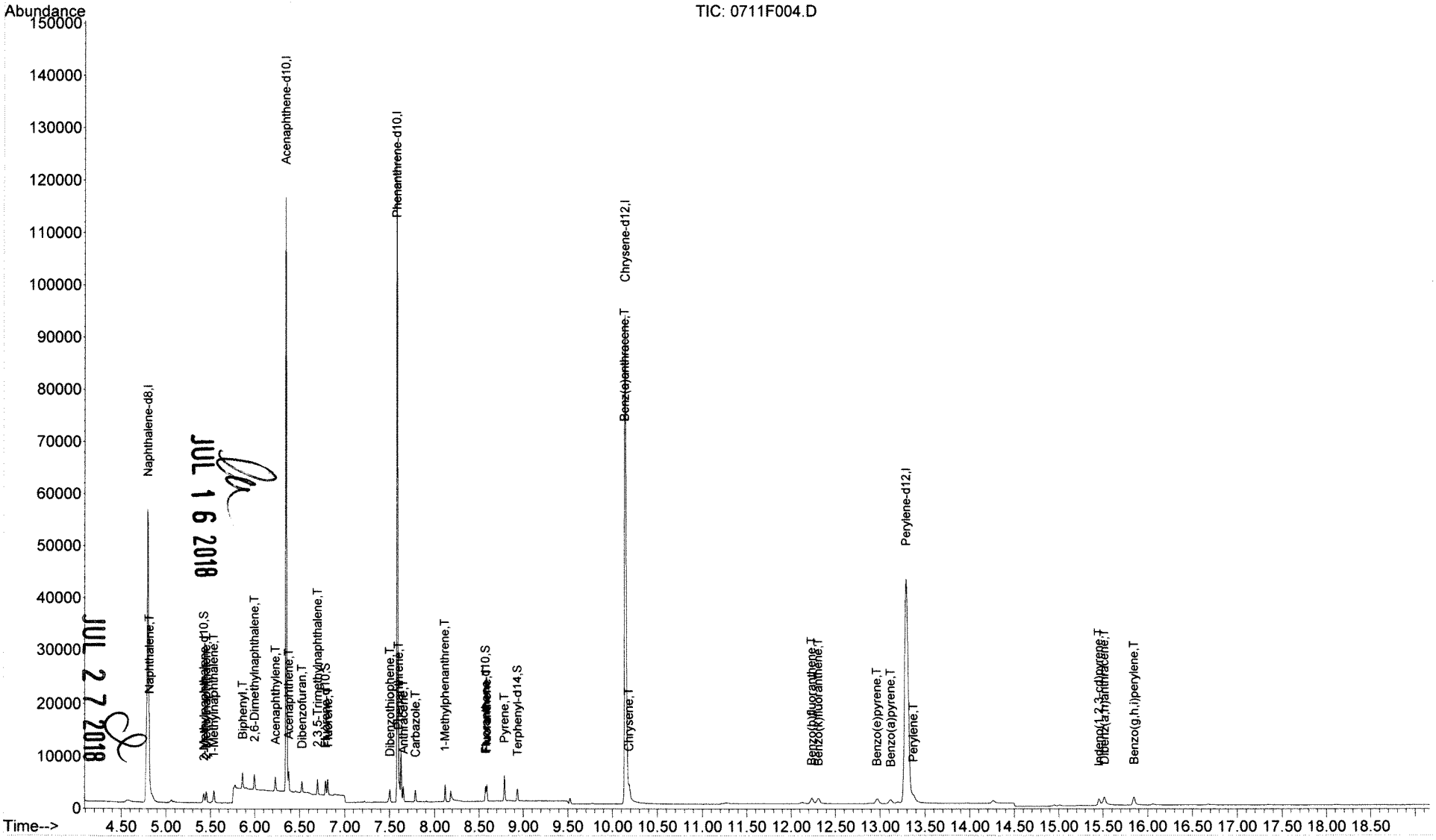
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

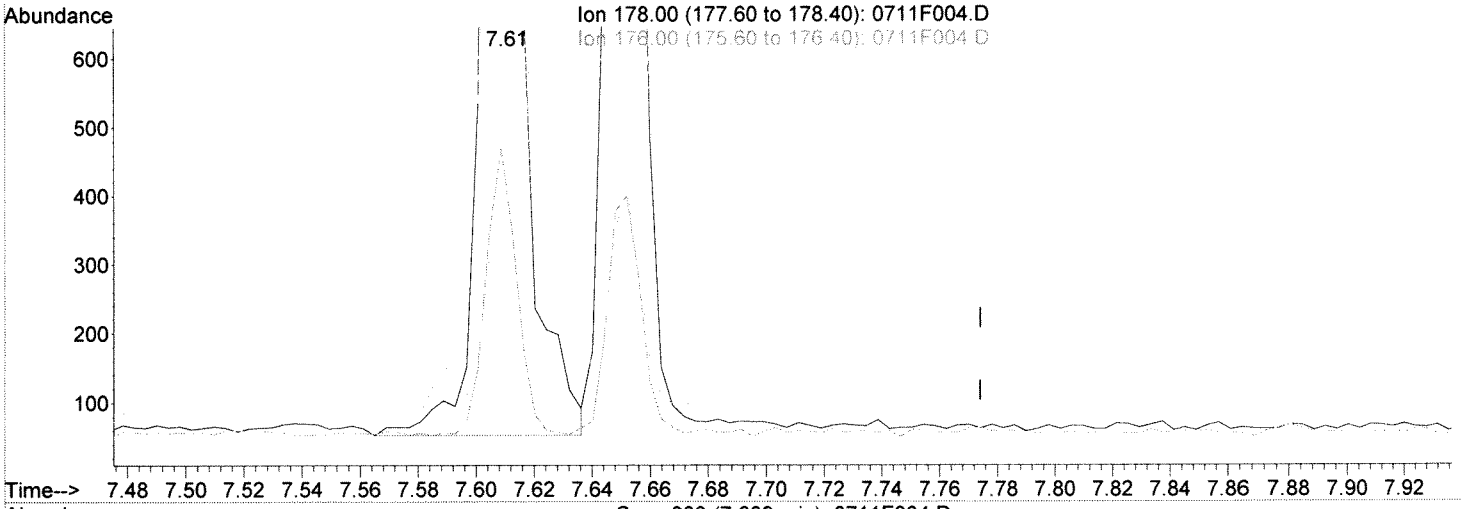
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

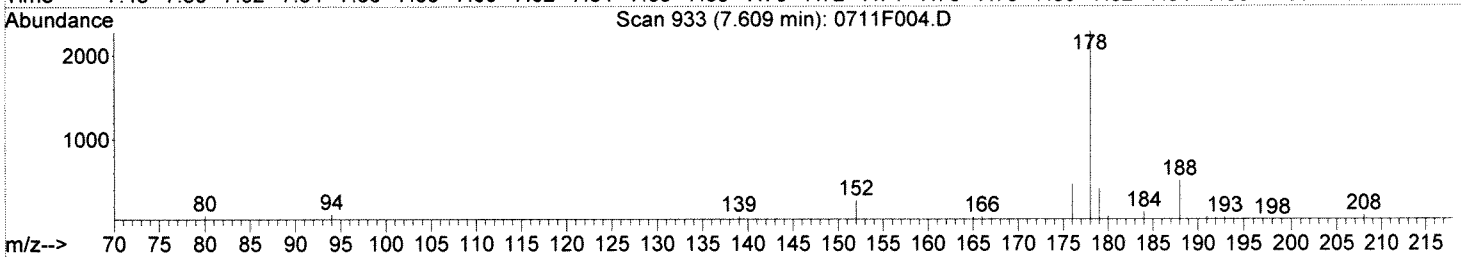


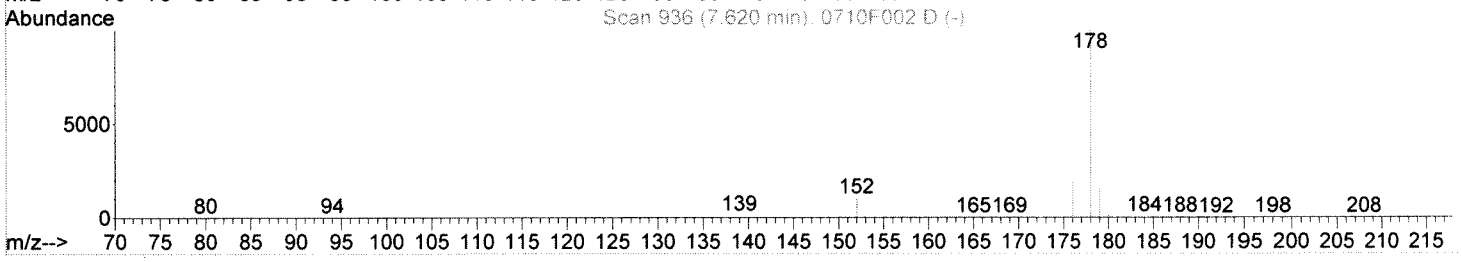
JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

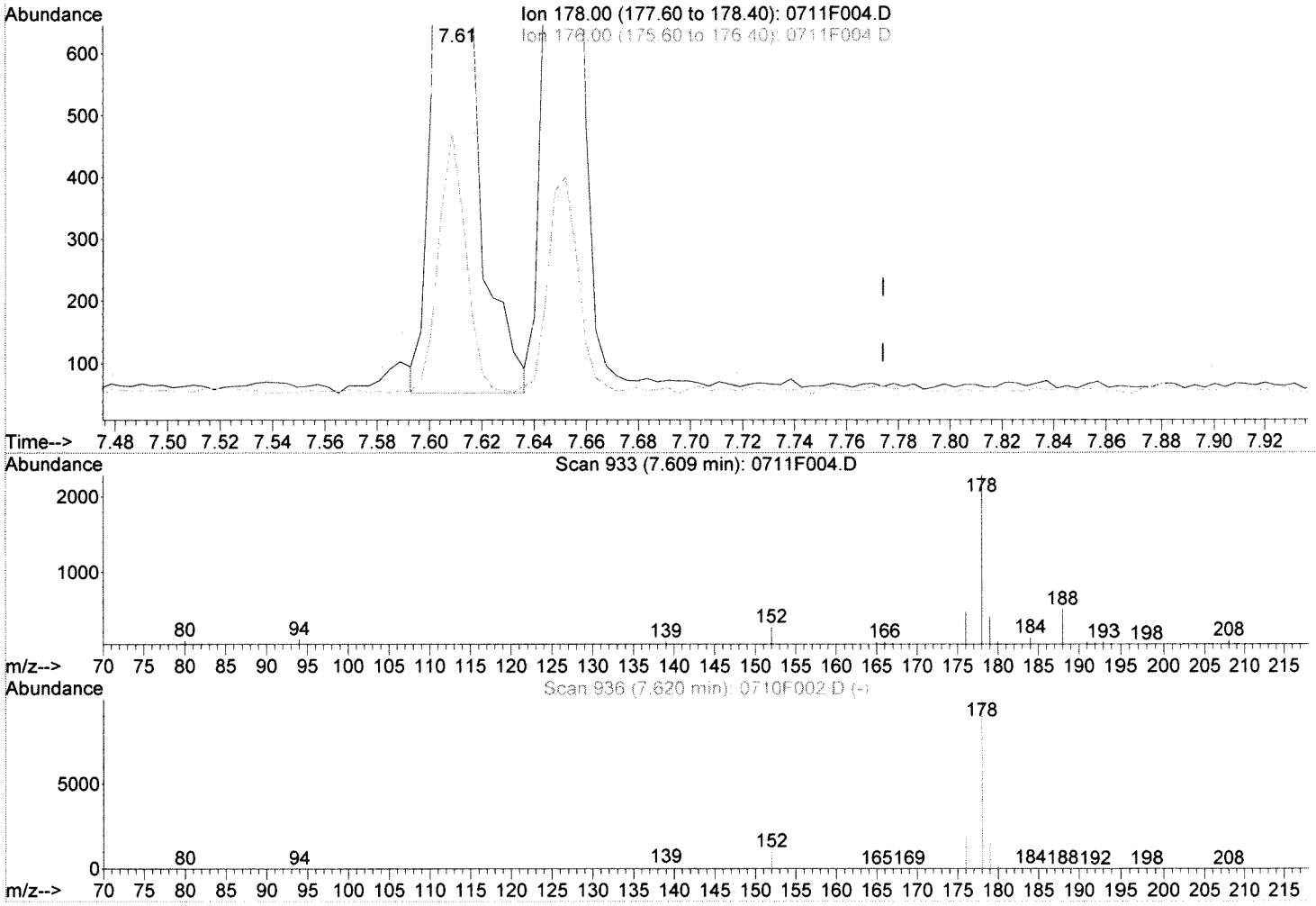
07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.81%			
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.82%			
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.74%			
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.82%			
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

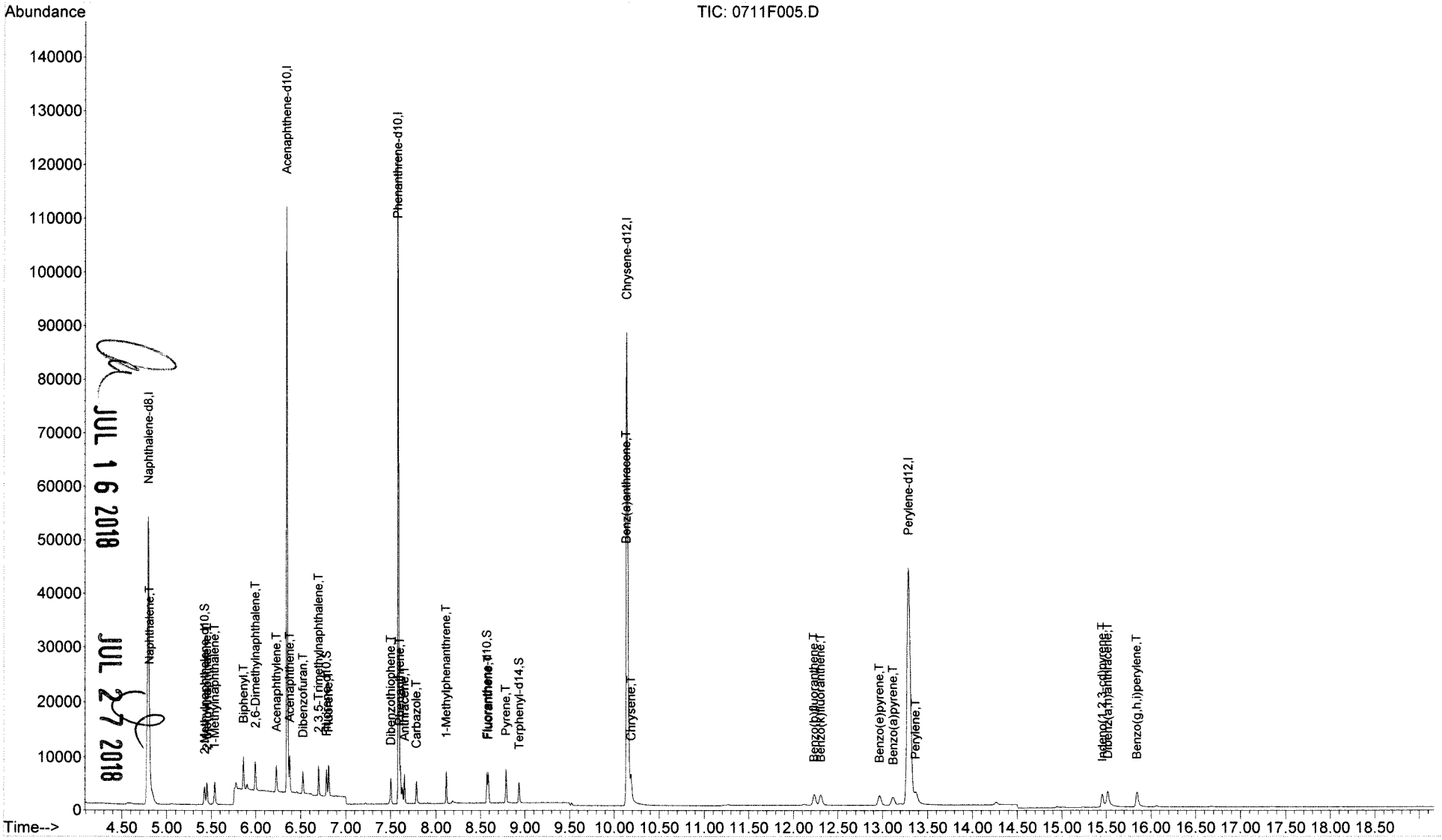
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

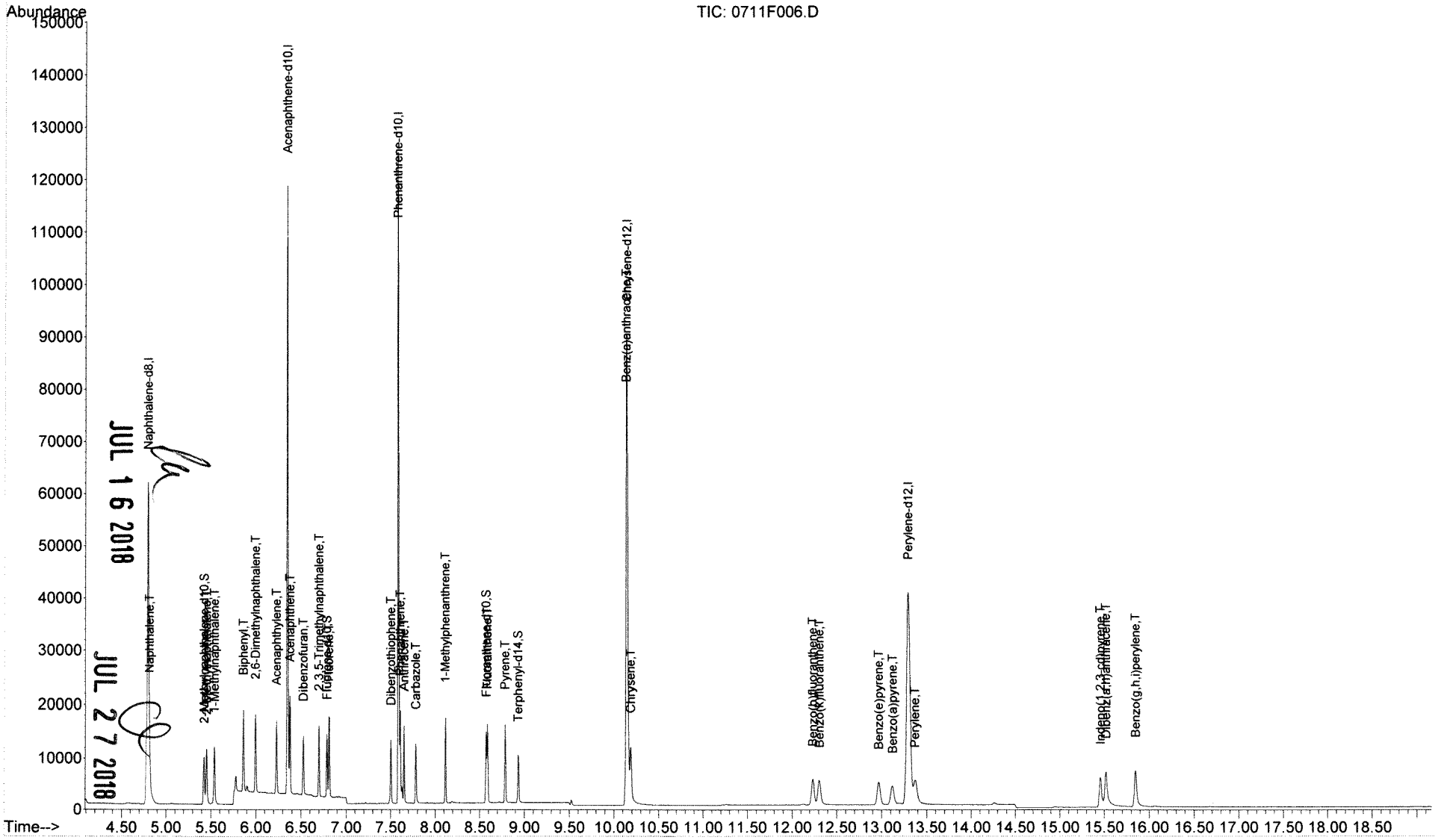
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

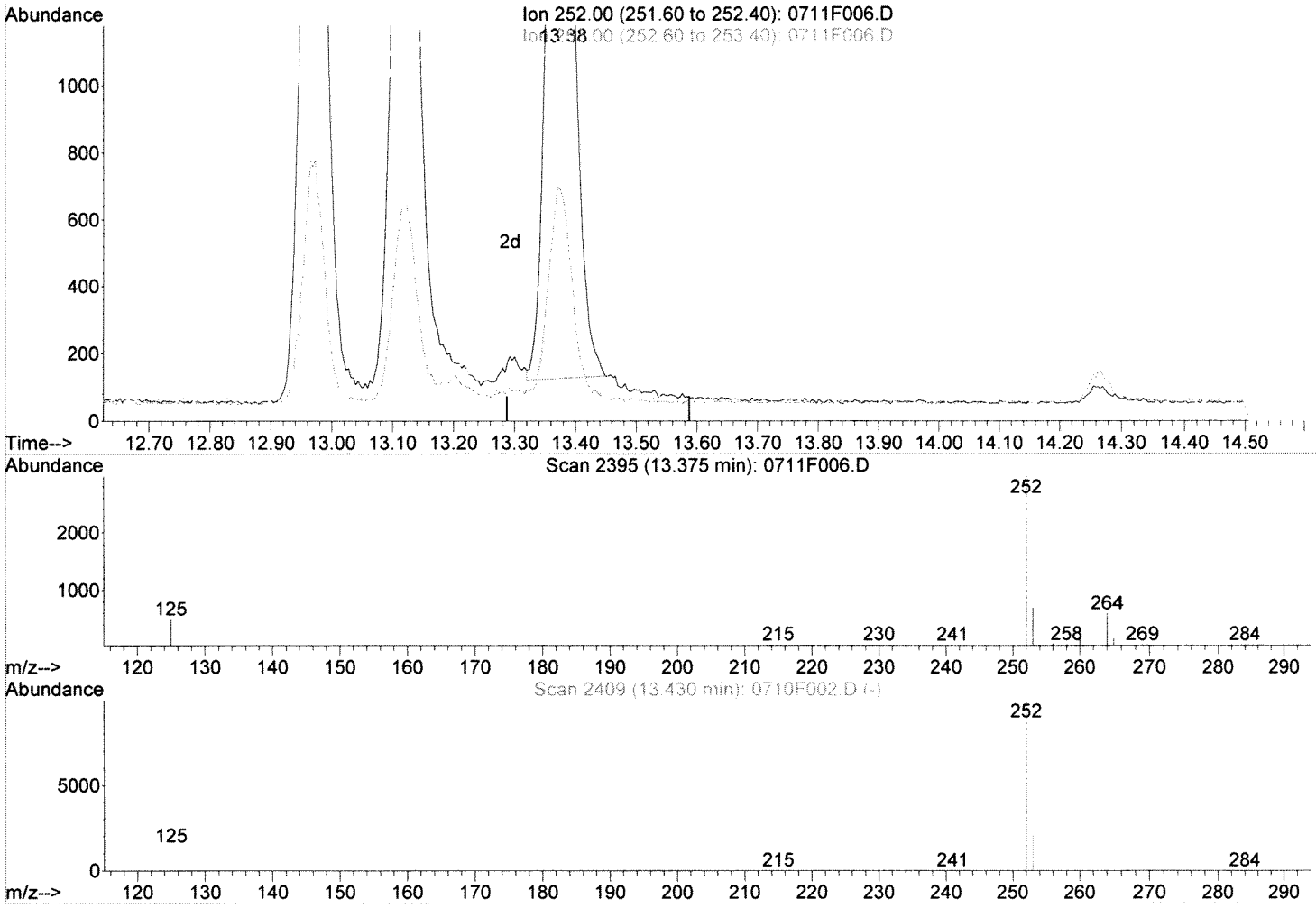
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

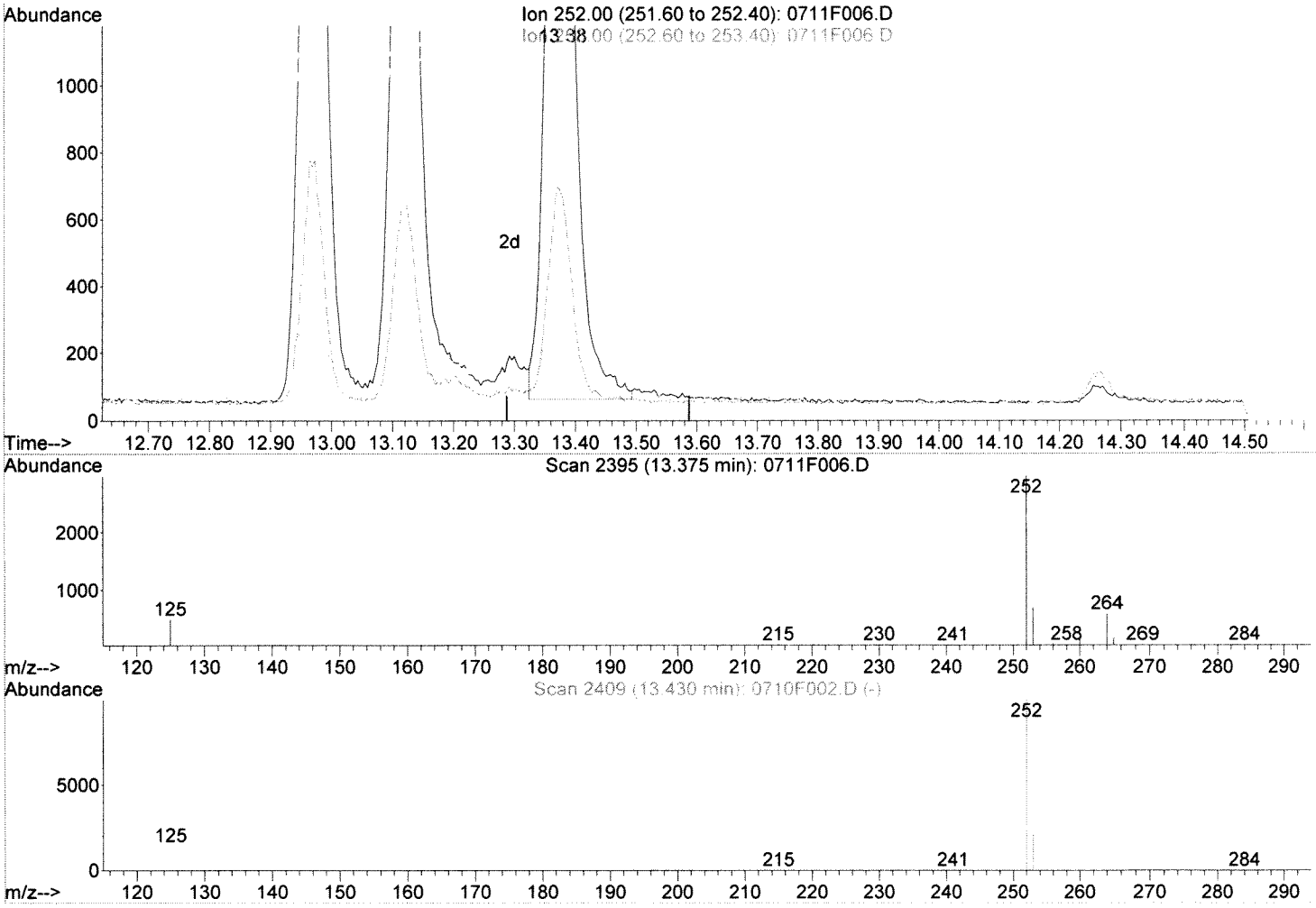
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (QedIt)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

07/11/18

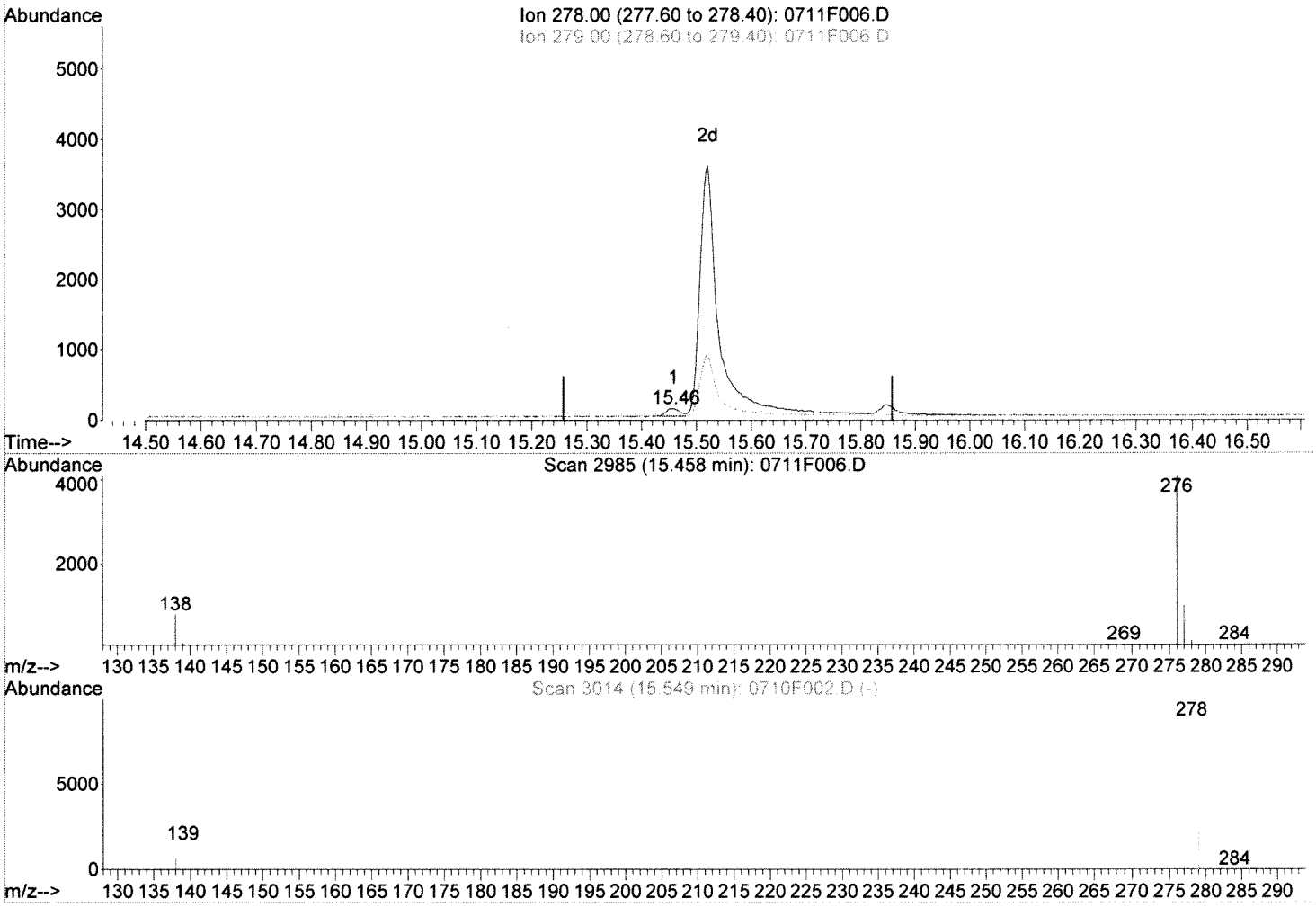
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

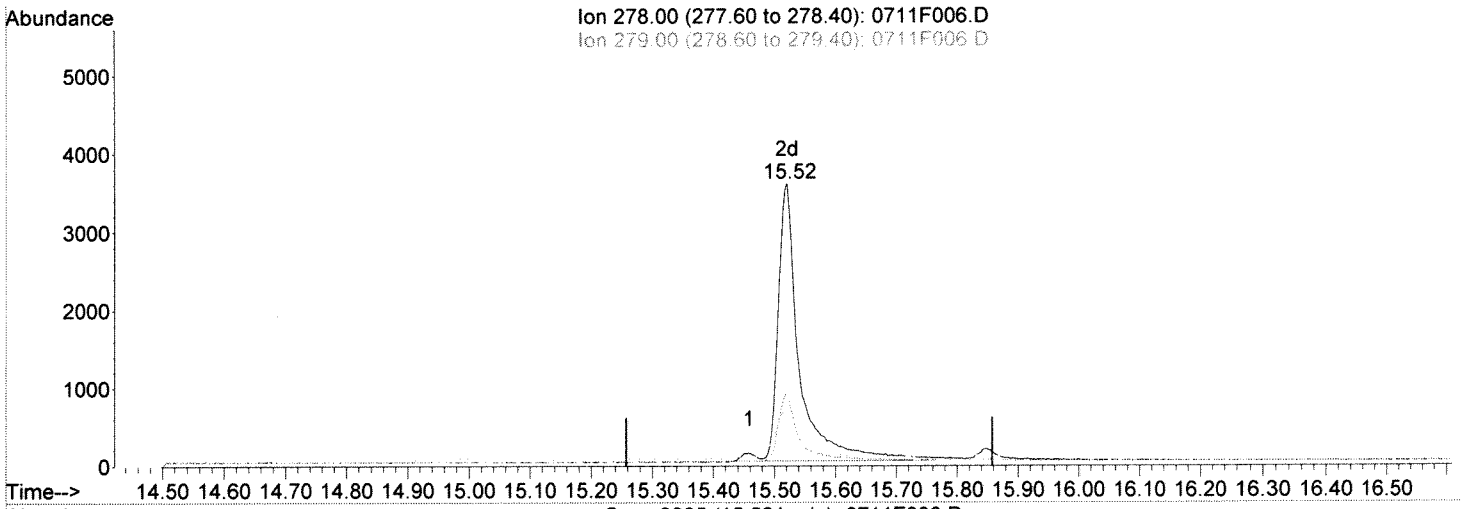
07/11/18

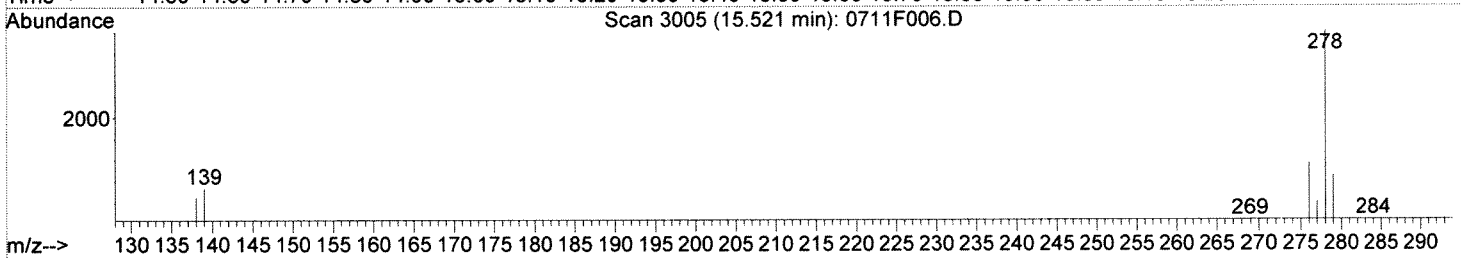
JUL 27 2018

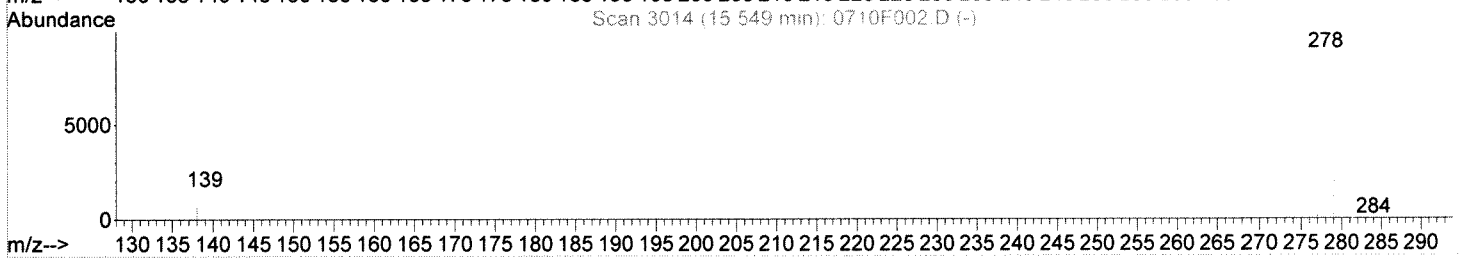
0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

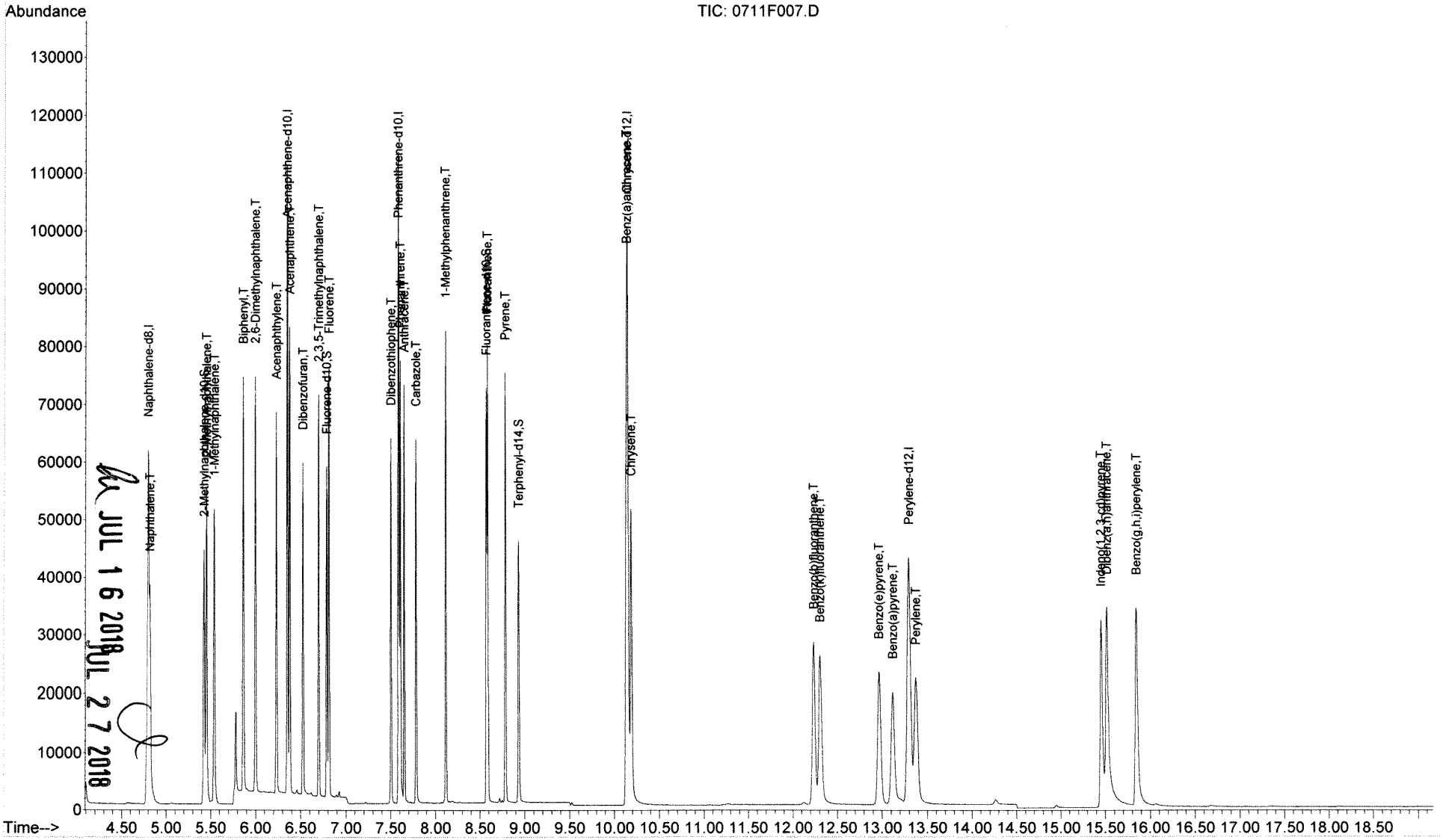
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 19.15%			
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.97%			
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 20.37%			
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.13%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

JUL 16 2018

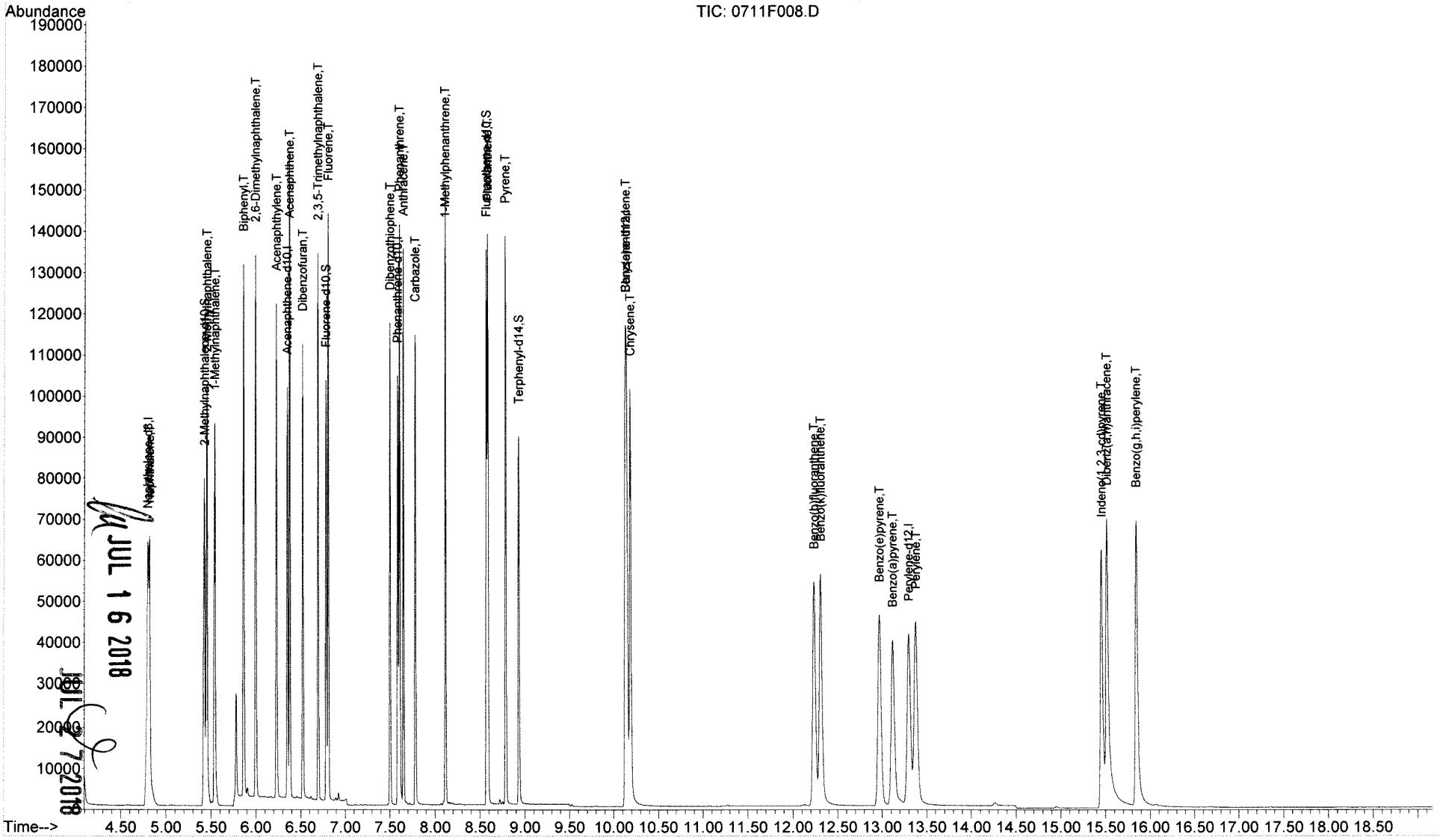
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

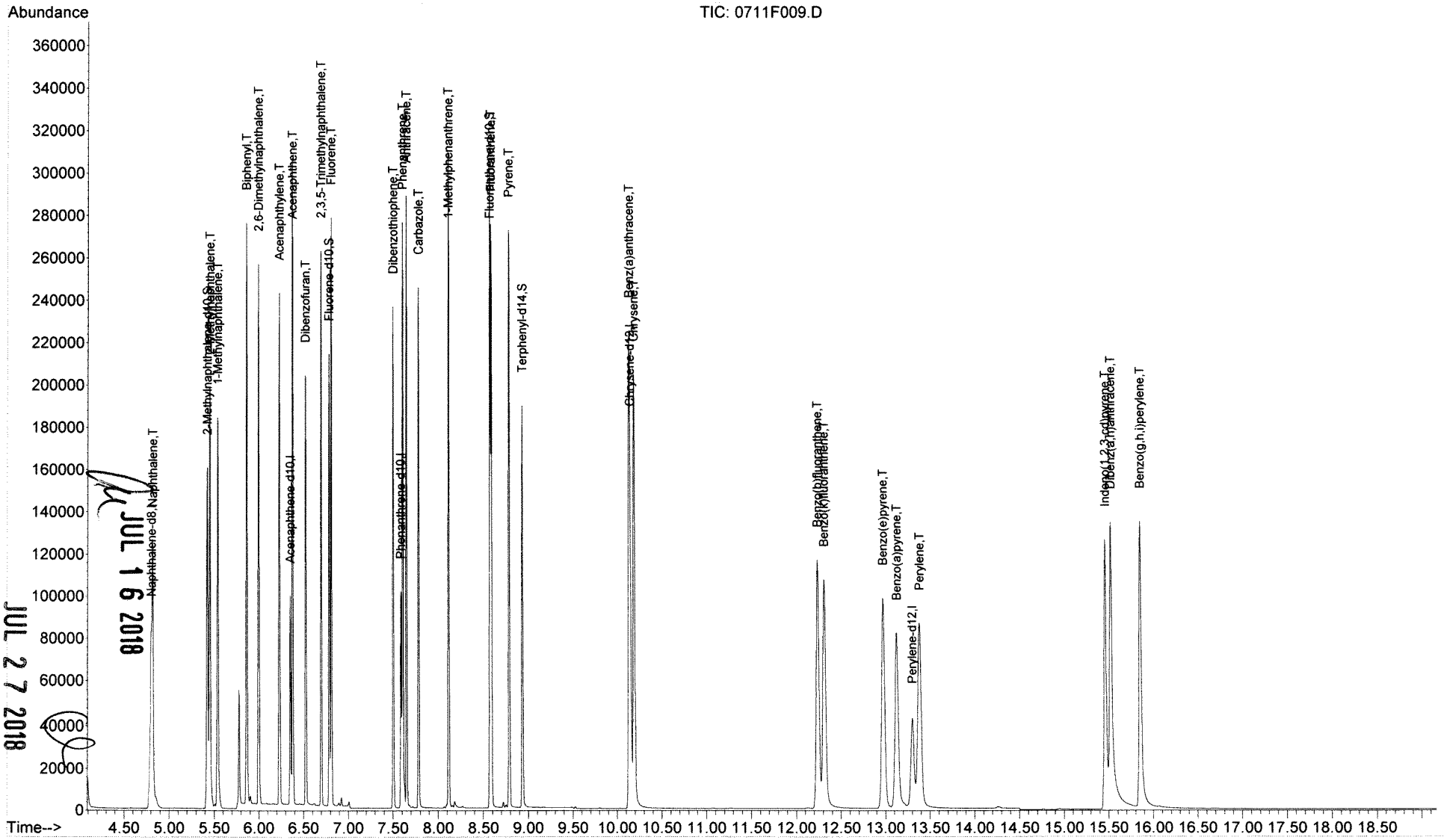
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
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Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

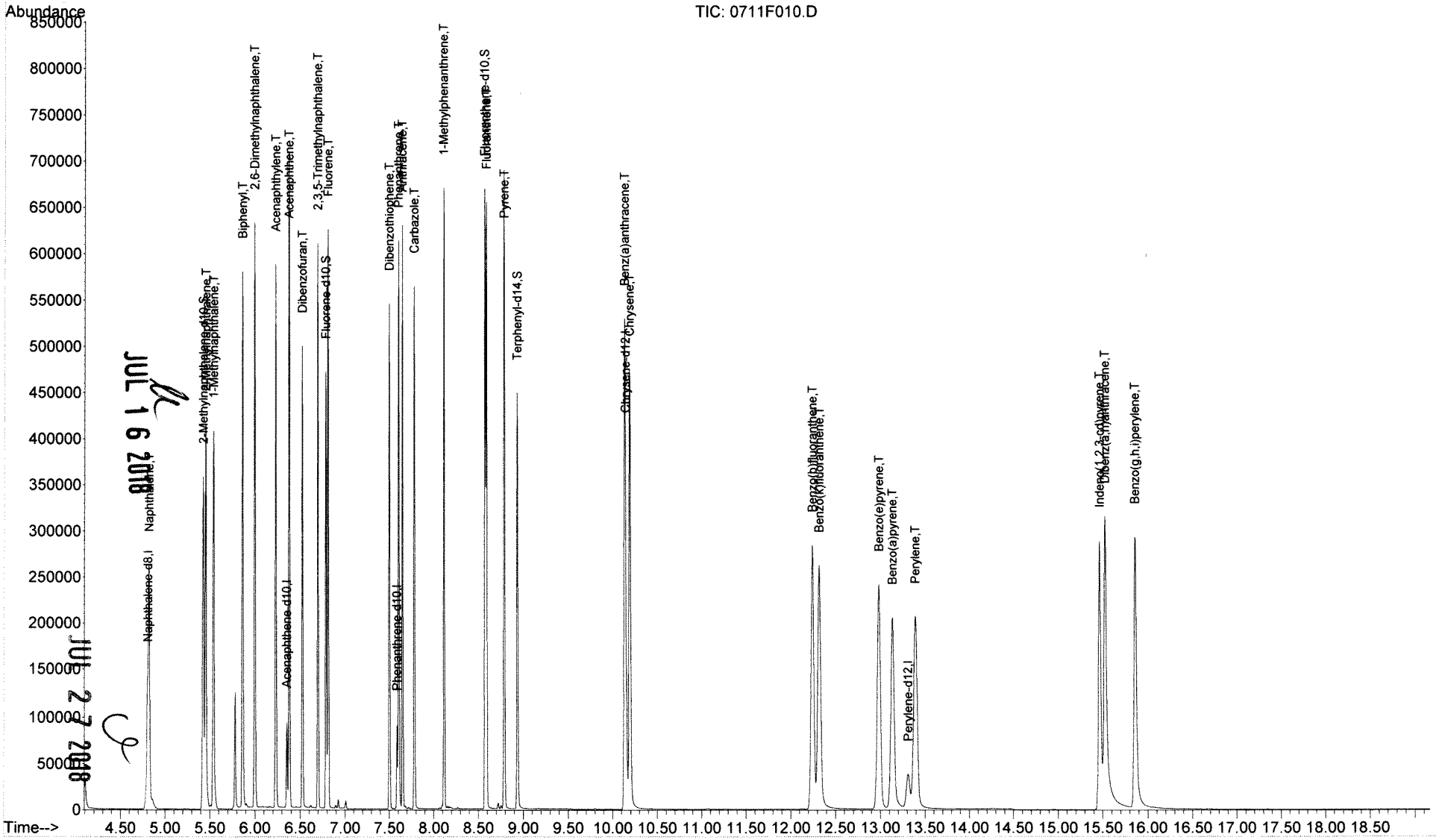
(#) = qualifier out of range (m) = manual integration
0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

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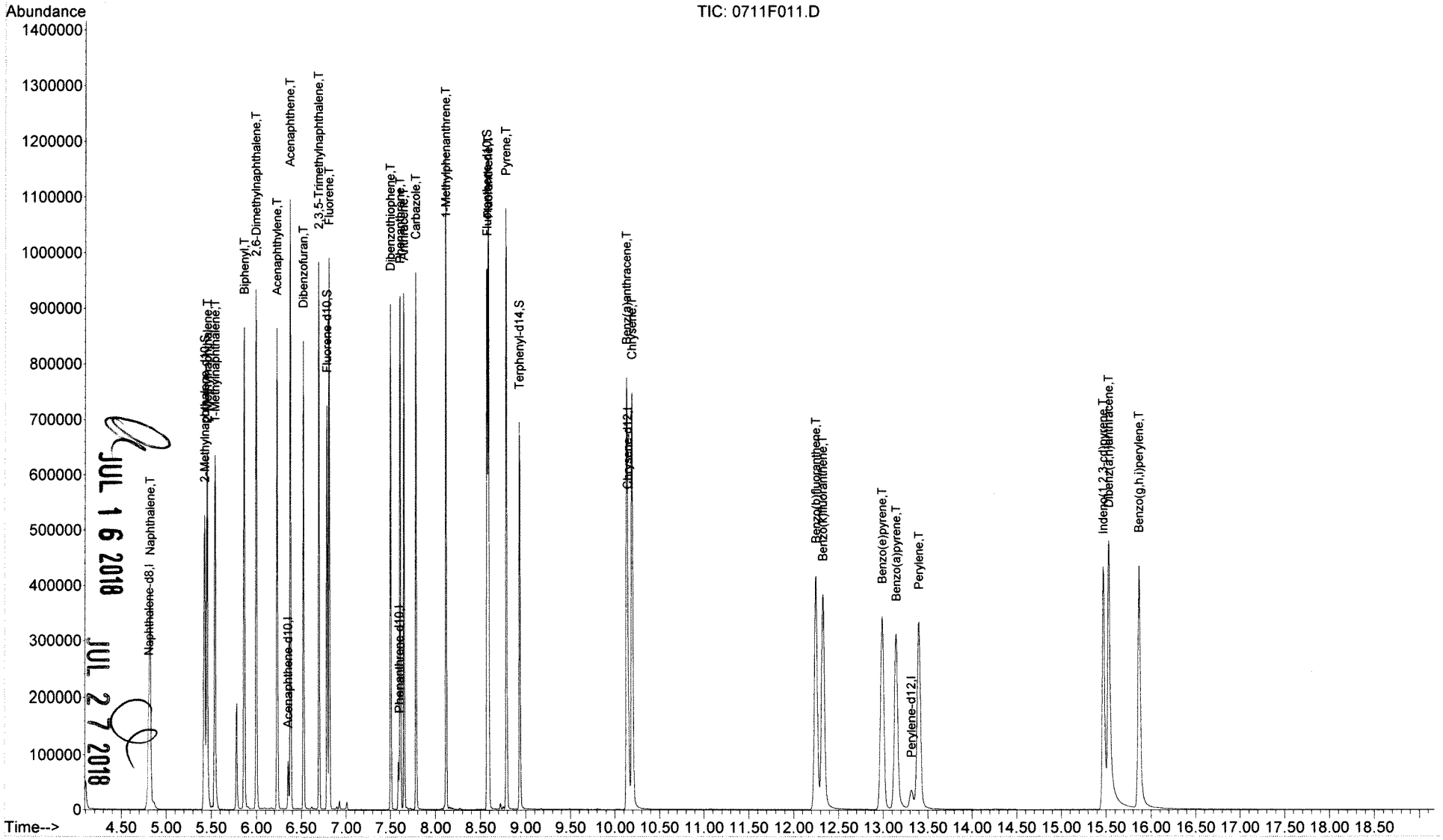
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0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

JUL 16 2018

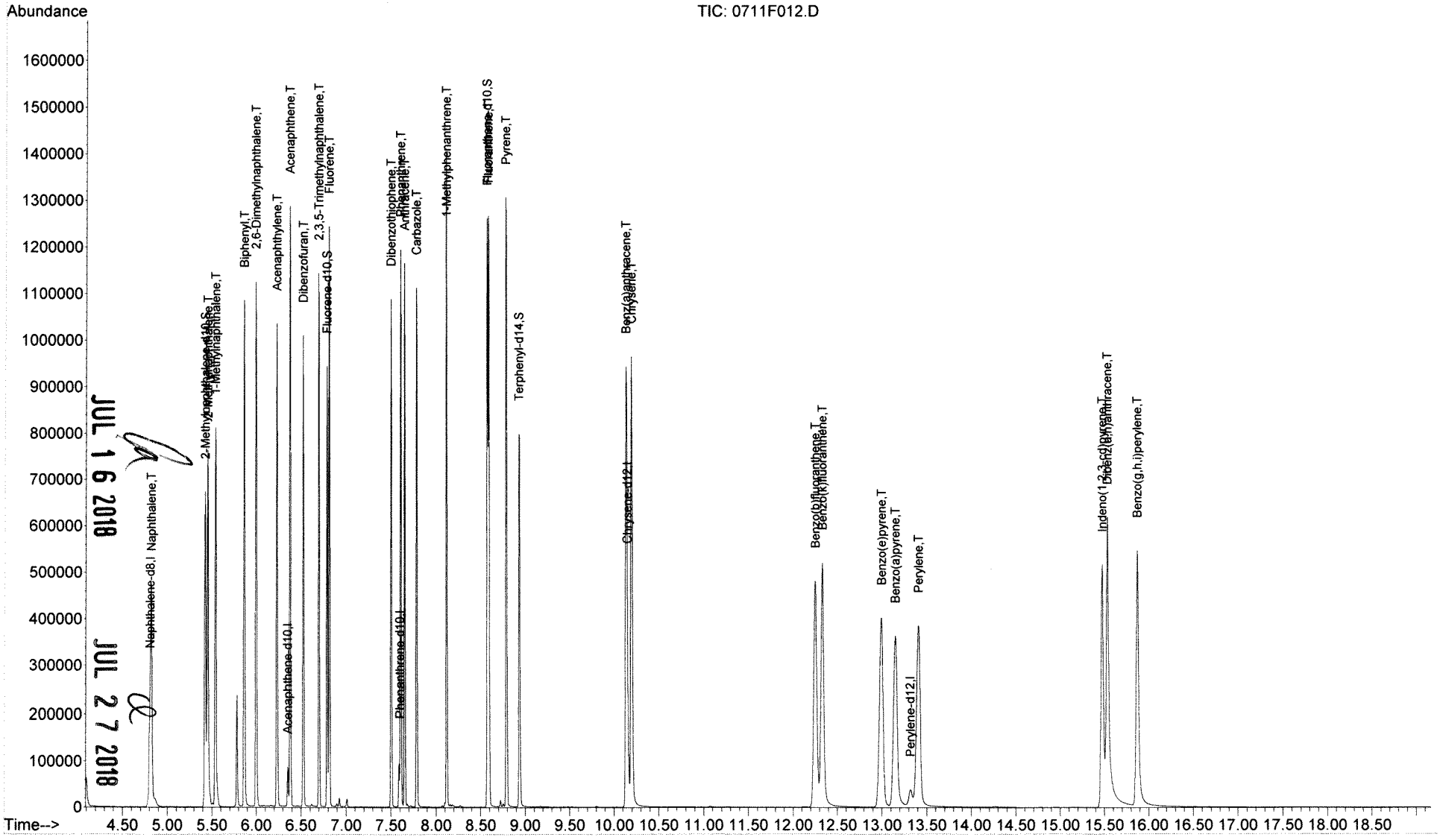
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

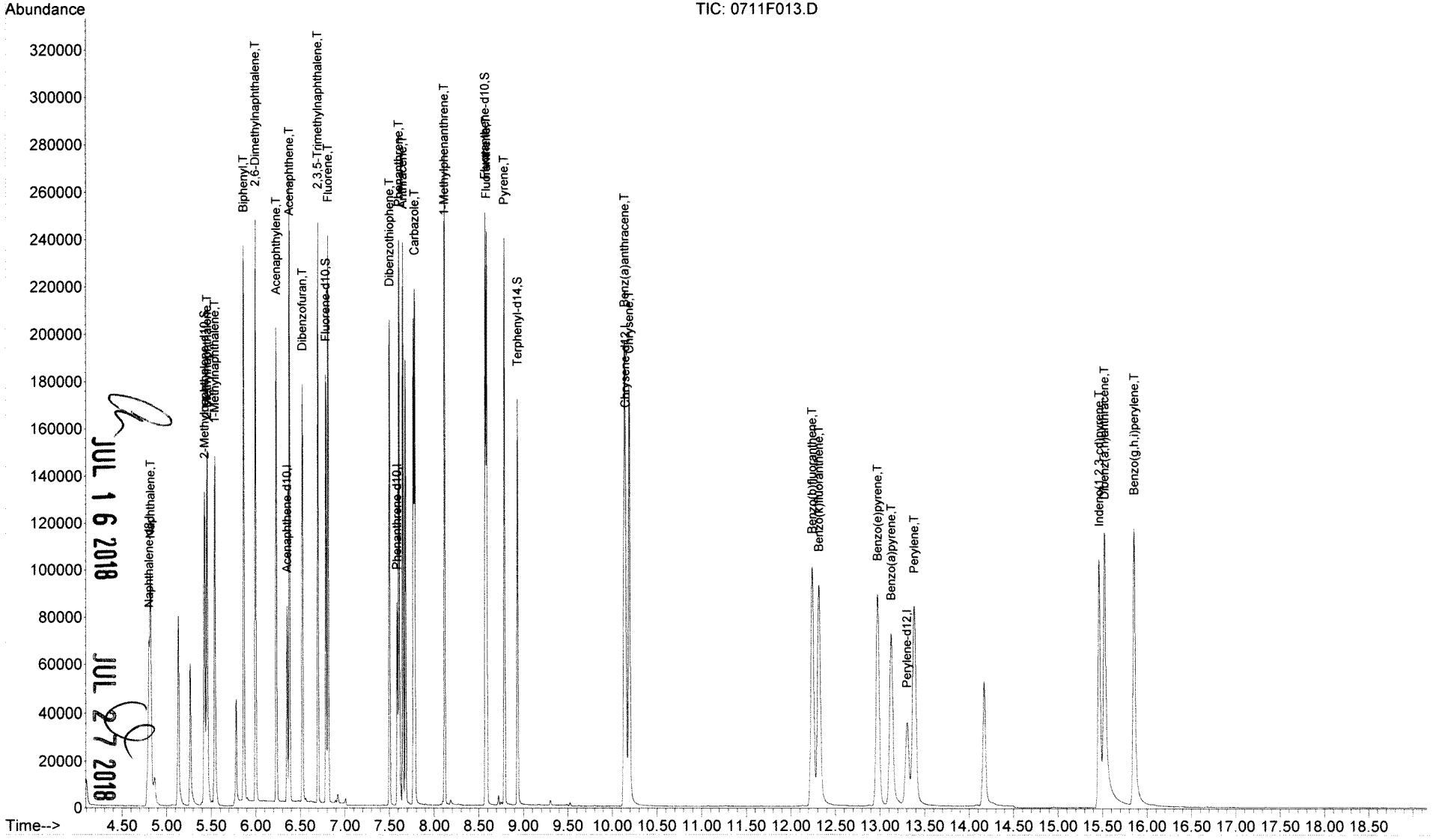
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



Preparation Information

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 18:30
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-004	L1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.410g	2mL	90.3
K1810270-006	N1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.031g	2mL	75.8
K1810270-010	T1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.087g	2mL	63.0
K1810270-011	R1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.247g	2mL	83.9
K1810270-012	P1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.385g	2mL	76.7
K1810270-013	T3-0to28-101618	8270D PAH SIM ULL	SEDIMENT	40.290g	2mL	43.8
K1810270-015	T7-0to31-101618	8270D PAH SIM ULL	SEDIMENT	40.183g	2mL	39.3
K1810270-016	T5-0to26-101618	8270D PAH SIM ULL	SEDIMENT	40.416g	2mL	47.8
K1810270-017	P3-0to29-101618	8270D PAH SIM ULL	SEDIMENT	40.290g	2mL	48.7
K1810270-018	R5-0to25-101618	8270D PAH SIM ULL	SEDIMENT	40.319g	2mL	45.9
K1810270-019	514-0to29-101618	8270D PAH SIM ULL	SEDIMENT	40.149g	2mL	40.5
K1810270-020	P5-0to26-101618	8270D PAH SIM ULL	SEDIMENT	40.302g	2mL	35.2
K1810270-029	R3-0to33-101718	8270D PAH SIM ULL	SEDIMENT	40.487g	2mL	36.1
KWG1805597-1	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	63.0
KWG1805597-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.056g	2mL	63.0
KWG1805597-3	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805597-4	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.487g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805597-1	K1810270-010	KQ1815625-01
KWG1805597-2	K1810270-010	KQ1815625-02
KWG1805597-3		KQ1815625-03
KWG1805597-4		KQ1815625-04

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-004	1700765					
K1810270-006	1700766					
K1810270-010	1700767					
K1810270-011	1700768					
K1810270-012	1700769					
K1810270-013	1700770					
K1810270-015	1700771					
K1810270-016	1700772					
K1810270-017	1700773					
K1810270-018	1700774					
K1810270-019	1700775					

Comments: IS= SVM57-100D

Started By: KPrescot Assisted By: – Training: Yes / No

Completed By: TPottsch Assisted By: – Yes / No

Reviewed By: [signature] Date: Storage: K-Tundra 1514

Chain of Custody

Relinquished By: TP Date: 11/1/18

Received By: [signature] Date: 11/8/18 Extracts Examined: Yes / No

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 18:30
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-020	1700776					
K1810270-029	1700777					
KWG1805597-1	1700778					
KWG1805597-2	1700779					
KWG1805597-3	1700780					
KWG1805597-4	1700781					

Comments:

Started By: KPrescot Assisted By: — Training Yes No

Completed By: TPottsch Assisted By: — Yes No

Reviewed By: Date: Storage: K-Tundra

Chain of Custody

Relinquished By: TP Date: 11/1/18

Received By: Date: 11/8/18 Extracts Examined Yes No

Preparation Information

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1810270-004	L1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	-
2	K1810270-006	N1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
3	K1810270-010	T1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
4	K1810270-011	R1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
5	K1810270-012	P1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
6	K1810270-013	T3-0to28-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
7	K1810270-015	T7-0to31-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
8	K1810270-016	T5-0to26-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
9	K1810270-017	P3-0to29-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
10	K1810270-018	R5-0to25-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
11	K1810270-019	514-0to29-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
12	K1810270-020	P5-0to26-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
13	K1810270-029	R3-0to33-101718	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
14	KWG1805597-1	Matrix Spike K1810270-010	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		80
15	KWG1805597-2	Duplicate Matrix Spike K1810270-010	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
16	KWG1805597-3	Lab Control Sample	-	-	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		
17	KWG1805597-4	Method Blank	-	-	8270D PAH SIM ULL	SEDIMENT	40.487		10	2		-

Comments: *See Pre-Prep Information Benchsheet. KKP 10/29/18. PREPRUN: 325138

Surrogate ID: AP:SVM59-50D 100/150ppm XP:03/04/19 K.K. KKP 10/29/18. 20ul Syringe. S-92

Spike ID: SVMPAH:SVM59-51F 25ppm XP:03/07/19 80ul Syringe. S-96

Witness: [signature] 10/29/18

Started By: KPrescot Assisted By: KV

Completed By: _____ Assisted By: BG

Additional Prep Information for EPA 3541
PAH

Service Request K1810270 Workgroup KWG1805597

Sulfate Lot # 178434 DCM (GC²) Lot # DV301 Glass Wool Lot# 213/7999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-01/02/03

Soxtherm Start (Time/Date/Initial): 1830 10/29/18 ~~TP~~ KP

Soxtherm Stop (Time/Date/Initial): 0718 10/30/18 KP

N-Evap (Time/Date/Initial): 09:00 11/1/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 09:36 11/1/18 TP
Hexane Lot # 192699 N-Evap Therm. ID: X SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 13:10 11/1/18 TP

Silica Column Lot # Ext002-35P 1:1 Hexane/DCM Reagent Lot # Ext002-32X ①
Turbovap (Time/Date/Initial): 13:25 11/1/18 BG Turbovap Therm. ID: ~~K-Turbovap~~ K-Turbovap
Temp as measured: 27.0 °C Correction factor: 0.0 °C Adjusted temp: 27.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20717645

Extract Storage: —

Completed (Time/Date/Initial): 15:50 11/1/18 BG/TP

Comments/Observations: ① EE TP 11/1/18

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325138 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	PAH SIM ULL	40.410g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	.01	PAH SIM ULL	40.031g	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
3	K1810270-010	.01	PAH SIM ULL	40.087g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
4	K1810270-010 MS KQ1815625-01	.01	PAH SIM ULL	40.044g		PrepComments:LAGUILAR K-Balance-47
5	K1810270-010 DMS KQ1815625-02	.01	PAH SIM ULL	40.056g		PrepComments:LAGUILAR K-Balance-47
6	K1810270-011	.01	PAH SIM ULL	40.247g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
7	K1810270-012	.01	PAH SIM ULL	40.385g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	PAH SIM ULL	40.290g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	PAH SIM ULL	40.183g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	PAH SIM ULL	40.416g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	PAH SIM ULL	40.290g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	PAH SIM ULL	40.319g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	PAH SIM ULL	40.149g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	PAH SIM ULL	40.302g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	PAH SIM ULL	40.487g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/26/18 18:47		10/29/18 0800

Preparation Information

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-001	N3-0to26-101518	8270D PAH SIM ULL	SEDIMENT	40.062g	2mL	74.3
K1810302-016	A1-0to30-102018	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	
K1810430-001	E-8.99-0to28-102418	8270D PAH SIM ULL	SOIL	40.037g	2mL	28.5
K1810430-002	C-8.94-0to27-102418	8270D PAH SIM ULL	SOIL	40.004g	2mL	30.2
K1810430-003	D-8.90-0to27-102418	8270D PAH SIM ULL	SOIL	40.007g	2mL	34.7
K1810430-004	D-8.83-0to25-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	34.7
K1810430-005	E-9.02-0to26-102418	8270D PAH SIM ULL	SOIL	40.028g	2mL	35.0
K1810430-006	B-9.00-0to29-102418	8270D PAH SIM ULL	SOIL	40.009g	2mL	27.7
K1810430-007	512-0to29-102418	8270D PAH SIM ULL	SOIL	40.052g	2mL	27.3
K1810430-008	D-9.09-0to29-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	32.2
K1810430-009	A-9.03-0to26-102418	8270D PAH SIM ULL	SOIL	40.044g	2mL	28.8
K1810430-010	B-9.15-0to30-102418	8270D PAH SIM ULL	SOIL	40.077g	2mL	46.5
K1810430-011	G-9.15-0to18-102418	8270D PAH SIM ULL	SOIL	40.080g	2mL	74.1
K1810683-001	PDI-ST-T06B-1810	8270D PAH SIM ULL	SEDIMENT	40.124g	2mL	25.3
K1810683-002	PDI-ST-T06A-1810	8270D PAH SIM ULL	SEDIMENT	40.049g	2mL	25.6
K1810683-003	PDI-ST-T07A-1810	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	22.3
K1810683-004	PDI-ST-T07B-1810	8270D PAH SIM ULL	SEDIMENT	40.085g	2mL	21.4
KWG1805796-1	Matrix Spike	8270D PAH SIM ULL	SOIL	40.057g	2mL	35.0
KWG1805796-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SOIL	40.011g	2mL	35.0
KWG1805796-3	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.064g	2mL	25.6
KWG1805796-4	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.114g	2mL	25.6
KWG1805796-5	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805796-6	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805796-1	K1810430-005	KQ1815762-01
KWG1805796-2	K1810430-005	KQ1815762-02
KWG1805796-3	K1810683-002	KQ1815762-03
KWG1805796-4	K1810683-002	KQ1815762-04
KWG1805796-5		KQ1815762-05
KWG1805796-6		KQ1815762-06

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-001	1702211					
K1810302-016	1702212					
K1810430-001	1702213					

Comments: IS = SV-557-100D

Started By: KPrescot Assisted By: —

Completed By: TPottsch Assisted By: —

Training: Yes / No (No circled)

Yes / No (No circled)

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra MS14

Chain of Custody

Relinquished By: TP Date: 11/12/18

Received By: [signature] Date: 11/14/18

Extracts Examined: Yes (circled) / No

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810430-002	1702214					
K1810430-003	1702215					
K1810430-004	1702216					
K1810430-005	1702217					
K1810430-006	1702218					
K1810430-007	1702219					
K1810430-008	1702220					
K1810430-009	1702221					
K1810430-010	1702222					
K1810430-011	1702223					
K1810683-001	1702224					
K1810683-002	1702225					
K1810683-003	1702226					
K1810683-004	1702227					
KWG1805796-1	1702228					
KWG1805796-2	1702229					
KWG1805796-3	1702230					
KWG1805796-4	1702231					
KWG1805796-5	1702232					
KWG1805796-6	1702233					

Comments:

Started By: KPrescot Assisted By: — Training

Completed By: TPottsch Assisted By: — Yes / No

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra Yes / No

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18 Extracts Examined: Yes / No

Preparation Information

11/14

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1810270-001	N3-0to26-101518	.02	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	-
2	K1810302-016	A1-0to30-102018	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
3	K1810430-001	E-8.99-0to28-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
4	K1810430-002	C-8.94-0to27-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
5	K1810430-003	D-8.90-0to27-102418 1A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
6	K1810430-004	D-8.83-0to25-102418 1B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
7	K1810430-005	E-9.02-0to26-102418 1C	.02	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
8	K1810430-006	B-9.00-0to29-102418 1D	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
9	K1810430-007	512-0to29-102418 1E	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
10	K1810430-008	D-9.09-0to29-102418 1F	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
11	K1810430-009	A-9.03-0to26-102418 2A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
12	K1810430-010	B-9.15-0to30-102418 2B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
13	K1810430-011	G-9.15-0to18-102418 2C	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
14	K1810683-001	PDI-ST-T06B-1810 2D	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
15	K1810683-002	PDI-ST-T06A-1810 2E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
16	K1810683-003	PDI-ST-T07A-1810 2F	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
17	K1810683-004	PDI-ST-T07B-1810 3A	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
18	KWG1805796-1	Matrix Spike K1810430-005 3B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		80

Comments: *See Pre-Prep Information Benchsheet. KRP 11/07/18. PREPRUN: 325303

Surrogate ID: MP: SVM59-50D 100/150ppm XP: 03/04/19 10ul Syringe. S-92.

Spike ID: SIM PAH: SVM59-51F 25ppm XP: 03/07/19 ~~100ul~~ E.E. KRP 11/07/18 80ul Syringe. S-9

Witness: Kayla Vo 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: —

Group ID:	KWG1805796	**Prep Method:**	EPA 3541		**Prep Date:**	11/07/18 00:00						
Department:	Semivoa GCMS											

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
19	KWG1805796-2	Duplicate Matrix Spike K1810430-005 3C	.01	✓	8270D PAH SIM ULL	SOIL	*	N/A	10	2	20	80
20	KWG1805796-3	Matrix Spike K1810683-002 3D	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
21	KWG1805796-4	Duplicate Matrix Spike K1810683-002 3E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
22	KWG1805796-5	Lab Control Sample 3F	–	–	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		–
23	KWG1805796-6	Method Blank	–	–	8270D PAH SIM ULL	SEDIMENT	40.332		10	2		–

Comments: * See Pre-Prep Information Benchsheet. KRP 11/07/18.

Surrogate ID: SEE PAGE 1

Spike ID: SEE PAGE 1

Witness: [signature] 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: –

Additional Prep Information for EPA 3541
PAH

Service Request K1810270/0302/0430/0683 Workgroup KWG1805796

Sulfate Lot #187085209 DCM (GC²) Lot #DV301 Glass Wool Lot# 213179999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-01/02/03

Soxtherm Start (Time/Date/Initial): 1345 11/07/18 KLP

Soxtherm Stop (Time/Date/Initial): 0755 11/08/18 KLP

N-Evap (Time/Date/Initial): 1328 11/8/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 10:14 11/9/18 TP
Hexane Lot # 195734 N-Evap Therm. ID: X-SVM-010
Temp as measured: 0.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 14:01 11/9/18 TP

Silica Column Lot # Ext002-350 1:1 Hexane/DCM Reagent Lot # Ext002-32X
Turbovap (Time/Date/Initial): 14:00 11/12/18 TP Turbovap Therm. ID: K-Turbovap-005
Temp as measured: 28.0 °C Correction factor: 0.0 °C Adjusted temp: 28.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20717645

Extract Storage: Hi Doggy

Completed (Time/Date/Initial): 17:04 11/12/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason: Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325303 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-09-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810430-001	.01	PAH SIM ULL	40.037g		PrepComments:GBEATLEY k-balance-49
2	K1810430-002	.01	PAH SIM ULL	40.004g		PrepComments:GBEATLEY k-balance-49
3	K1810430-003	.01	PAH SIM ULL	40.007g		PrepComments:GBEATLEY k-balance-49
4	K1810430-004	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
5	K1810430-005	.02	PAH SIM ULL	40.028g		PrepComments:GBEATLEY k-balance-49
6	K1810430-005 MS KQ1815762-01	.01	PAH SIM ULL	40.057g		PrepComments:GBEATLEY k-balance-49
7	K1810430-005 DMS KQ1815762-02	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
8	K1810430-006	.01	PAH SIM ULL	40.009g		PrepComments:GBEATLEY k-balance-49
9	K1810430-007	.01	PAH SIM ULL	40.052g		PrepComments:GBEATLEY k-balance-49
10	K1810430-008	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
11	K1810430-009	.01	PAH SIM ULL	40.044g		PrepComments:GBEATLEY k-balance-49
12	K1810430-010	.01	PAH SIM ULL	40.077g		PrepComments:GBEATLEY k-balance-49
13	K1810430-011	.01	PAH SIM ULL	40.080g		PrepComments:GBEATLEY k-balance-49

Relinquished By:	Date/Time: 10/30/18 1125	Received By:	Date/Time: 11/05/18 1330

325303

Pre-Prep Information Benchsheet

Prep Run #: ~~325583~~ **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-15-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810683-001	.01	PAH SIM ULL	40.124g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
2	K1810683-002	.02	PAH SIM ULL	40.049g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
3	K1810683-002 MS KQ1816031-01	.02	PAH SIM ULL	40.064g		PrepComments:DMADDEN K-Balance-50
4	K1810683-002 DMS KQ1816031-02	.02	PAH SIM ULL	40.114g		PrepComments:DMADDEN K-Balance-50
5	K1810683-003	.01	PAH SIM ULL	40.332g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
6	K1810683-004	.01	PAH SIM ULL	40.085g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50

All samples & QC moved to prep run # 325303. KLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10:47 11.2.18	Kassidy Van	11/05/18 1348

315303

Pre-Prep Information Benchsheet

Prep Run #: ~~325832~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	PAH SIM ULL	40.062g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	PAH SIM ULL	40.044g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Samples added to prep run # 315303. LLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.6.18 1631	LLP	11/07/18

Injection Log

Directory: J:\ms14\data\111418

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1114F001.D	1.	DFTPP @ 10ug/mL | SVM59-57A		14 Nov 2018 05:51
2	2	1114F002.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-89N		14 Nov 2018 06:17
3	3	1114F003.D	1.	KWG1805796-6 MB		14 Nov 2018 06:42
4	4	1114F004.D	1.	KWG1805796-5 LCS		14 Nov 2018 07:08
5	5	1114F005.D	1.	KWG1805775-4 MB		14 Nov 2018 07:33
6	6	1114F006.D	1.	KWG1805775-3 LCS		14 Nov 2018 07:58
7	7	1114F007.D	1.	KWG1805775-5 SRM		14 Nov 2018 08:23
8	8	1114F008.D	1.	KWG1805775-5 SRM 5X (NR)		14 Nov 2018 08:48
9	9	1114F009.D	1.	K1810669-002MS 5X		14 Nov 2018 09:14
10	10	1114F010.D	1.	K1810669-002DMS 5X		14 Nov 2018 09:40
11	11	1114F011.D	1.	K1810669-002DIL 5X		14 Nov 2018 10:05
12	12	1114F012.D	1.	K1810669-001DIL 5X		14 Nov 2018 10:30
13	13	1114F013.D	1.	K1810270-001DIL 5X		14 Nov 2018 10:56
14	14	1114F014.D	1.	K1810430-001DIL 5X		14 Nov 2018 11:21
15	15	1114F015.D	1.	K1810430-002DIL 5X		14 Nov 2018 11:46
16	16	1114F016.D	1.	K1810430-003DIL 5X		14 Nov 2018 12:12
17	17	1114F017.D	1.	K1810430-004DIL 5X		14 Nov 2018 12:39
18	18	1114F018.D	1.	K1810430-006DIL 5X		14 Nov 2018 13:05
19	19	1114F019.D	1.	K1810430-007DIL 5X		14 Nov 2018 13:31
20	20	1114F020.D	1.	K1810430-008DIL 5X		14 Nov 2018 13:57
21	21	1114F021.D	1.	K1810430-011DIL 20X		14 Nov 2018 14:25
22	22	1114F022.D	1.	K1810430-005MS 10X		14 Nov 2018 14:51
23	23	1114F023.D	1.	K1810430-005DMS 10X		14 Nov 2018 15:17
24	24	1114F024.D	1.	K1810430-005DIL 10X		14 Nov 2018 15:43
25	25	1114F025.D	1.	K1810430-009DIL 10X		14 Nov 2018 16:09
26	26	1114F026.D	1.	K1810430-010DIL 10X		14 Nov 2018 16:35
27	27	1114F027.D	1.	K1810669-002	* Lims # 615927	14 Nov 2018 17:01
28	28	1114F028.D	1.	K1810669-001		14 Nov 2018 17:27
29	100	1114F029.D	1.	DCM	CAL15779	14 Nov 2018 17:53
30	100	1114F030.D	1.	DCM		14 Nov 2018 18:20
31	100	1114F031.D	1.	DCM	12/3/18	14 Nov 2018 18:46

NR

5

DILUTION LOG MS 14

Date: 11/14/18 Prepared by: L Weiskopf Solvent Lot #: DI 383

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
KWG5795-SRM	100ul	0.5mL	5X	matrix
K1810669-2MS				
-2DUS				
-2				
-1				
K1810270-1				
K1810430-1				
-2				
-3				
-4				
-6				
-7				
-8				
-11	25ul		20X	
-5MS	50ul		10X	
-5DUS				
-5				
-9				
-10				

11/15/18

Injection Log

Directory: J:\MS14\DATA\110718

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1107F001.D	1.	DFTPP @ 10ug/mL | SVM59-57A		7 Nov 2018 04:55
2	2	1107F002.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-81A		7 Nov 2018 05:26
3	3	1107F003.D	1.	KWG1805648-4 MB		7 Nov 2018 05:56
4	4	1107F004.D	1.	KWG1805648-3 LCS		7 Nov 2018 06:26
5	5	1107F005.D	1.	K1810305-002		7 Nov 2018 06:56
6	6	1107F006.D	1.	K1810305-025		7 Nov 2018 07:26
7	7	1107F007.D	1.	K1810305-007		7 Nov 2018 07:56
8	8	1107F008.D	1.	K1810302-026DIL 10X		7 Nov 2018 08:27
9	9	1107F009.D	1.	K1810270-004DIL 4X		7 Nov 2018 08:58
10	10	1107F010.D	1.	K1810270-011DIL 4X		7 Nov 2018 09:28
11	11	1107F011.D	1.	K1810270-012DIL 4X		7 Nov 2018 09:59
12	12	1107F012.D	1.	K1810305-002MS 5X		7 Nov 2018 10:29
13	13	1107F013.D	1.	K1810305-002DMS 5X		7 Nov 2018 10:59
14	14	1107F014.D	1.	K1810305-002DIL 5X		7 Nov 2018 11:30
15	15	1107F015.D	1.	K1810305-001DIL 5X		7 Nov 2018 12:00
16	16	1107F016.D	1.	K1810305-004DIL 5X		7 Nov 2018 12:31
17	17	1107F017.D	1.	K1810305-005DIL 5X		7 Nov 2018 13:01
18	18	1107F018.D	1.	K1810305-006DIL 5X		7 Nov 2018 13:32
19	19	1107F019.D	1.	K1810305-008DIL 5X		7 Nov 2018 14:02
20	20	1107F020.D	1.	K1810305-009DIL 5X		7 Nov 2018 14:32
21	21	1107F021.D	1.	K1810305-010DIL 5X		7 Nov 2018 15:03
22	22	1107F022.D	1.	K1810305-011DIL 5X		7 Nov 2018 15:33
23	23	1107F023.D	1.	K1810305-012DIL 5X		7 Nov 2018 16:03
24	24	1107F024.D	1.	K1810305-013DIL 5X		7 Nov 2018 16:33
25	25	1107F025.D	1.	K1810305-014DIL 5X		7 Nov 2018 17:03
26	100	1107F026.D	1.	DCM		7 Nov 2018 17:34
27	100	1107F027.D	1.	DCM		7 Nov 2018 18:04
28	1	1107F028.D	1.	DFTPP @ 10ug/mL | SVM59-57A		7 Nov 2018 18:34
29	2	1107F029.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-81A		7 Nov 2018 19:05
30	26	1107F030.D	1.	KWG1805579-3 MB		7 Nov 2018 19:35
31	27	1107F031.D	1.	KWG1805579-1 LCS		7 Nov 2018 20:06
32	28	1107F032.D	1.	KWG1805579-2 DLCS		7 Nov 2018 20:36
33	29	1107F033.D	1.	K1810305-015DIL 5X		7 Nov 2018 21:06
34	30	1107F034.D	1.	K1810305-016DIL 5X		7 Nov 2018 21:36
35	31	1107F035.D	1.	K1809881-007		7 Nov 2018 22:06
36	32	1107F036.D	1.	K1809109-007		7 Nov 2018 22:36
37	33	1107F037.D	1.	K1809302-007		7 Nov 2018 23:06
38	34	1107F038.D	1.	K1809470-007		7 Nov 2018 23:36
39	35	1107F039.D	1.	K1809619-007		8 Nov 2018 00:07
40	36	1107F040.D	1.	K1809698-007		8 Nov 2018 00:37
41	37	1107F041.D	1.	K1809797-006		8 Nov 2018 01:07
42	38	1107F042.D	1.	K1809967-006		8 Nov 2018 01:37
43	39	1107F043.D	1.	K1810049-006		8 Nov 2018 02:07

Q 11/9/18

Q 11/19/18

A GMS # 614504
CAL 15779

NR - outside tune window

DILUTION LOG MS 14

Date: 11/7/18 Prepared by: Labiskopf Solvent Lot #: DT383

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
K1810302-26	50ul	0.5mL	10X	matrix
K1810270-4	250ul	1.0mL	4X	
-11				
-12				
K1810305-2MS	100ul	0.5mL	5X	
-2DMS				
-2				
-1				
-4				
-5				
-6				
-8				
-9				
-10				
-11				
-12				
-13				

11/8/18

Directory: J:\MS14\DATA\110518

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1105F001.D	1.	DFTPP @ 10ug/mL | SVM59-57A		5 Nov 2018 09:12
2	2	1105F002.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-81A		5 Nov 2018 09:41
3	3	1105F003.D	1.	IB/KWG1805529-4 MB NR		5 Nov 2018 10:12
4	4	1105F004.D	1.	KWG1805529-3 LCS - rerun		5 Nov 2018 10:41
5	5	1105F005.D	1.	K1810083-011MS 5X		5 Nov 2018 11:10
6	6	1105F006.D	1.	K1810083-011DMS 5X		5 Nov 2018 11:39
7	7	1105F007.D	1.	K1810083-011DIL 5X		5 Nov 2018 12:08
8	8	1105F008.D	1.	K1810088-005DIL 5X		5 Nov 2018 12:40
9	9	1105F009.D	1.	K1810083-006DIL 5X		5 Nov 2018 13:11
10	10	1105F010.D	1.	K1810083-013DIL 10X		5 Nov 2018 13:41
11	11	1105F011.D	1.	K1810083-004		5 Nov 2018 14:12
12	12	1105F012.D	1.	K1810083-018DIL 4X		5 Nov 2018 14:42
13	13	1105F013.D	1.	K1810083-021DIL 2X	sample cancelled	5 Nov 2018 15:12
14	14	1105F014.D	1.	K1810083-022DIL 5X		5 Nov 2018 15:42
15	15	1105F015.D	1.	KWG1805597-4 MB		5 Nov 2018 16:12
16	16	1105F016.D	1.	KWG1805597-3 LCS NR- rerun		5 Nov 2018 16:42
17	17	1105F017.D	1.	K1810270-010MS		5 Nov 2018 17:12
18	18	1105F018.D	1.	K1810270-010DMS		5 Nov 2018 17:42
19	19	1105F019.D	1.	K1810270-010		5 Nov 2018 18:11
20	20	1105F020.D	1.	K1810270-006		5 Nov 2018 18:41
21	21	1105F021.D	1.	K1810270-020		5 Nov 2018 19:10
22	22	1105F022.D	1.	K1810270-029		5 Nov 2018 19:40
23	100	1105F023.D	1.	DCM		5 Nov 2018 20:10
24	100	1105F024.D	1.	DCM NR		5 Nov 2018 20:39

*LIMS # 614502
OK 15779
11/16/18

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DILUTION LOG MS 14

Date: 11/5/18 Prepared by: LWeiskopf Solvent Lot #: DT383

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
K1810083-11MS	100ul	0.5mL	5X	matrix
-11DMS				
-11				
K1810088-5				
K1810083-6				
-13	50ul		10X	
-18	250ul	1.0mL	4X	
-21	250ul	0.5mL	2X	
-22	100ul	0.5mL	5X	

11/6/18

Injection Log

Directory: J:\MS14\DATA\110618

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1106F001.D	1.	DFTPP @ 10ug/mL | SVM59-57A		6 Nov 2018 05:06
2	2	1106F002.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-81A		6 Nov 2018 05:35
3	3	1106F003.D	1.	KWG1805529-4 MB		6 Nov 2018 06:04
4	4	1106F004.D	1.	KWG1805529-3 LCS		6 Nov 2018 06:33
5	5	1106F005.D	1.	KWG1805597-3 LCS		6 Nov 2018 07:01
6	6	1106F006.D	1.	KWG1805647-4 MB		6 Nov 2018 07:30
7	7	1106F007.D	1.	KWG1805647-3 LCS		6 Nov 2018 07:59
8	8	1106F008.D	1.	K1810302-022MS		6 Nov 2018 08:27
9	9	1106F009.D	1.	K1810302-022DMS		6 Nov 2018 08:56
10	10	1106F010.D	1.	K1810302-022		6 Nov 2018 09:25
11	11	1106F011.D	1.	K1810302-024		6 Nov 2018 09:53
12	12	1106F012.D	1.	K1810302-026	Needs 10X Dil.	6 Nov 2018 10:22
13	13	1106F013.D	1.	K1810270-004DIL 10X	rerun @ 4X Dil.	6 Nov 2018 10:51
14	14	1106F014.D	1.	K1810270-011DIL 10X		6 Nov 2018 11:20
15	15	1106F015.D	1.	K1810270-012DIL 10X		6 Nov 2018 11:49
16	16	1106F016.D	1.	K1810270-013DIL 5X		6 Nov 2018 12:18
17	17	1106F017.D	1.	K1810270-015DIL 5X		6 Nov 2018 12:46
18	18	1106F018.D	1.	K1810270-016DIL 5X		6 Nov 2018 13:15
19	19	1106F019.D	1.	K1810270-017DIL 5X		6 Nov 2018 13:44
20	20	1106F020.D	1.	K1810270-018DIL 5X		6 Nov 2018 14:13
21	21	1106F021.D	1.	K1810270-019DIL 5X		6 Nov 2018 14:42
22	22	1106F022.D	1.	K1810302-023DIL 5X		6 Nov 2018 15:10
23	23	1106F023.D	1.	K1810302-027DIL 5X		6 Nov 2018 15:39
24	24	1106F024.D	1.	K1810302-028DIL 10X		6 Nov 2018 16:08
25	25	1106F025.D	1.	K1810302-029DIL 10X		6 Nov 2018 16:37
26	100	1106F026.D	1.	DCM	NR	6 Nov 2018 17:06
27	100	1106F027.D	1.	DCM		6 Nov 2018 17:35
28	100	1106F028.D	1.	DCM		6 Nov 2018 18:03

*LIMS # 614503
CAL 15779
11/16/18

5

DILUTION LOG MS 19

Date: 11/6/18 Prepared by: Lkliskopf Solvent Lot #: DT383

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
K1810270-4	50ul	0.5mL	10X	yellow extract
-11	↓	↓	↓	↓
-12	↓		↓	
-13	100ul		5X	
-15	↓		↓	
-16				
-17				
-18				
-19				
K1810302-23				
-27	↓		↓	
-28	50ul		10X	
-29	↓	↓	10X	↓

11/8/18

Injection Log

Directory: J:\MS14\DATA\071118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
20	20	0711F020.D	1.	K1805517-004		11 Jul 2018 15:40
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

SIM-PAH ICAL

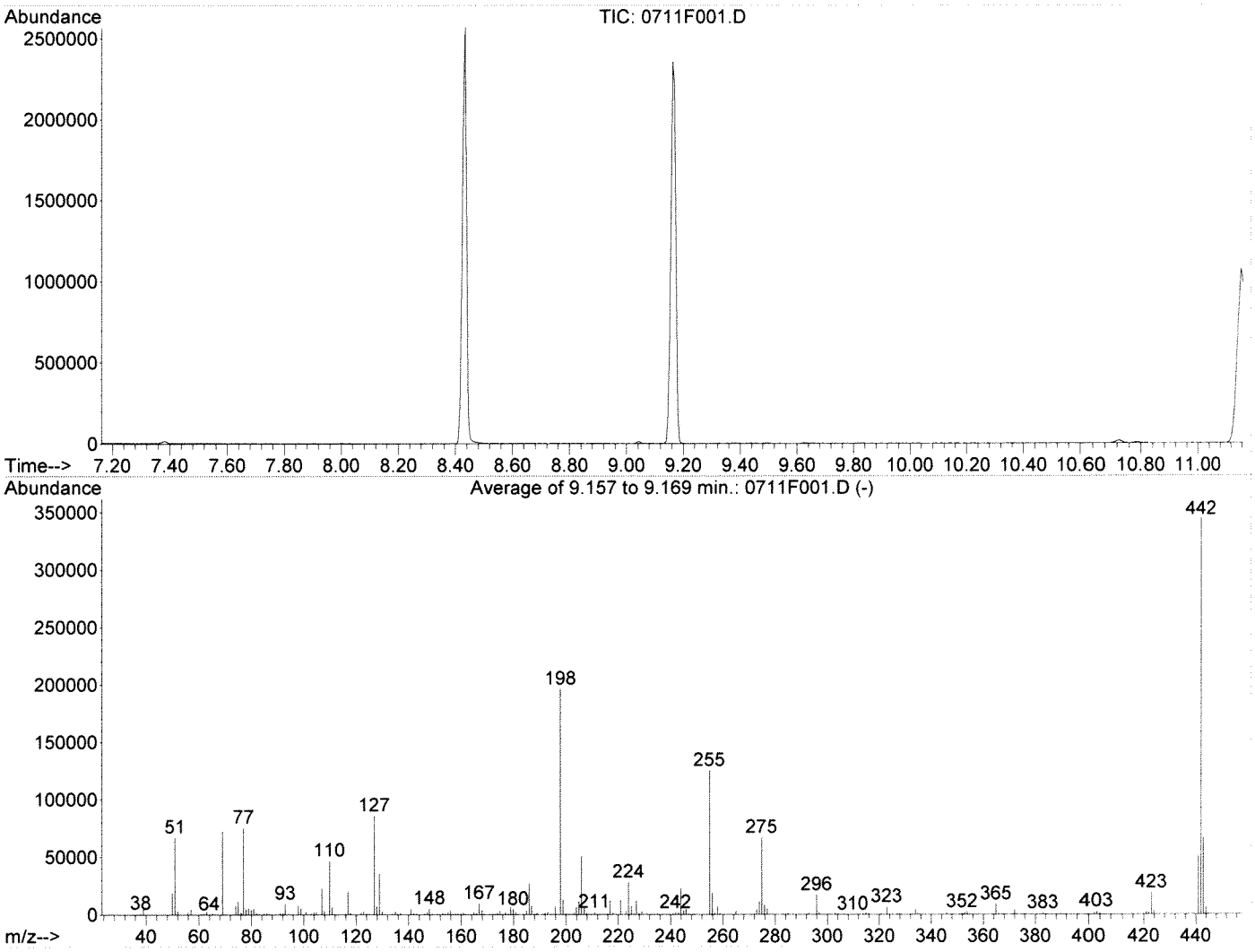
CAL15779

JUL 16 2018

JUL 27 2018

DFTPP

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

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J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

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Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

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229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

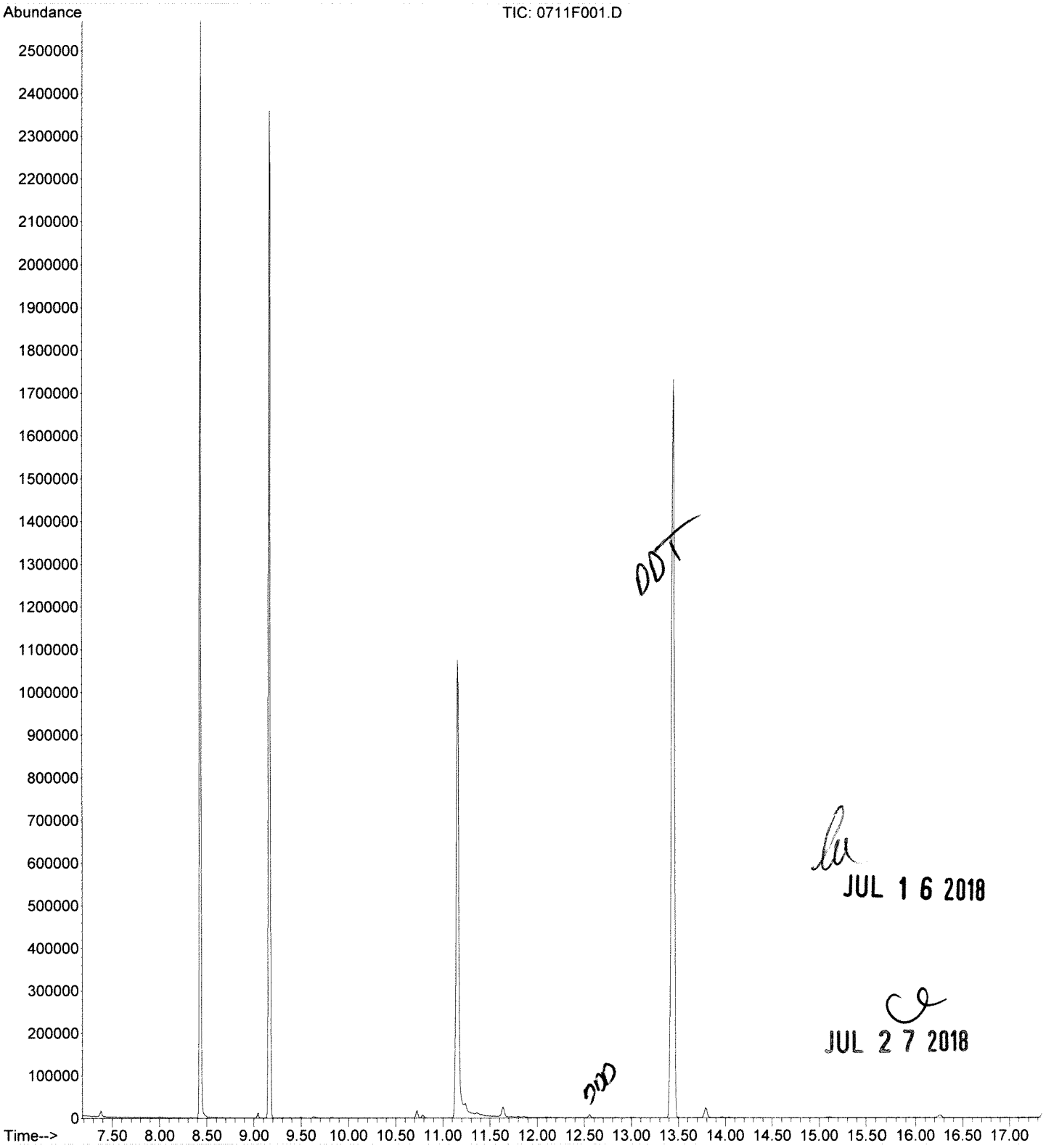
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

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File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	ODD	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

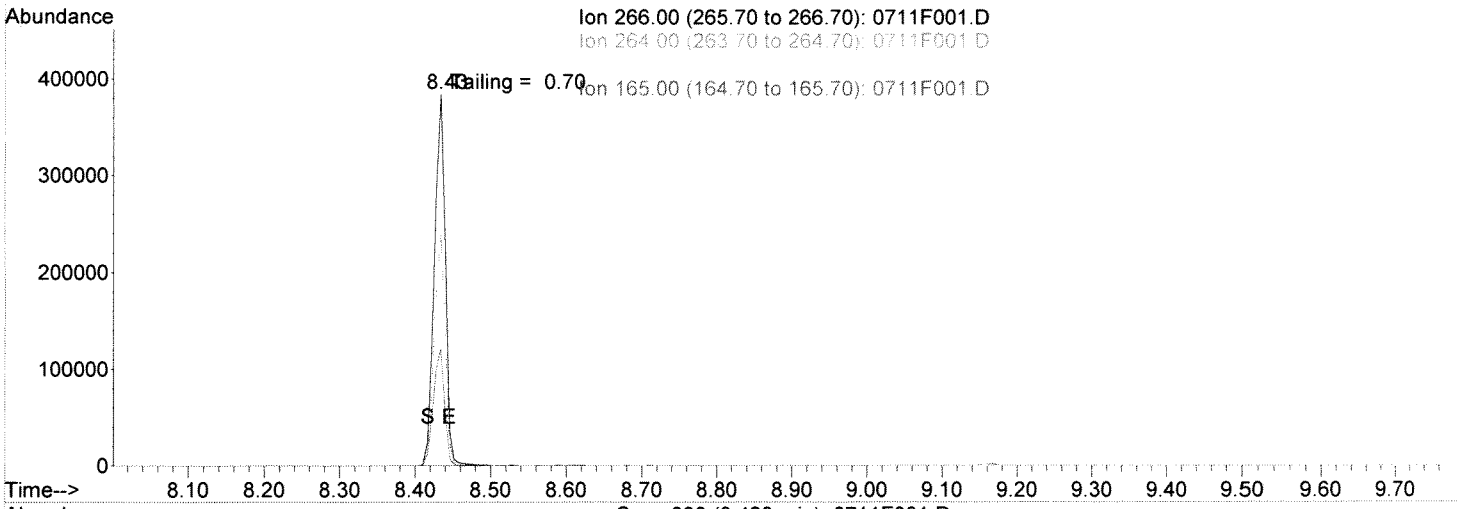
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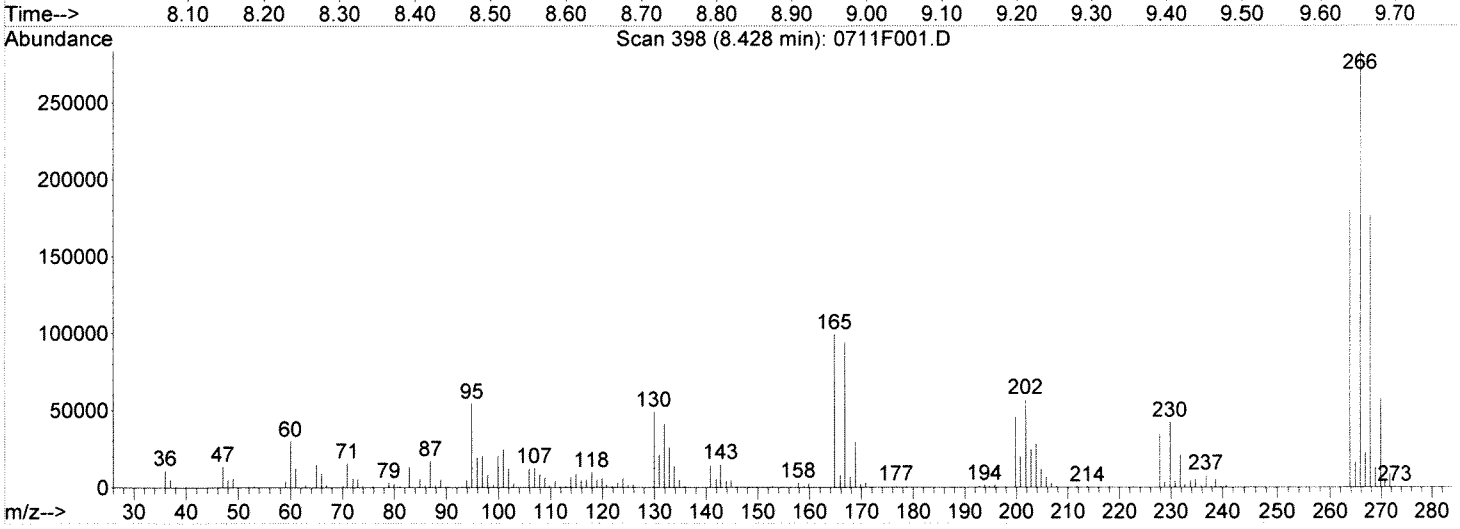
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -27%

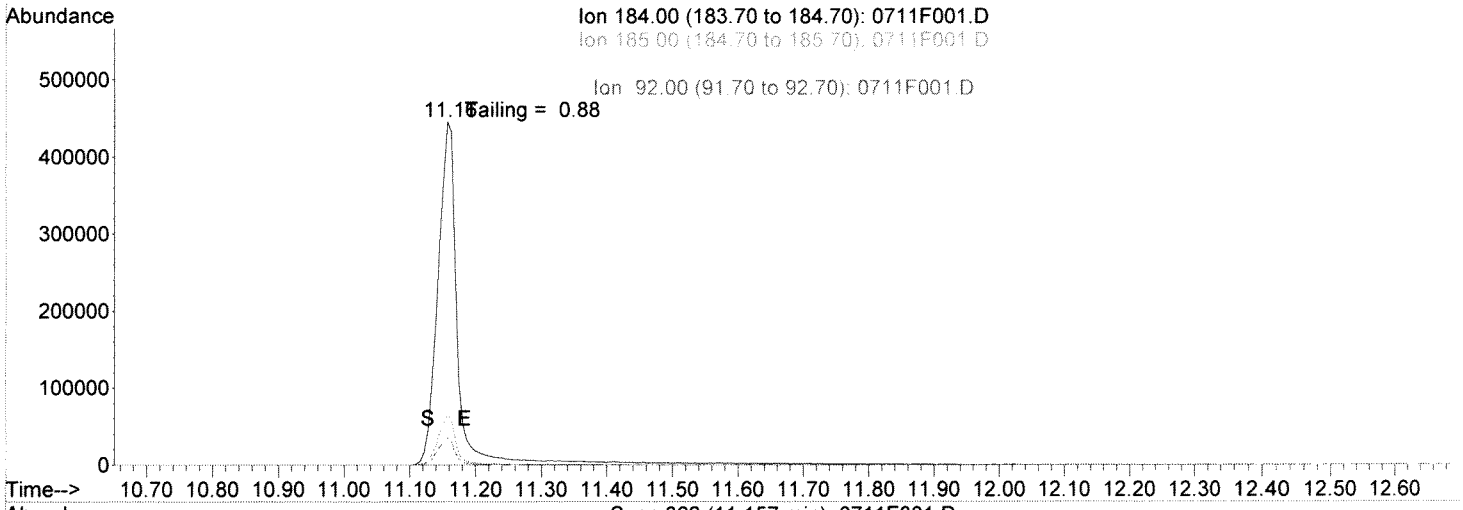
JUL 16 2018

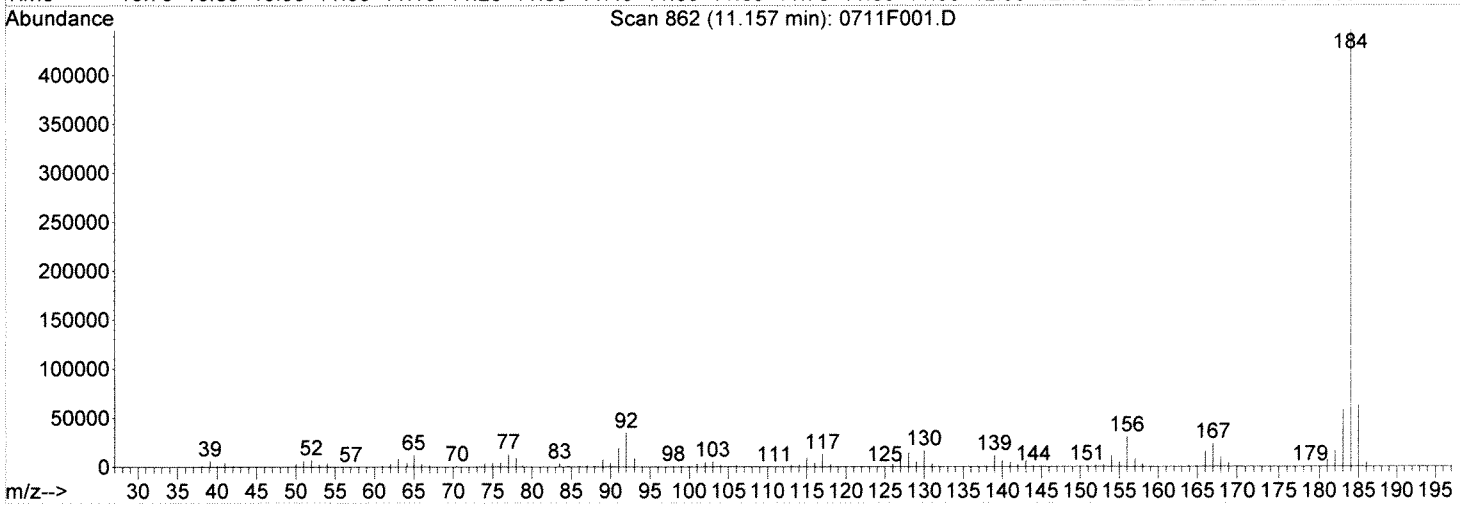
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

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JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

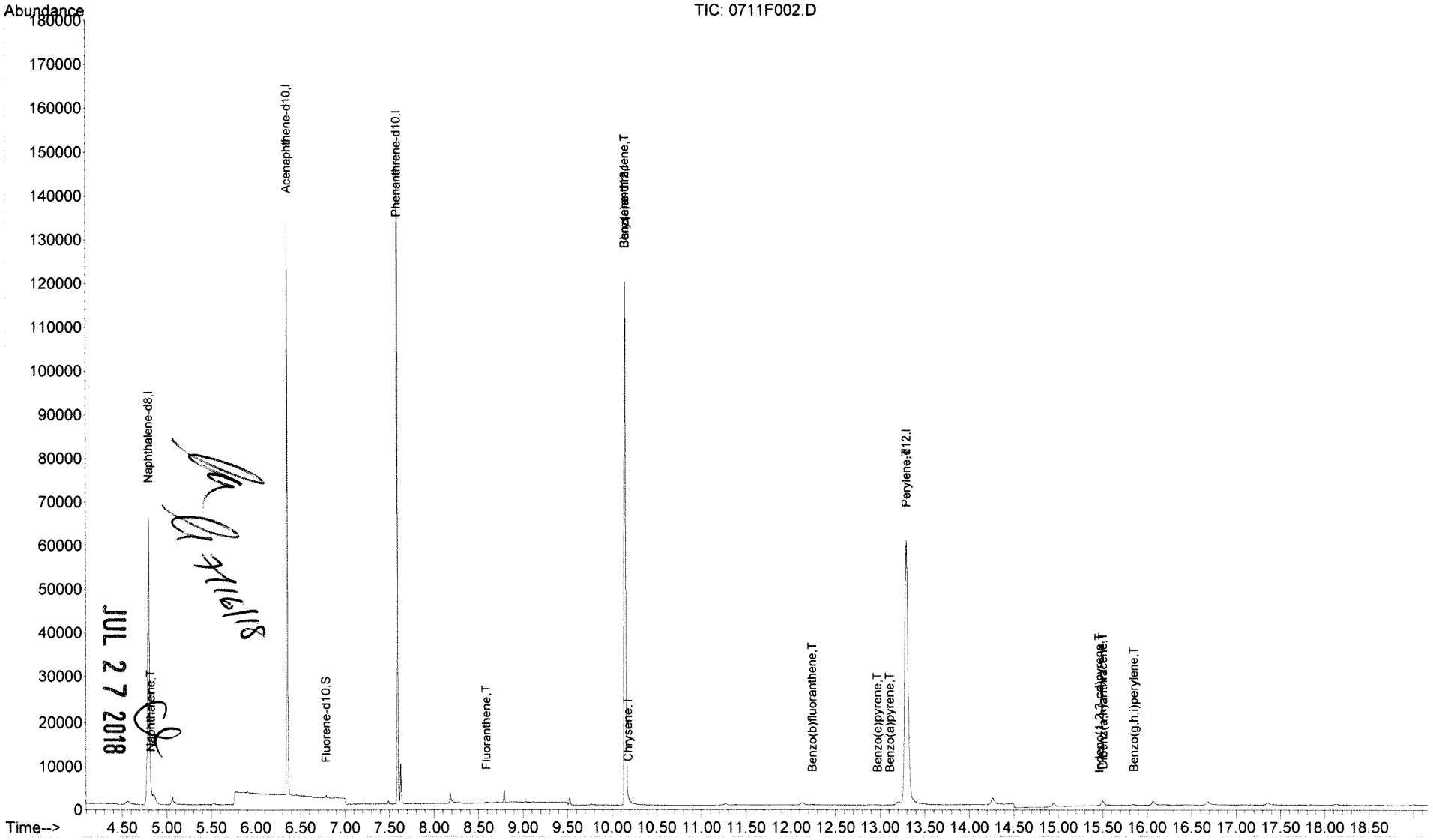
7/16/18

JUL 27 2018

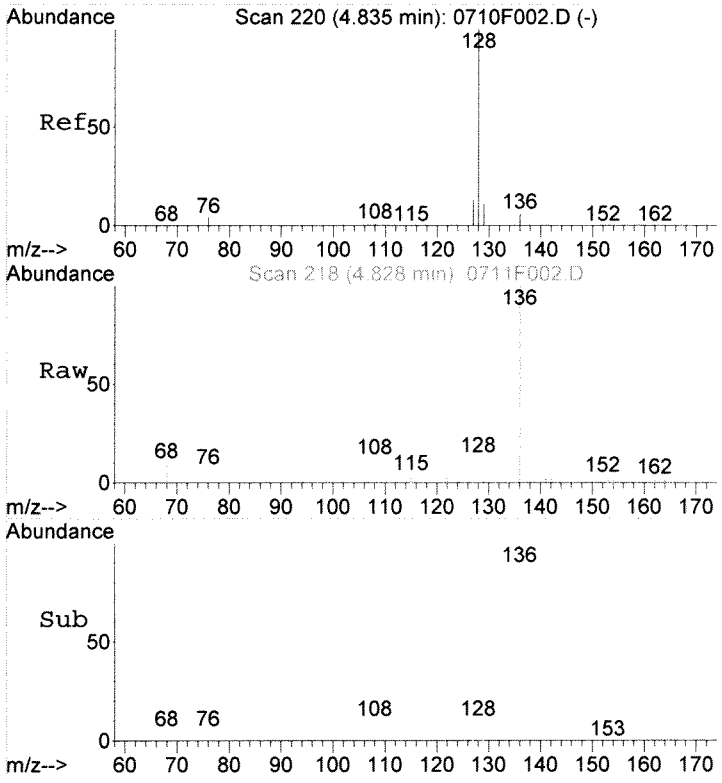
(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



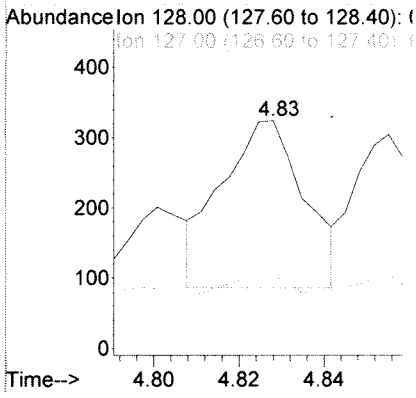
JUL 27 2018

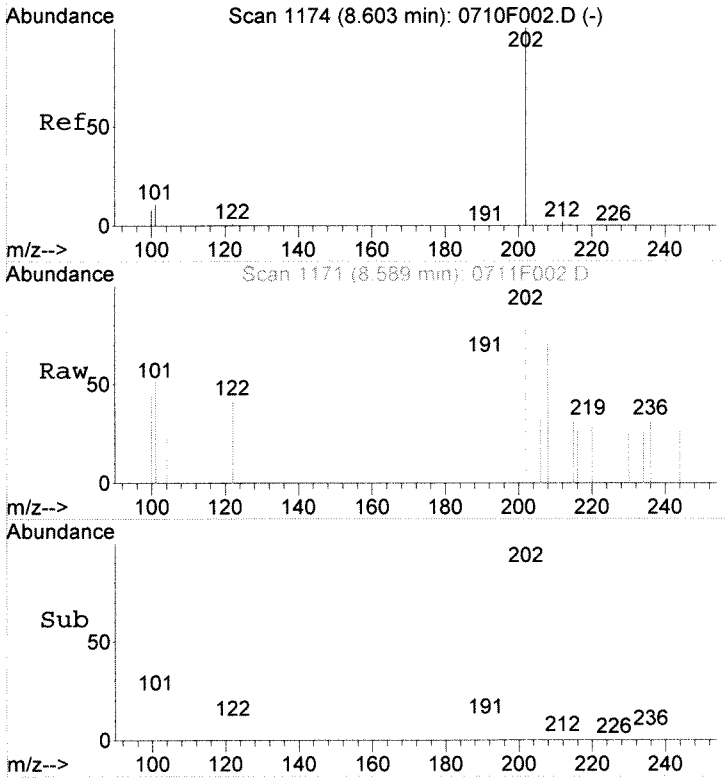


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

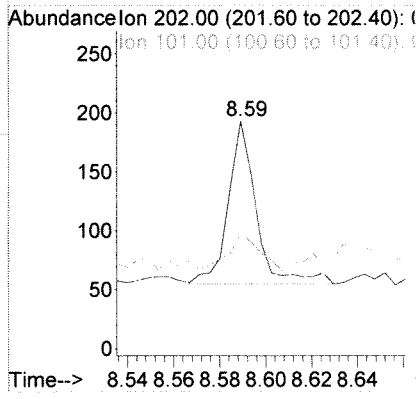




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

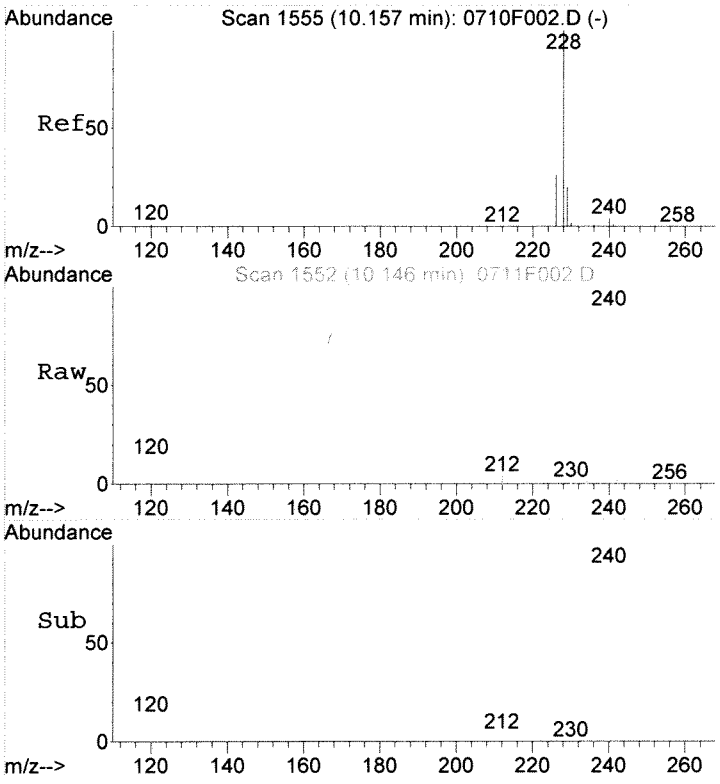
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

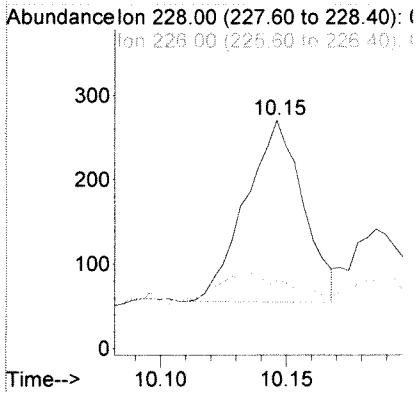
JUL 27 2018

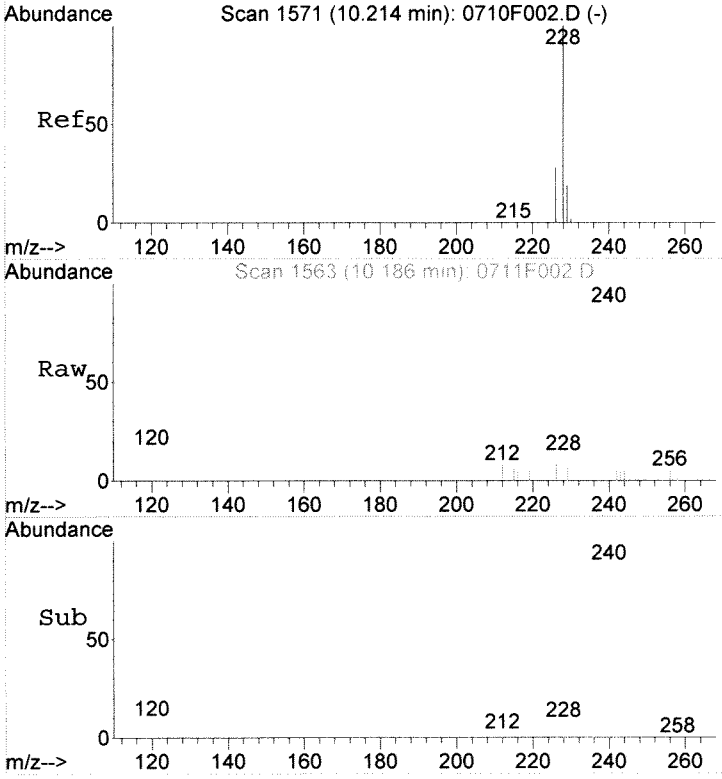


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

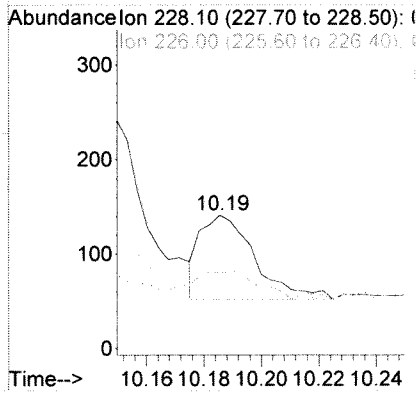




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

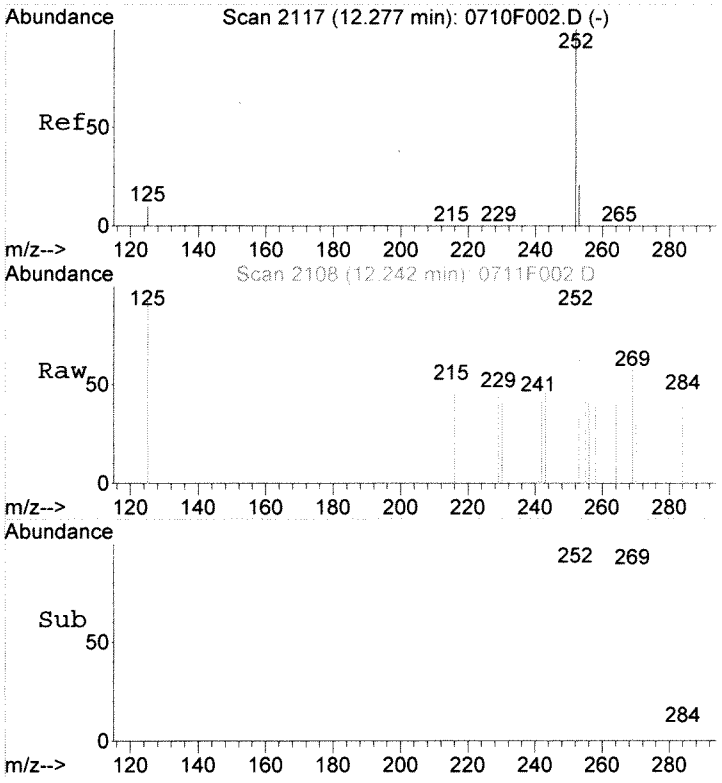
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

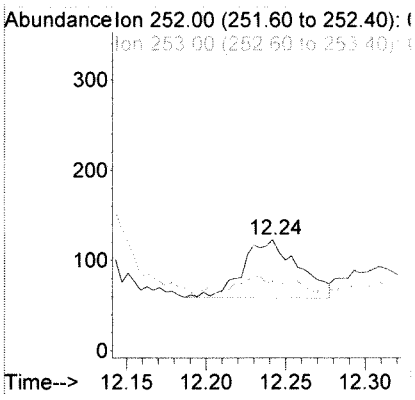
JUL 27 2018

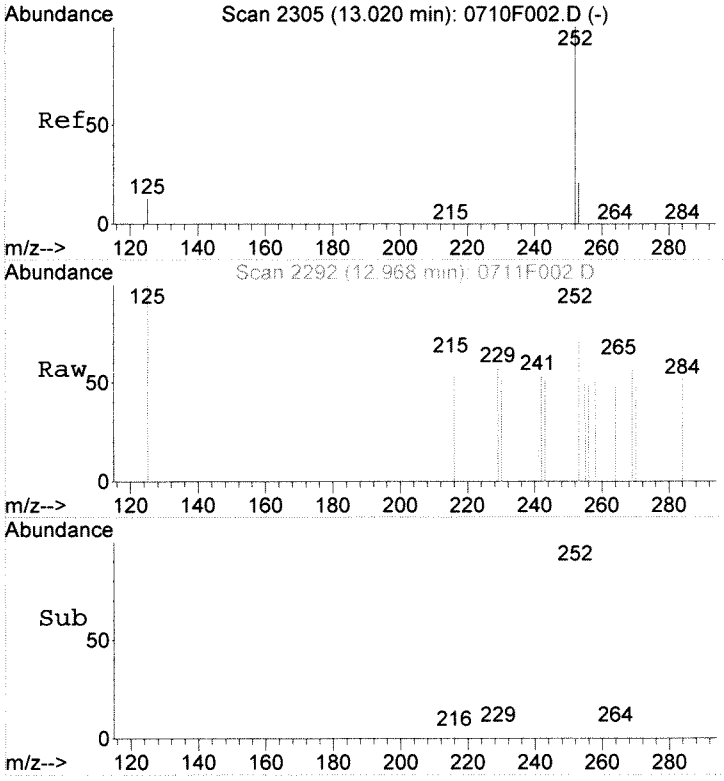


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

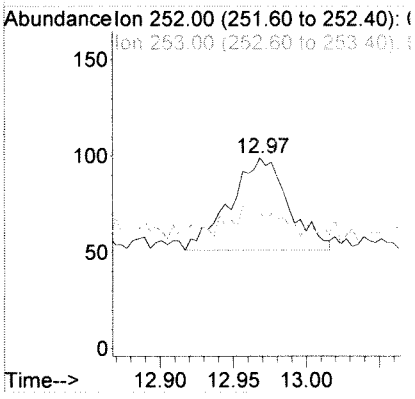




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

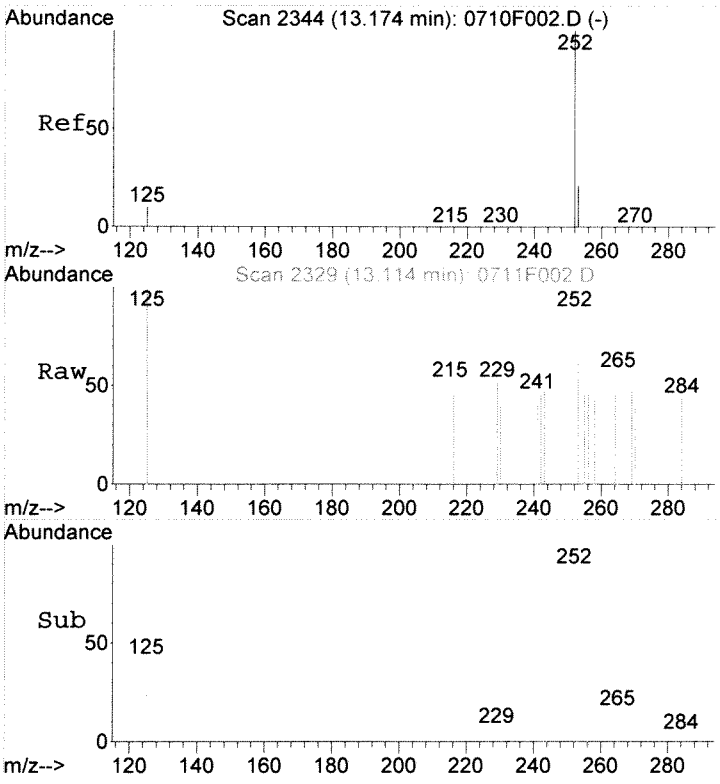
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



7/16/18

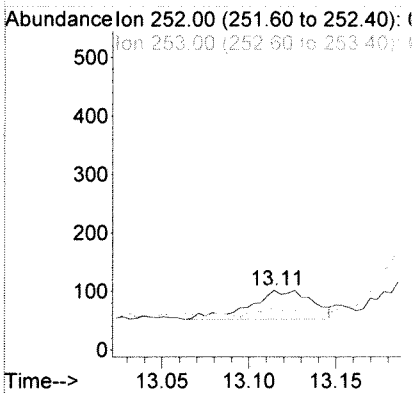
JUL 27 2018

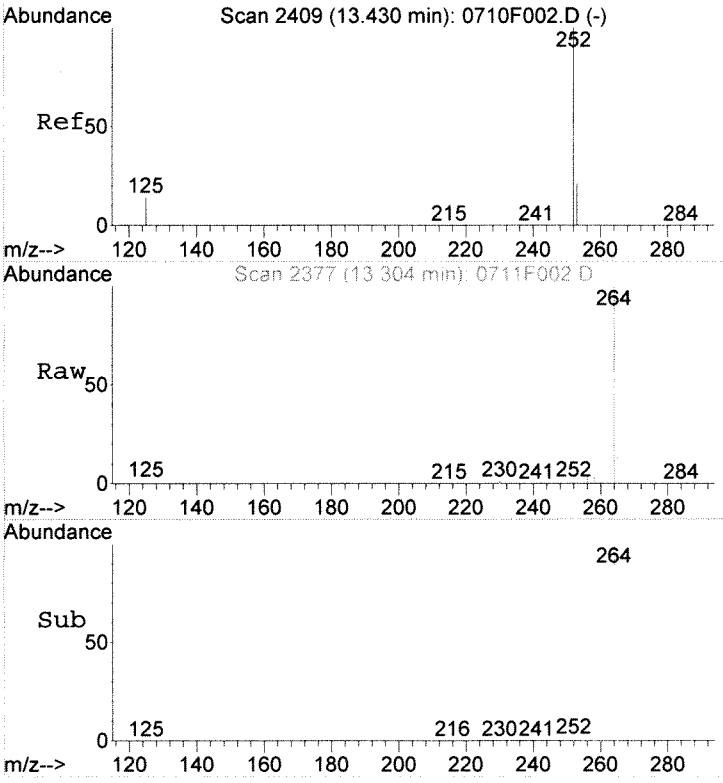


#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 126

Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1

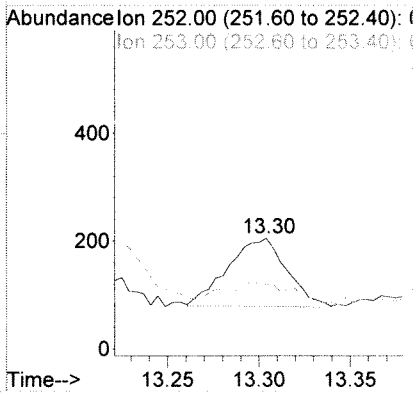




#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

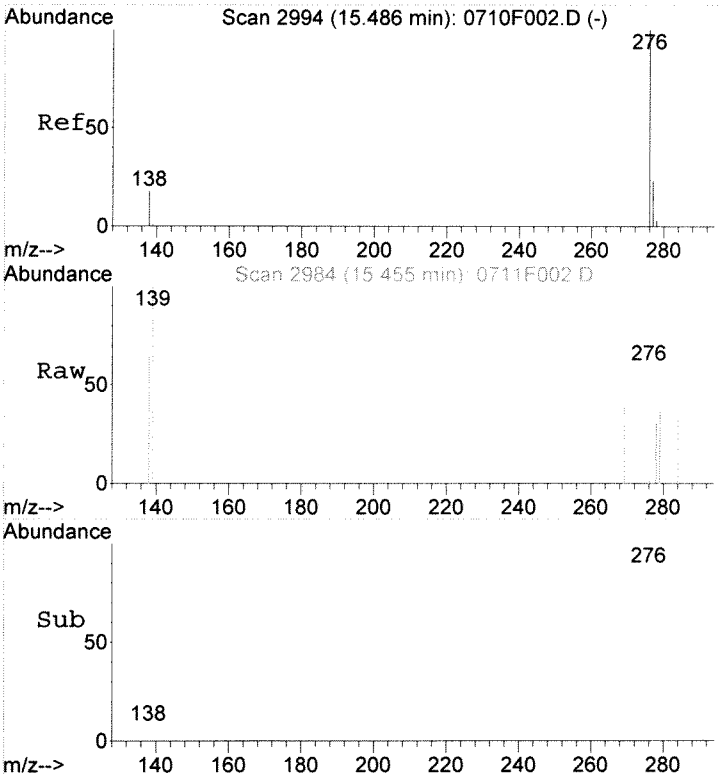
Tgt Ion:252 Resp: 287

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

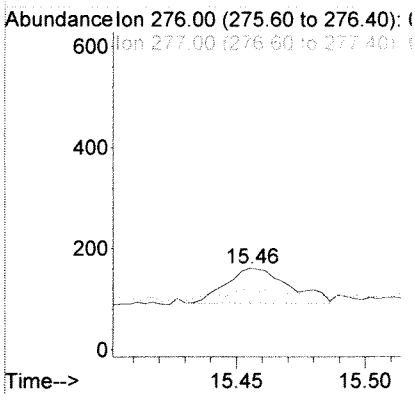
JUL 27 2018

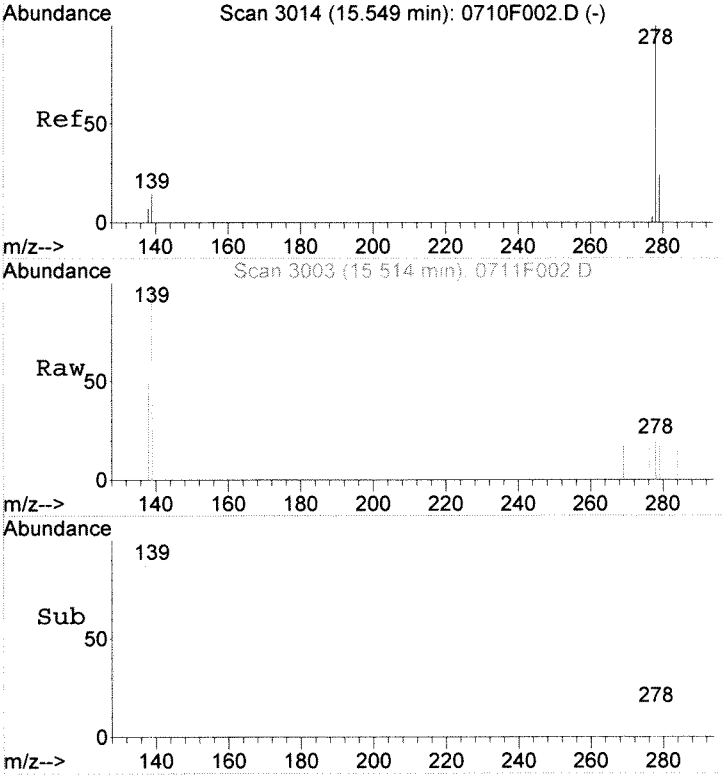


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

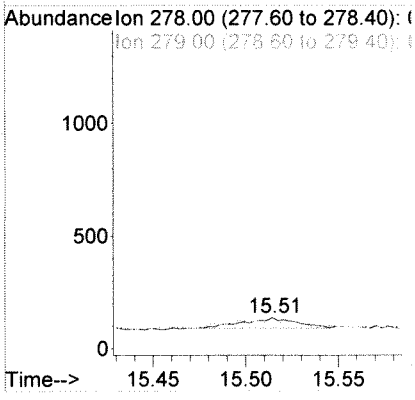




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

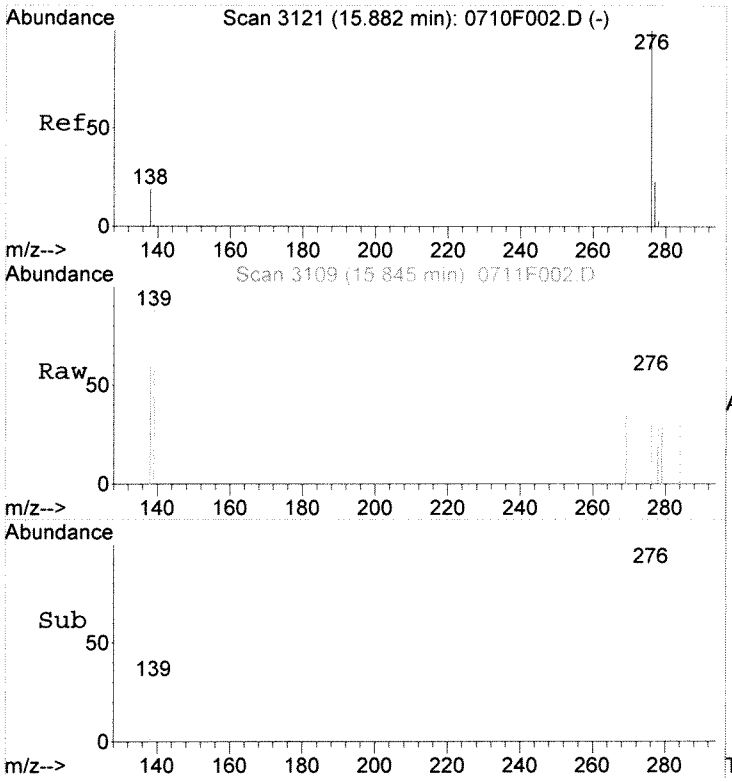
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

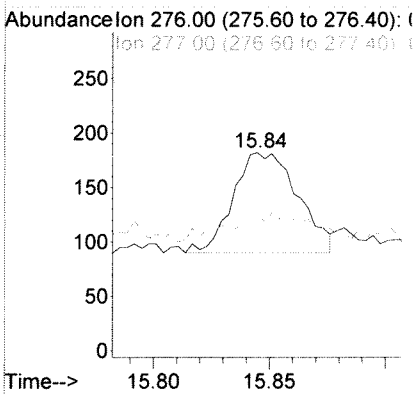
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.22%		
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.28%		
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.19%		
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.30%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

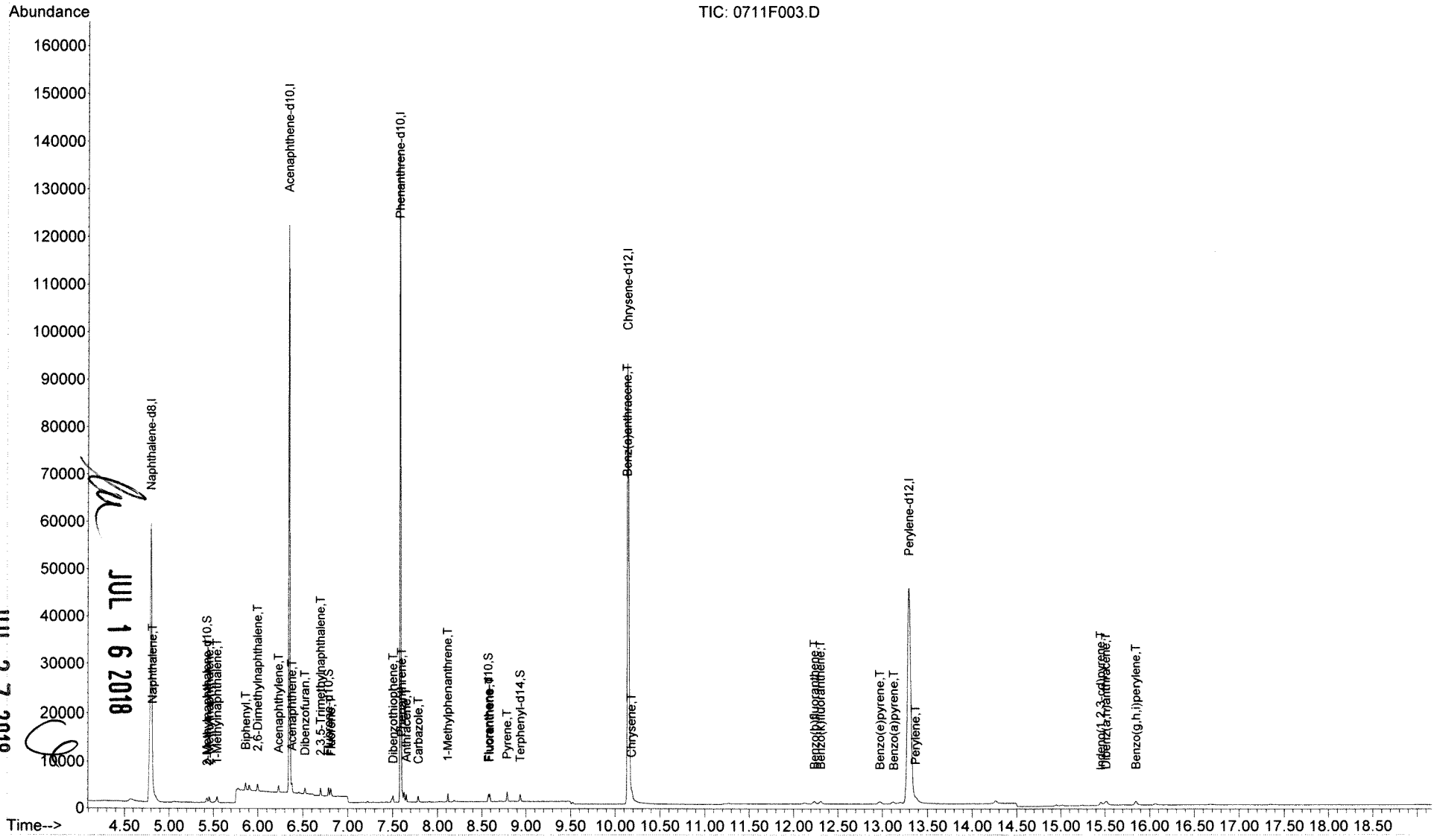
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

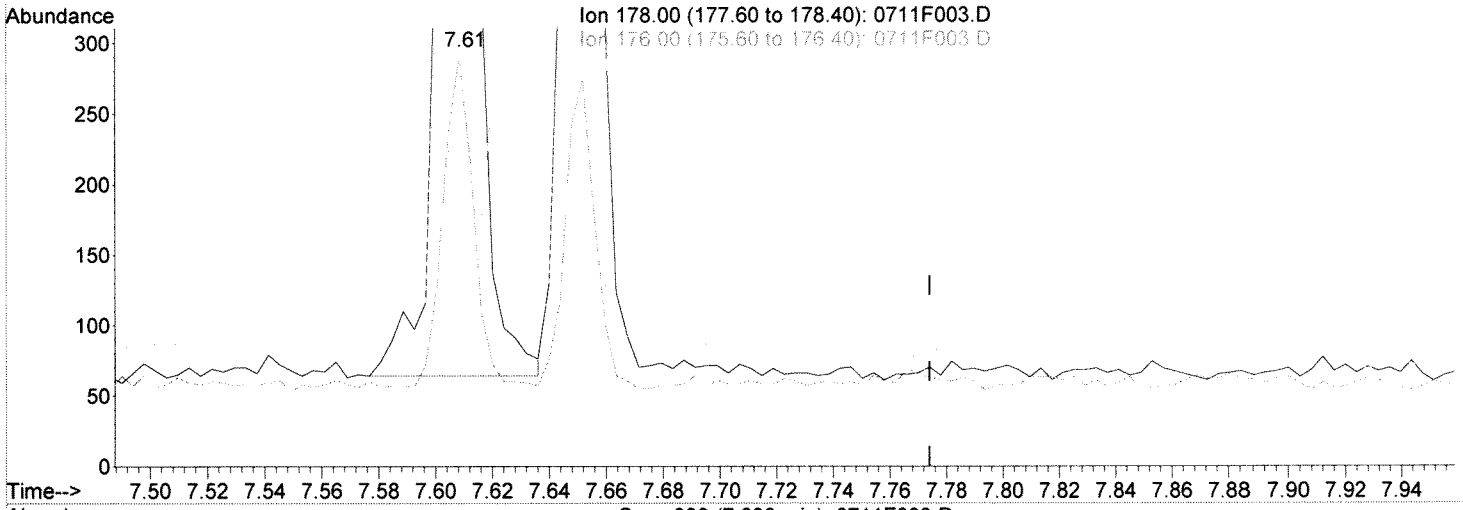


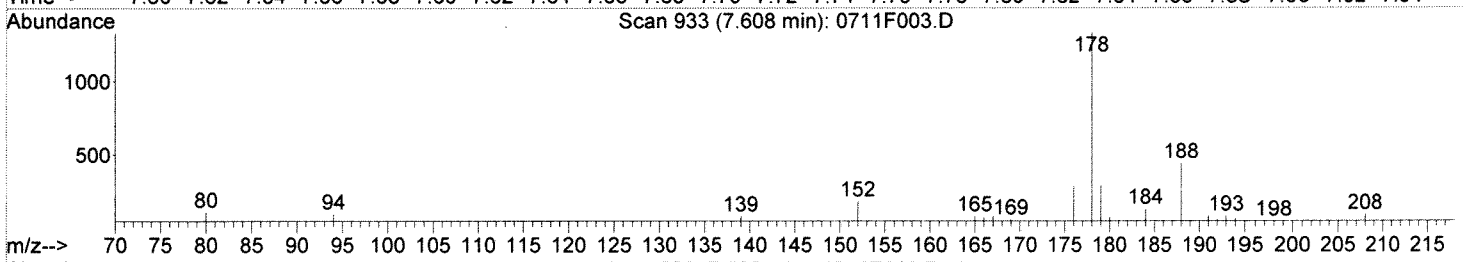
JUL 27 2018
JUL 16 2018

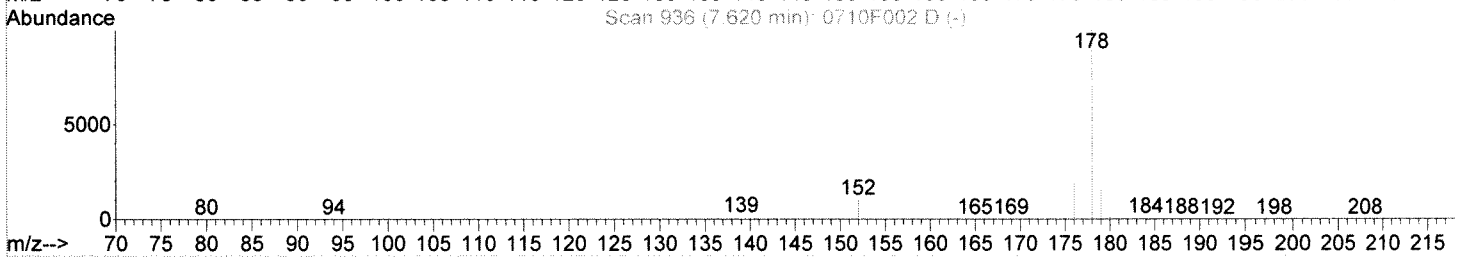
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

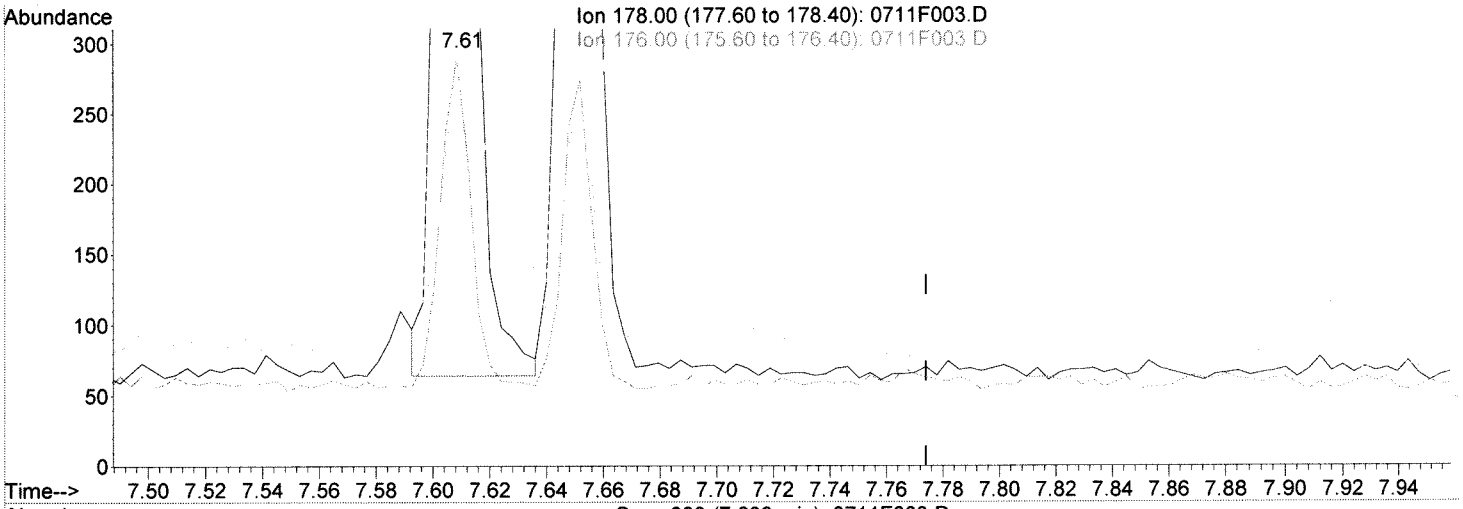
JUL 2 7 2018

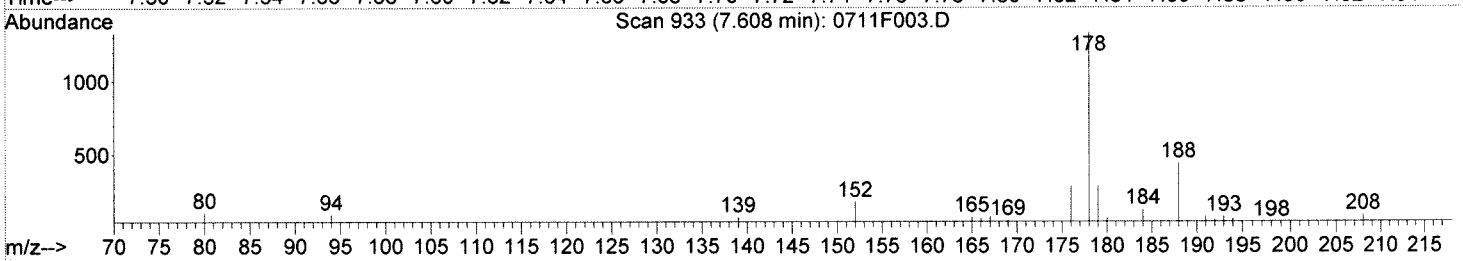
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

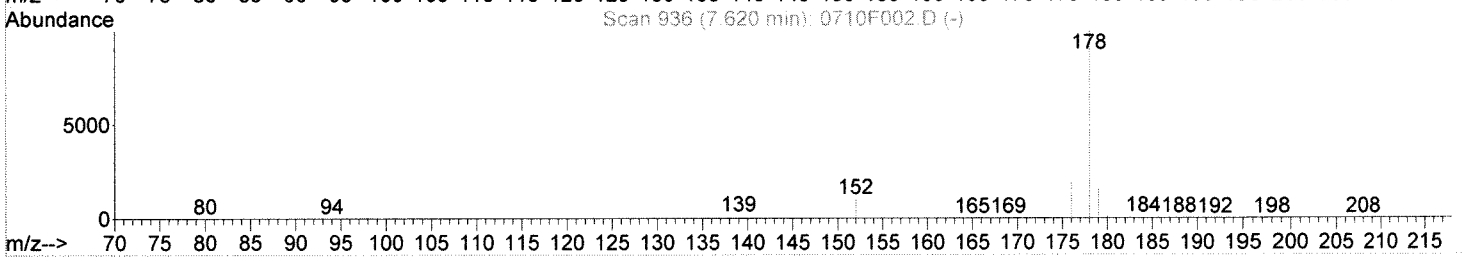
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

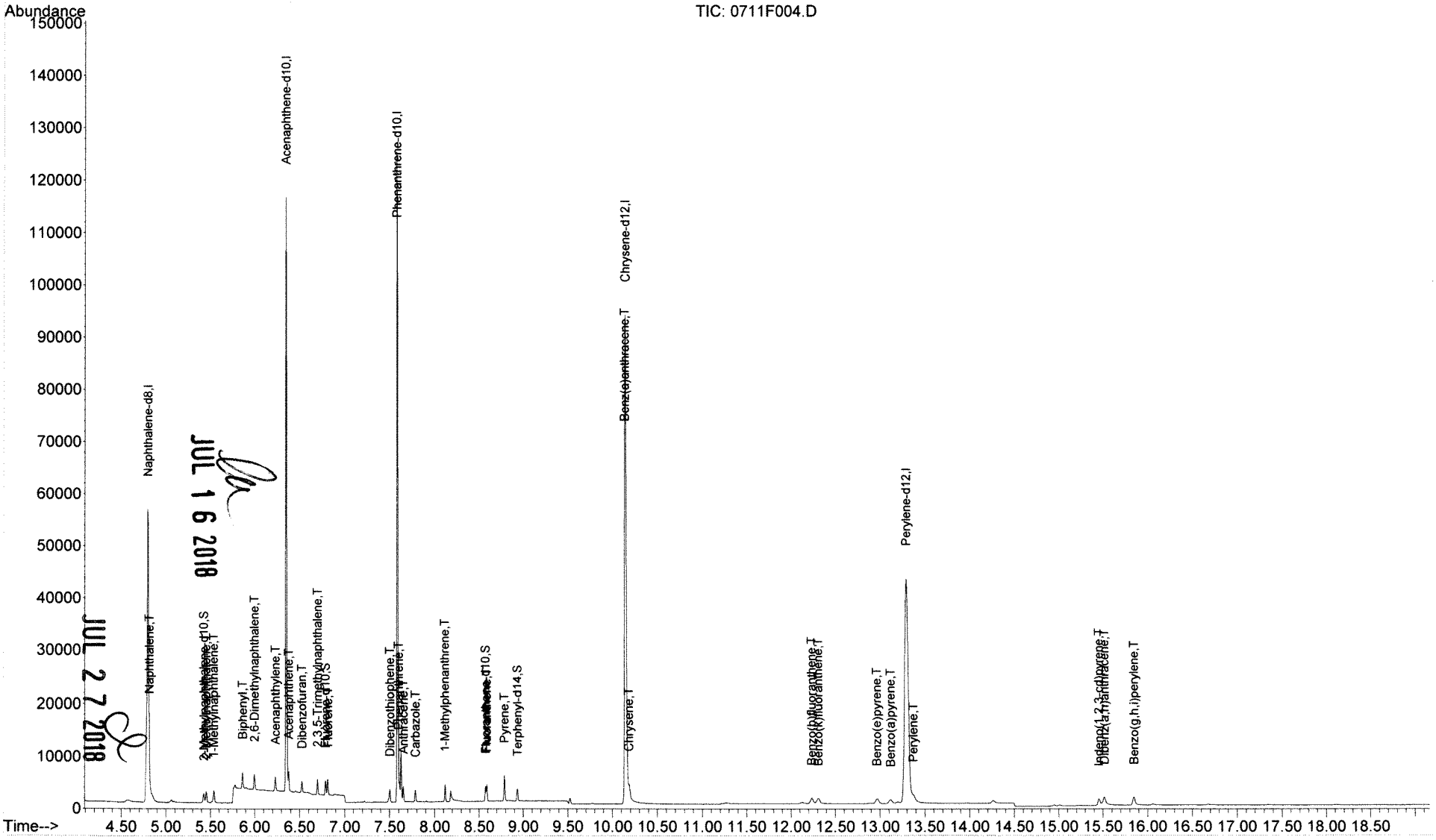
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

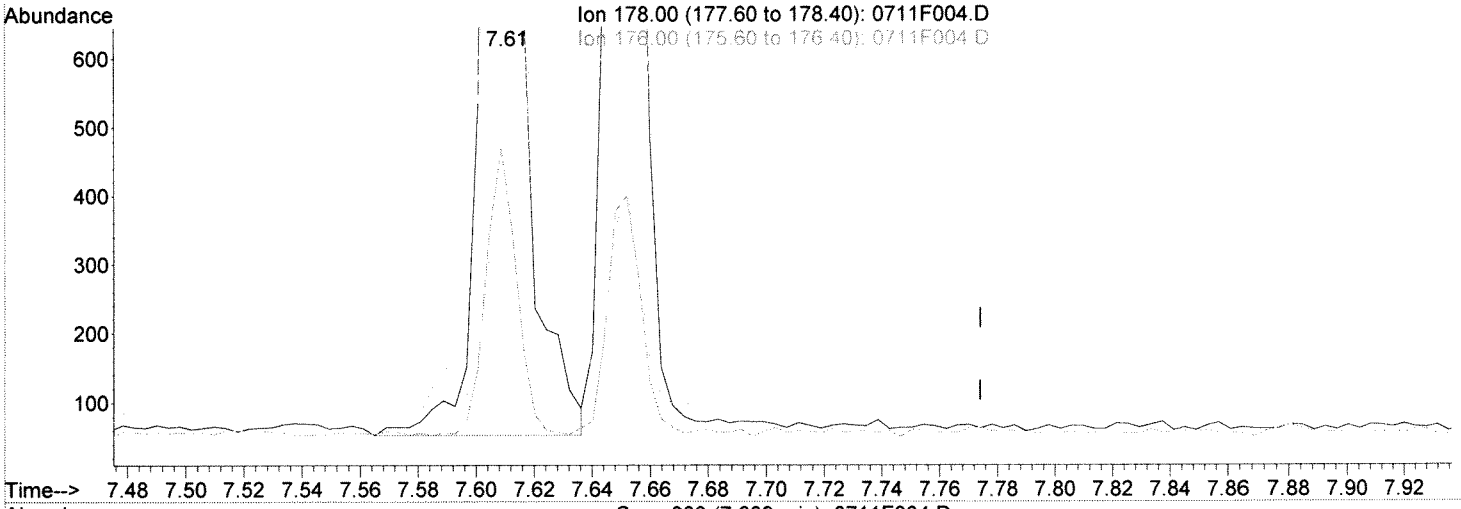
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

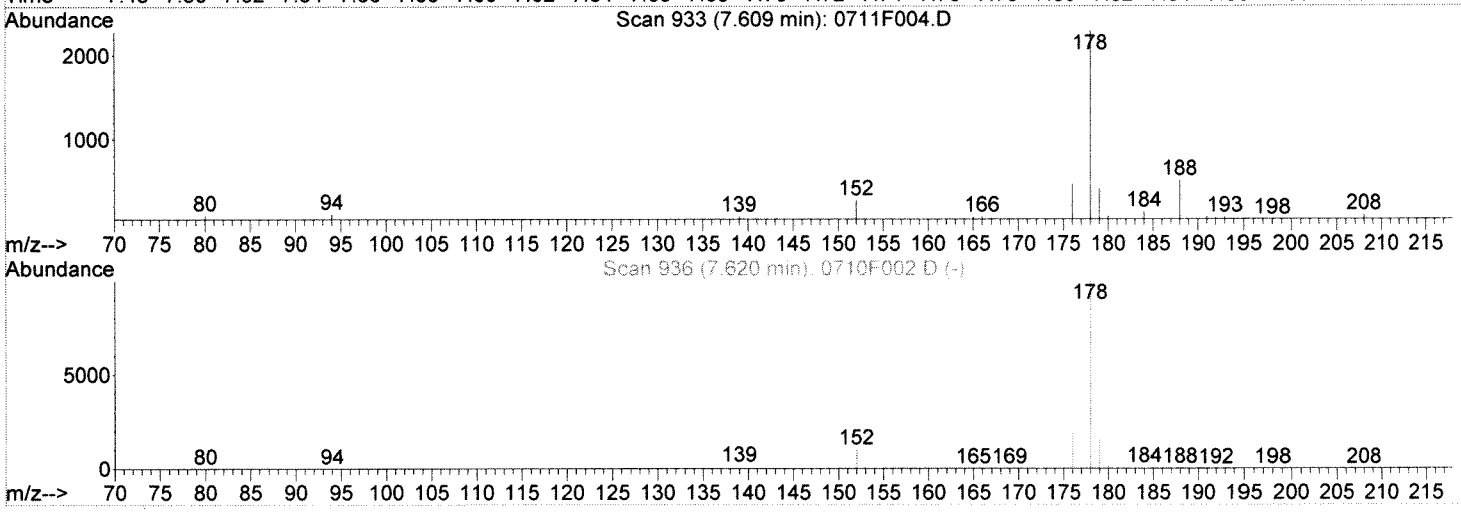


JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

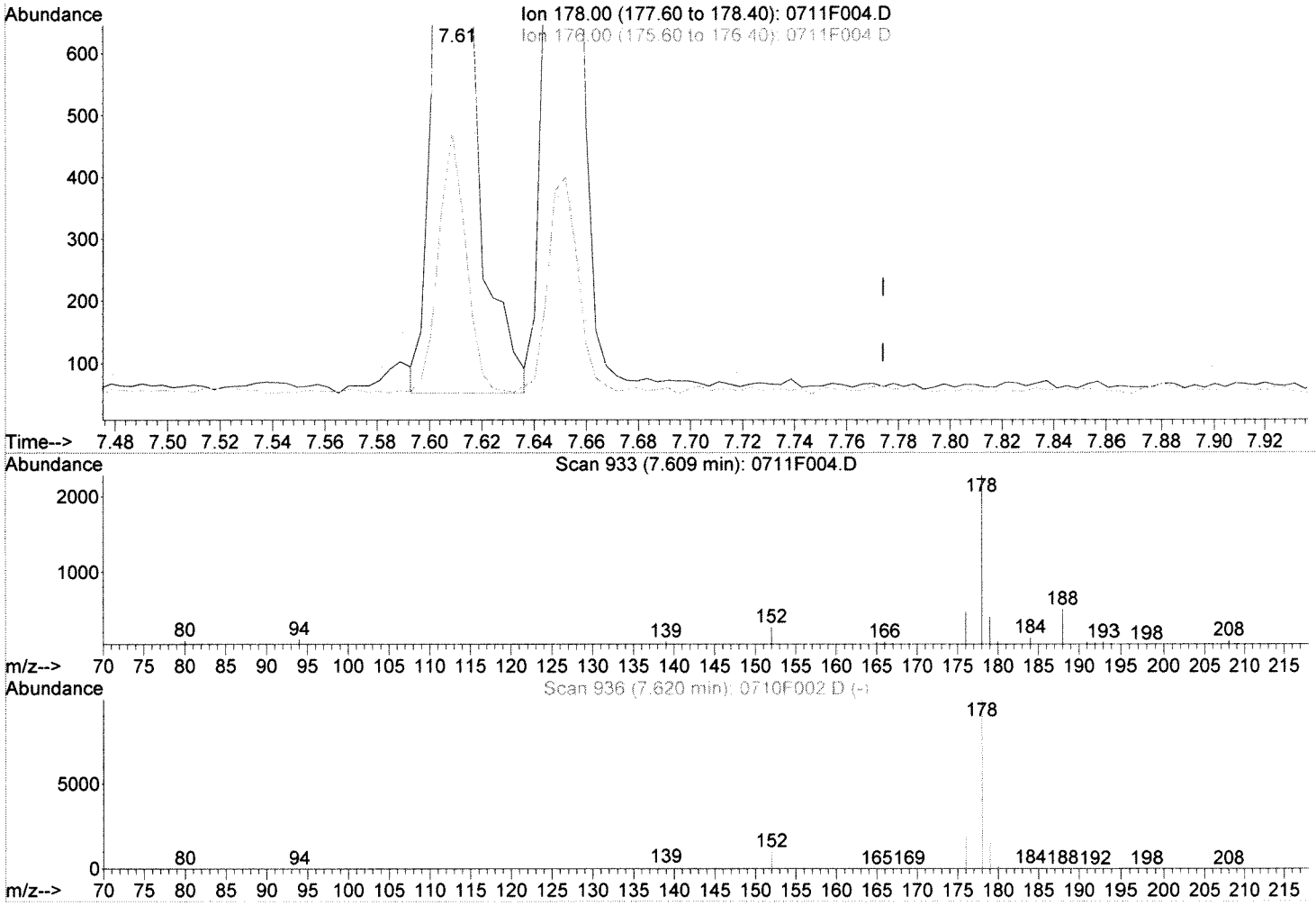
JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Quantitation Report (Qual)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.81%		
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.74%		
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

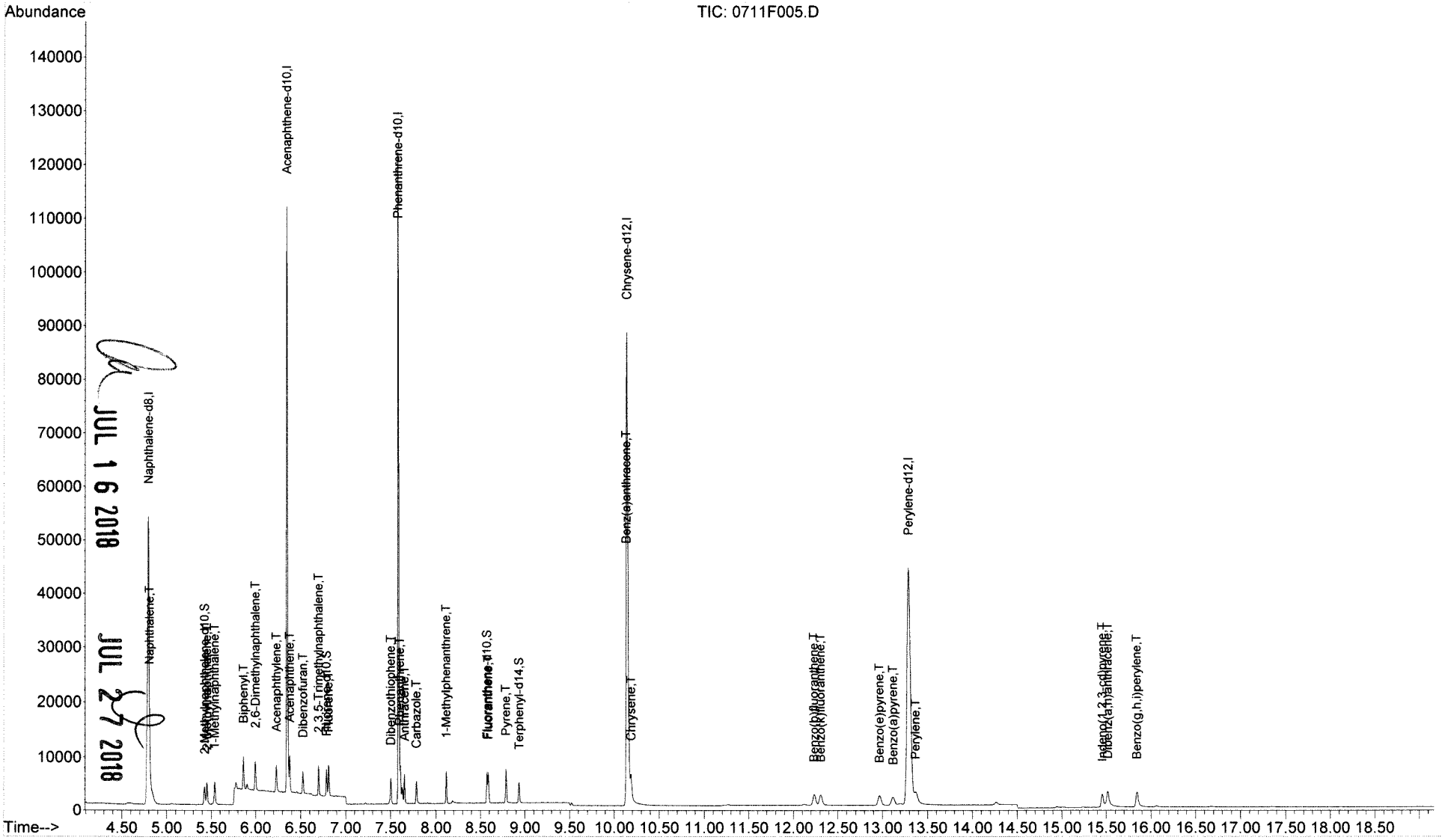
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

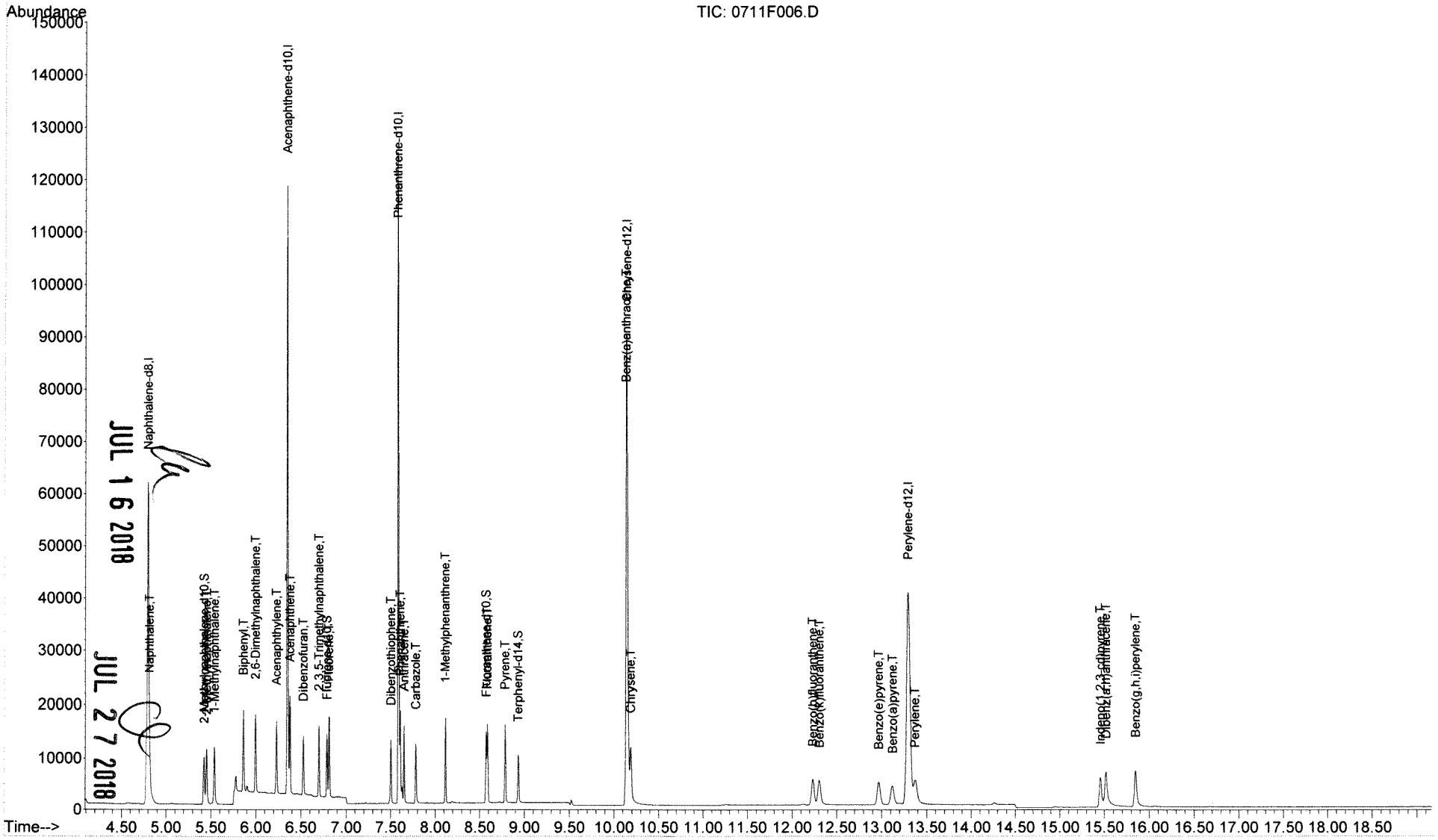
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

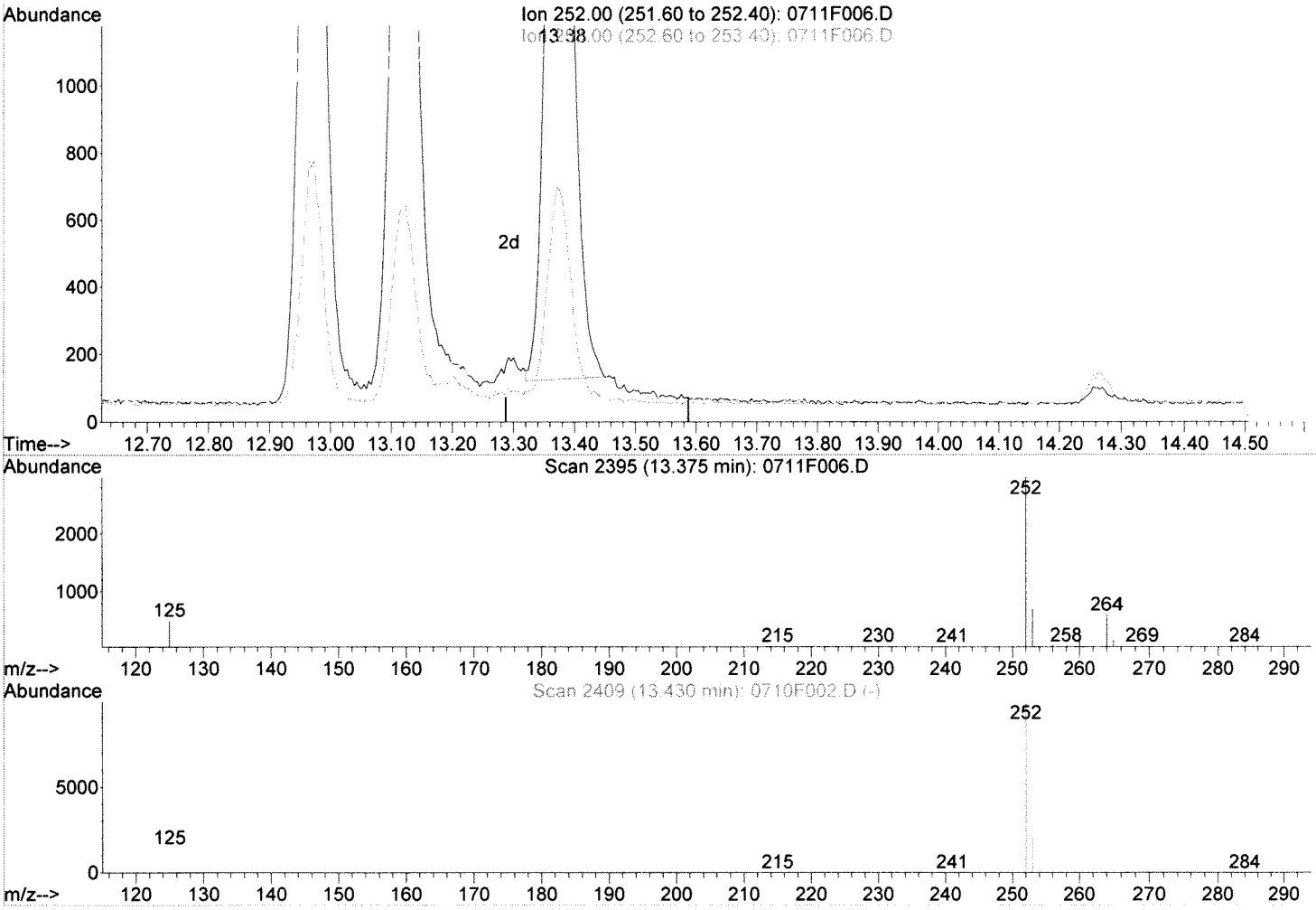


JUL 16 2018
JUL 27 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

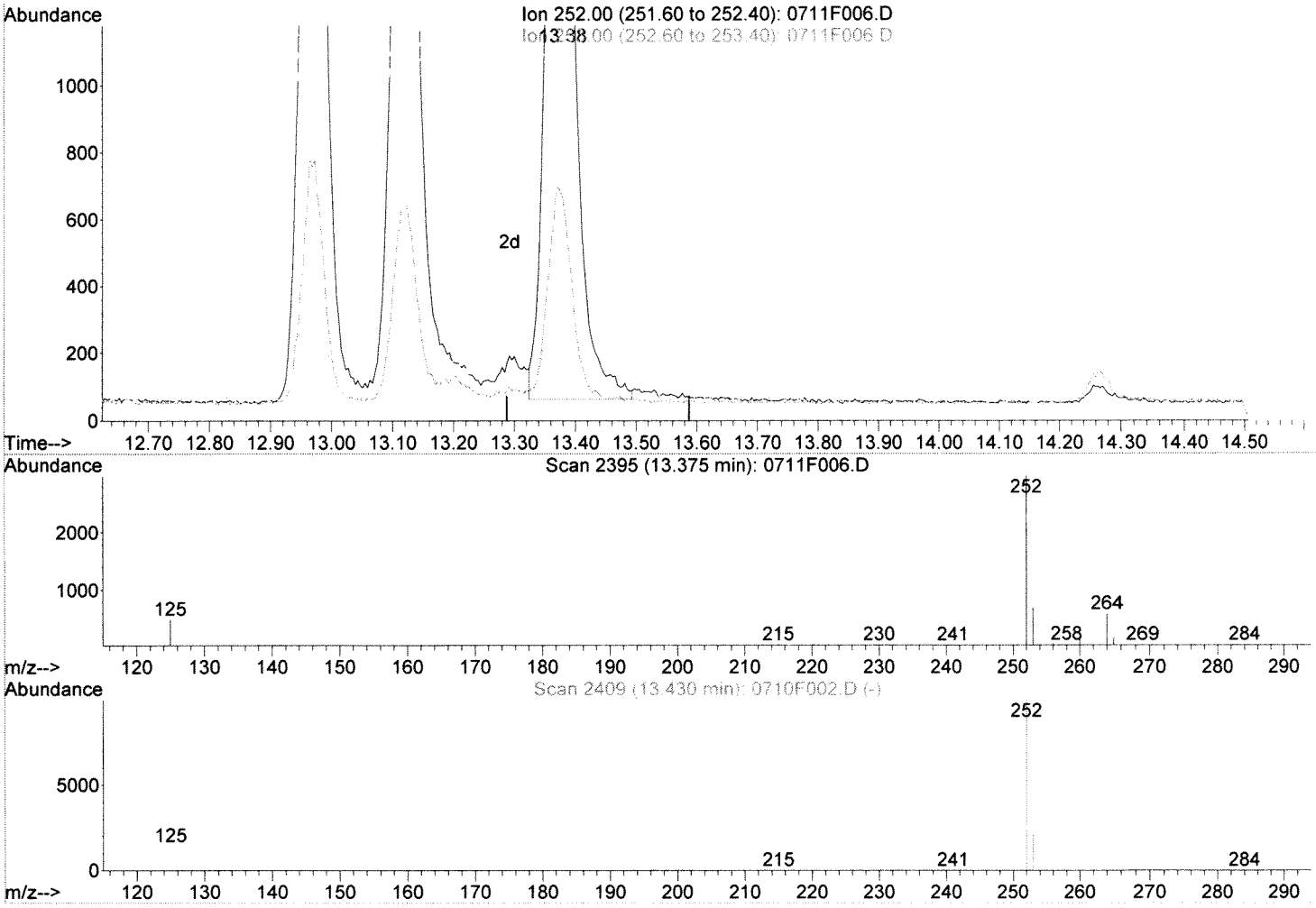
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

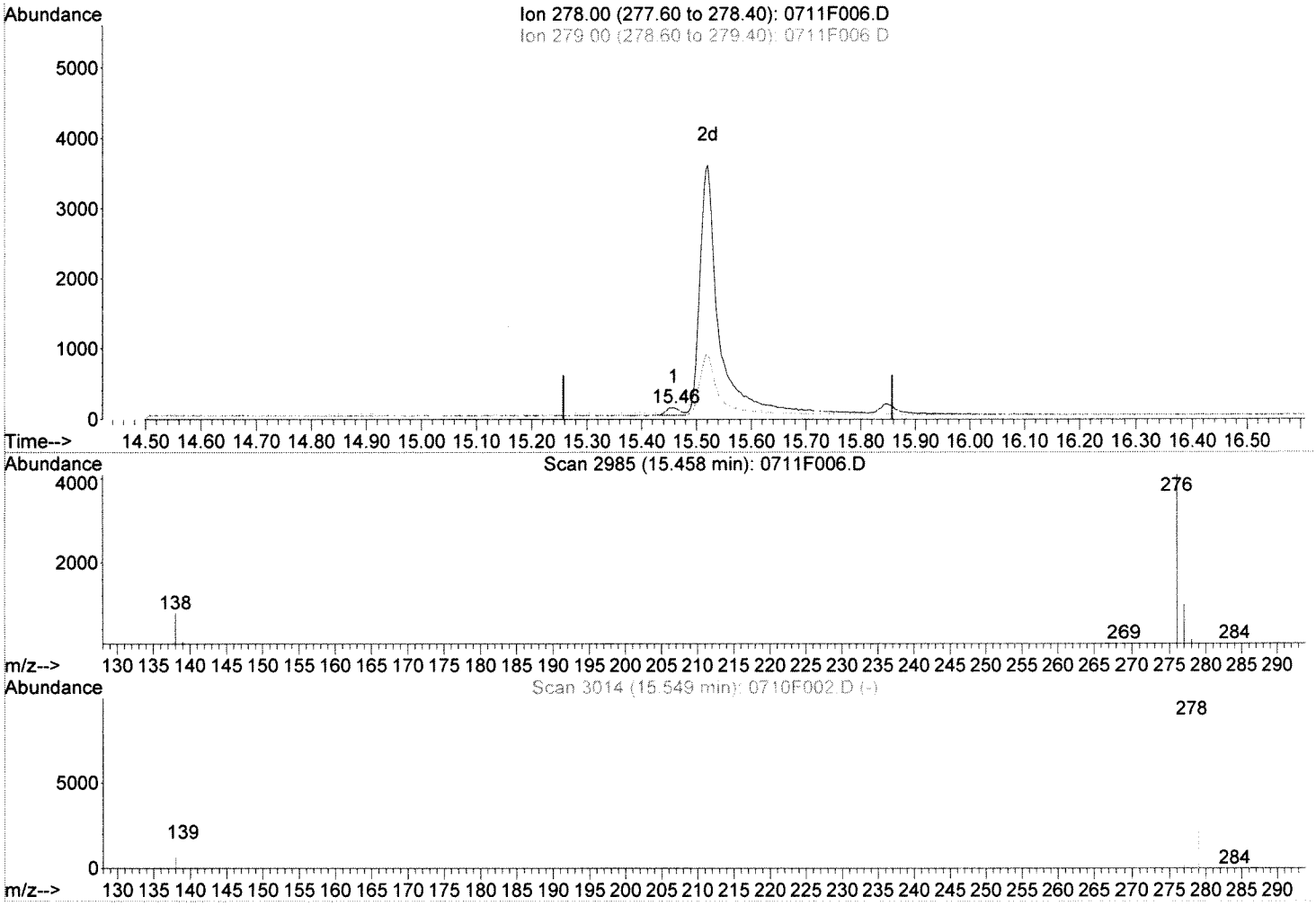
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

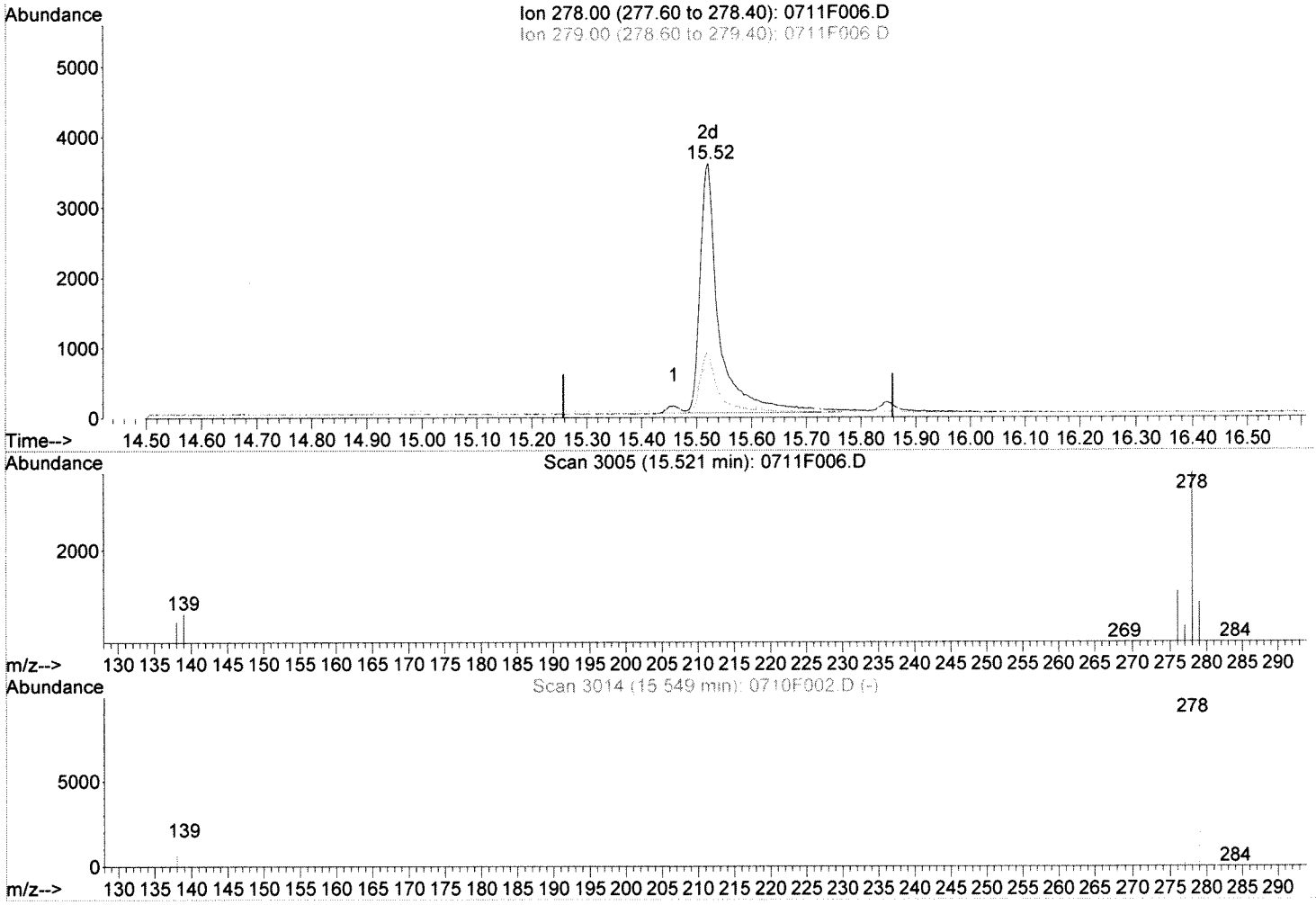
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

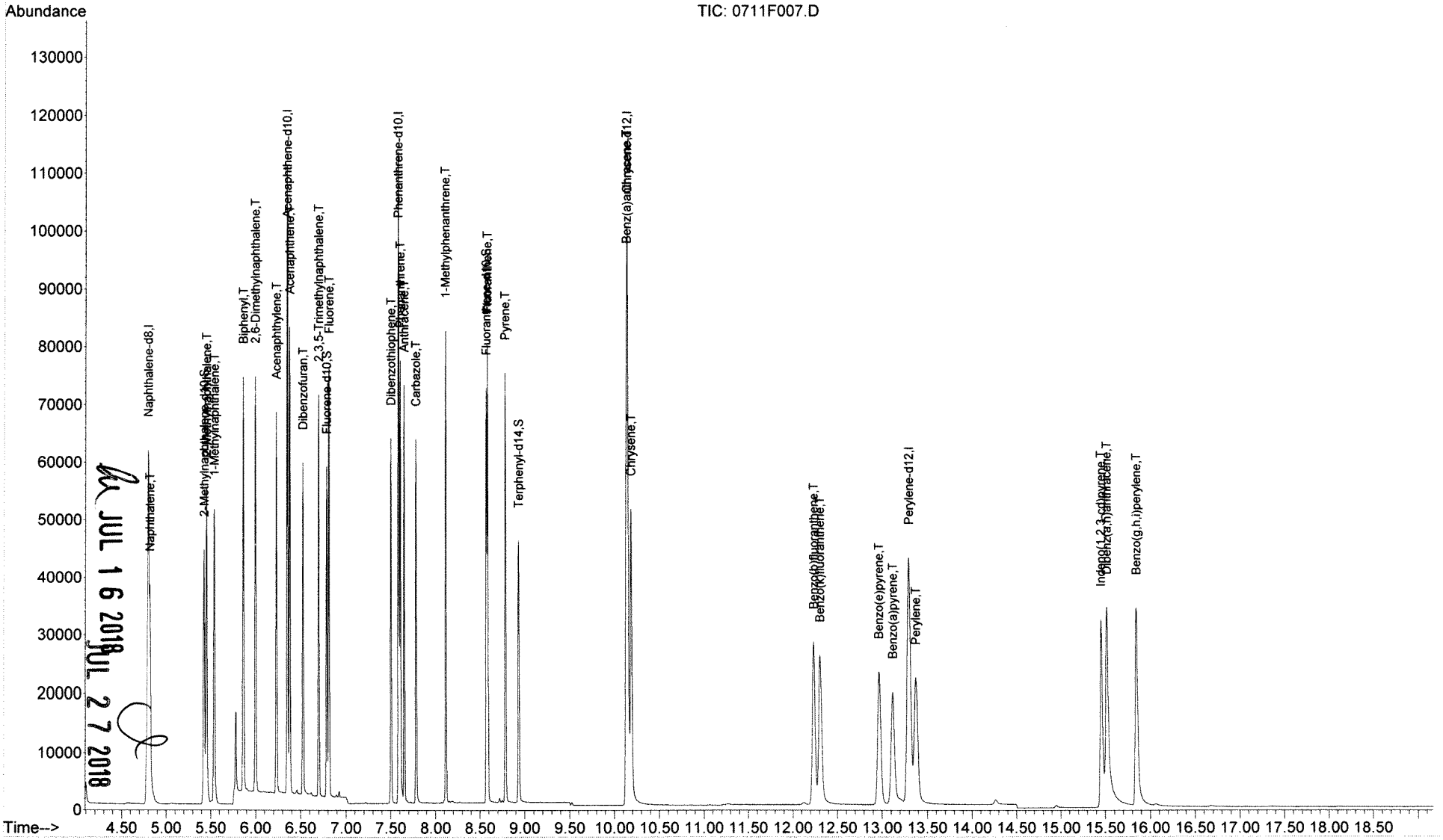
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	19.15%		
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	18.97%		
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	20.37%		
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	18.13%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

JUL 16 2018

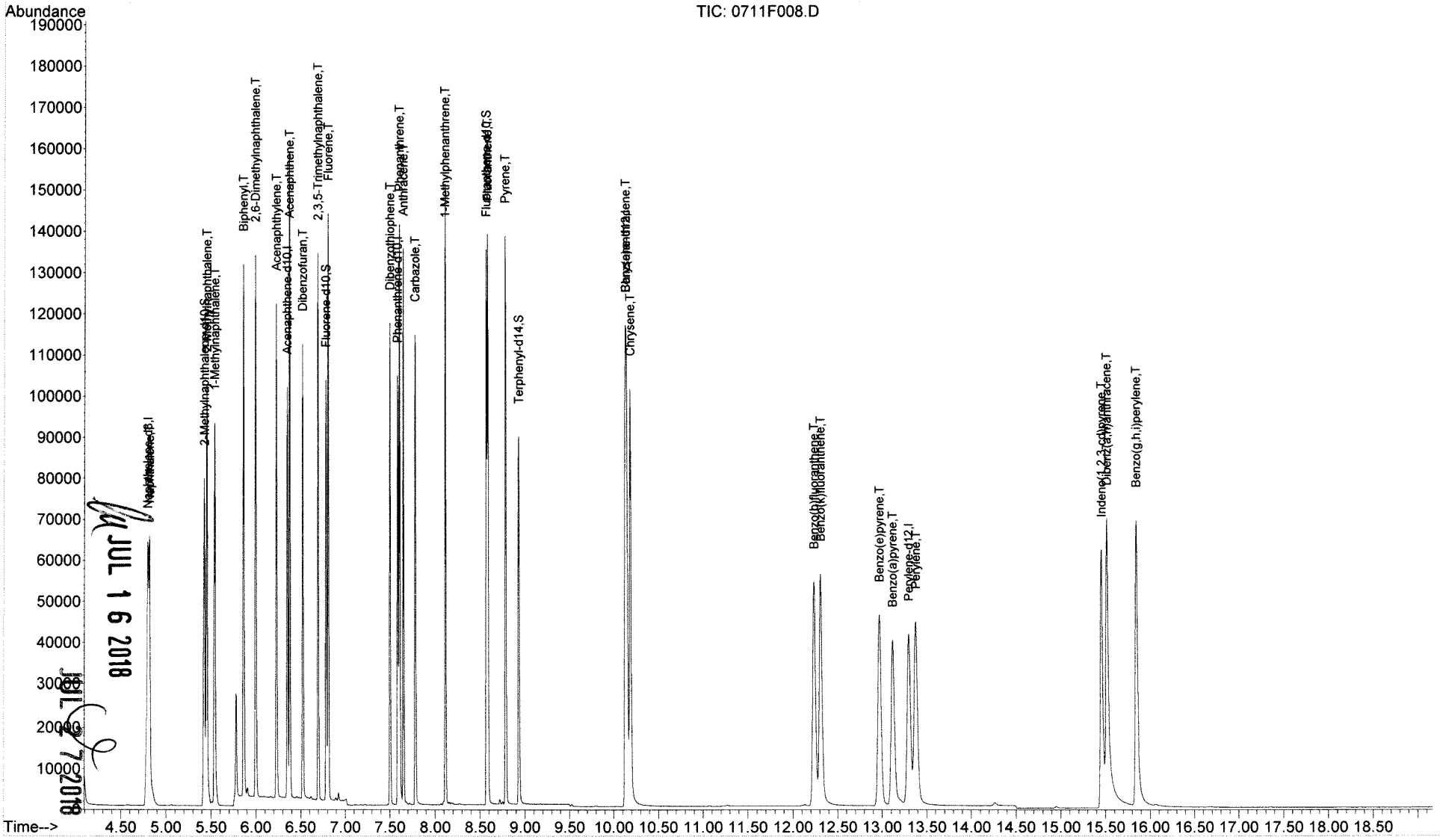
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

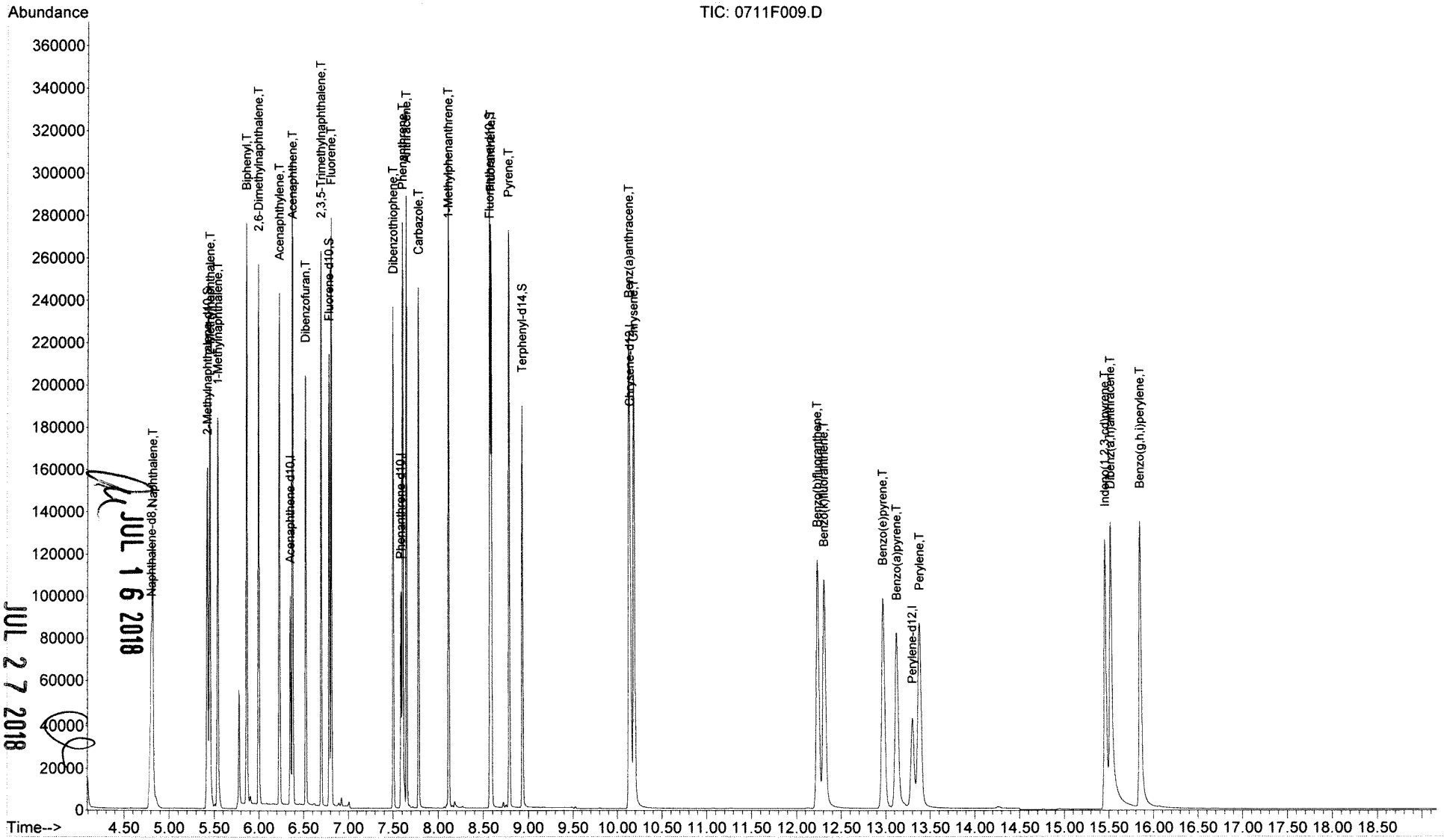
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

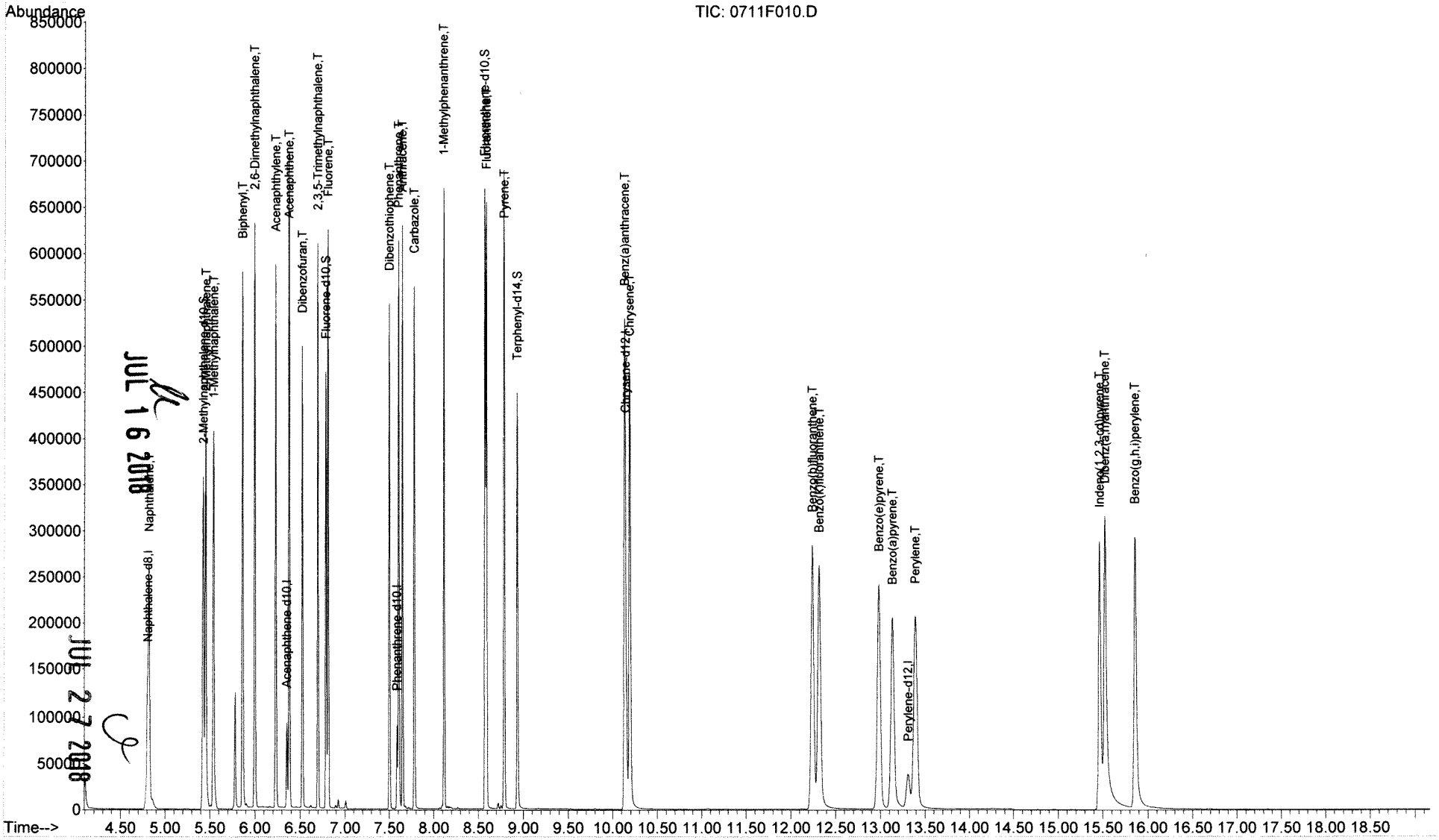
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0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

JUL 16 2018

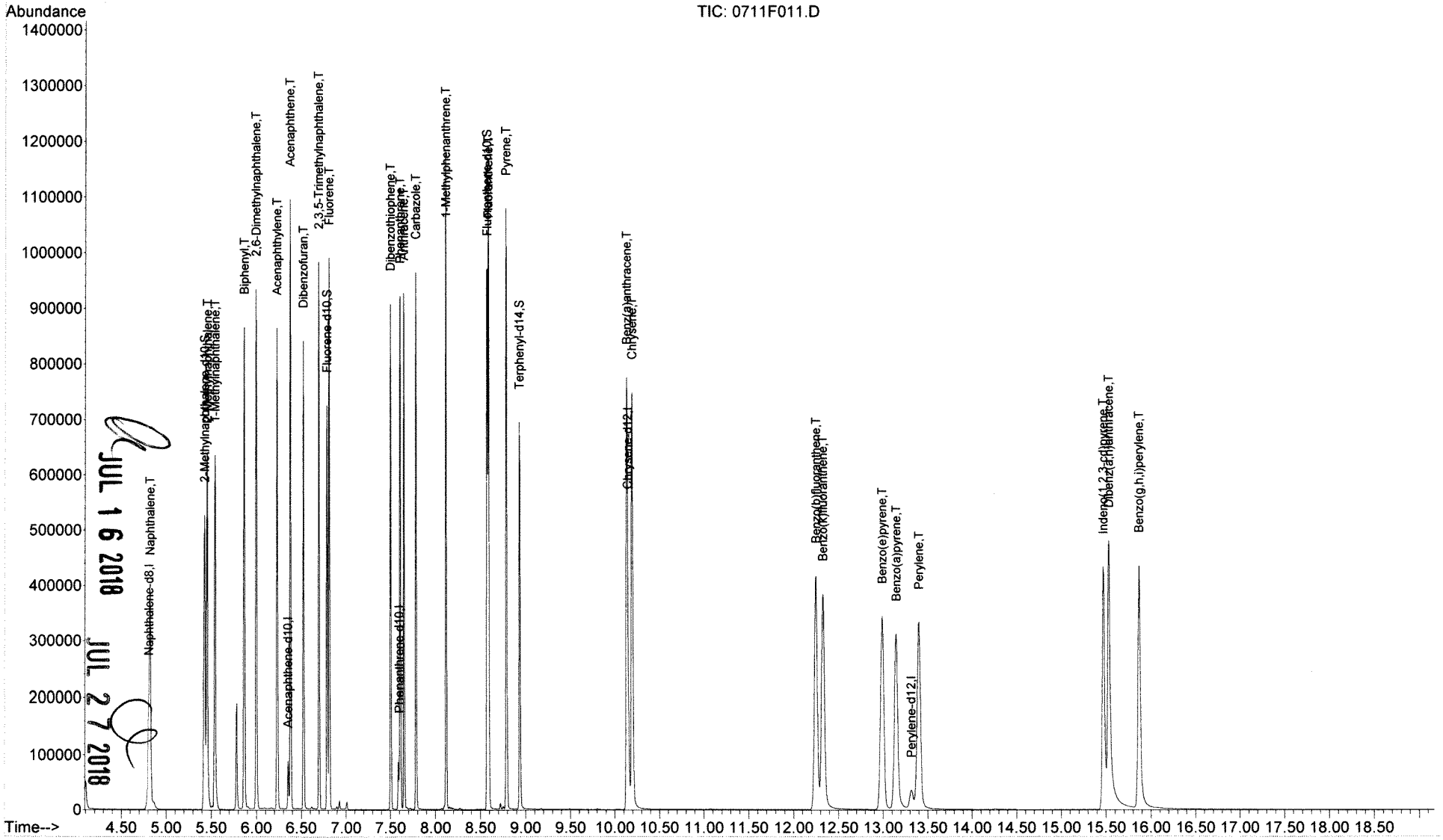
(#) = qualifier out of range (m) = manual integration
0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

JUL 16 2018

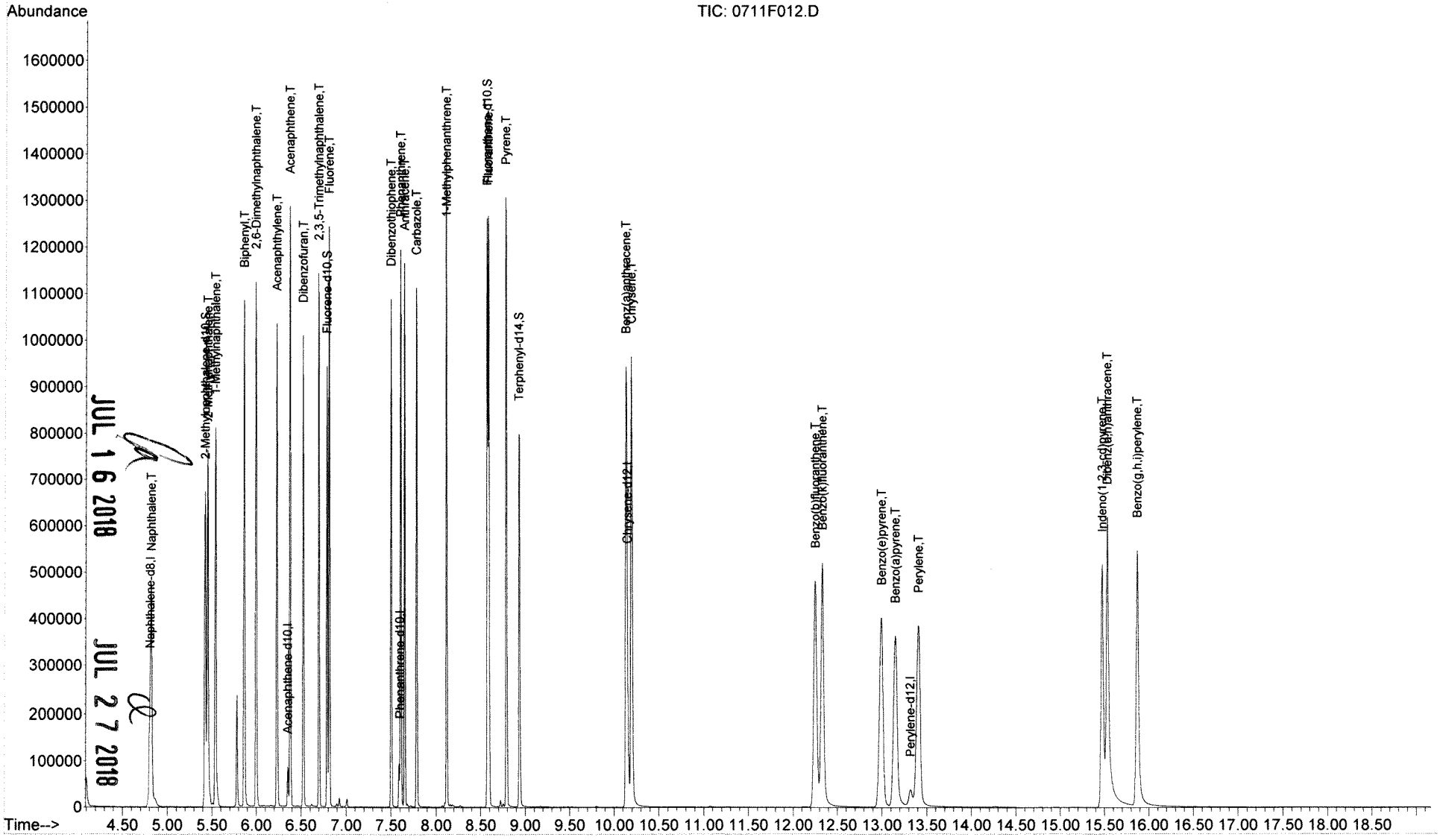
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

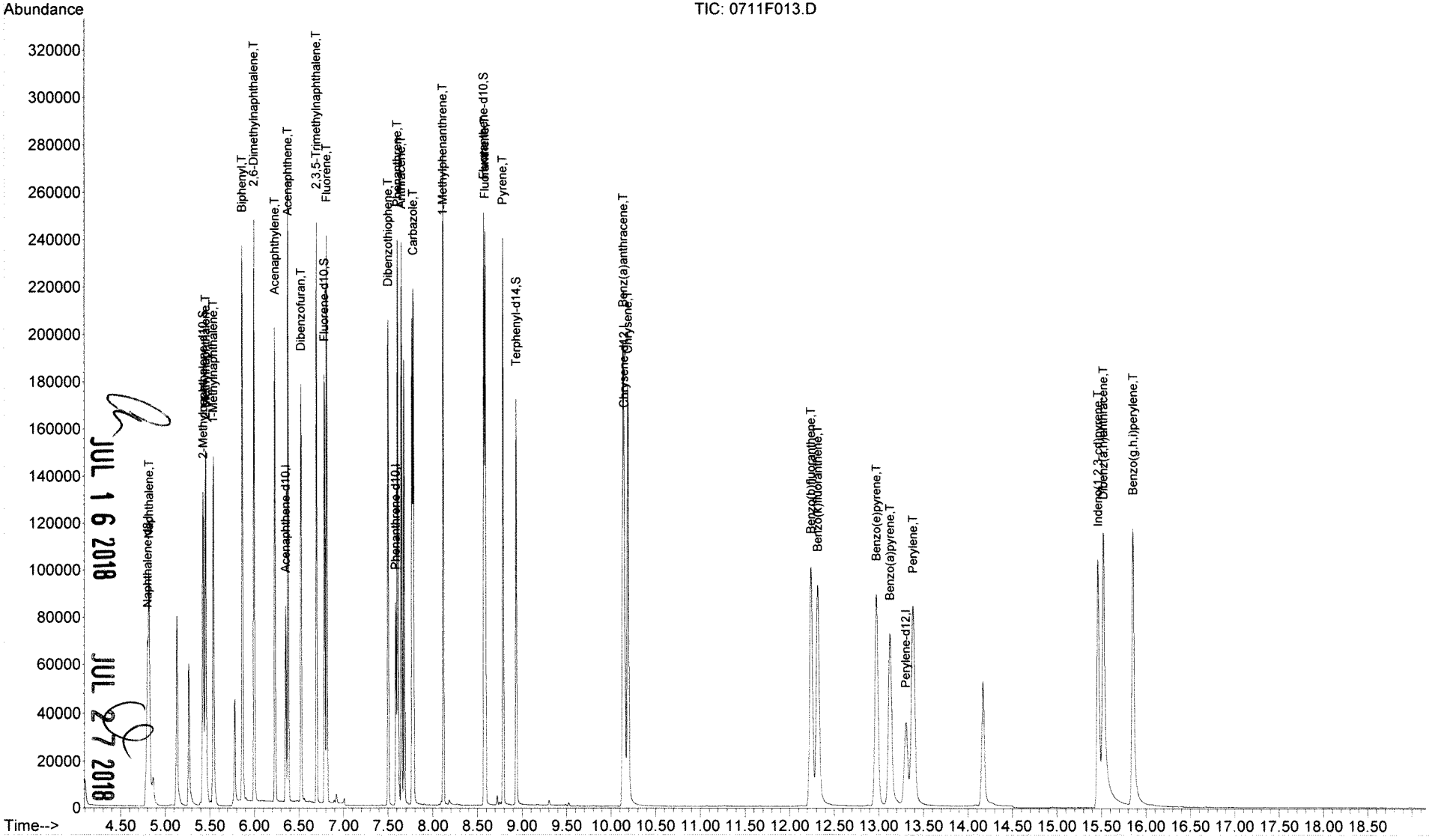
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



Preparation Information

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 18:30
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-004	L1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.410g	2mL	90.3
K1810270-006	N1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.031g	2mL	75.8
K1810270-010	T1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.087g	2mL	63.0
K1810270-011	R1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.247g	2mL	83.9
K1810270-012	P1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.385g	2mL	76.7
K1810270-013	T3-0to28-101618	8270D PAH SIM ULL	SEDIMENT	40.290g	2mL	43.8
K1810270-015	T7-0to31-101618	8270D PAH SIM ULL	SEDIMENT	40.183g	2mL	39.3
K1810270-016	T5-0to26-101618	8270D PAH SIM ULL	SEDIMENT	40.416g	2mL	47.8
K1810270-017	P3-0to29-101618	8270D PAH SIM ULL	SEDIMENT	40.290g	2mL	48.7
K1810270-018	R5-0to25-101618	8270D PAH SIM ULL	SEDIMENT	40.319g	2mL	45.9
K1810270-019	514-0to29-101618	8270D PAH SIM ULL	SEDIMENT	40.149g	2mL	40.5
K1810270-020	P5-0to26-101618	8270D PAH SIM ULL	SEDIMENT	40.302g	2mL	35.2
K1810270-029	R3-0to33-101718	8270D PAH SIM ULL	SEDIMENT	40.487g	2mL	36.1
KWG1805597-1	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	63.0
KWG1805597-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.056g	2mL	63.0
KWG1805597-3	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805597-4	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.487g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805597-1	K1810270-010	KQ1815625-01
KWG1805597-2	K1810270-010	KQ1815625-02
KWG1805597-3		KQ1815625-03
KWG1805597-4		KQ1815625-04

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-004	1700765					
K1810270-006	1700766					
K1810270-010	1700767					
K1810270-011	1700768					
K1810270-012	1700769					
K1810270-013	1700770					
K1810270-015	1700771					
K1810270-016	1700772					
K1810270-017	1700773					
K1810270-018	1700774					
K1810270-019	1700775					

Comments: IS= SVM57-100D

Started By: KPrescot Assisted By: – Training: Yes / No

Completed By: TPottsch Assisted By: – Yes / No

Reviewed By: [signature] Date: Storage: K-Tundra #514

Chain of Custody

Relinquished By: TP Date: 11/1/18

Received By: [signature] Date: 11/8/18 Extracts Examined: Yes / No

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 18:30
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-020	1700776					
K1810270-029	1700777					
KWG1805597-1	1700778					
KWG1805597-2	1700779					
KWG1805597-3	1700780					
KWG1805597-4	1700781					

Comments:

Started By: KPrescot Assisted By: — Training: Yes / No

Completed By: TPottsch Assisted By: — Yes / No

Reviewed By: Date: Storage: K-Tundra

Chain of Custody

Relinquished By: TP Date: 11/1/18

Received By: Date: 11/8/18 Extracts Examined: Yes / No

Preparation Information

Group ID: KWG1805597 **Prep Method:** EPA 3541 **Prep Date:** 10/29/18 00:00
Department: Semivoa GCMS

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1810270-004	L1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	-
2	K1810270-006	N1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
3	K1810270-010	T1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
4	K1810270-011	R1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
5	K1810270-012	P1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
6	K1810270-013	T3-0to28-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
7	K1810270-015	T7-0to31-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
8	K1810270-016	T5-0to26-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
9	K1810270-017	P3-0to29-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
10	K1810270-018	R5-0to25-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
11	K1810270-019	514-0to29-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
12	K1810270-020	P5-0to26-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
13	K1810270-029	R3-0to33-101718	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
14	KWG1805597-1	Matrix Spike K1810270-010	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		80
15	KWG1805597-2	Duplicate Matrix Spike K1810270-010	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
16	KWG1805597-3	Lab Control Sample	-	-	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		
17	KWG1805597-4	Method Blank	-	-	8270D PAH SIM ULL	SEDIMENT	40.487		10	2		-

Comments: *See Pre-Prep Information Benchsheet. KKP 10/29/18. PREPRUN: 325138

Surrogate ID: AP: SVM59-50D 100/150ppm XP: 03/04/19 E.E. KKP 10/29/18. 20ul Syringe. S-92
Spike ID: SVMPAH: SVM59-51F 25ppm XP: 03/07/19 80ul Syringe. S-96
Witness: [signature] 10/29/18

Started By: KPrescot Assisted By: KV
Completed By: Assisted By: BG

Additional Prep Information for EPA 3541
PAH

Service Request K1810270 Workgroup KWG1805597

Sulfate Lot # 178434 DCM (GC²) Lot # DV301 Glass Wool Lot# 213/7999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐
Storage Location (if not extracted same day): —
Soxtherm/s unit I.D# K-SOX-01/02/03
Soxtherm Start (Time/Date/Initial): 1830 10/29/18 ZKP
Soxtherm Stop (Time/Date/Initial): 0718 10/30/18 ZKP

N-Evap (Time/Date/Initial): 09:00 11/1/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 09:36 11/1/18 TP
Hexane Lot # 192699 N-Evap Therm. ID: X SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 13:10 11/1/18 TP

Silica Column Lot # Ext002-35P 1:1 Hexane/DCM Reagent Lot # Ext002-32X ①
Turbovap (Time/Date/Initial): 13:25 11/1/18 BG Turbovap Therm. ID: ~~K-Turbovap~~ K-Turbovap ①
Temp as measured: 27.0 °C Correction factor: 0.0 °C Adjusted temp: 27.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20717645

Extract Storage: —

Completed (Time/Date/Initial): 15:56 11/1/18 BG/TP

Comments/Observations: ① EE TP 11/1/18

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325138 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	PAH SIM ULL	40.410g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	.01	PAH SIM ULL	40.031g	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
3	K1810270-010	.01	PAH SIM ULL	40.087g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
4	K1810270-010 MS KQ1815625-01	.01	PAH SIM ULL	40.044g		PrepComments:LAGUILAR K-Balance-47
5	K1810270-010 DMS KQ1815625-02	.01	PAH SIM ULL	40.056g		PrepComments:LAGUILAR K-Balance-47
6	K1810270-011	.01	PAH SIM ULL	40.247g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
7	K1810270-012	.01	PAH SIM ULL	40.385g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	PAH SIM ULL	40.290g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	PAH SIM ULL	40.183g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	PAH SIM ULL	40.416g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	PAH SIM ULL	40.290g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	PAH SIM ULL	40.319g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	PAH SIM ULL	40.149g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	PAH SIM ULL	40.302g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	PAH SIM ULL	40.487g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/26/18 18:47		10/29/18 0800

Preparation Information

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-001	N3-0to26-101518	8270D PAH SIM ULL	SEDIMENT	40.062g	2mL	74.3
K1810302-016	A1-0to30-102018	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	
K1810430-001	E-8.99-0to28-102418	8270D PAH SIM ULL	SOIL	40.037g	2mL	28.5
K1810430-002	C-8.94-0to27-102418	8270D PAH SIM ULL	SOIL	40.004g	2mL	30.2
K1810430-003	D-8.90-0to27-102418	8270D PAH SIM ULL	SOIL	40.007g	2mL	34.7
K1810430-004	D-8.83-0to25-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	34.7
K1810430-005	E-9.02-0to26-102418	8270D PAH SIM ULL	SOIL	40.028g	2mL	35.0
K1810430-006	B-9.00-0to29-102418	8270D PAH SIM ULL	SOIL	40.009g	2mL	27.7
K1810430-007	512-0to29-102418	8270D PAH SIM ULL	SOIL	40.052g	2mL	27.3
K1810430-008	D-9.09-0to29-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	32.2
K1810430-009	A-9.03-0to26-102418	8270D PAH SIM ULL	SOIL	40.044g	2mL	28.8
K1810430-010	B-9.15-0to30-102418	8270D PAH SIM ULL	SOIL	40.077g	2mL	46.5
K1810430-011	G-9.15-0to18-102418	8270D PAH SIM ULL	SOIL	40.080g	2mL	74.1
K1810683-001	PDI-ST-T06B-1810	8270D PAH SIM ULL	SEDIMENT	40.124g	2mL	25.3
K1810683-002	PDI-ST-T06A-1810	8270D PAH SIM ULL	SEDIMENT	40.049g	2mL	25.6
K1810683-003	PDI-ST-T07A-1810	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	22.3
K1810683-004	PDI-ST-T07B-1810	8270D PAH SIM ULL	SEDIMENT	40.085g	2mL	21.4
KWG1805796-1	Matrix Spike	8270D PAH SIM ULL	SOIL	40.057g	2mL	35.0
KWG1805796-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SOIL	40.011g	2mL	35.0
KWG1805796-3	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.064g	2mL	25.6
KWG1805796-4	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.114g	2mL	25.6
KWG1805796-5	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805796-6	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805796-1	K1810430-005	KQ1815762-01
KWG1805796-2	K1810430-005	KQ1815762-02
KWG1805796-3	K1810683-002	KQ1815762-03
KWG1805796-4	K1810683-002	KQ1815762-04
KWG1805796-5		KQ1815762-05
KWG1805796-6		KQ1815762-06

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-001	1702211					
K1810302-016	1702212					
K1810430-001	1702213					

Comments: IS = SV-557-100D

Started By: KPrescot Assisted By: —

Completed By: TPottsch Assisted By: —

Training: Yes / No (No) — Yes / No (No)

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra 11514

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18

Extracts Examined: (Yes) / No

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810430-002	1702214					
K1810430-003	1702215					
K1810430-004	1702216					
K1810430-005	1702217					
K1810430-006	1702218					
K1810430-007	1702219					
K1810430-008	1702220					
K1810430-009	1702221					
K1810430-010	1702222					
K1810430-011	1702223					
K1810683-001	1702224					
K1810683-002	1702225					
K1810683-003	1702226					
K1810683-004	1702227					
KWG1805796-1	1702228					
KWG1805796-2	1702229					
KWG1805796-3	1702230					
KWG1805796-4	1702231					
KWG1805796-5	1702232					
KWG1805796-6	1702233					

Comments:

Started By: KPrescot Assisted By: — Training

Completed By: TPottsch Assisted By: — Yes No

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra Yes No

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18 Extracts Examined: Yes No

Preparation Information

11/14

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1810270-001	N3-0to26-101518	.02	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	-
2	K1810302-016	A1-0to30-102018	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
3	K1810430-001	E-8.99-0to28-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
4	K1810430-002	C-8.94-0to27-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
5	K1810430-003	D-8.90-0to27-102418 1A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
6	K1810430-004	D-8.83-0to25-102418 1B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
7	K1810430-005	E-9.02-0to26-102418 1C	.02	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
8	K1810430-006	B-9.00-0to29-102418 1D	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
9	K1810430-007	512-0to29-102418 1E	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
10	K1810430-008	D-9.09-0to29-102418 1F	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
11	K1810430-009	A-9.03-0to26-102418 2A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
12	K1810430-010	B-9.15-0to30-102418 2B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
13	K1810430-011	G-9.15-0to18-102418 2C	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		-
14	K1810683-001	PDI-ST-T06B-1810 2D	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
15	K1810683-002	PDI-ST-T06A-1810 2E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
16	K1810683-003	PDI-ST-T07A-1810 2F	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
17	K1810683-004	PDI-ST-T07B-1810 3A	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
18	KWG1805796-1	Matrix Spike K1810430-005 3B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		80

Comments: *See Pre-Prep Information Benchsheet. KKP 11/07/18. PREPRUN: 325303

Surrogate ID: RP: SVM59-50D 100/150ppm XP: 03/04/19 10ul Syringe. S-92.

Spike ID: SIM PAH: SVM59-51F 25ppm XP: 03/07/19 ~~100ul~~ E.E. KKP 11/07/18 80ul Syringe. S-9

Witness: Kayla Prescott 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: —

Group ID:	KWG1805796	**Prep Method:**	EPA 3541						**Prep Date:**	11/07/18 00:00			
Department:	Semivoa GCMS												

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
19	KWG1805796-2	Duplicate Matrix Spike K1810430-005 3C	.01	✓	8270D PAH SIM ULL	SOIL	*	N/A	10	2	20	80
20	KWG1805796-3	Matrix Spike K1810683-002 3D	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
21	KWG1805796-4	Duplicate Matrix Spike K1810683-002 3E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
22	KWG1805796-5	Lab Control Sample 3F	–	–	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		–
23	KWG1805796-6	Method Blank	–	–	8270D PAH SIM ULL	SEDIMENT	40.332		10	2		–

Comments: * See Pre-Prep Information Benchsheet. KRP 11/07/18.

Surrogate ID: SEE PAGE 1

Spike ID: SEE PAGE 1

Witness: [signature] 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: –

Additional Prep Information for EPA 3541
PAH

Service Request K1810270/0302/0430/0683 Workgroup KWG1805796

Sulfate Lot #187085209 DCM (GC²) Lot #DV301 Glass Wool Lot# 213179999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-01/02/03

Soxtherm Start (Time/Date/Initial): 1345 11/07/18 KLP

Soxtherm Stop (Time/Date/Initial): 0755 11/08/18 KLP

N-Evap (Time/Date/Initial): 1328 11/8/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 10:14 11/9/18 TP
Hexane Lot # 195734 N-Evap Therm. ID: X-SVM-010
Temp as measured: 0.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 14:01 11/9/18 TP

Silica Column Lot # Ext002-350 1:1 Hexane/DCM Reagent Lot # Ext002-32X
Turbovap (Time/Date/Initial): 14:00 11/12/18 TP Turbovap Therm. ID: K-Turbovap-005
Temp as measured: 28.0 °C Correction factor: 0.0 °C Adjusted temp: 28.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20176045

Extract Storage: Hi Doggy

Completed (Time/Date/Initial): 17:04 11/12/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason: Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325303 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-09-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810430-001	.01	PAH SIM ULL	40.037g		PrepComments:GBEATLEY k-balance-49
2	K1810430-002	.01	PAH SIM ULL	40.004g		PrepComments:GBEATLEY k-balance-49
3	K1810430-003	.01	PAH SIM ULL	40.007g		PrepComments:GBEATLEY k-balance-49
4	K1810430-004	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
5	K1810430-005	.02	PAH SIM ULL	40.028g		PrepComments:GBEATLEY k-balance-49
6	K1810430-005 MS KQ1815762-01	.01	PAH SIM ULL	40.057g		PrepComments:GBEATLEY k-balance-49
7	K1810430-005 DMS KQ1815762-02	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
8	K1810430-006	.01	PAH SIM ULL	40.009g		PrepComments:GBEATLEY k-balance-49
9	K1810430-007	.01	PAH SIM ULL	40.052g		PrepComments:GBEATLEY k-balance-49
10	K1810430-008	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
11	K1810430-009	.01	PAH SIM ULL	40.044g		PrepComments:GBEATLEY k-balance-49
12	K1810430-010	.01	PAH SIM ULL	40.077g		PrepComments:GBEATLEY k-balance-49
13	K1810430-011	.01	PAH SIM ULL	40.080g		PrepComments:GBEATLEY k-balance-49

Relinquished By:	Date/Time: 10/30/18 1125	Received By:	Date/Time: 11/05/18 1330

325303

Pre-Prep Information Benchsheet

Prep Run #: ~~325583~~ **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-15-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810683-001	.01	PAH SIM ULL	40.124g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
2	K1810683-002	.02	PAH SIM ULL	40.049g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
3	K1810683-002 MS KQ1816031-01	.02	PAH SIM ULL	40.064g		PrepComments:DMADDEN K-Balance-50
4	K1810683-002 DMS KQ1816031-02	.02	PAH SIM ULL	40.114g		PrepComments:DMADDEN K-Balance-50
5	K1810683-003	.01	PAH SIM ULL	40.332g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
6	K1810683-004	.01	PAH SIM ULL	40.085g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50

All samples & QC moved to prep run # 325303. KLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10:47 11.2.18	Kassidy Van	11/05/18 1348

315303

Pre-Prep Information Benchsheet

Prep Run #: ~~325832~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	PAH SIM ULL	40.062g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	PAH SIM ULL	40.044g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Samples added to prep run # 315303. LLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.6.18 1631	LLP	11/07/18

Injection Log

Directory: J:\MS14\DATA\071118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
20	20	0711F020.D	1.	K1805517-004		11 Jul 2018 15:40
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

SIM-PAH ICAL

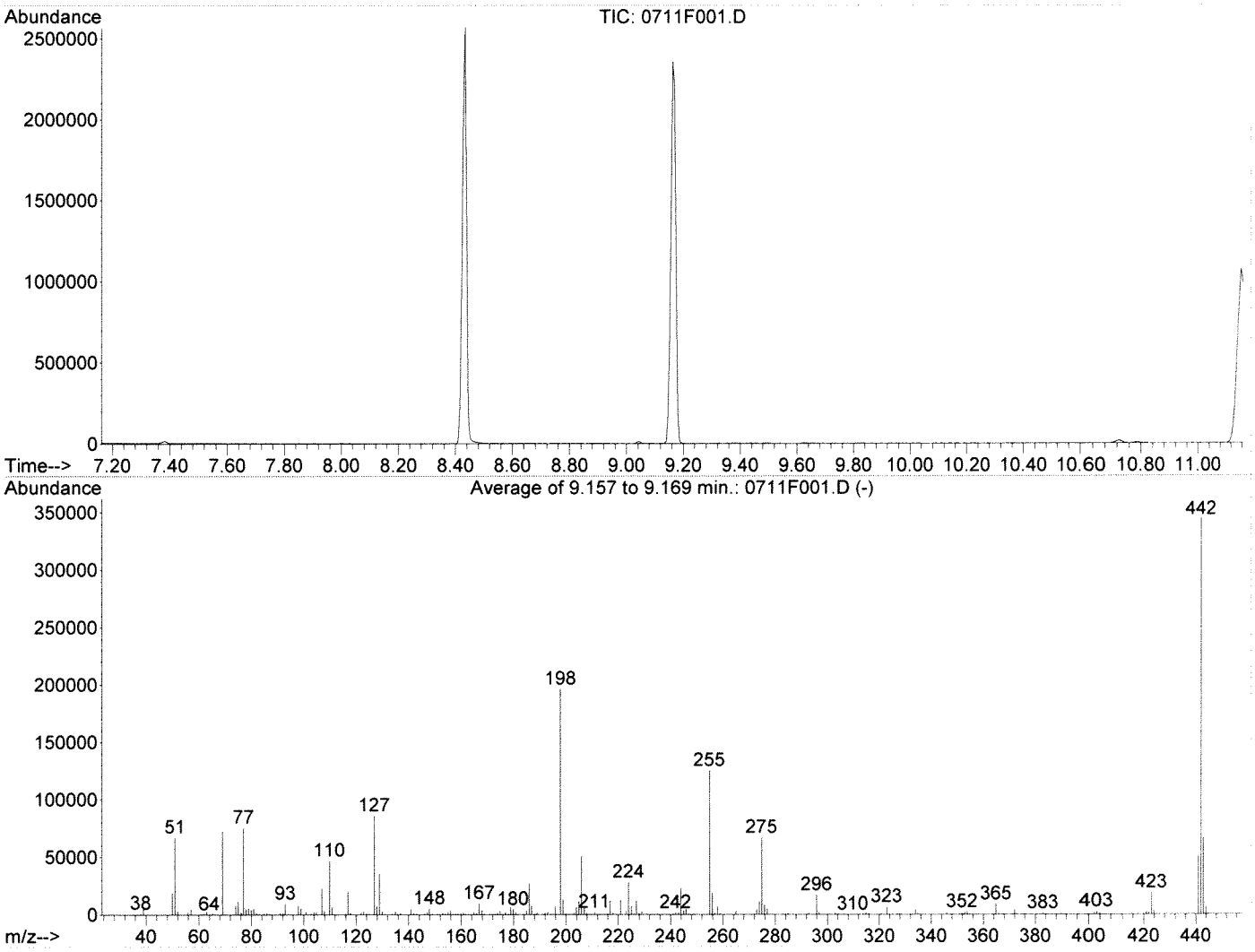
CAL15779

JUL 16 2018

JUL 27 2018

DFTPP

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

JUL 16 2018

JUL 27 2018

J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

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Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

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229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

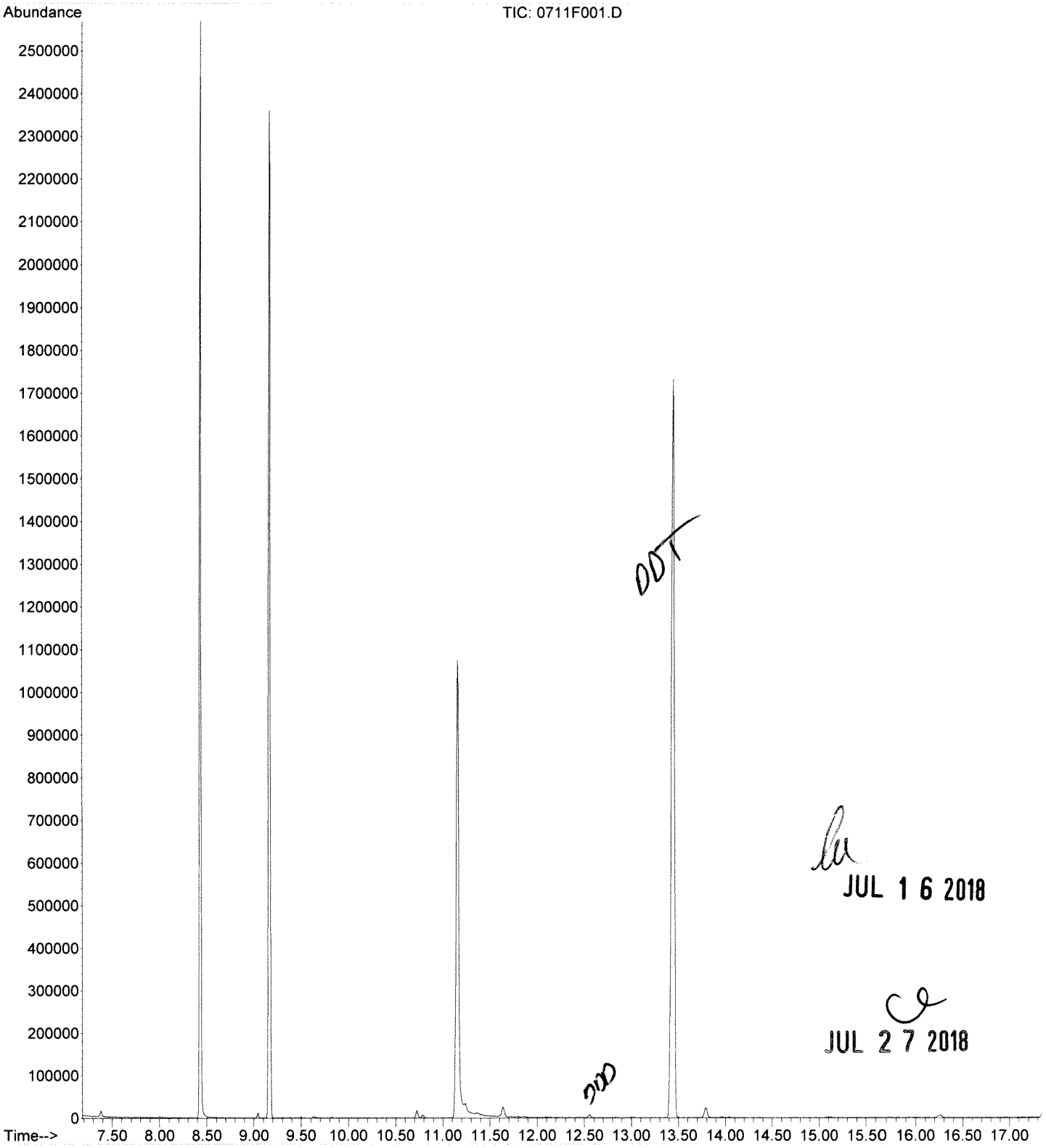
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

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File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	OOO	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

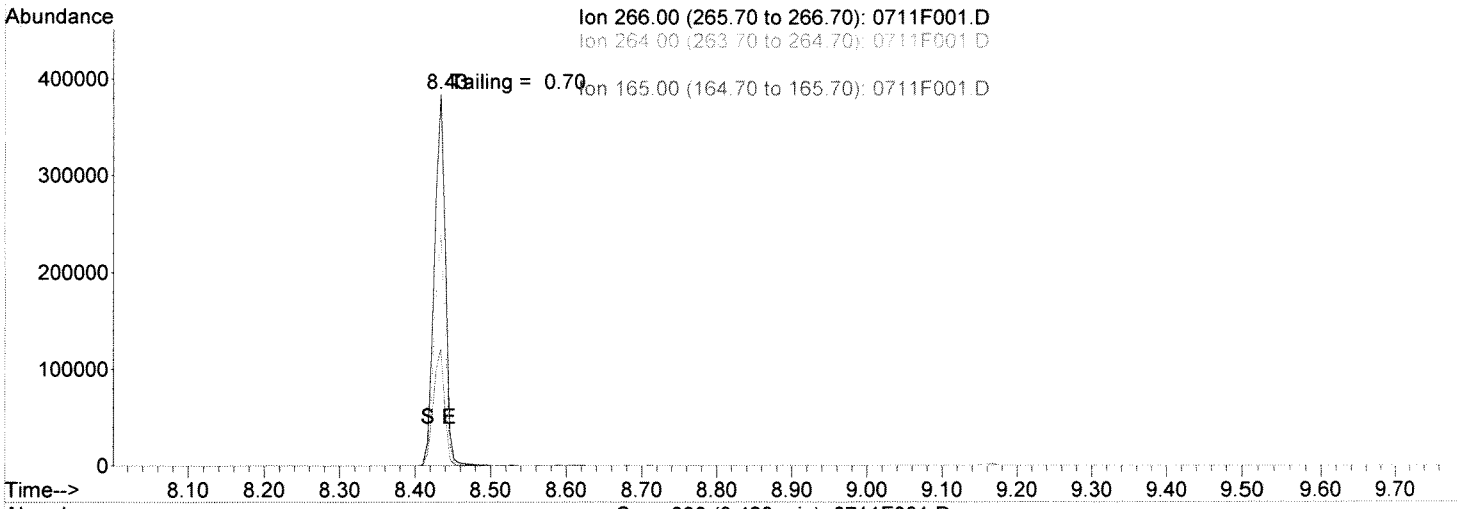
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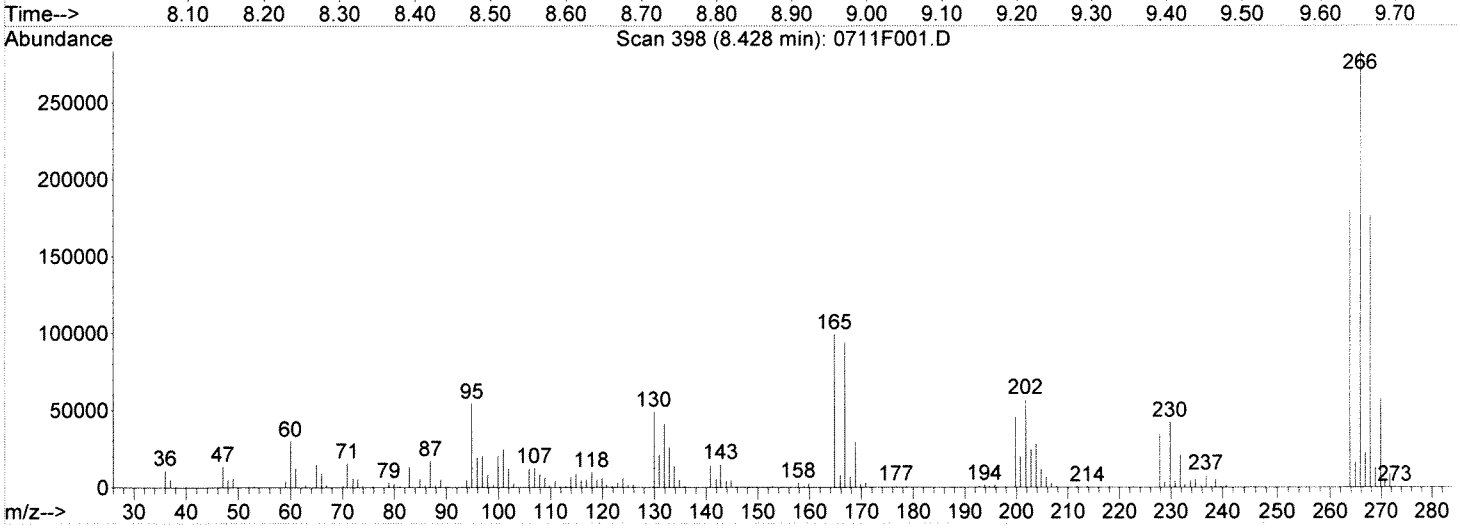
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -2%

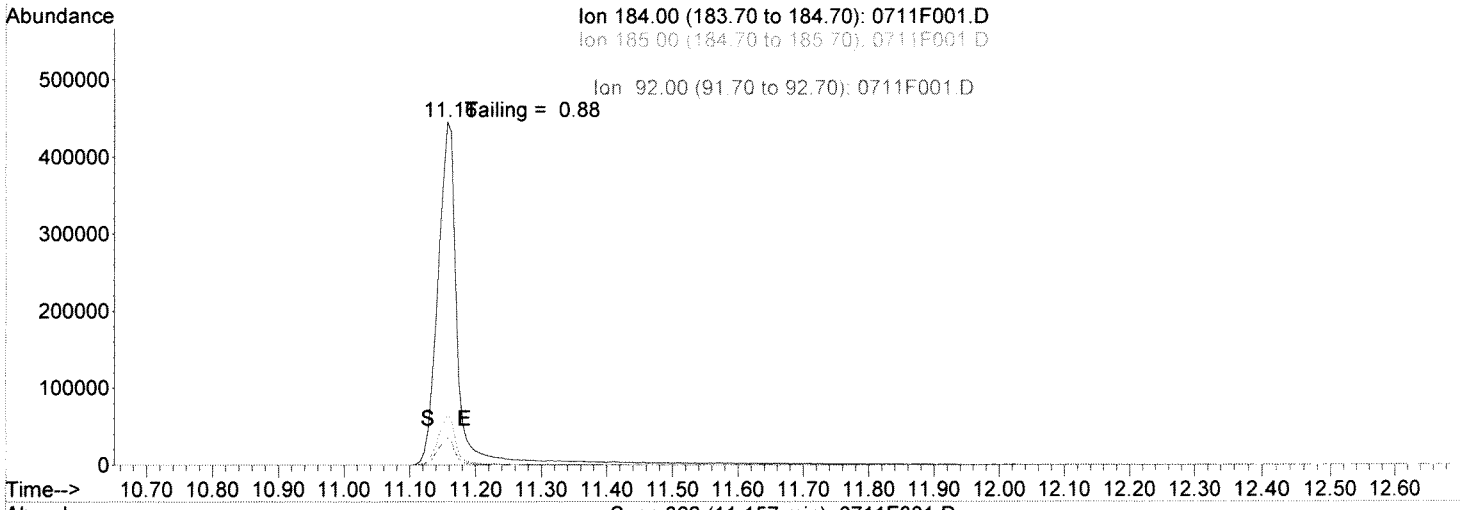
JUL 16 2018

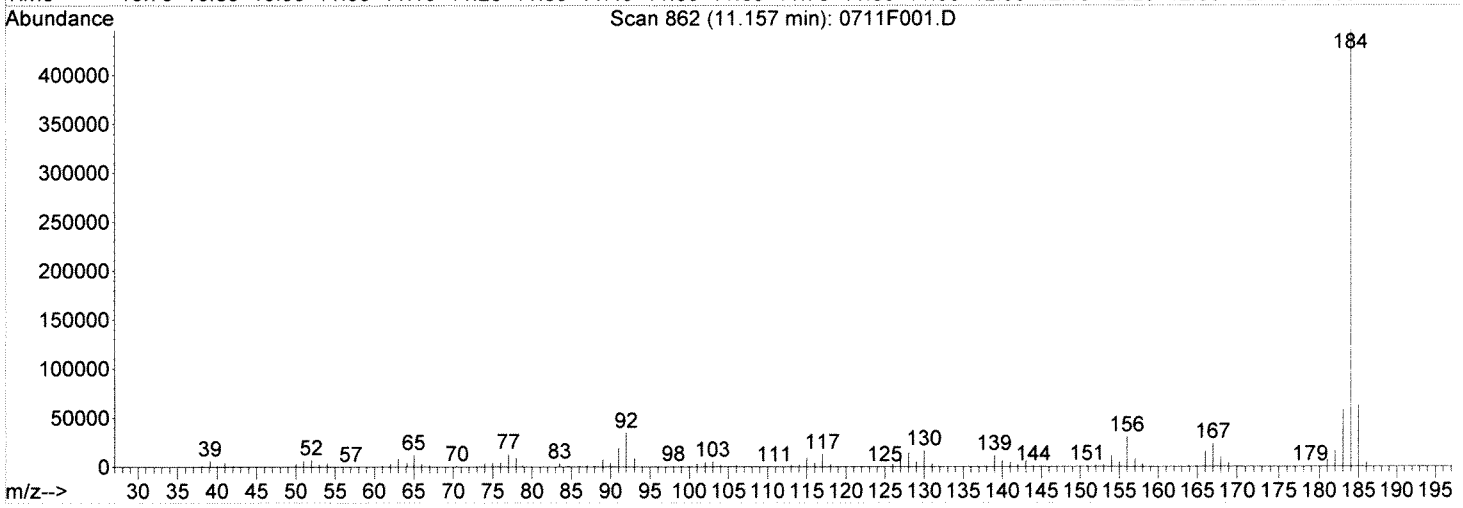
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

JUL 16 2018

JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

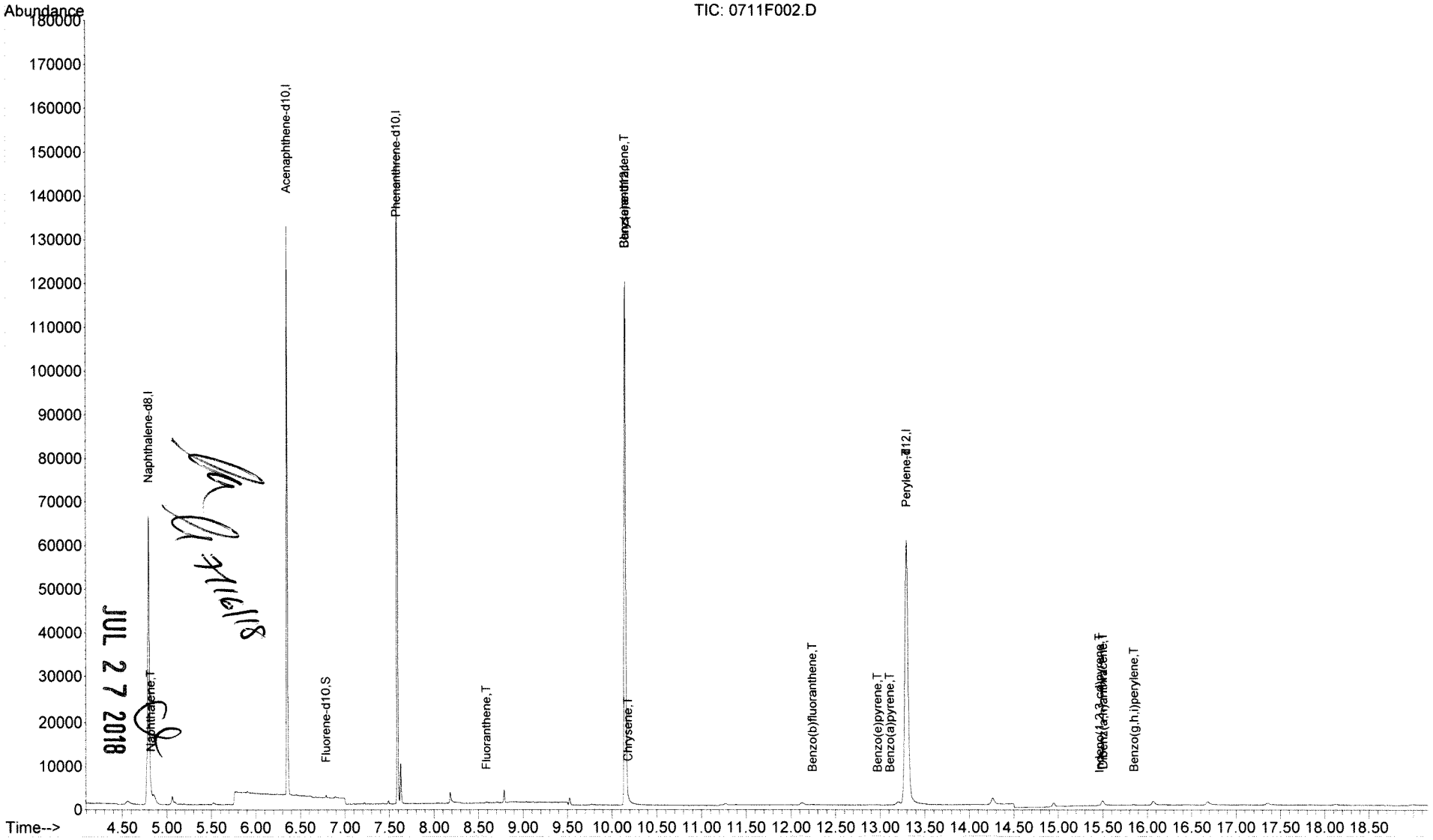
7/16/18

JUL 27 2018

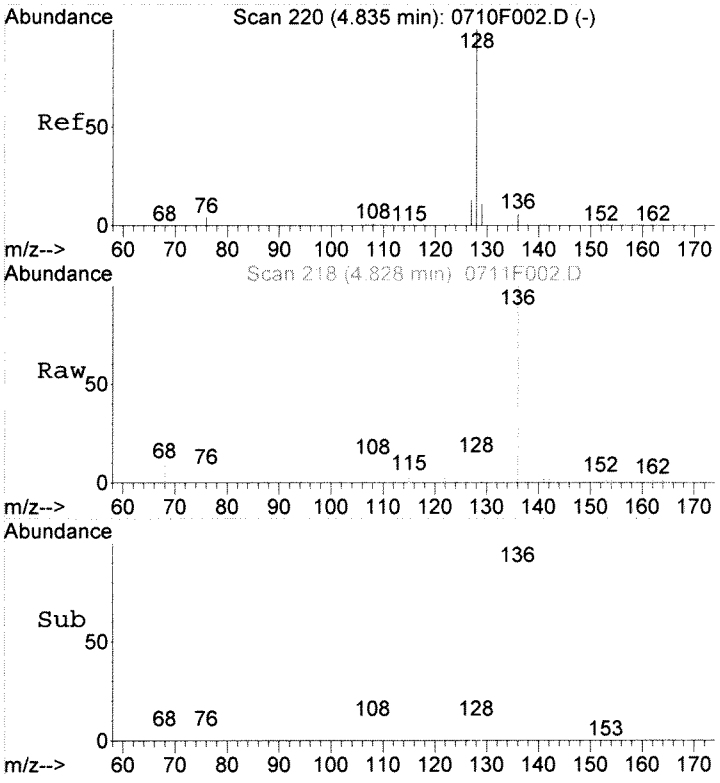
(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



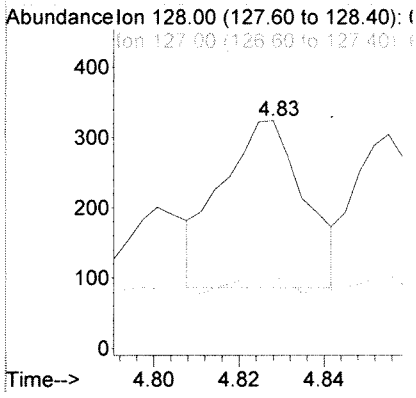
JUL 27 2018

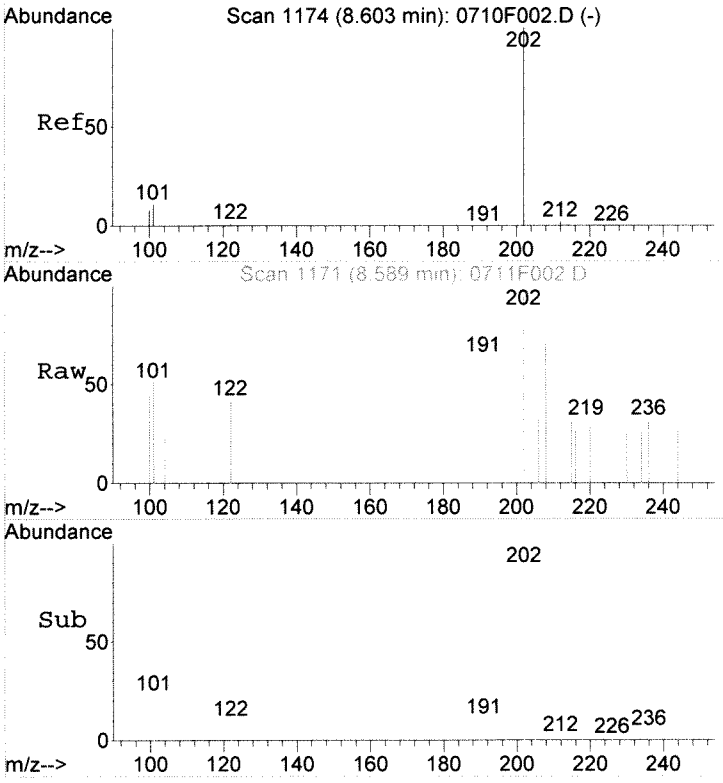


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

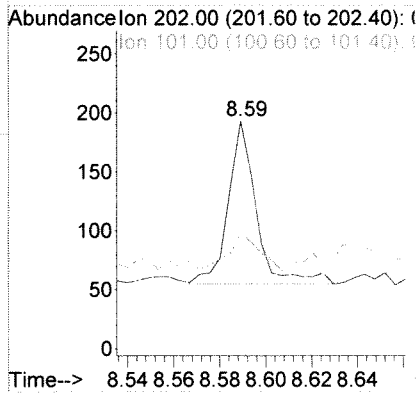




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

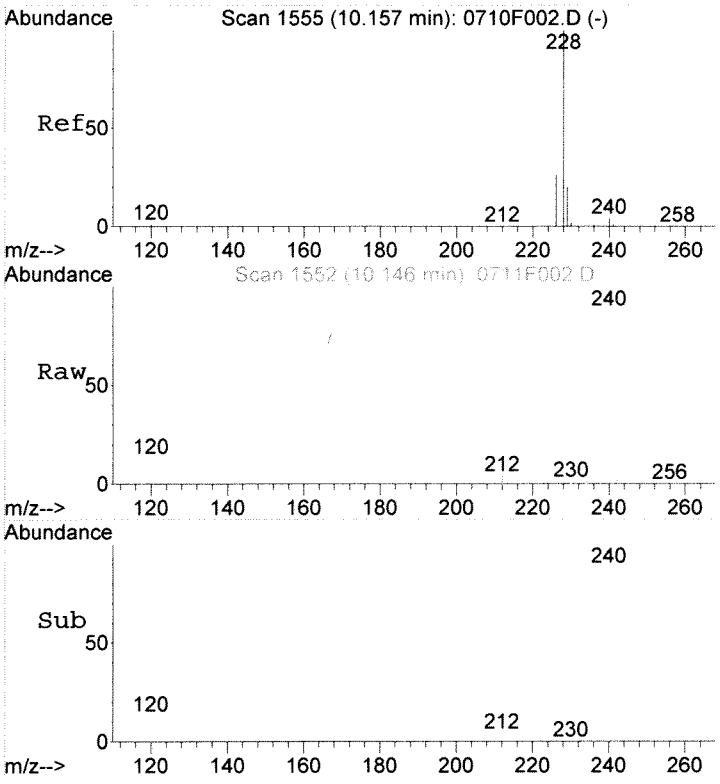
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

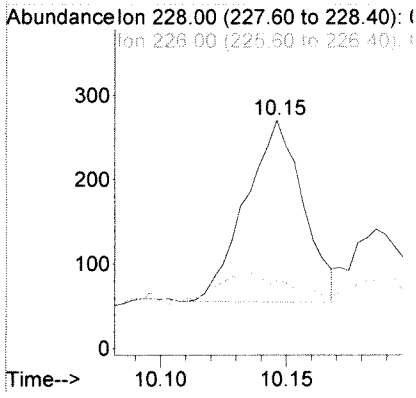
JUL 27 2018

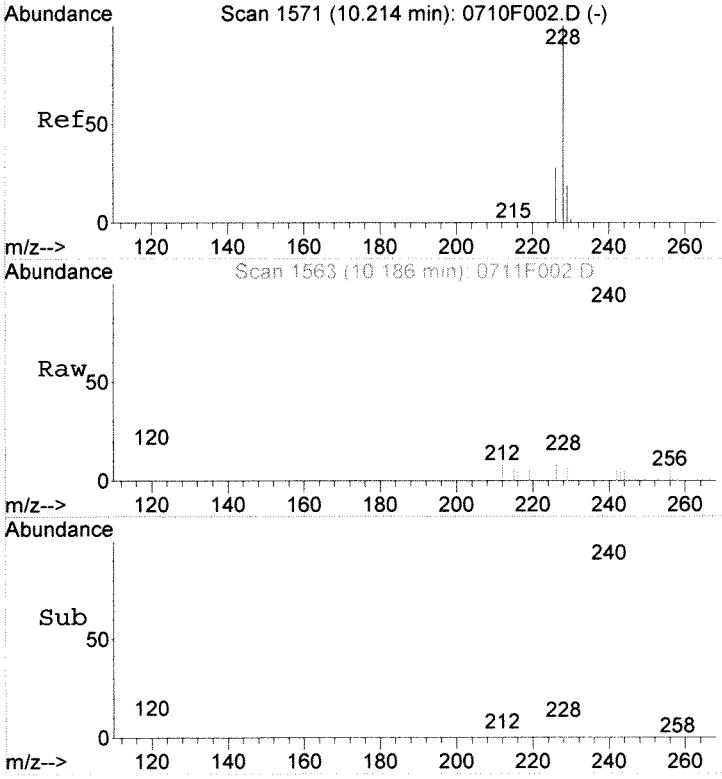


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

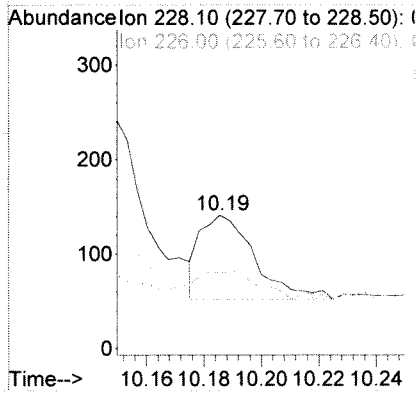




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

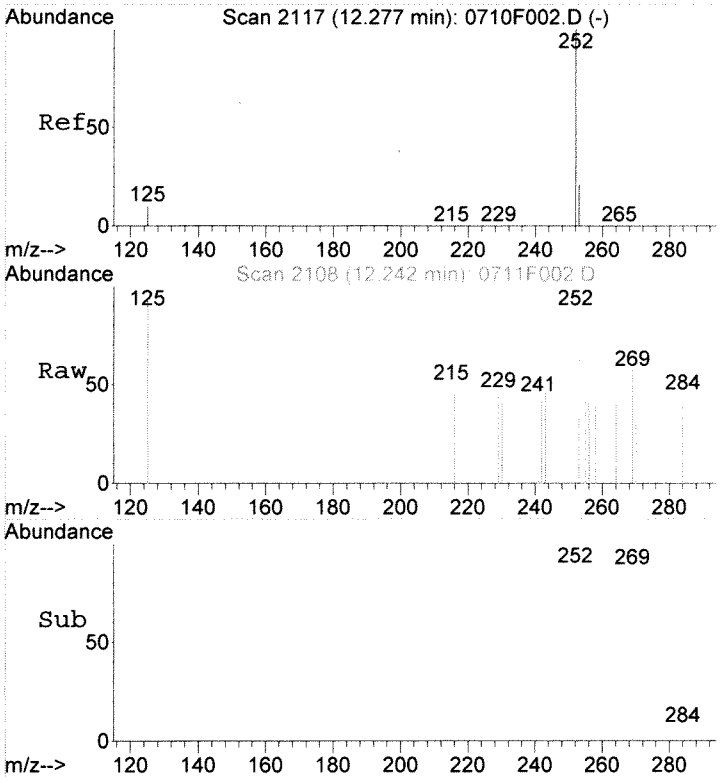
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

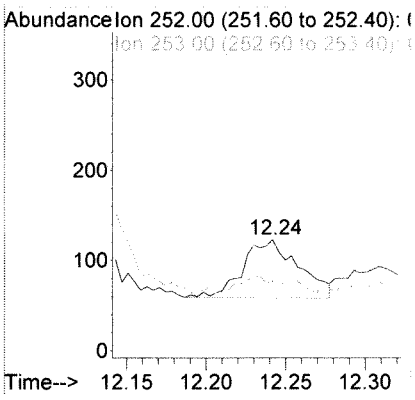
JUL 27 2018

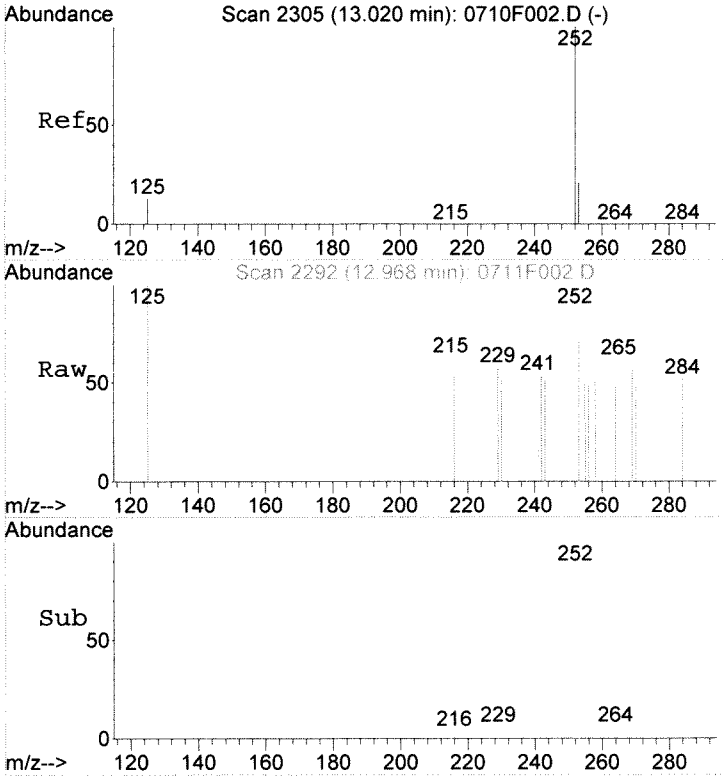


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

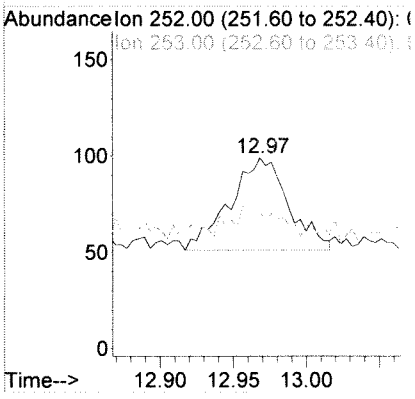




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

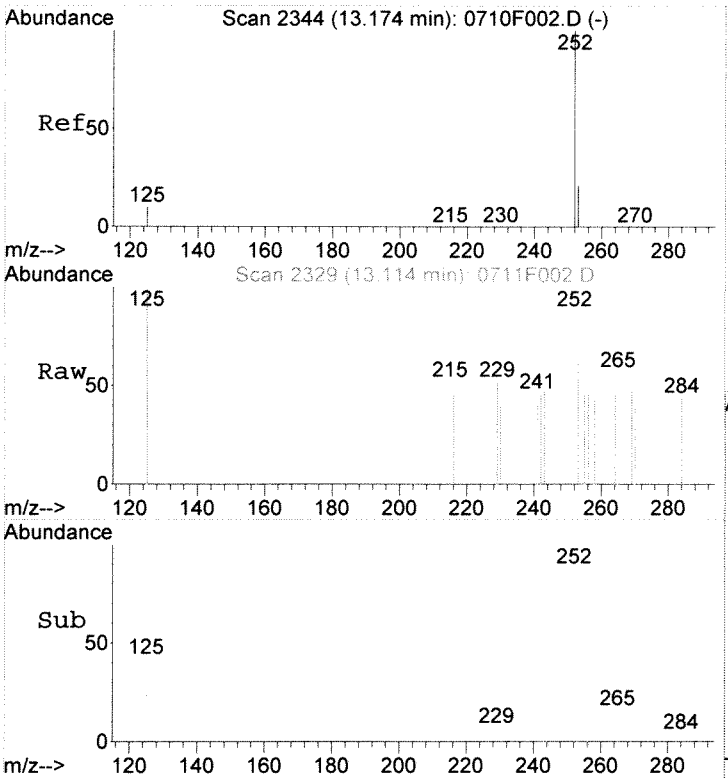
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



7/16/18

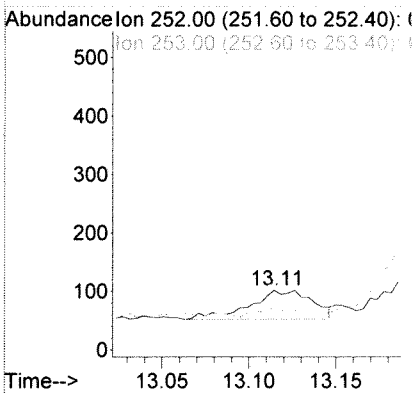
JUL 27 2018

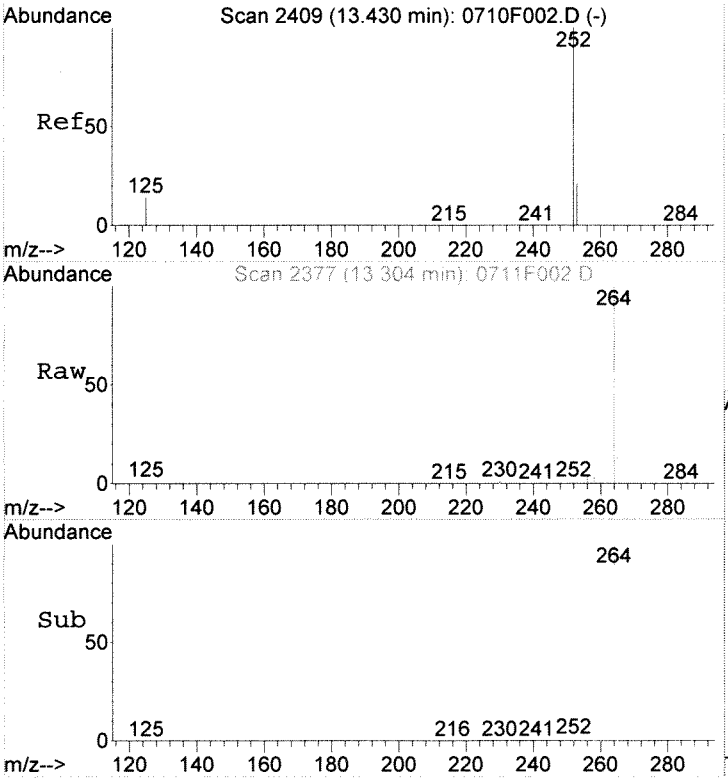


#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 126

Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1

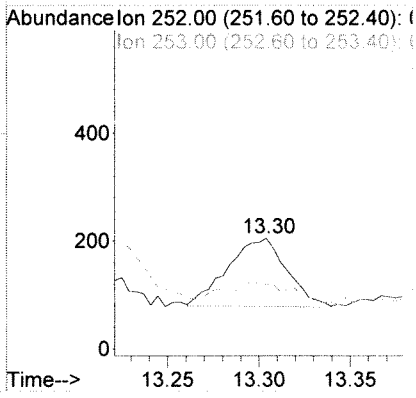




#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

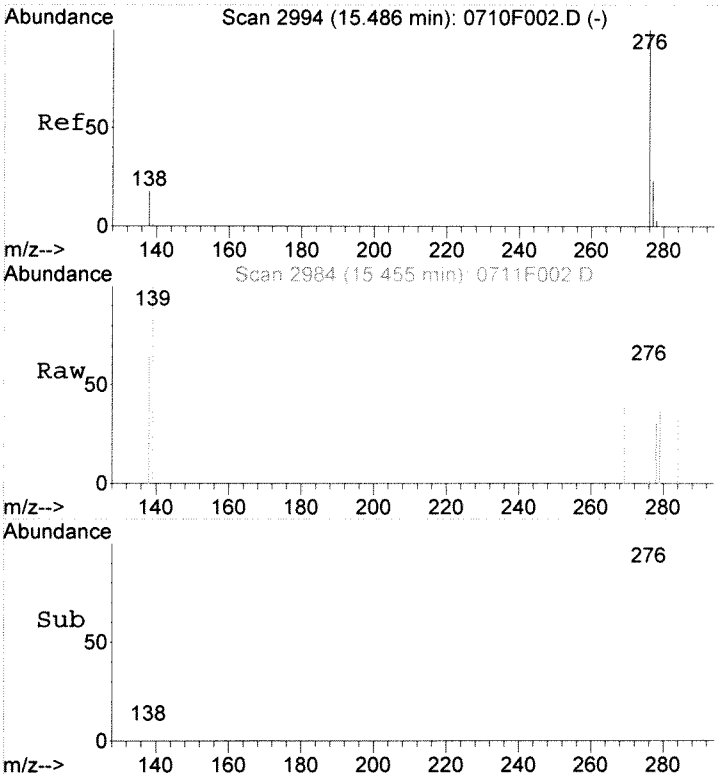
Tgt Ion:252 Resp: 287

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

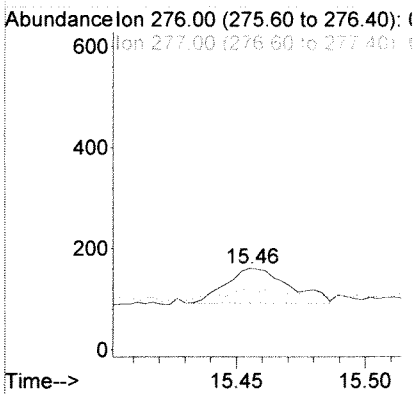
JUL 27 2018

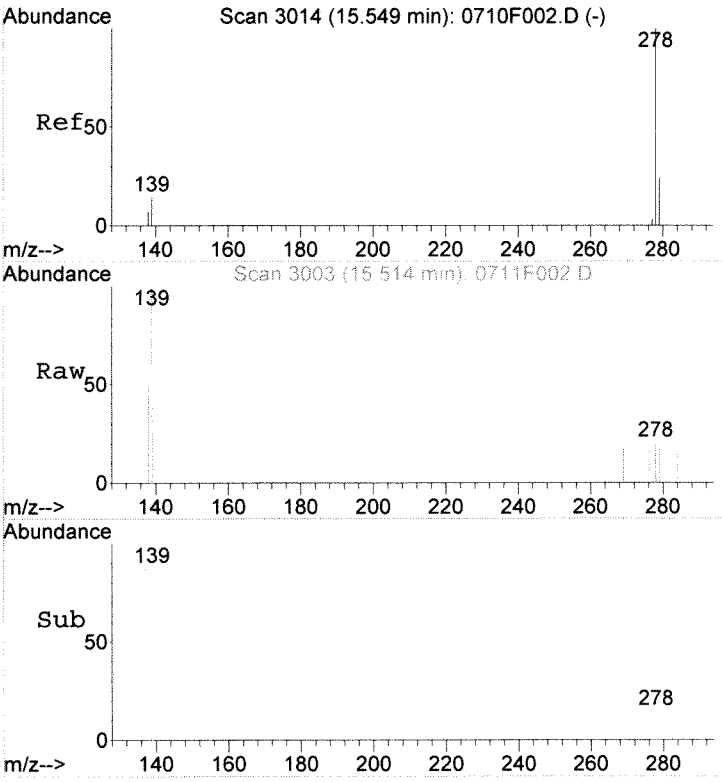


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

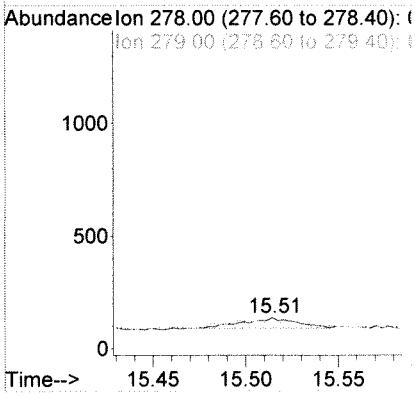




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

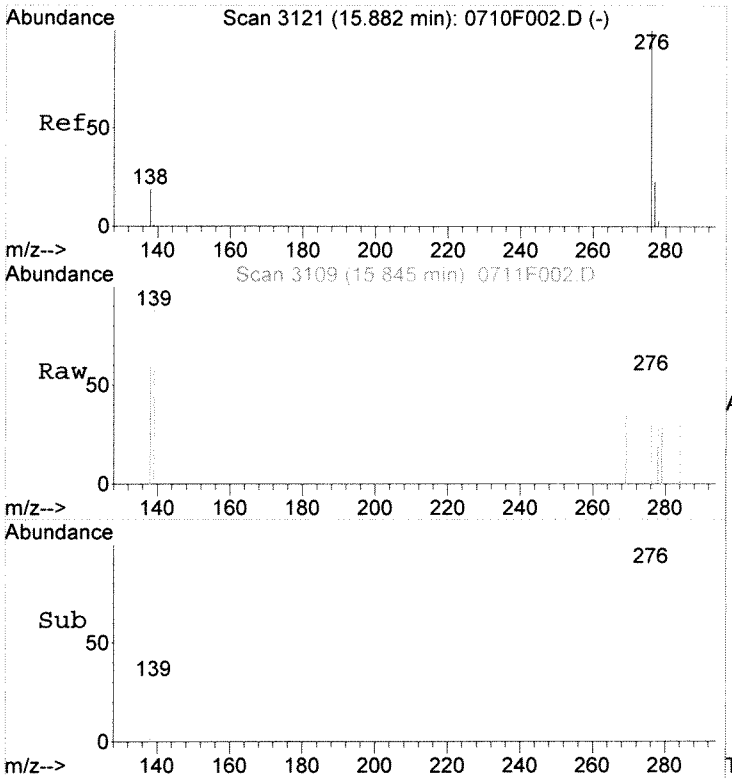
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

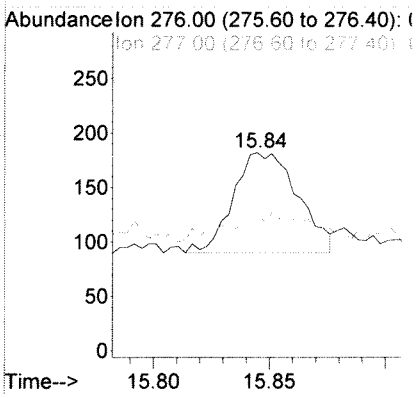
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.22%		
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.28%		
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.19%		
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.30%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

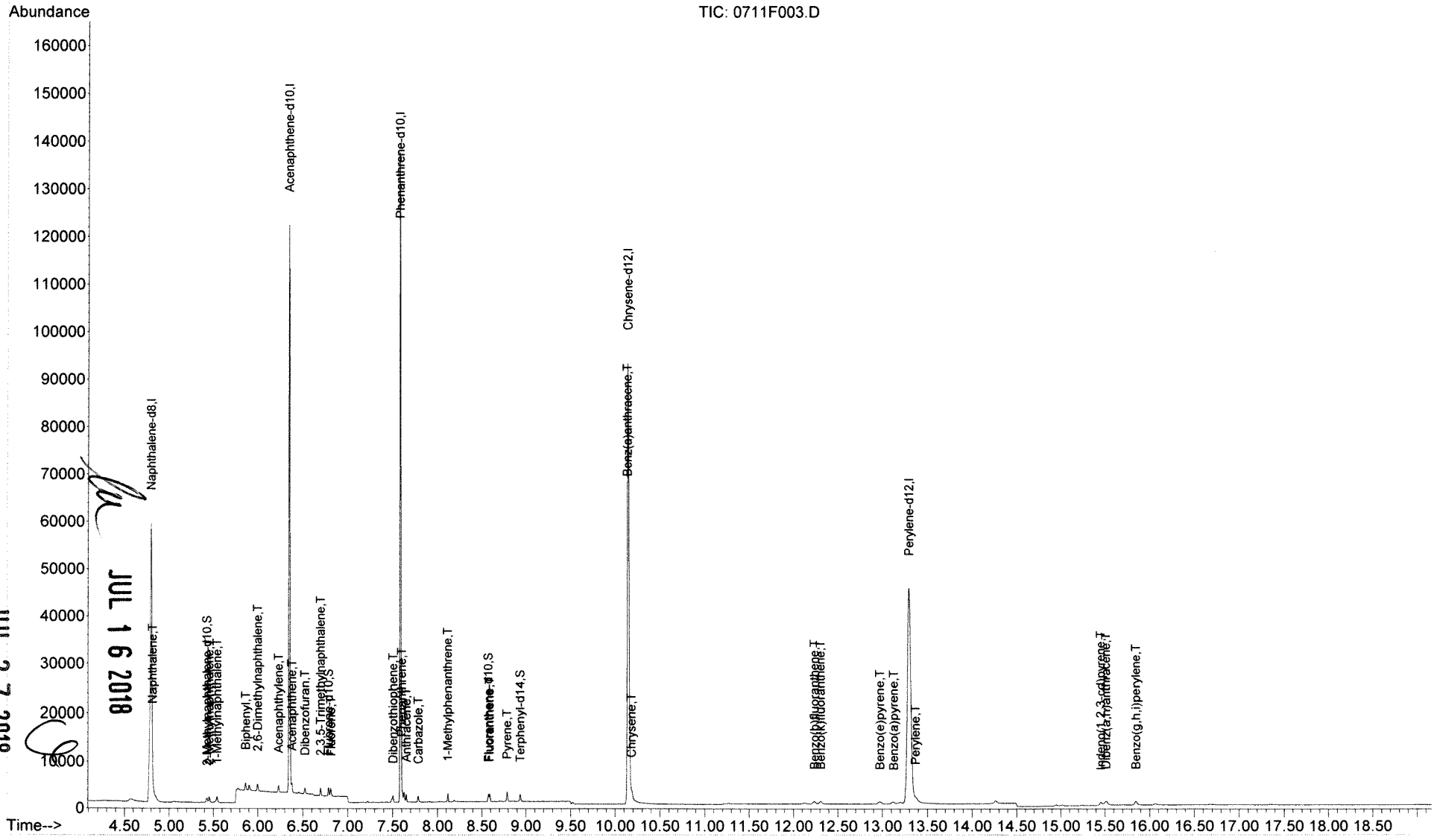
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

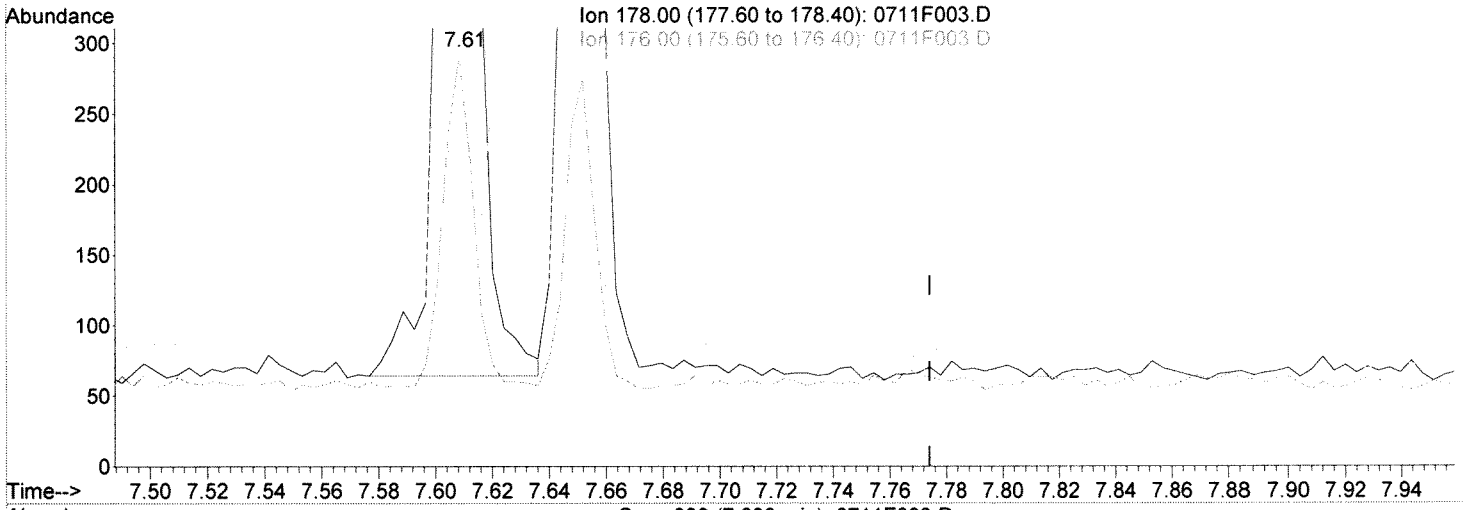


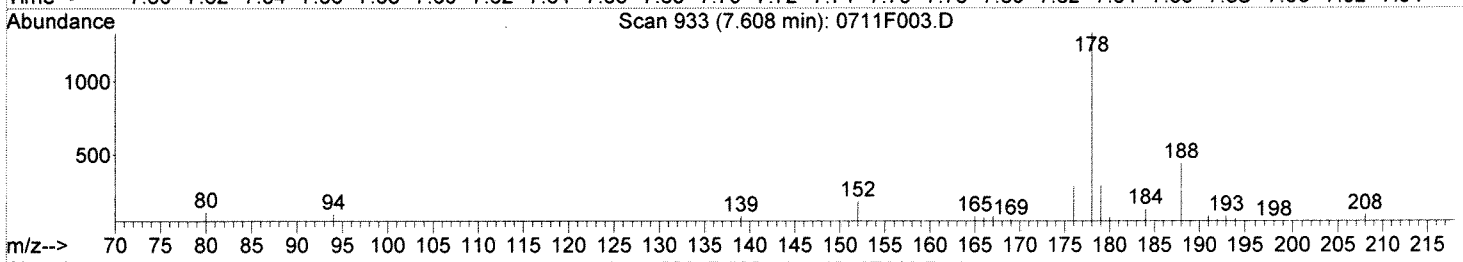
JUL 27 2018
JUL 16 2018

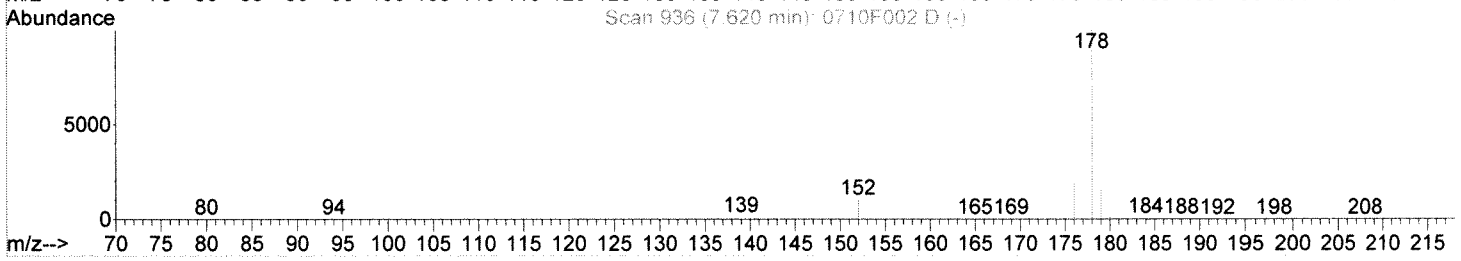
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

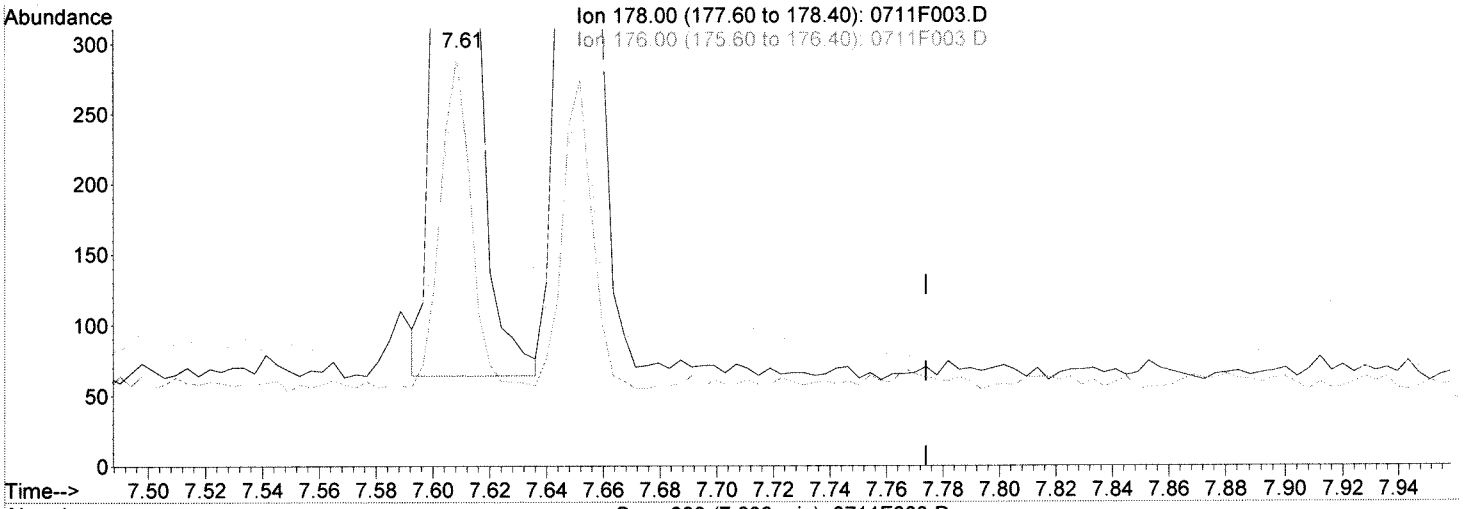
07/11/18

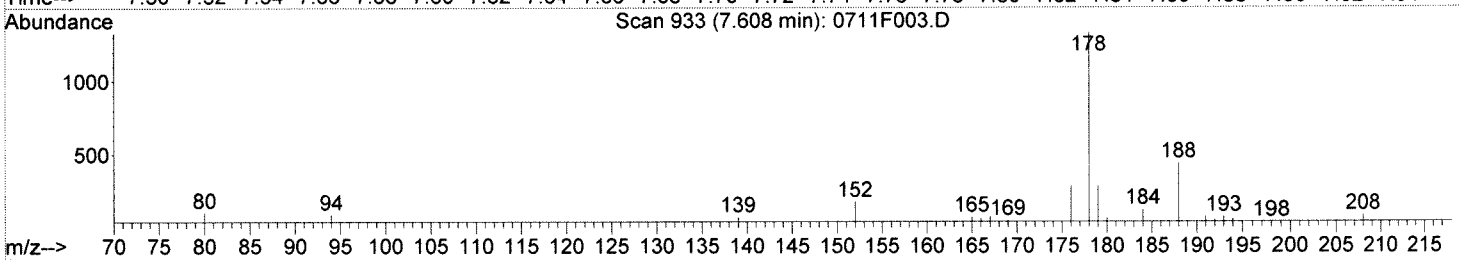
JUL 2 7 2018

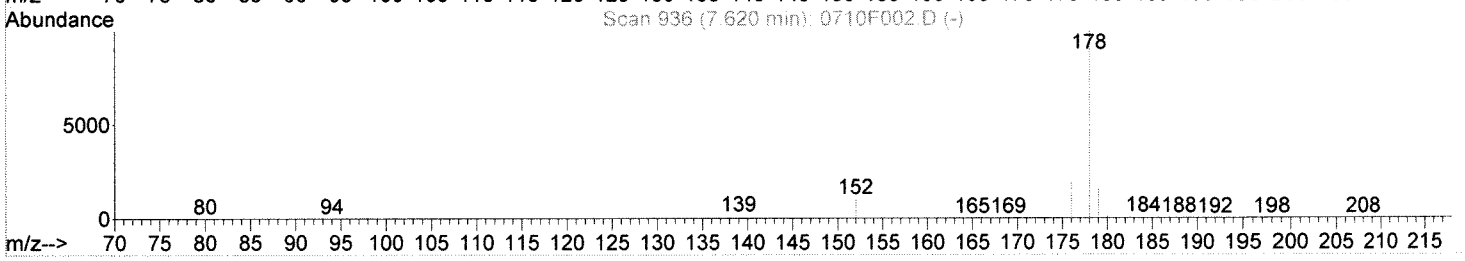
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

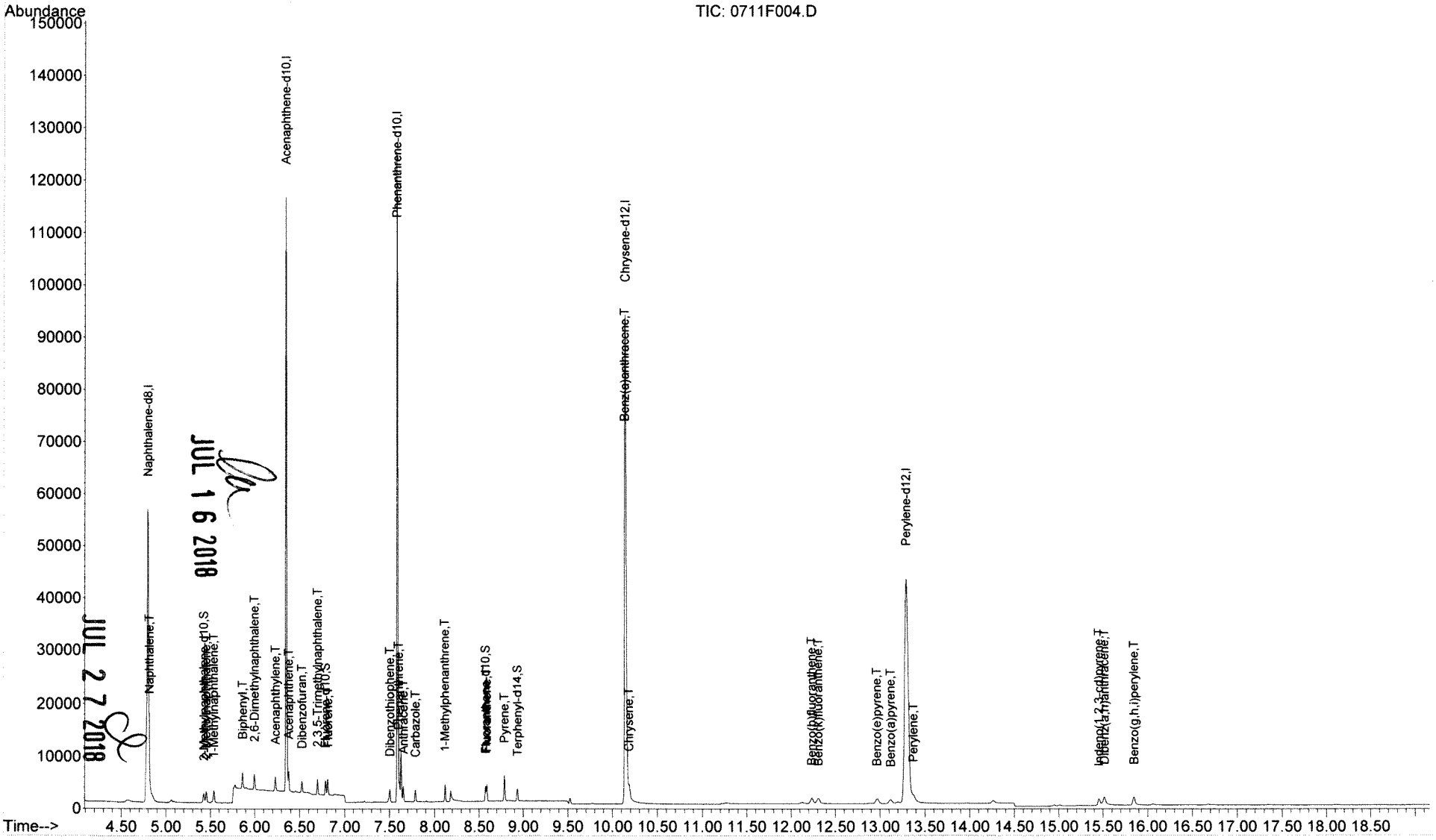
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

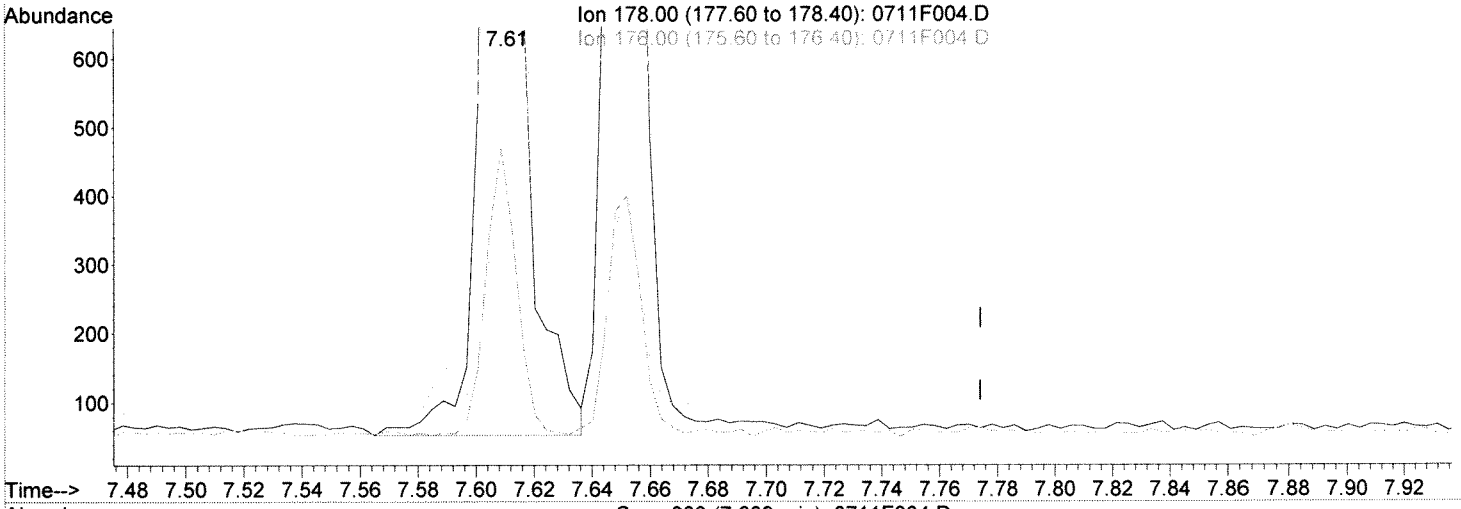
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

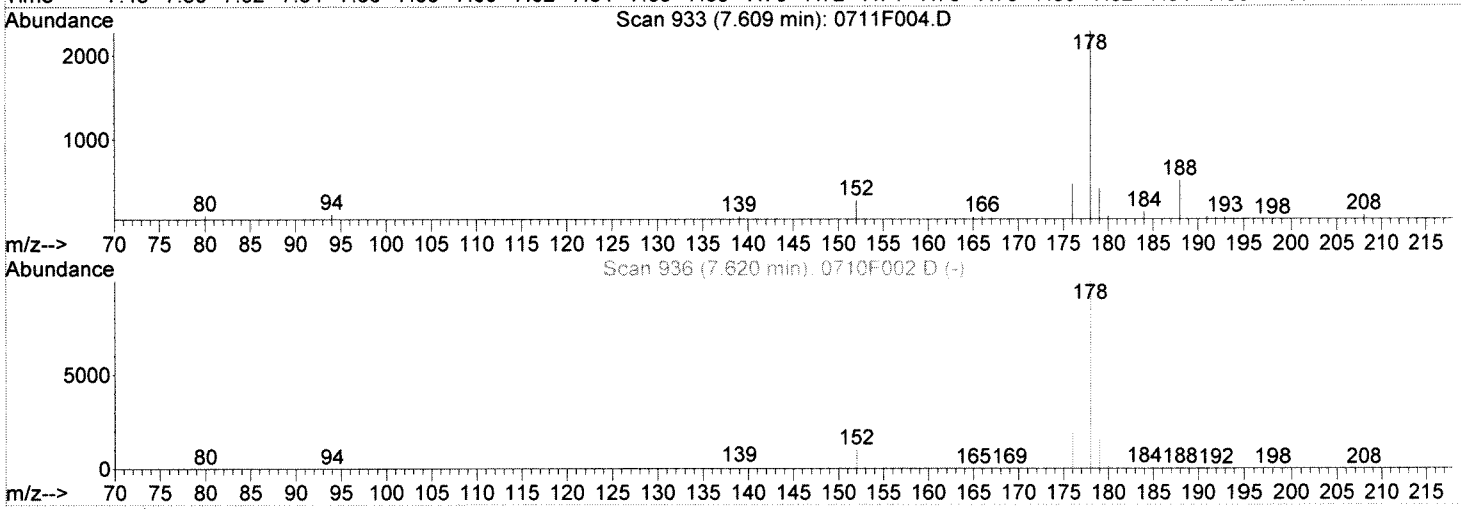


JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

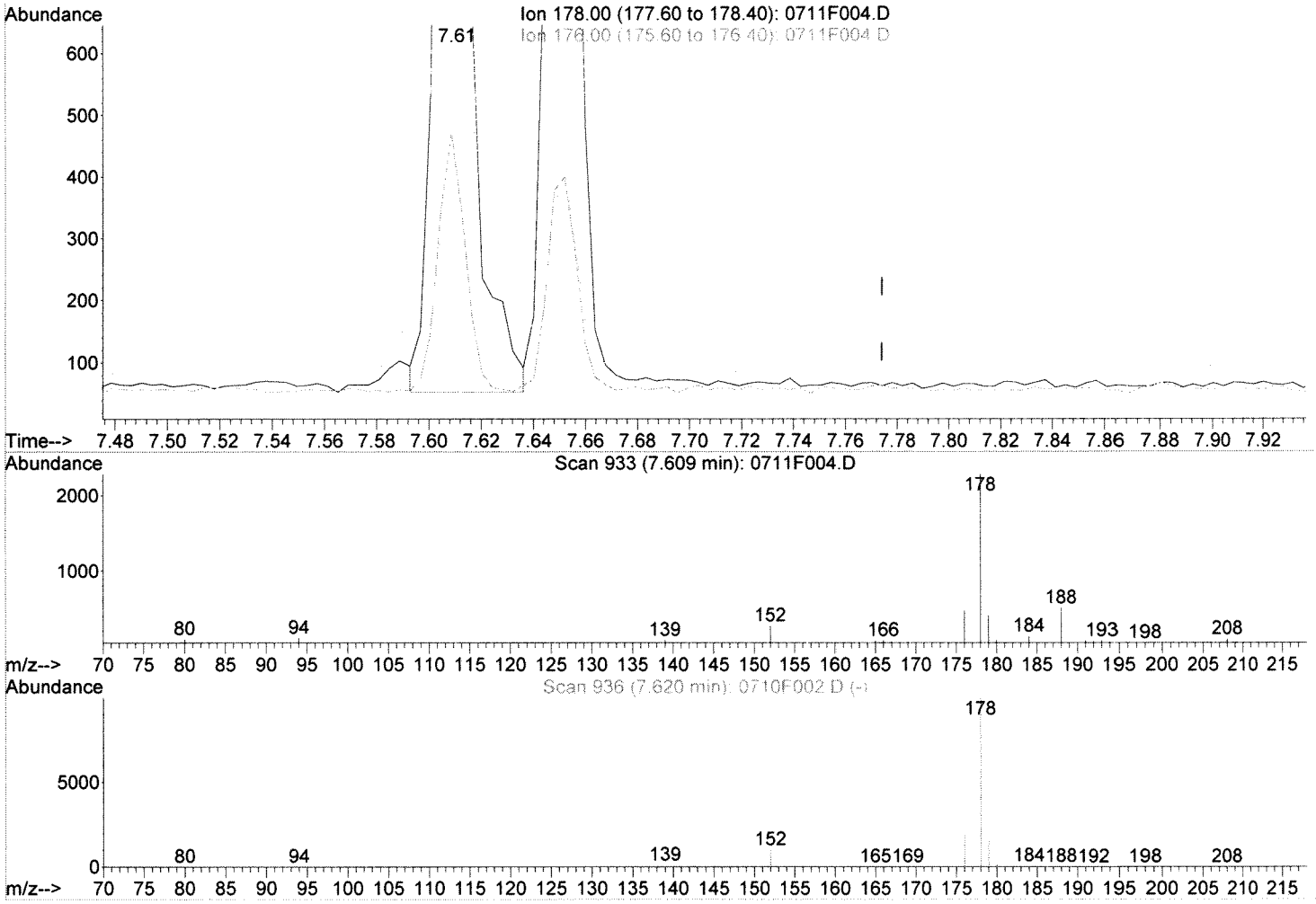
JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Quantitation Report (Qual)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.81%		
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.74%		
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

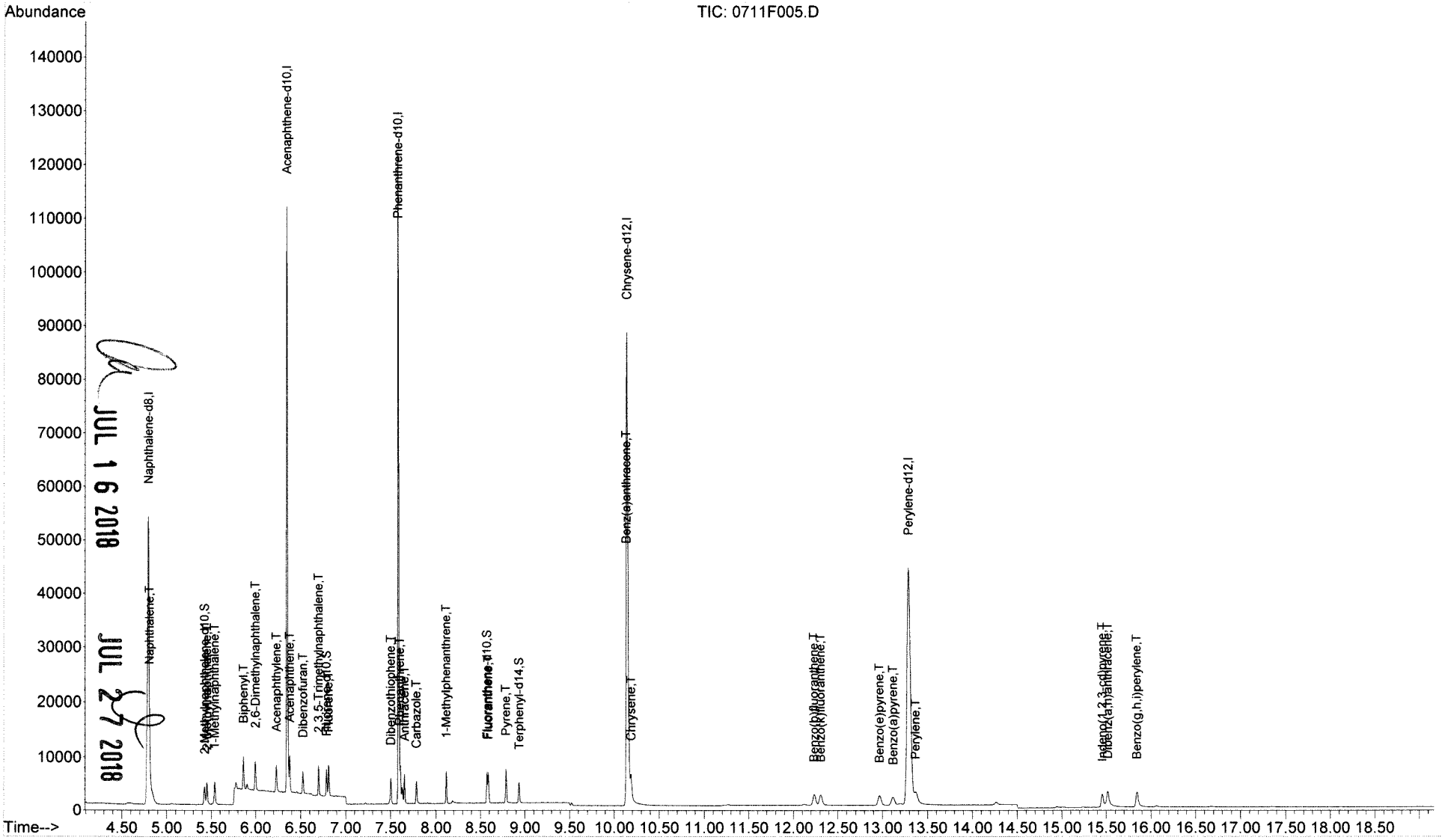
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

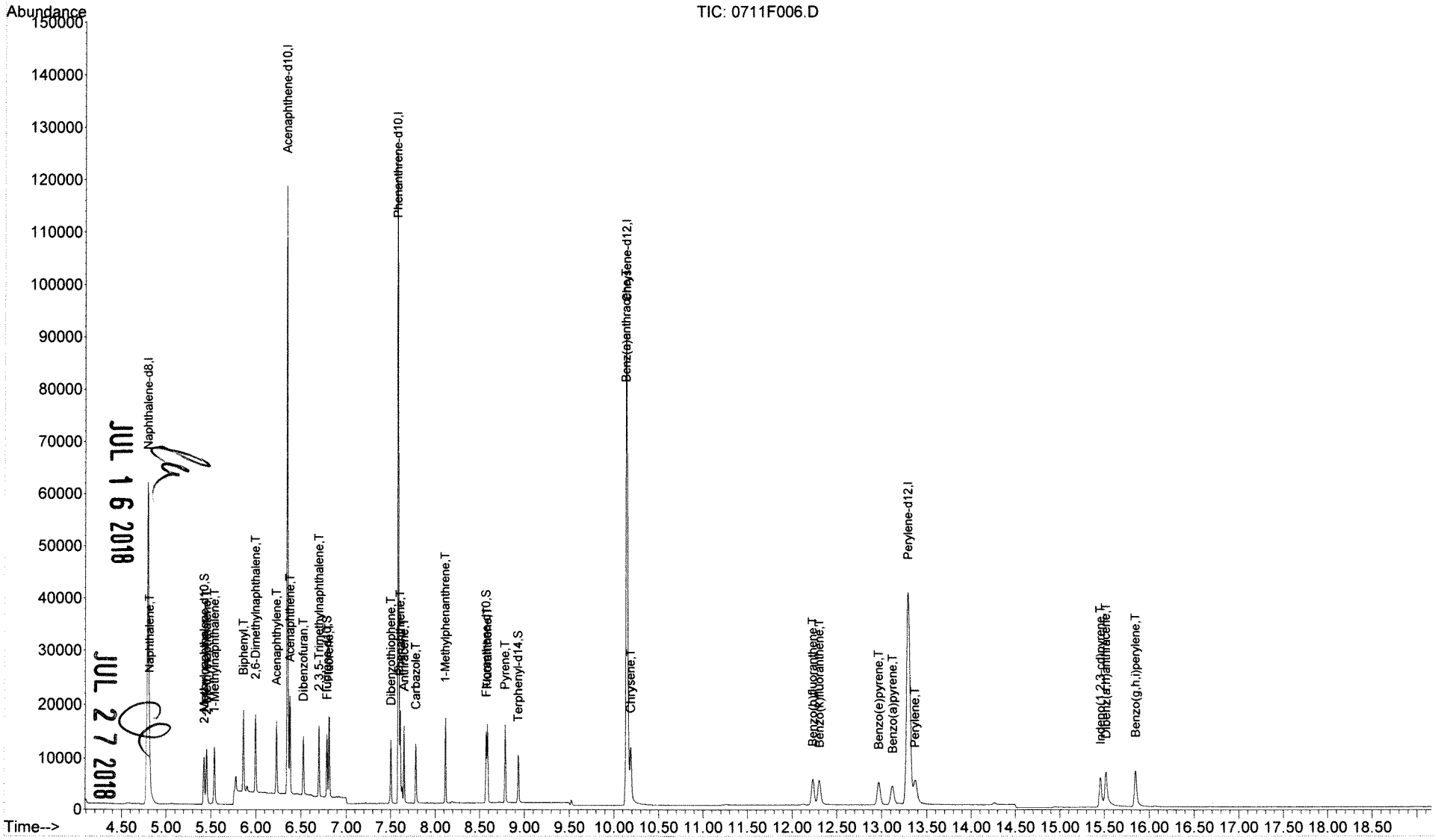
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

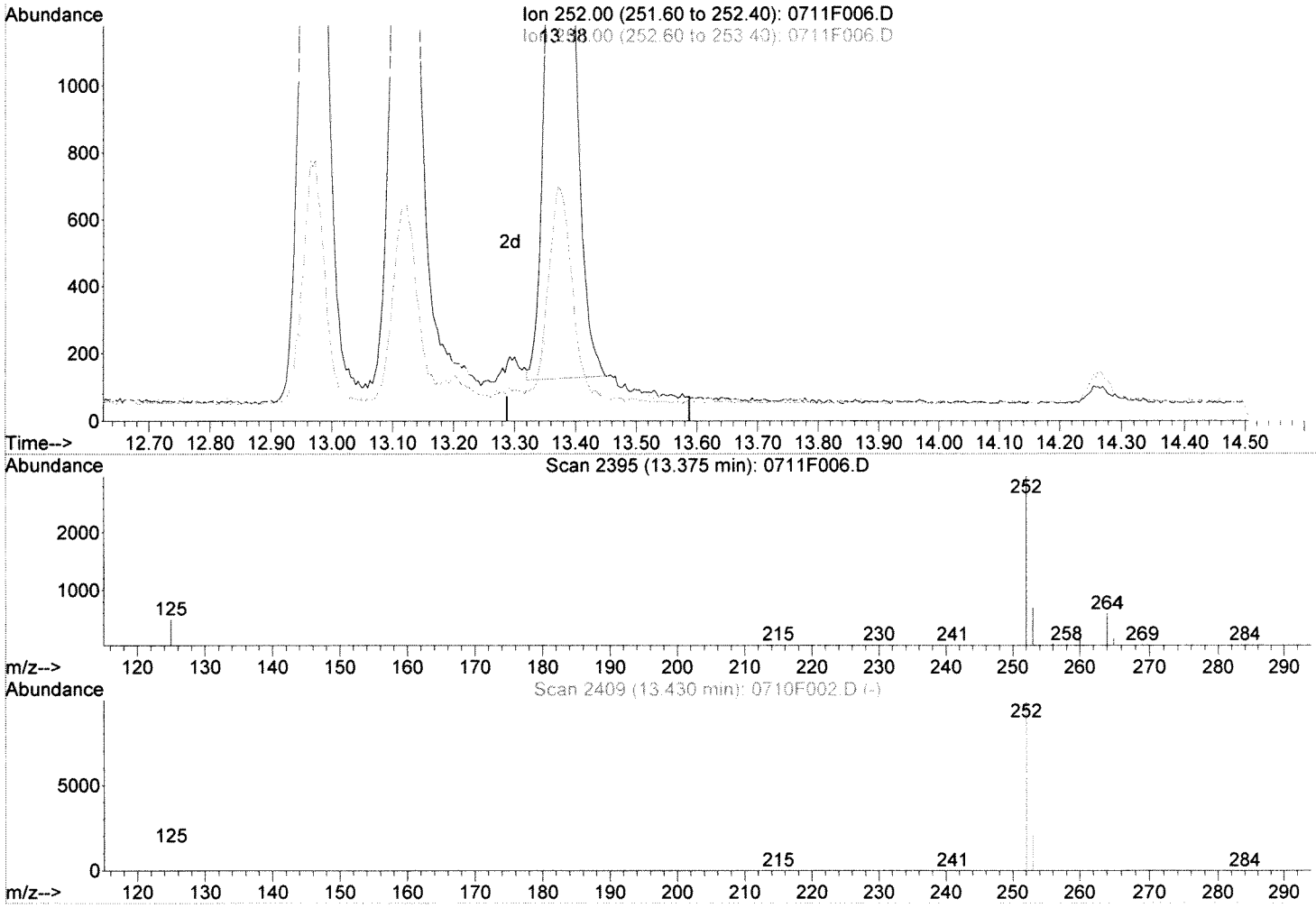
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

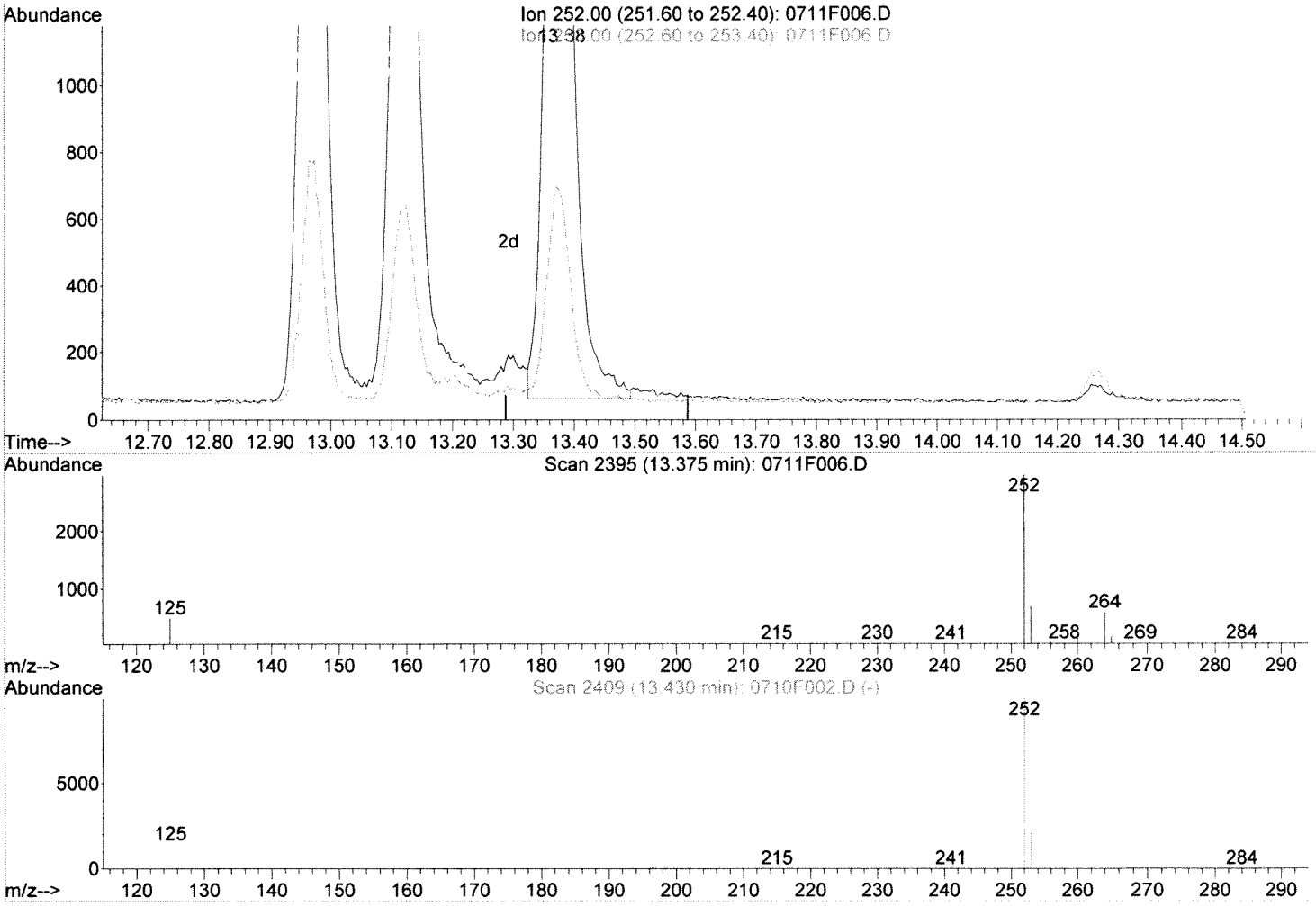
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

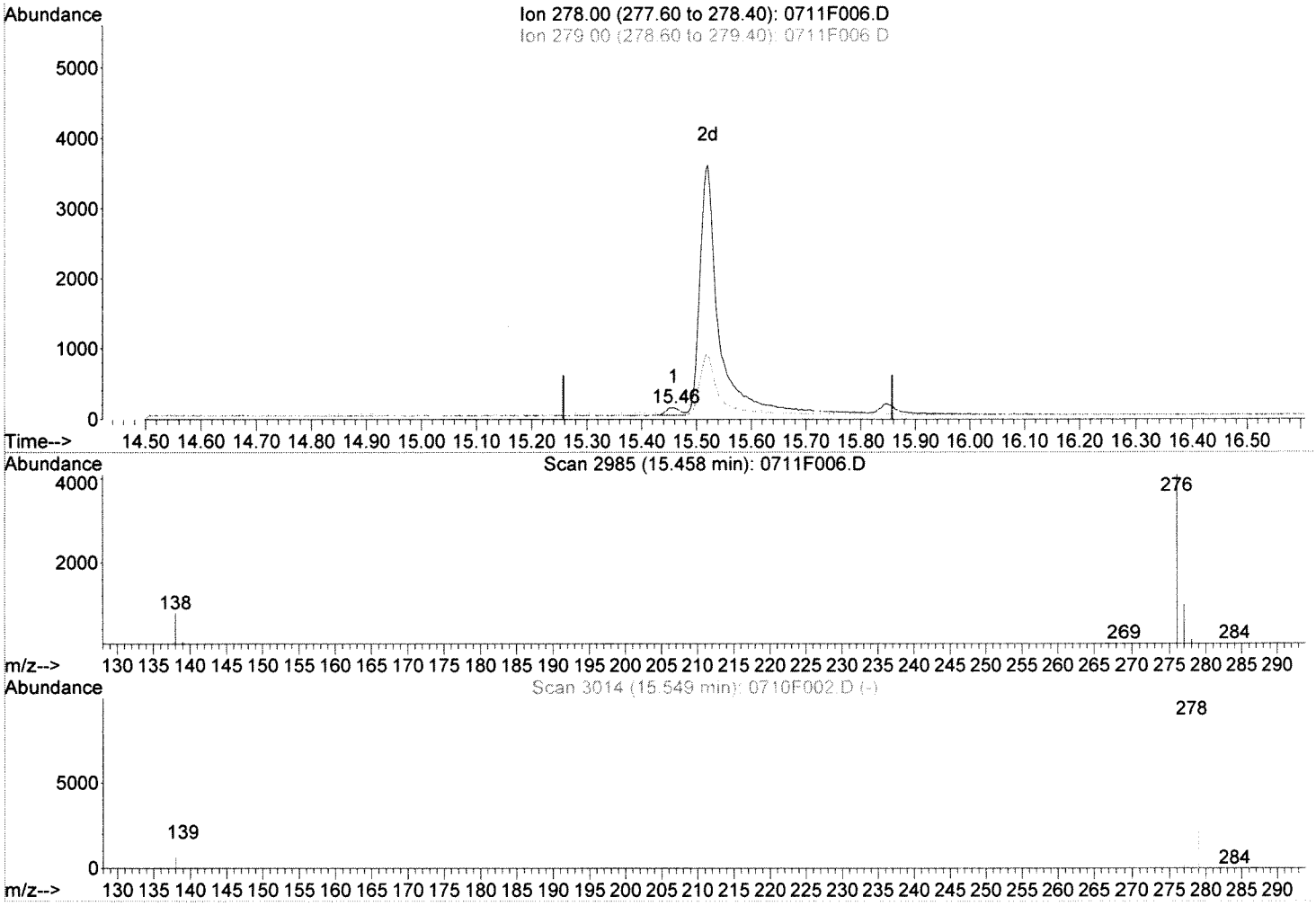
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

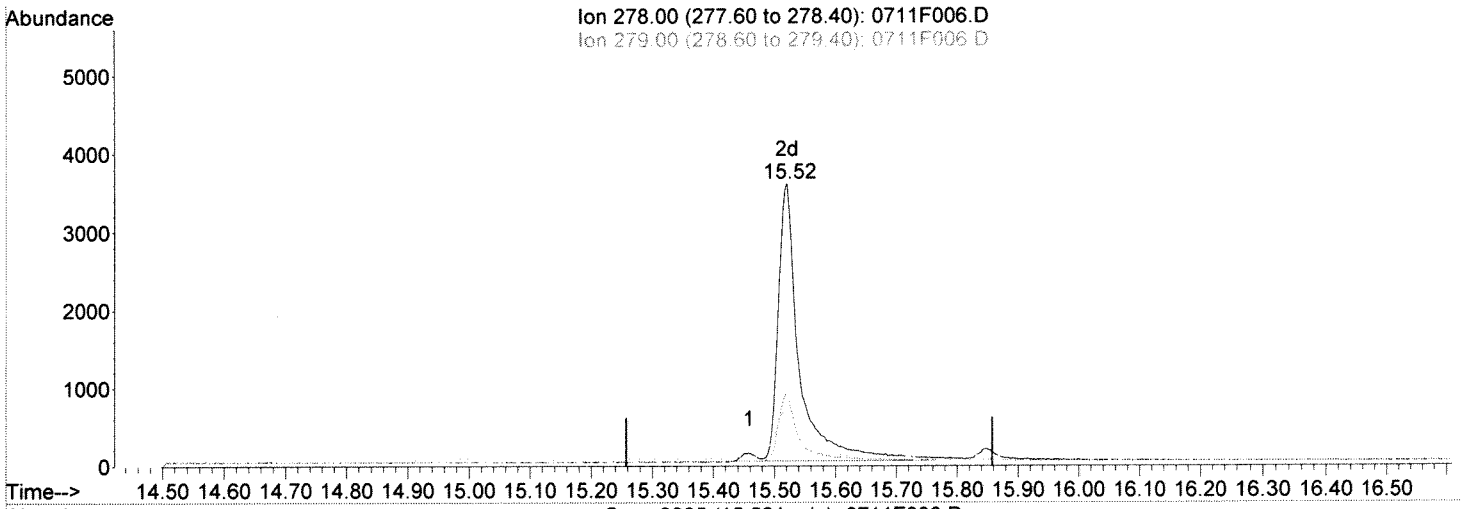
07/11/18

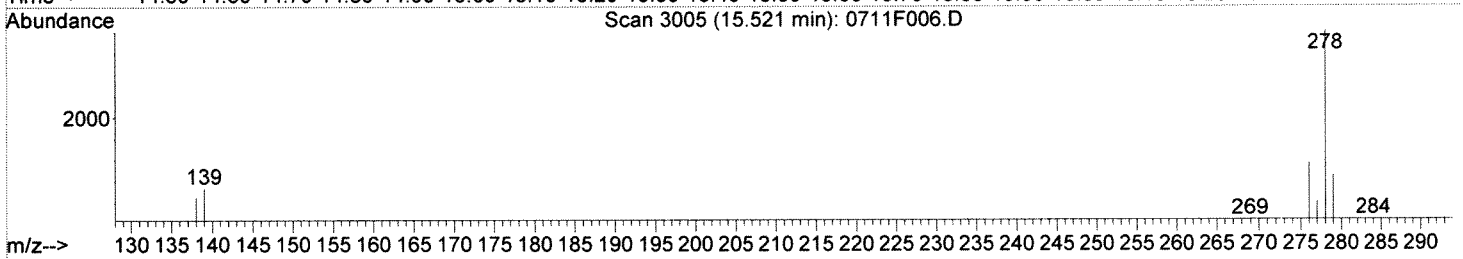
JUL 27 2018

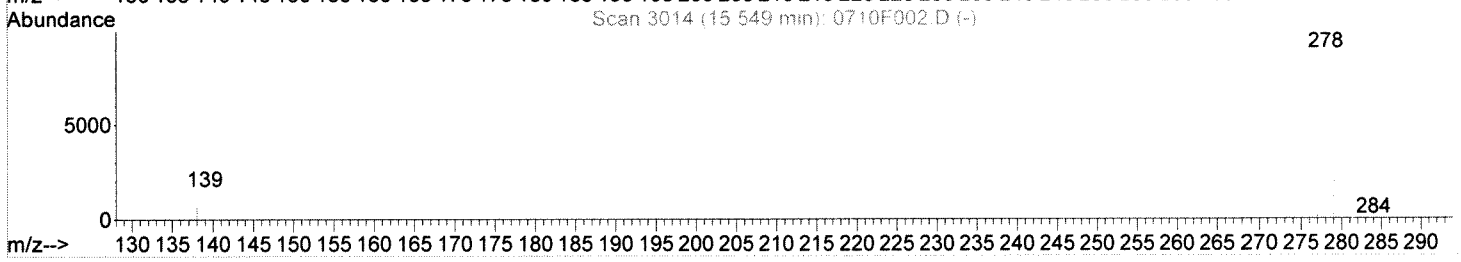
0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

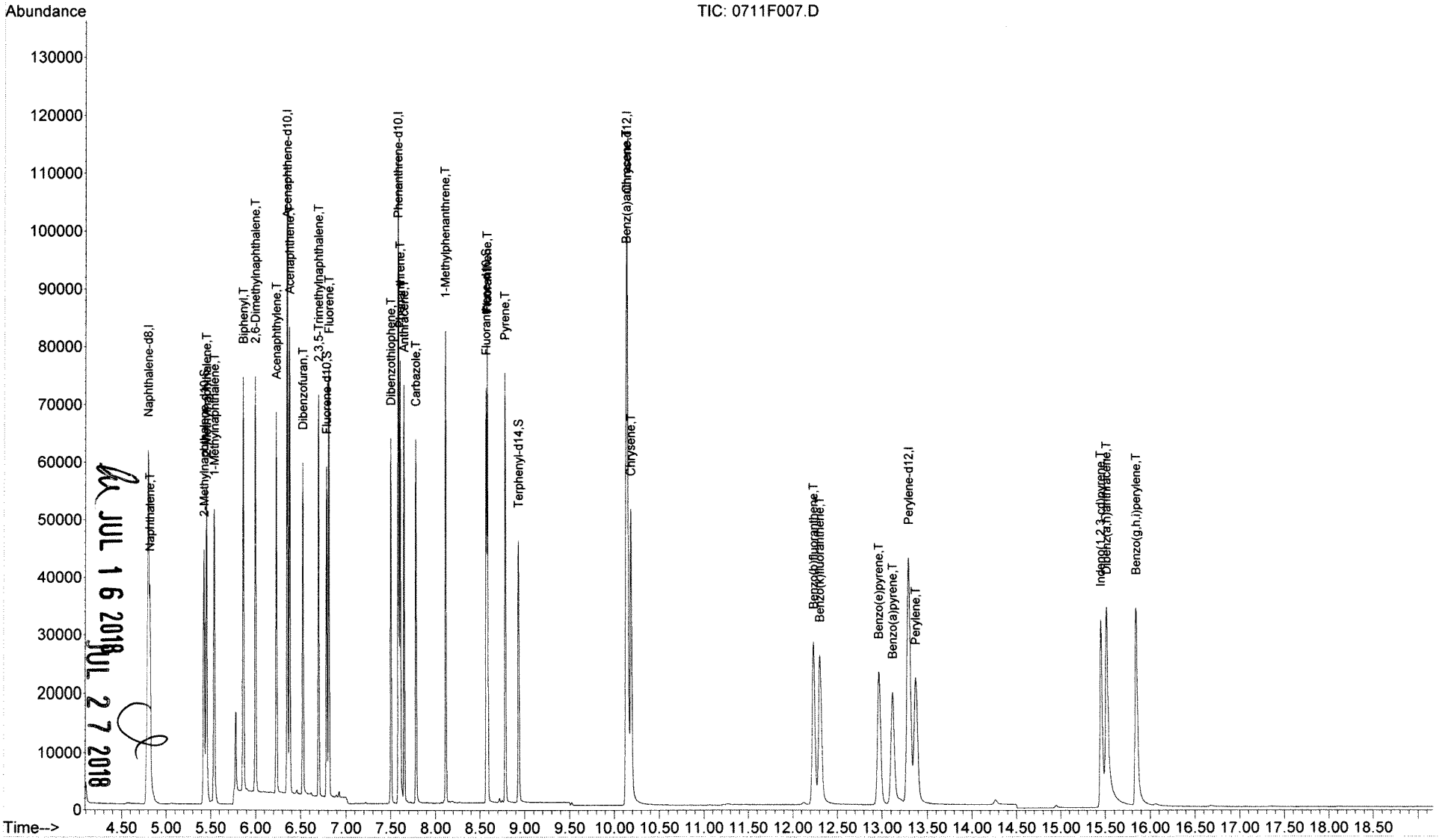
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 19.15%			
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.97%			
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 20.37%			
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.13%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

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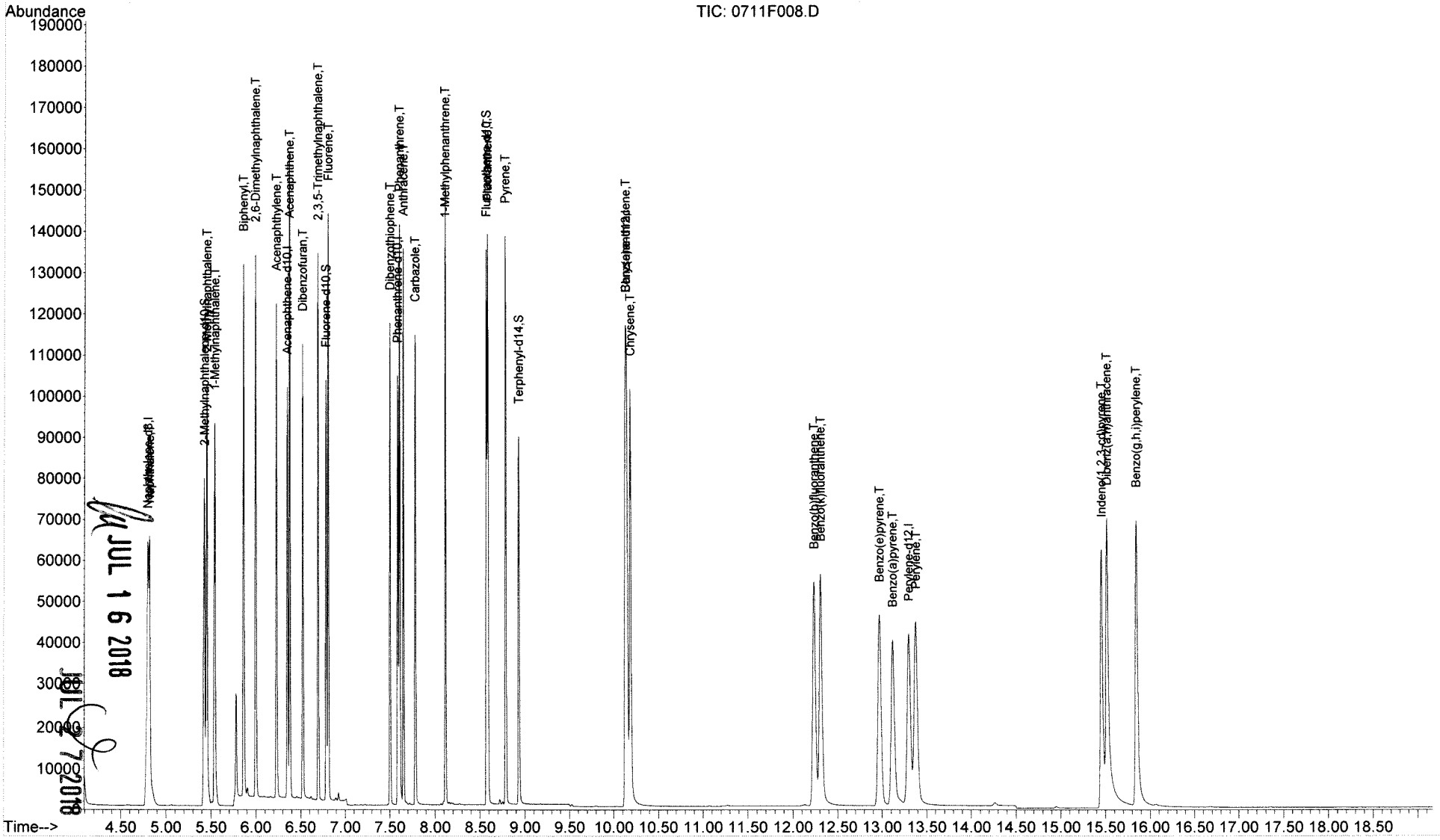
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

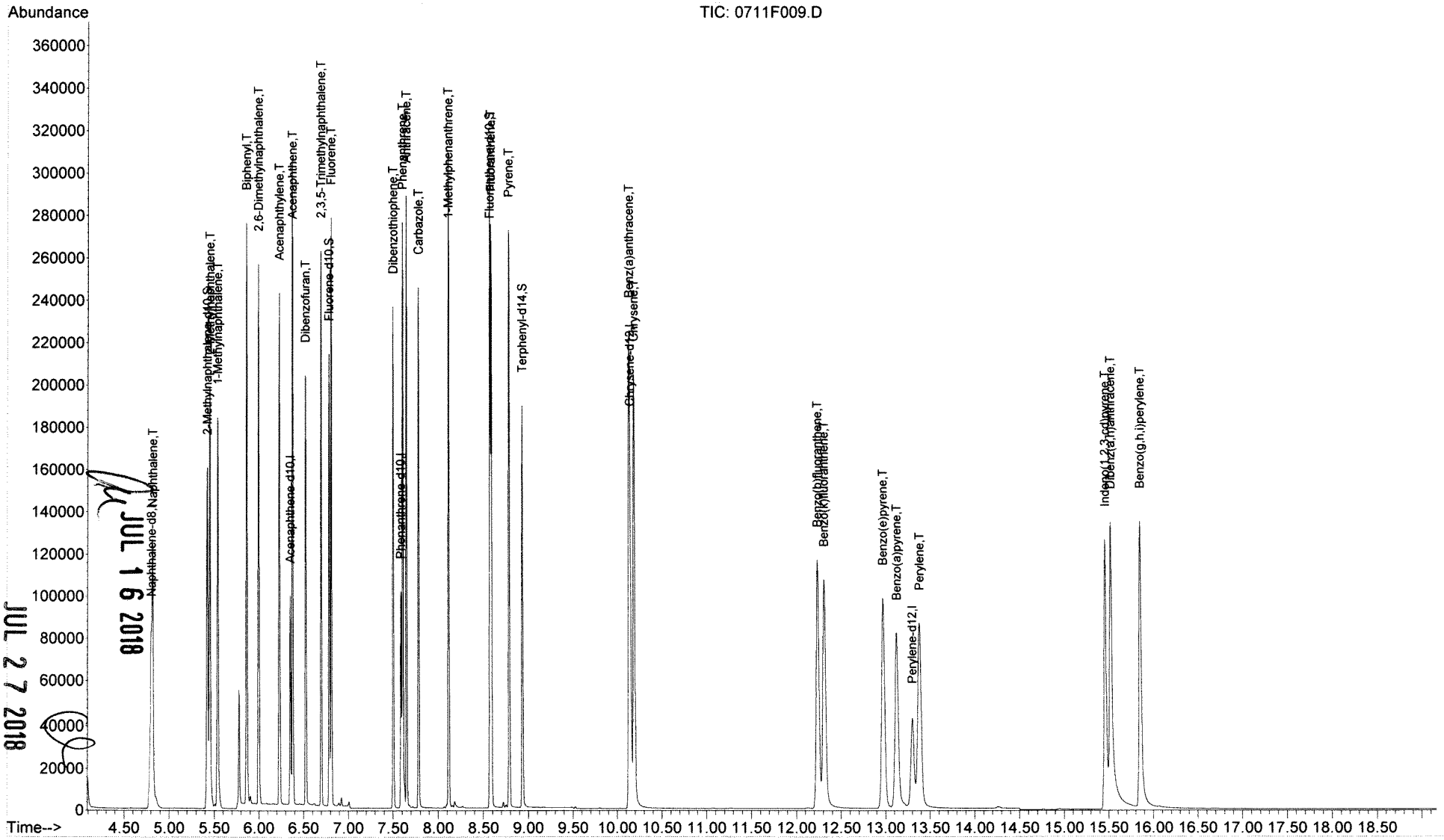
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

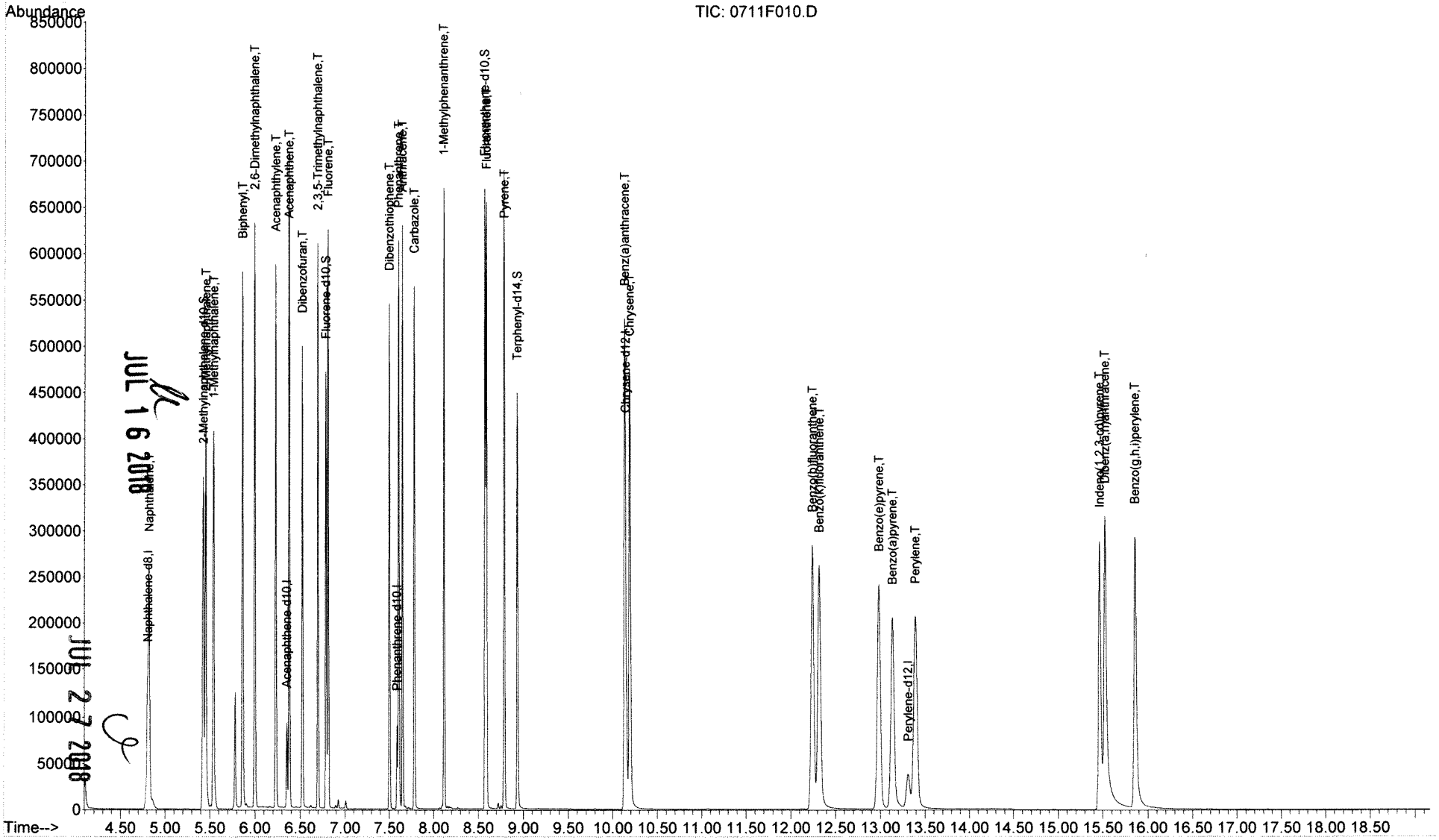
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0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

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Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
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Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

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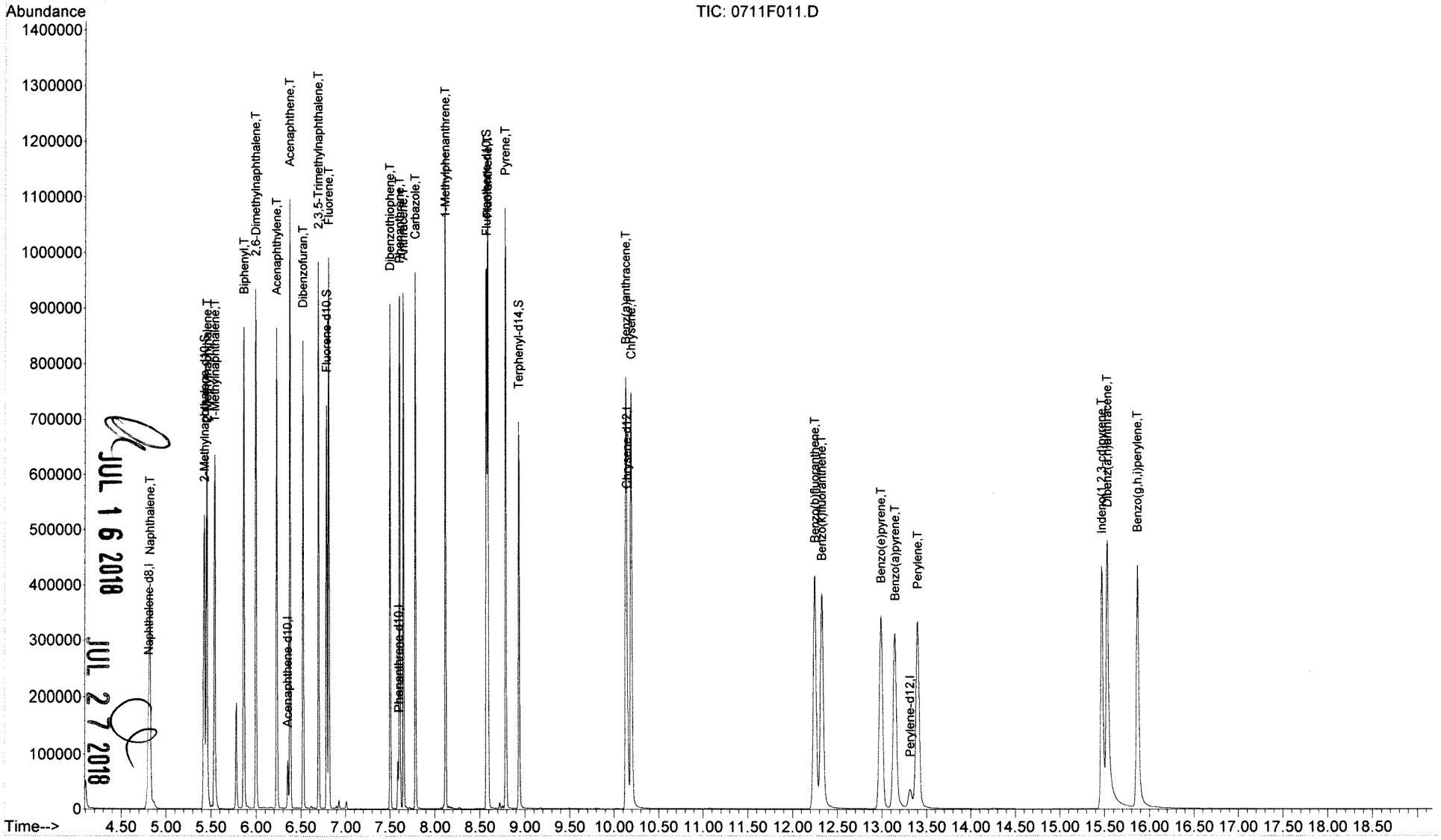
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0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

JUL 16 2018

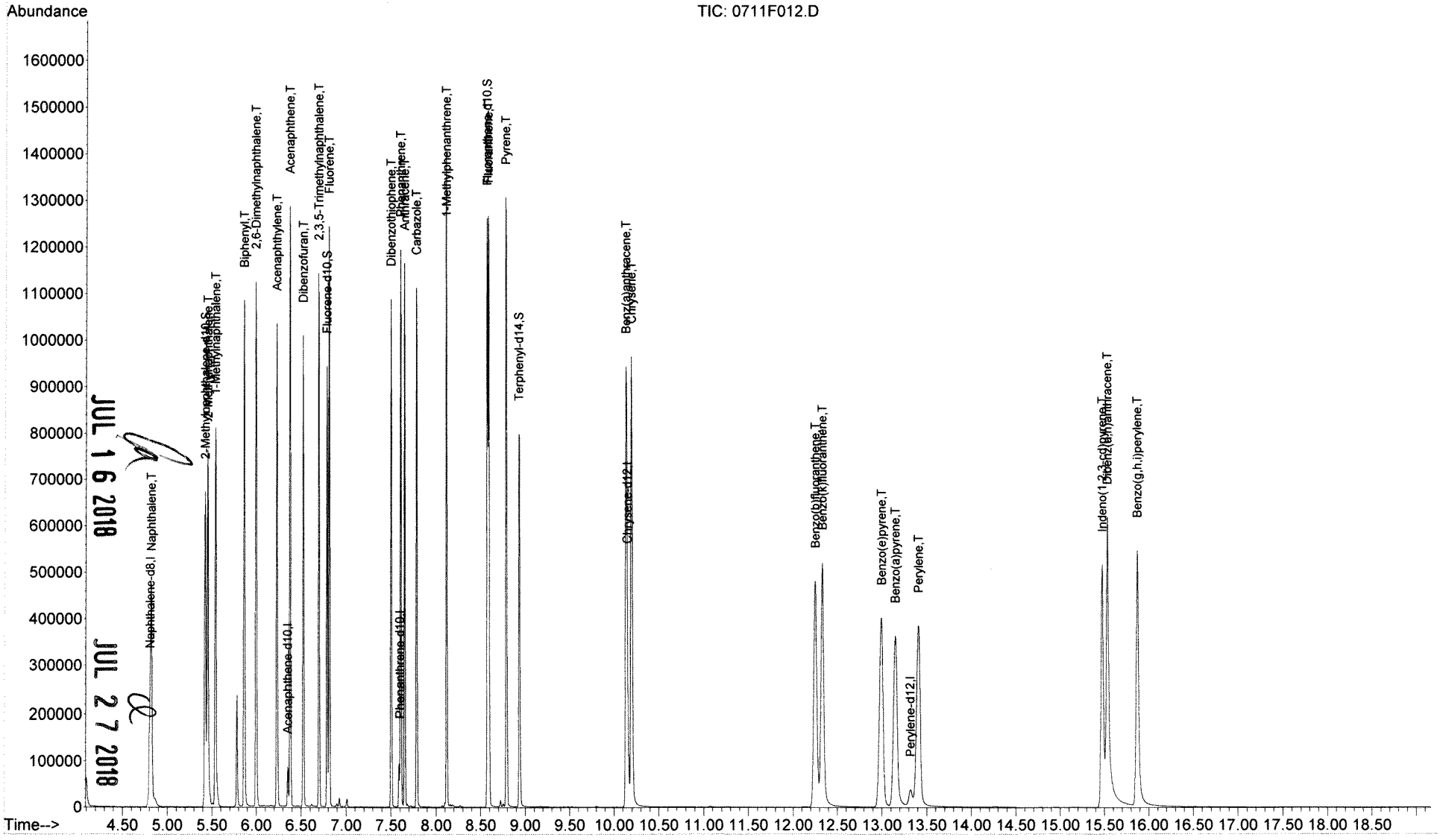
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

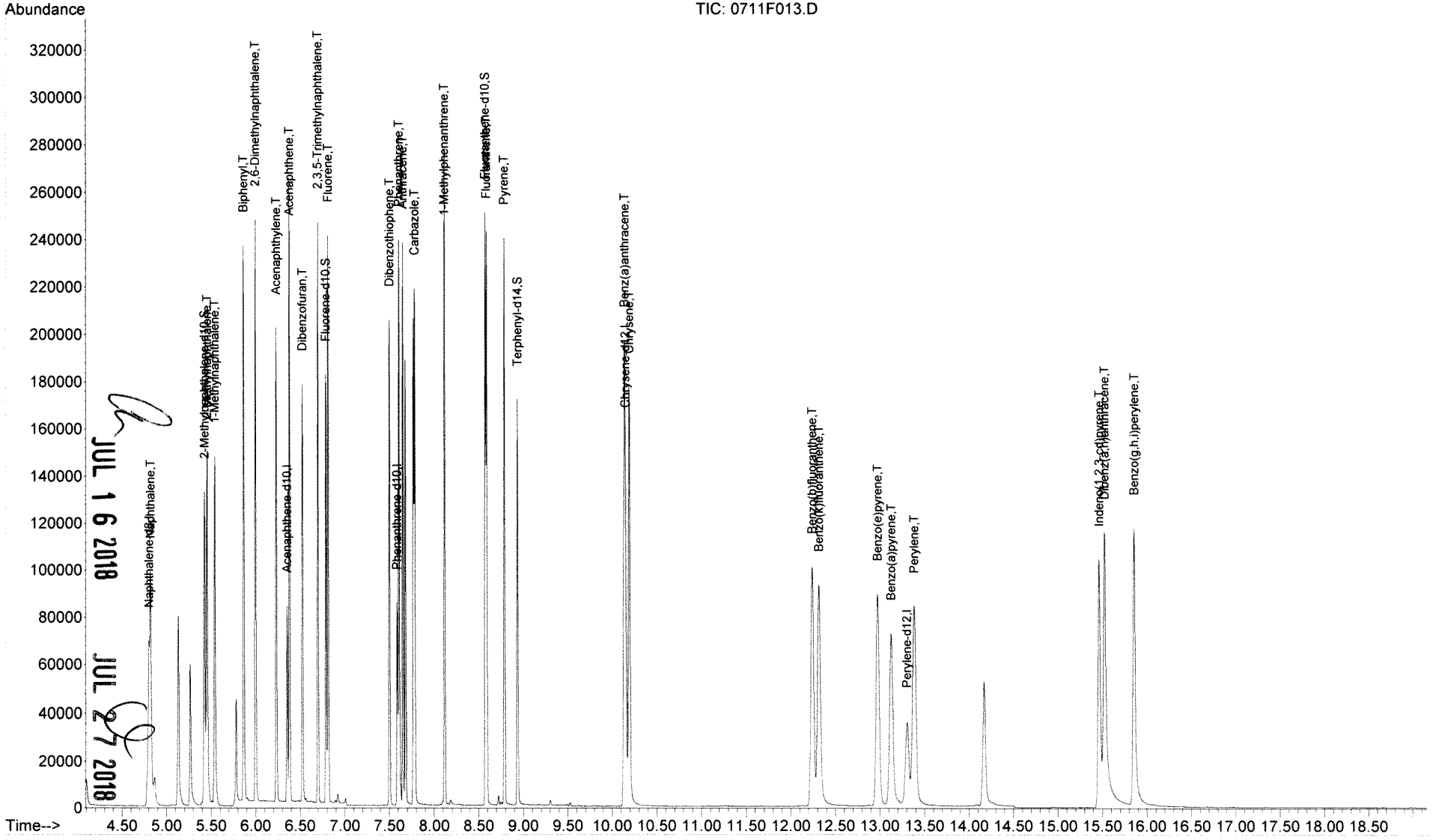
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



Preparation Information

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 18:30
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-004	L1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.410g	2mL	90.3
K1810270-006	N1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.031g	2mL	75.8
K1810270-010	T1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.087g	2mL	63.0
K1810270-011	R1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.247g	2mL	83.9
K1810270-012	P1-0to30-101518	8270D PAH SIM ULL	SEDIMENT	40.385g	2mL	76.7
K1810270-013	T3-0to28-101618	8270D PAH SIM ULL	SEDIMENT	40.290g	2mL	43.8
K1810270-015	T7-0to31-101618	8270D PAH SIM ULL	SEDIMENT	40.183g	2mL	39.3
K1810270-016	T5-0to26-101618	8270D PAH SIM ULL	SEDIMENT	40.416g	2mL	47.8
K1810270-017	P3-0to29-101618	8270D PAH SIM ULL	SEDIMENT	40.290g	2mL	48.7
K1810270-018	R5-0to25-101618	8270D PAH SIM ULL	SEDIMENT	40.319g	2mL	45.9
K1810270-019	514-0to29-101618	8270D PAH SIM ULL	SEDIMENT	40.149g	2mL	40.5
K1810270-020	P5-0to26-101618	8270D PAH SIM ULL	SEDIMENT	40.302g	2mL	35.2
K1810270-029	R3-0to33-101718	8270D PAH SIM ULL	SEDIMENT	40.487g	2mL	36.1
KWG1805597-1	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	63.0
KWG1805597-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.056g	2mL	63.0
KWG1805597-3	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805597-4	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.487g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805597-1	K1810270-010	KQ1815625-01
KWG1805597-2	K1810270-010	KQ1815625-02
KWG1805597-3		KQ1815625-03
KWG1805597-4		KQ1815625-04

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-004	1700765					
K1810270-006	1700766					
K1810270-010	1700767					
K1810270-011	1700768					
K1810270-012	1700769					
K1810270-013	1700770					
K1810270-015	1700771					
K1810270-016	1700772					
K1810270-017	1700773					
K1810270-018	1700774					
K1810270-019	1700775					

Comments: IS= SVM57-100D

Started By: KPrescot Assisted By: – Training: Yes / No

Completed By: TPottsch Assisted By: – Yes / No

Reviewed By: [signature] Date: Storage: K-Tundra #514

Chain of Custody

Relinquished By: TP Date: 11/1/18

Received By: [signature] Date: 11/8/18 Extracts Examined: Yes / No

Group ID:	KWG1805597	**Prep Method:**	EPA 3541	**Prep Date:**	10/29/18 18:30
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-020	1700776					
K1810270-029	1700777					
KWG1805597-1	1700778					
KWG1805597-2	1700779					
KWG1805597-3	1700780					
KWG1805597-4	1700781					

Comments:

Started By: KPrescot Assisted By: — Training: Yes / No

Completed By: TPottsch Assisted By: — Yes / No

Reviewed By: Date: Storage: K-Tundra

Chain of Custody

Relinquished By: TP Date: 11/1/18

Received By: Date: 11/8/18 Extracts Examined: Yes / No

Preparation Information

Group ID: KWG1805597 **Prep Method:** EPA 3541 **Prep Date:** 10/29/18 00:00
Department: Semivoa GCMS

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1810270-004	L1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	-
2	K1810270-006	N1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
3	K1810270-010	T1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
4	K1810270-011	R1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
5	K1810270-012	P1-0to30-101518	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
6	K1810270-013	T3-0to28-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
7	K1810270-015	T7-0to31-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
8	K1810270-016	T5-0to26-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
9	K1810270-017	P3-0to29-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
10	K1810270-018	R5-0to25-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
11	K1810270-019	514-0to29-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
12	K1810270-020	P5-0to26-101618	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
13	K1810270-029	R3-0to33-101718	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		-
14	KWG1805597-1	Matrix Spike K1810270-010	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		80
15	KWG1805597-2	Duplicate Matrix Spike K1810270-010	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
16	KWG1805597-3	Lab Control Sample	-	-	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		
17	KWG1805597-4	Method Blank	-	-	8270D PAH SIM ULL	SEDIMENT	40.487		10	2		-

Comments: *See Pre-Prep Information Benchsheet. KKP 10/29/18. PREPRUN: 325138

Surrogate ID: AP: SVM59-50D 100/150ppm XP: 03/04/19 K.K. KKP 10/29/18. 20ul Syringe. S-92
Spike ID: SVMPAH: SVM59-51F 25ppm XP: 03/07/19 80ul Syringe. S-96
Witness: [signature] 10/29/18

Started By: KPrescot Assisted By: KV
Completed By: Assisted By: BG

Additional Prep Information for EPA 3541
PAH

Service Request K1810270 Workgroup KWG1805597

Sulfate Lot # 178434 DCM (GC²) Lot # DV301 Glass Wool Lot# 213/7999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐
Storage Location (if not extracted same day): —
Soxtherm/s unit I.D# K-SOX-01/02/03
Soxtherm Start (Time/Date/Initial): 1830 10/29/18 ZKP
Soxtherm Stop (Time/Date/Initial): 0718 10/30/18 ZKP

N-Evap (Time/Date/Initial): 09:00 11/1/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 09:36 11/1/18 TP
Hexane Lot # 192699 N-Evap Therm. ID: X SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 13:10 11/1/18 TP

Silica Column Lot # Ext002-35P 1:1 Hexane/DCM Reagent Lot # Ext002-32X ①
Turbovap (Time/Date/Initial): 13:25 11/1/18 BG Turbovap Therm. ID: ~~K-Turbovap~~ K-Turbovap ①
Temp as measured: 27.0 °C Correction factor: 0.0 °C Adjusted temp: 27.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20717645

Extract Storage: —

Completed (Time/Date/Initial): 15:56 11/1/18 BG/TP

Comments/Observations: ① EE TP 11/1/18

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325138 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	PAH SIM ULL	40.410g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	.01	PAH SIM ULL	40.031g	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
3	K1810270-010	.01	PAH SIM ULL	40.087g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
4	K1810270-010 MS KQ1815625-01	.01	PAH SIM ULL	40.044g		PrepComments:LAGUILAR K-Balance-47
5	K1810270-010 DMS KQ1815625-02	.01	PAH SIM ULL	40.056g		PrepComments:LAGUILAR K-Balance-47
6	K1810270-011	.01	PAH SIM ULL	40.247g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
7	K1810270-012	.01	PAH SIM ULL	40.385g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	PAH SIM ULL	40.290g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	PAH SIM ULL	40.183g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	PAH SIM ULL	40.416g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	PAH SIM ULL	40.290g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	PAH SIM ULL	40.319g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	PAH SIM ULL	40.149g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	PAH SIM ULL	40.302g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	PAH SIM ULL	40.487g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/26/18 18:47		10/29/18 0800

Preparation Information

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-001	N3-0to26-101518	8270D PAH SIM ULL	SEDIMENT	40.062g	2mL	74.3
K1810302-016	A1-0to30-102018	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	
K1810430-001	E-8.99-0to28-102418	8270D PAH SIM ULL	SOIL	40.037g	2mL	28.5
K1810430-002	C-8.94-0to27-102418	8270D PAH SIM ULL	SOIL	40.004g	2mL	30.2
K1810430-003	D-8.90-0to27-102418	8270D PAH SIM ULL	SOIL	40.007g	2mL	34.7
K1810430-004	D-8.83-0to25-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	34.7
K1810430-005	E-9.02-0to26-102418	8270D PAH SIM ULL	SOIL	40.028g	2mL	35.0
K1810430-006	B-9.00-0to29-102418	8270D PAH SIM ULL	SOIL	40.009g	2mL	27.7
K1810430-007	512-0to29-102418	8270D PAH SIM ULL	SOIL	40.052g	2mL	27.3
K1810430-008	D-9.09-0to29-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	32.2
K1810430-009	A-9.03-0to26-102418	8270D PAH SIM ULL	SOIL	40.044g	2mL	28.8
K1810430-010	B-9.15-0to30-102418	8270D PAH SIM ULL	SOIL	40.077g	2mL	46.5
K1810430-011	G-9.15-0to18-102418	8270D PAH SIM ULL	SOIL	40.080g	2mL	74.1
K1810683-001	PDI-ST-T06B-1810	8270D PAH SIM ULL	SEDIMENT	40.124g	2mL	25.3
K1810683-002	PDI-ST-T06A-1810	8270D PAH SIM ULL	SEDIMENT	40.049g	2mL	25.6
K1810683-003	PDI-ST-T07A-1810	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	22.3
K1810683-004	PDI-ST-T07B-1810	8270D PAH SIM ULL	SEDIMENT	40.085g	2mL	21.4
KWG1805796-1	Matrix Spike	8270D PAH SIM ULL	SOIL	40.057g	2mL	35.0
KWG1805796-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SOIL	40.011g	2mL	35.0
KWG1805796-3	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.064g	2mL	25.6
KWG1805796-4	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.114g	2mL	25.6
KWG1805796-5	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805796-6	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805796-1	K1810430-005	KQ1815762-01
KWG1805796-2	K1810430-005	KQ1815762-02
KWG1805796-3	K1810683-002	KQ1815762-03
KWG1805796-4	K1810683-002	KQ1815762-04
KWG1805796-5		KQ1815762-05
KWG1805796-6		KQ1815762-06

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-001	1702211					
K1810302-016	1702212					
K1810430-001	1702213					

Comments: IS = SV-557-100D

Started By: KPrescot Assisted By: —

Completed By: TPottsch Assisted By: —

Training: Yes / No (No) — Yes / No (No)

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra 11514

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18

Extracts Examined: (Yes) / No

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810430-002	1702214					
K1810430-003	1702215					
K1810430-004	1702216					
K1810430-005	1702217					
K1810430-006	1702218					
K1810430-007	1702219					
K1810430-008	1702220					
K1810430-009	1702221					
K1810430-010	1702222					
K1810430-011	1702223					
K1810683-001	1702224					
K1810683-002	1702225					
K1810683-003	1702226					
K1810683-004	1702227					
KWG1805796-1	1702228					
KWG1805796-2	1702229					
KWG1805796-3	1702230					
KWG1805796-4	1702231					
KWG1805796-5	1702232					
KWG1805796-6	1702233					

Comments:

Started By: KPrescot Assisted By: — Training

Completed By: TPottsch Assisted By: — Yes No

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra Yes No

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18 Extracts Examined: Yes No

Preparation Information

11/14

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1810270-001	N3-0to26-101518	.02	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	–
2	K1810302-016	A1-0to30-102018	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
3	K1810430-001	E-8.99-0to28-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
4	K1810430-002	C-8.94-0to27-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
5	K1810430-003	D-8.90-0to27-102418 1A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
6	K1810430-004	D-8.83-0to25-102418 1B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
7	K1810430-005	E-9.02-0to26-102418 1C	.02	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
8	K1810430-006	B-9.00-0to29-102418 1D	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
9	K1810430-007	512-0to29-102418 1E	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
10	K1810430-008	D-9.09-0to29-102418 1F	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
11	K1810430-009	A-9.03-0to26-102418 2A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
12	K1810430-010	B-9.15-0to30-102418 2B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
13	K1810430-011	G-9.15-0to18-102418 2C	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
14	K1810683-001	PDI-ST-T06B-1810 2D	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
15	K1810683-002	PDI-ST-T06A-1810 2E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
16	K1810683-003	PDI-ST-T07A-1810 2F	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
17	K1810683-004	PDI-ST-T07B-1810 3A	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
18	KWG1805796-1	Matrix Spike K1810430-005 3B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		80

Comments: *See Pre-Prep Information Benchsheet. KKP 11/07/18. PREPRUN: 325303

Surrogate ID: MP: SVM59-50D 100/150ppm XP: 03/04/19 10ul Syringe. S-92.

Spike ID: SIM PAH: SVM59-51F 25ppm XP: 03/07/19 ~~100ul~~ E.E. KKP 11/07/18 80ul Syringe. S-9

Witness: Kayla Vo 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: –

Group ID:	KWG1805796	**Prep Method:**	EPA 3541						**Prep Date:**	11/07/18 00:00			
Department:	Semivoa GCMS												

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
19	KWG1805796-2	Duplicate Matrix Spike K1810430-005 3C	.01	✓	8270D PAH SIM ULL	SOIL	*	N/A	10	2	20	80
20	KWG1805796-3	Matrix Spike K1810683-002 3D	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
21	KWG1805796-4	Duplicate Matrix Spike K1810683-002 3E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
22	KWG1805796-5	Lab Control Sample 3F	-	-	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		-
23	KWG1805796-6	Method Blank	-	-	8270D PAH SIM ULL	SEDIMENT	40.332		10	2		-

Comments: * See Pre-Prep Information Benchsheet. KRP 11/07/18.

Surrogate ID: SEE PAGE 1

Spike ID: SEE PAGE 1

Witness: 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: -

Printed: 11/07/2018 08:45:56 Preparation Information Page 2 of 2

u:\Stealth\Crystal.rpt\prep2.rpt

Additional Prep Information for EPA 3541
PAH

Service Request K1810270/0302/0430/0683 Workgroup KWG1805796

Sulfate Lot #187085209 DCM (GC²) Lot #DV301 Glass Wool Lot# 213179999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-01/02/03

Soxtherm Start (Time/Date/Initial): 1345 11/07/18 KLP

Soxtherm Stop (Time/Date/Initial): 0755 11/08/18 KLP

N-Evap (Time/Date/Initial): 1328 11/8/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 10:14 11/9/18 TP
Hexane Lot # 195734 N-Evap Therm. ID: X-SVM-010
Temp as measured: 0.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 14:01 11/9/18 TP

Silica Column Lot # Ext002-350 1:1 Hexane/DCM Reagent Lot # Ext002-32X
Turbovap (Time/Date/Initial): 14:00 11/12/18 TP Turbovap Therm. ID: K-Turbovap-005
Temp as measured: 28.0 °C Correction factor: 0.0 °C Adjusted temp: 28.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20176045

Extract Storage: Hi Doggy

Completed (Time/Date/Initial): 17:04 11/12/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason: Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325303 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-09-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810430-001	.01	PAH SIM ULL	40.037g		PrepComments:GBEATLEY k-balance-49
2	K1810430-002	.01	PAH SIM ULL	40.004g		PrepComments:GBEATLEY k-balance-49
3	K1810430-003	.01	PAH SIM ULL	40.007g		PrepComments:GBEATLEY k-balance-49
4	K1810430-004	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
5	K1810430-005	.02	PAH SIM ULL	40.028g		PrepComments:GBEATLEY k-balance-49
6	K1810430-005 MS KQ1815762-01	.01	PAH SIM ULL	40.057g		PrepComments:GBEATLEY k-balance-49
7	K1810430-005 DMS KQ1815762-02	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
8	K1810430-006	.01	PAH SIM ULL	40.009g		PrepComments:GBEATLEY k-balance-49
9	K1810430-007	.01	PAH SIM ULL	40.052g		PrepComments:GBEATLEY k-balance-49
10	K1810430-008	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
11	K1810430-009	.01	PAH SIM ULL	40.044g		PrepComments:GBEATLEY k-balance-49
12	K1810430-010	.01	PAH SIM ULL	40.077g		PrepComments:GBEATLEY k-balance-49
13	K1810430-011	.01	PAH SIM ULL	40.080g		PrepComments:GBEATLEY k-balance-49

Relinquished By:	Date/Time: 10/30/18 1125	Received By:	Date/Time: 11/05/18 1330

325303

Pre-Prep Information Benchsheet

Prep Run #: ~~325583~~ **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-15-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810683-001	.01	PAH SIM ULL	40.124g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
2	K1810683-002	.02	PAH SIM ULL	40.049g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
3	K1810683-002 MS KQ1816031-01	.02	PAH SIM ULL	40.064g		PrepComments:DMADDEN K-Balance-50
4	K1810683-002 DMS KQ1816031-02	.02	PAH SIM ULL	40.114g		PrepComments:DMADDEN K-Balance-50
5	K1810683-003	.01	PAH SIM ULL	40.332g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
6	K1810683-004	.01	PAH SIM ULL	40.085g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50

All samples & QC moved to prep run # 325303. KLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10:47 11.2.18	Kassidy Van	11/05/18 1348

315303

Pre-Prep Information Benchsheet

Prep Run #: ~~325832~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	PAH SIM ULL	40.062g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	PAH SIM ULL	40.044g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Samples added to prep run # 315303. LLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.6.18 1631	LLP	11/07/18

Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 325584 **Prep WorkFlow:** OrgExtS(14) **Status:** Prepped
Team: Semivoa GCMS/KPRESCOTT **Prep Method:** EPA 3541 **Prep Date/Time:** 11/7/18 11:19 AM
Number of Copies to make: 3

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810270-001	N3-0to26-101518	.02	8270D/SVO LL		Sediment	40.093g	2.00mL	APOSEY K-BALANCE-48 11062018 / Samples
2	K1810302-016	A1-0to30-102018	.02	8270D/SVO LL		Sediment	40.065g	2.00mL	APOSEY K-BALANCE-48 11062018 / Samples
3	K1810683-001	PDI-ST-T06B-1810	.01	8270D/SVO LL		Sediment	40.068g	2.00mL	DMADDEN K-Balance-50 / 5g Pest OC instead of 20g for
4	K1810683-002	PDI-ST-T06A-1810	.02	8270D/SVO LL		Sediment	40.388g	2.00mL	DMADDEN K-Balance-50 / 5g Pest OC instead of 20g for
5	K1810683-003	PDI-ST-T07A-1810	.01	8270D/SVO LL		Sediment	40.248g	2.00mL	DMADDEN K-Balance-50 / 5g Pest OC instead of 20g for
6	K1810683-004	PDI-ST-T07B-1810	.01	8270D/SVO LL		Sediment	40.110g	2.00mL	DMADDEN K-Balance-50 / 5g Pest OC instead of 20g for
7	KQ1816032-01	K1810683-002 MS	.03	8270D/SVO LL		Solid	40.149g	2.00mL	DMADDEN K-Balance-50
8	KQ1816032-02	K1810683-002 DMS	.03	8270D/SVO LL		Solid	40.141g	2.00mL	DMADDEN K-Balance-50
9	KQ1816032-03	LCS		8270D/SVO LL		Solid	20.00g	2.00mL	
10	KQ1816032-04	MB		8270D/SVO LL		Solid	40.3880g	2.00mL	

Spiking Solutions

Name: Benzoic Acid Matrix Spike @ 200ppm Inventory ID 189077 Logbook Ref: SVM59-51B Expires On: 03/05/2019

K1810270-001 50.00µL KQ1816032-01 50.00µL KQ1816032-02 50.00µL KQ1816032-03 50.00µL

Name: 8270 ALL PURPOSE SURROGATE Inventory ID 189727 Logbook Ref: SVM59-50D Expires On: 03/04/2019

K1810270-001 50.00µL K1810302-016 50.00µL K1810683-001 50.00µL K1810683-002 50.00µL K1810683-003 50.00µL K1810683-004 50.00µL
KQ1816032-01 50.00µL KQ1816032-02 50.00µL KQ1816032-03 50.00µL KQ1816032-04 50.00µL

Name: 8270 Matrix Spike Inventory ID 193362 Logbook Ref: SVM59-82H Expires On: 05/02/2019

K1810270-001 50.00µL KQ1816032-01 50.00µL KQ1816032-02 50.00µL KQ1816032-03 50.00µL

Name: CLP Matrix Spike @ 100ug/mL Inventory ID 194231 Logbook Ref: SVM59-85E Expires On: 05/05/2019

K1810270-001 50.00µL KQ1816032-01 50.00µL KQ1816032-02 50.00µL KQ1816032-03 50.00µL

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	11/7/18 11:19	Started:	11/7/18 11:19	Started:	11/12/18 18:29
Finished:	11/7/18 19:05	Finished:	11/7/18 19:05	Finished:	11/12/18 18:29
By:	~~KPRESCOTT~~	By:	KPRESCOTT	By:	TPOTTSCHMIDT
Comments	DMADDEN JW 11/13/18	Comments		Comments	

Preparation Information Benchsheet

Prep Run#: 325584
Team: Semivoa GCMS/KPRESCOTT

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Prepped
Prep Date/Time: 11/7/18 11:19 AM

Comments: _____

Reviewed By: _____ Date: 11/13/18

Chain of Custody

Relinquished By: _____ Date: 11/12/18

Received By: _____ Date: _____

Extracts Examined
Yes No

11/14

Preparation Information Benchsheet

Prep Run#: 325584
Team: Semivoa GCMS/KPRESCOTT
Number of Copies to make: 3

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Draft
Prep Date/Time: 11/7/18 07:45 AM

#	Lab Code	Client ID		B#	√	Method /Test	Matrix	Amt. Ext. g	pH	Int. Vol mL	Final Vol mL	Surr Amt µL	Spike Amt µL
1	**K1810270-001**	N3-0to26-101518	7B	.02	✓	8270D / SVO LL	Sediment	40.093	N/A	10	2	150	-
2	**K1810302-016**	A1-0to30-102018	7C	.02	✓	8270D / SVO LL	Sediment	40.065		10	2		-
3	**K1810683-001**	PDI-ST-T06B-1810	7B	.01	✓	8270D / SVO LL	Sediment	40.068		10	2		-
4	**K1810683-002**	PDI-ST-T06A-1810	7C	.03	✓	8270D / SVO LL	Sediment	40.388		10	2		-
5	**K1810683-003**	PDI-ST-T07A-1810	7D	.01	✓	8270D / SVO LL	Sediment	40.248		10	2		-
6	**K1810683-004**	PDI-ST-T07B-1810	7E	.01	✓	8270D / SVO LL	Sediment	40.110		10	2		-
7	**KQ1816032-01**	K1810683-002 MS	7F	.03	✓	8270D / SVO LL	Solid	40.149		10	2		50/50/50
8	**KQ1816032-02**	K1810683-002 DMS	8A	.03	✓	8270D / SVO LL	Solid	40.141		10	2		
9	**KQ1816032-03**	LCS	8B	-	-	8270D / SVO LL	Solid	20.000		10	2		
10	**KQ1816032-04**	MB	8C	-	-	8270D / SVO LL	Solid	40.388		10	2		-

Comments:

Surrogate ID: AE:SVM59-50D 100/150ppm XP:03/04/19 50uL ipp.4I

Witnessed By: 11/7/18

Analyst: Kal. Lee Prescott

Spike ID: 8270:SVM59-82H 100ppm XP:05/02/19 50uL ipp.4I
CLP:SVM59-85C 100ppm XP:05/05/19 50uL ipp.4I
BA:SVM59-51B 200ppm XP:03/05/19 50uL ipp.4I

Assisted By: K.V

GPC RUNLOG

Run Date: 11/9/2018 **Calibration Date:** 11/7/2018

GPC #: 6 **Program Number:** BNA

Lab I.D.	Position	Test	Dilution	Comments
BLANK	1	8270 LL	NA	N/A
BLANK	2	8270 LL	NA	N/A
KQ1815593-05 MB	3	8270 LL	NA	N/A
KQ1815593-04 LCS	4	8270 LL	NA	N/A
K1810357-01	5	8270 LL	NA	N/A
K1810357-02	6	8270 LL	NA	N/A
K1810357-03	7	8270 LL	NA	N/A
K1810357-04	8	8270 LL	NA	N/A
K1810357-05	9	8270 LL	NA	N/A
K1810357-06	10	8270 LL	NA	N/A
K1810357-07	11	8270 LL	NA	N/A
K1810357-08	12	8270 LL	NA	N/A
K1810357-09	13	8270 LL	NA	N/A
K1810357-10	14	8270 LL	NA	N/A
K1810357-11	15	8270 LL	NA	N/A
K1810357-12	16	8270 LL	NA	N/A
K1810357-13	17	8270 LL	NA	N/A
K1810357-14	18	8270 LL	NA	N/A
K1810357-15	19	8270 LL	NA	N/A
K1810357-16	20	8270 LL	NA	N/A
K1810357-17	21	8270 LL	NA	N/A
K1810357-02 DUP	22	8270 LL	NA	N/A
K1810357-02 MS	23	8270 LL	NA	N/A
K1810357-02 DMS	24	8270 LL	NA	N/A
BLANK	25	8270 LL	NA	N/A
BLANK	26	8270 LL	NA	N/A
KQ1816032-04 MB	27	8270 LL	NA	N/A
KQ1816032-03 LCS	28	8270 LL	NA	N/A
K1810270-01	29	8270 LL	NA	N/A
K1810302-16	30	8270 LL	NA	N/A
K1810683-01	31	8270 LL	NA	N/A
K1810683-02	32	8270 LL	NA	N/A
K1810683-03	33	8270 LL	NA	N/A
K1810683-04	34	8270 LL	NA	N/A
K1810683-02 MS	35	8270 LL	NA	N/A
K1810683-02 DMS	36	8270 LL	NA	N/A
BLANK	37	8270 LL	NA	N/A

BLANK	38	8270 LL	NA	N/A
KQ1815427-04 MB	39	8270 LL	NA	N/A
KQ1815427-03 LCS	40	8270 LL	NA	N/A
K1810302-22	41	8270 LL	NA	N/A
K1810302-23	42	8270 LL	NA	N/A
K1810302-24	43	8270 LL	NA	N/A
K1810302-25	44	8270 LL	NA	N/A
K1810302-27	45	8270 LL	NA	N/A
K1810302-28	46	8270 LL	NA	N/A
K1810302-29	47	8270 LL	NA	N/A
K1810302-24 MS	48	8270 LL	NA	N/A
K1810302-24 DMS	49	8270 LL	NA	N/A

Final Volume Calculation

Intermediate Volume before GPC:	**10**	mL
Aliquot taken from intermediate volume:	**10**	mL
Aliquot diluted up to....	**10**	mL
Volume Injected onto column:	**5**	mL
GPC'd Extract brought to the Final Volume of:	**1**	mL
Calculated True Final Volume:	**2**	mL

Filter Lot # FC8051

Operator Date and Initial: TP 11/9/18

Pre-Prep Information Benchsheet

Prep Run #: 325584 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-15-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810683-001	.01	SVO LL	40.068g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
2	K1810683-002	.03	SVO LL	40.388g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
3	K1810683-002 MS KQ1816032-01	.03	SVO LL	40.149g		PrepComments:DMADDEN K-Balance-50
4	K1810683-002 DMS KQ1816032-02	.03	SVO LL	40.141g		PrepComments:DMADDEN K-Balance-50
5	K1810683-003	.01	SVO LL	40.248g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
6	K1810683-004	.01	SVO LL	40.110g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.2.18 10:47	Kassidy Van	11/05/18 1348

325584

Pre-Prep Information Benchsheet

Prep Run #: ~~325838~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	SVO LL	40.093g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	SVO LL	40.065g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Samples batched w/ prep run# 325584. KRP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.6.18 1626	KRP	11/07/18

Additional Prep Information for EPA 3541

8270 and 8270-LL

Service Request K1810270/0302/0683 **Workgroup** KQ1816032

Sulfate Lot # 186085209 DCM (GC²) Lot # DU301 Glass Wool Lot # 21317999

Date/Time/Initials Weighed: — Balance ID: — Calibration Verified —

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-07/08

Soxtherm Start (Time/Date/Initial): 1119 11/07/18 ~~KLP~~

Soxtherm Stop (Time/Date/Initial): 1905 11/7/18 KV

N-Evap (Time/Date/Initial): 07:47 11/8/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

GPC Clean-up (3640): Start 17:50 11/9/18 TP (Time/Date/Initial)

Filter lot# FC8051

S-Evap (Time/Date/Initial): 1123 11/12/18 BG S-Evap Therm. ID: DWB-46
Temp as measured: 75 °C Correction factor: 0.0 °C Adjusted temp: 75.0 °C

N-Evap (Time/Date/Initial): 14:40 11/12/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20717645

Extract Storage: JTT

Completed (Time/Date/Initial): 16:41 11/12/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason: Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

R:\Extractions\Active Benchsheets\3541\AddPrep EPA 3541 8270.doc
Reviewed by: Carlus Pollard 6/8/18 SOP: EXT-3541 Rev. 10

Preparation Information Benchsheet

Prep Run#: 325139 **Prep WorkFlow:** OrgExtS(14) **Status:** Prepped
Team: Semivoa GCMS/KPRESCOTT **Prep Method:** EPA 3541 **Prep Date/Time:** 10/29/18 08:00 PM
Number of Copies to make: 1

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810270-004	L1-0to30-101518	.01	8270D/SVO LL		Sediment	40.176g	2.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	N1-0to30-101518	.01	8270D/SVO LL		Sediment	40.423g	2.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 /
3	K1810270-010	T1-0to30-101518	.01	8270D/SVO LL		Sediment	40.144g	2.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47
4	K1810270-011	R1-0to30-101518	.01	8270D/SVO LL		Sediment	40.194g	2.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 /
5	K1810270-012	P1-0to30-101518	.01	8270D/SVO LL		Sediment	40.264g	2.00mL	DMADDEN K-Balance-50LAGUILAR K-Balance-47 /
6	K1810270-013	T3-0to28-101618	.01	8270D/SVO LL		Sediment	40.377g	2.00mL	LAGUILAR K-Balance-47
7	K1810270-015	T7-0to31-101618	.01	8270D/SVO LL		Sediment	40.154g	2.00mL	LAGUILAR K-Balance-47
8	K1810270-016	T5-0to26-101618	.01	8270D/SVO LL		Sediment	40.385g	2.00mL	LAGUILAR K-Balance-47
9	K1810270-017	P3-0to29-101618	.01	8270D/SVO LL		Sediment	40.271g	2.00mL	LAGUILAR K-Balance-47
10	K1810270-018	R5-0to25-101618	.01	8270D/SVO LL		Sediment	40.183g	2.00mL	LAGUILAR K-Balance-47
11	K1810270-019	514-0to29-101618	.01	8270D/SVO LL		Sediment	40.301g	2.00mL	LAGUILAR K-Balance-47
12	K1810270-020	P5-0to26-101618	.01	8270D/SVO LL		Sediment	40.412g	2.00mL	LAGUILAR K-Balance-47 / Homogenized sample is more
13	K1810270-029	R3-0to33-101718	.01	8270D/SVO LL		Sediment	40.425g	2.00mL	LAGUILAR K-Balance-47 / Homogenized sample is more
14	KQ1815626-01	K1810270-011 MS	.01	8270D/SVO LL		Solid	40.352g	2.00mL	LAGUILAR K-Balance-47
15	KQ1815626-02	K1810270-011 DMS	.01	8270D/SVO LL		Solid	40.213g	2.00mL	LAGUILAR K-Balance-47
16	KQ1815626-03	LCS		8270D/SVO LL		Solid	20.00g	2.00mL	
17	KQ1815626-04	MB		8270D/SVO LL		Solid	40.4250g	2.00mL	

Spiking Solutions

Name: Benzoic Acid Matrix Spike @ 200ppm Inventory ID 189077 Logbook Ref: SVM59-51B Expires On: 03/05/2019

KQ1815626-01 50.00µL KQ1815626-02 50.00µL KQ1815626-03 50.00µL

Name: 8270 ALL PURPOSE SURROGATE Inventory ID 189727 Logbook Ref: SVM59-50D Expires On: 03/04/2019

K1810270-004 50.00µL K1810270-006 50.00µL K1810270-010 50.00µL K1810270-011 50.00µL K1810270-012 50.00µL K1810270-013 50.00µL
K1810270-015 50.00µL K1810270-016 50.00µL K1810270-017 50.00µL K1810270-018 50.00µL K1810270-019 50.00µL K1810270-020 50.00µL
K1810270-029 50.00µL KQ1815626-01 50.00µL KQ1815626-02 50.00µL KQ1815626-03 50.00µL KQ1815626-04 50.00µL

Name: 8270 Matrix Spike Inventory ID 193362 Logbook Ref: SVM59-82H Expires On: 05/02/2019

KQ1815626-01 50.00µL KQ1815626-02 50.00µL KQ1815626-03 50.00µL

Name: CLP Matrix Spike @ 100ug/mL Inventory ID 194231 Logbook Ref: SVM59-85E Expires On: 05/05/2019

KQ1815626-01 50.00µL KQ1815626-02 50.00µL KQ1815626-03 50.00µL

Preparation Information Benchsheet

Prep Run#: 325139
Team: Semivoa GCMS/KPRESCOTT

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Prepped
Prep Date/Time: 10/29/18 08:00 PM

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	10/29/18 20:00	Started:	10/29/18 20:00	Started:	11/7/18 16:18
Finished:	10/30/18 13:15	Finished:	10/30/18 13:15	Finished:	11/7/18 16:18
By:	~~KPRESCOTT~~	By:	KPRESCOTT	By:	TPOTTSCHMIDT
Comments	DMADDEN JW 11/9/18	Comments		Comments	

Comments: IS: 8VM5B-99A

Reviewed By: _____ Date: 11/9/18

Chain of Custody

Relinquished By: TP Date: 11/7/18

Received By: _____ Date: 11.09.18

Extracts Examined: (Yes) No

Preparation Information Benchsheet

11/16

Prep Run#: 325139
Team: Semivoa GCMS/KPRESCOTT
Number of Copies to make: 1

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3541

Status: Draft
Prep Date/Time: 10/26/18 18:43 PM

#	Lab Code	Client ID		B#	√	Method /Test	Matrix	Amt. Ext. g	pH	Int. Vol mL	Final Vol mL	Surr Amt µL	Spike Amt µL
1	**K1810270-004**	L1-0to30-101518	9A	.01	✓	8270D / SVO LL	Sediment	*	N/A	10	2	150	-
2	**K1810270-006**	N1-0to30-101518	9B	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
3	**K1810270-010**	T1-0to30-101518	9C	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
4	**K1810270-011**	R1-0to30-101518	9D	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
5	**K1810270-012**	P1-0to30-101518	9E	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
6	**K1810270-013**	T3-0to28-101618	9F	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
7	**K1810270-015**	T7-0to31-101618	7B	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
8	**K1810270-016**	T5-0to26-101618	7C	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
9	**K1810270-017**	P3-0to29-101618	7D	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
10	**K1810270-018**	R5-0to25-101618	7E	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
11	**K1810270-019**	514-0to29-101618	7F	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
12	**K1810270-020**	P5-0to26-101618	8A	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
13	**K1810270-029**	R3-0to33-101718	8B	.01	✓	8270D / SVO LL	Sediment	*		10	2		-
14	**KQ1815626-01**	K1810270-011 MS	8C	.01	✓	8270D / SVO LL	Solid	*		10	2		50/50/50
15	**KQ1815626-02**	K1810270-011 DMS	8E	.01	✓	8270D / SVO LL	Solid	*		10	2		
16	**KQ1815626-03**	LCS	8F	-	-	8270D / SVO LL	Solid	20.000		10	2		
17	**KQ1815626-04**	MB	3D	-	-	8270D / SVO LL	Solid	40.425		10	2		-

Page 1706 of 1856

Comments: * See Pre-Prep Information Benchsheet. KP 10/29/18.

Surrogate ID: 8270:SVM59-50D 100/150ppm XP:03/04/19 50ml epp. HI

Witnessed By: 10/29/18

Analyst: Kai Prescott

Spike ID: 8270:SVM59-59A 100ppm XP:03/19/19 50ml epp. HI
CLP:SVM59-66D 100ppm XP:04/08/19 50ml epp. HI
BN:SVM59-51B 200ppm XP:03/05/19 50ml epp. HI

Assisted By: KN

GPC RUNLOG

Run Date: 11/5/2018 **Calibration Date:** 10/30/2018

GPC #: 6 **Program Number:** BNA

Lab I.D.	Position	Test	Dilution	Comments
BLANK	1	8270 LL	NA	N/A
BLANK	2	8270 LL	NA	N/A
KQ1814984-04 MB	3	8270 LL	NA	N/A
KQ1814984-03 LCS	4	8270 LL	NA	N/A
K1810083-01	5	8270 LL	NA	N/A
K1810083-02	6	8270 LL	NA	N/A
K1810083-03	7	8270 LL	NA	N/A
K1810083-04	8	8270 LL	NA	N/A
K1810083-06	9	8270 LL	NA	N/A
K1810083-09	10	8270 LL	NA	N/A
K1810083-11	11	8270 LL	NA	N/A
K1810083-13	12	8270 LL	NA	N/A
K1810083-15	13	8270 LL	NA	N/A
K1810083-18	14	8270 LL	NA	N/A
K1810083-20	15	8270 LL	NA	N/A
K1810083-21	16	8270 LL	NA	N/A
K1810083-22	17	8270 LL	NA	N/A
K1810083-11 MS	18	8270 LL	NA	N/A
K1810083-11 DMS	19	8270 LL	NA	N/A
BLANK	20	8270 LL	NA	N/A
BLANK	21	8270 LL	NA	N/A
KQ1815626-04 MB	22	8270 LL	NA	N/A
KQ1815626-03 LCS	23	8270 LL	NA	N/A
K1810270-04	24	8270 LL	NA	N/A
K1810270-06	25	8270 LL	NA	N/A
K1810270-10	26	8270 LL	NA	N/A
K1810270-11	27	8270 LL	NA	N/A
K1810270-12	28	8270 LL	NA	N/A
K1810270-13	29	8270 LL	NA	N/A
K1810270-15	30	8270 LL	NA	N/A
K1810270-16	31	8270 LL	NA	N/A
K1810270-17	32	8270 LL	NA	N/A
K1810270-18	33	8270 LL	NA	N/A
K1810270-19	34	8270 LL	NA	N/A
K1810270-20	35	8270 LL	NA	N/A
K1810270-29	36	8270 LL	NA	N/A
K1810270-11 MS	37	8270 LL	NA	N/A

K1810270-11 DMS	**38**	8270 LL	NA	N/A
BLANK	**39**	8270 LL	NA	N/A
BLANK	**40**	8270 LL	NA	N/A
KQ1815734-05 MB	**41**	8270 LL	NA	N/A
KQ1815734-04 LCS	**42**	8270 LL	NA	N/A
K1810439-01	**43**	8270 LL	NA	N/A
K1810439-02	**44**	8270 LL	NA	N/A
K1810439-03	**45**	8270 LL	NA	N/A
K1810439-04	**46**	8270 LL	NA	N/A
K1810439-05	**47**	8270 LL	NA	N/A
K1810439-06	**48**	8270 LL	NA	N/A
K1810439-07	**49**	8270 LL	NA	N/A
K1810439-09	**50**	8270 LL	NA	N/A
K1810439-10	**51**	8270 LL	NA	N/A
K1810439-12	**52**	8270 LL	NA	N/A
K1810439-03 DUP	**53**	8270 LL	NA	N/A
K1810439-03 MS	**54**	8270 LL	NA	N/A
K1810439-03 DMS	**55**	8270 LL	NA	N/A

Final Volume Calculation

Intermediate Volume before GPC:	**10**	mL
Aliquot taken from intermediate volume:	**10**	mL
Aliquot diluted up to....	**10**	mL
Volume Injected onto column:	**5**	mL
GPC'd Extract brought to the Final Volume of:	**1**	mL
Calculated True Final Volume:	**2**	mL

Filter Lot # FC8051

Operator Date and Initial: TP 11/6/18

Pre-Prep Information Benchsheet

Prep Run #: 325139 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-06-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-004	.01	SVO LL	40.176g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
2	K1810270-006	.01	SVO LL	40.423g	Big chunks of rock within sample. More water than soil.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
3	K1810270-010	.01	SVO LL	40.144g		PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
4	K1810270-011	.01	SVO LL	40.194g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
5	K1810270-011 MS KQ1815626-01	.01	SVO LL	40.352g		PrepComments:LAGUILAR K-Balance-47
6	K1810270-011 DMS KQ1815626-02	.01	SVO LL	40.213g		PrepComments:LAGUILAR K-Balance-47
7	K1810270-012	.01	SVO LL	40.264g	Big chunks of rock within sample.	PrepComments:DMADDEN K-Balance-50LAGUILAR K-Balance-47
8	K1810270-013	.01	SVO LL	40.377g		PrepComments:LAGUILAR K-Balance-47
9	K1810270-015	.01	SVO LL	40.154g		PrepComments:LAGUILAR K-Balance-47
10	K1810270-016	.01	SVO LL	40.385g		PrepComments:LAGUILAR K-Balance-47
11	K1810270-017	.01	SVO LL	40.271g		PrepComments:LAGUILAR K-Balance-47
12	K1810270-018	.01	SVO LL	40.183g		PrepComments:LAGUILAR K-Balance-47
13	K1810270-019	.01	SVO LL	40.301g		PrepComments:LAGUILAR K-Balance-47
14	K1810270-020	.01	SVO LL	40.412g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47
15	K1810270-029	.01	SVO LL	40.425g	Homogenized sample is more water than soil.	PrepComments:LAGUILAR K-Balance-47

10/26/18 18:46

Relinquished By:	Date/Time:	Received By:	Date/Time: 10/29/18 0800

Additional Prep Information for EPA 3541

8270 and 8270-LL

Service Request K1810270 **Workgroup** KQ1815626

Sulfate Lot # 178434 DCM (GC^2) Lot # DU301 Glass Wool Lot # 21317999

Date/Time/Initials Weighed: — Balance ID: — Calibration Verified —

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# X-SOX-03/07/08/09 E.E. KLP 10/29/18.

Soxtherm Start (Time/Date/Initial): 2000 10/30 29/18 KLP

Soxtherm Stop (Time/Date/Initial): 1315 10/30/18 KLP

N-Evap (Time/Date/Initial): 07:46 10/31/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0°C

GPC Clean-up (3640): Start 10:43 11/5/18 TP (Time/Date/Initial)

S-Evap (Time/Date/Initial): 0800 11/7/18 BG S-Evap Therm. ID: DWB 46
Temp as measured: 75 °C Correction factor: 0.0 °C Adjusted temp: 75.0 °C

N-Evap (Time/Date/Initial): 1035 11/7/18 BG N-Evap Therm. ID: X-SVM-010
Temp as measured: 20 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Pipet Lots: Intermediate Volume 1491864 7 Final Volume 26717645

Extract Storage: Birthday

Completed (Time/Date/Initial): 1216 11/7/18 BG/TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked--Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

1st CE 11/17/18
2nd TP 11/30/18

Validation Report

Data File: J:\MS29\DATA\111418\1114F012.D\
Lab ID: K1810270-001
RunType: N/A
Matrix: Sediment

Date Acquired: 11/14/18 15:50:00
Batch ID: 615539
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time		X
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Sample Exceptions

Exception Categories	Result	Corrective Action
Preparation Hold Time	Prep Date/Time: 11/07/2018 1119 Hold Date/Time: 10/29/2018 2359	Narrate

Primary Review: _____

Secondary Review: _____

1st 11/17/18
2nd 11/30/18

Quantitation Report

Data File:	J:\MS29\DATA\111418\1114F012.D\	**Instrument:**	K-MS-29
Acqu Date:	11/14/18 15:50:00	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-001	**Raw Units:**	ng/mL

Bottle ID:	K1810270-001.02	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	615539	**Prep Lot:**	325584	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	11/7/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.65	+0.01	267978	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	14.01		437701	1621.78	65	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.69	+0.01	733400	3217.96	220		Y

Prep Amount:	40.093 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	74.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

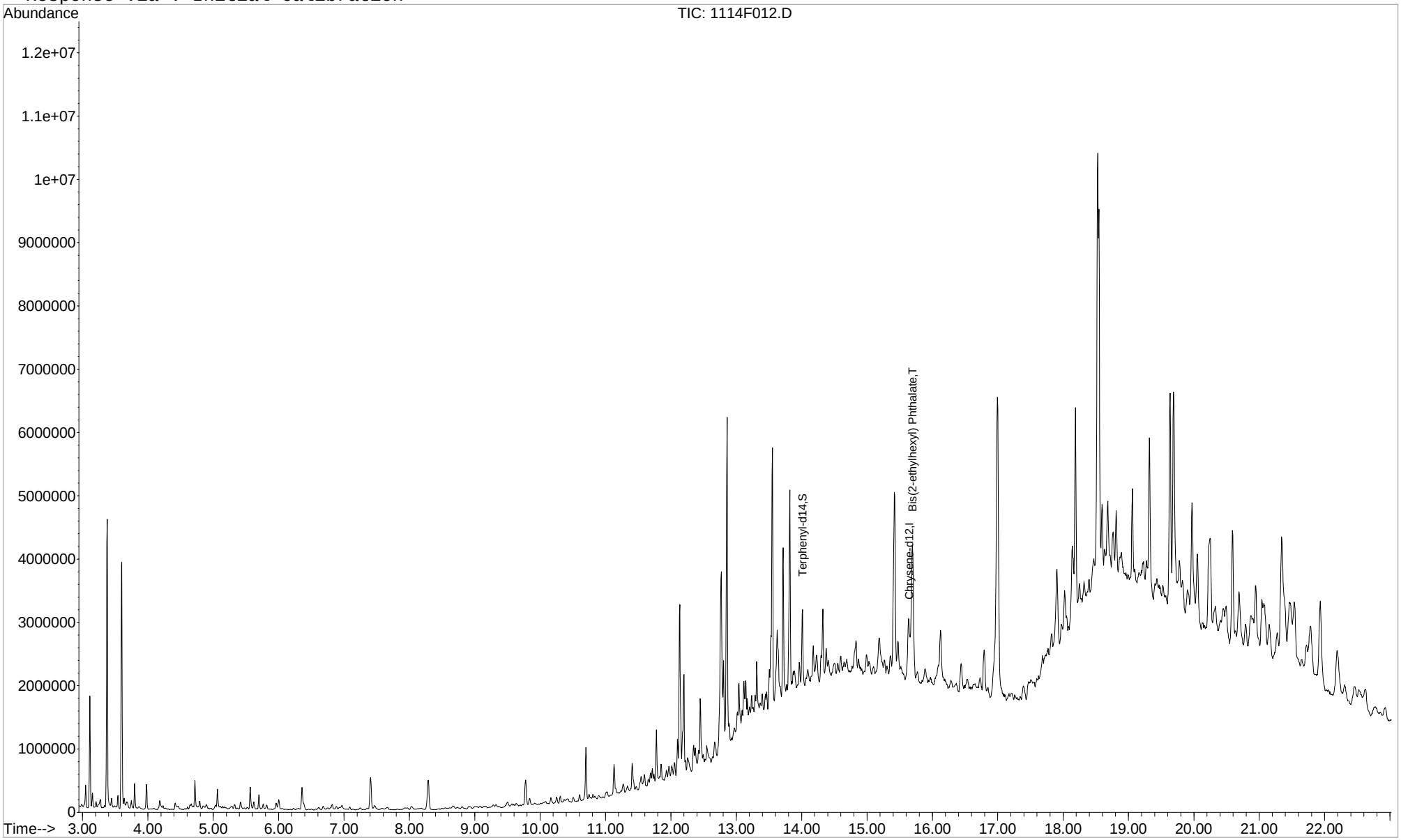
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Quantitation Report (QT Reviewed)

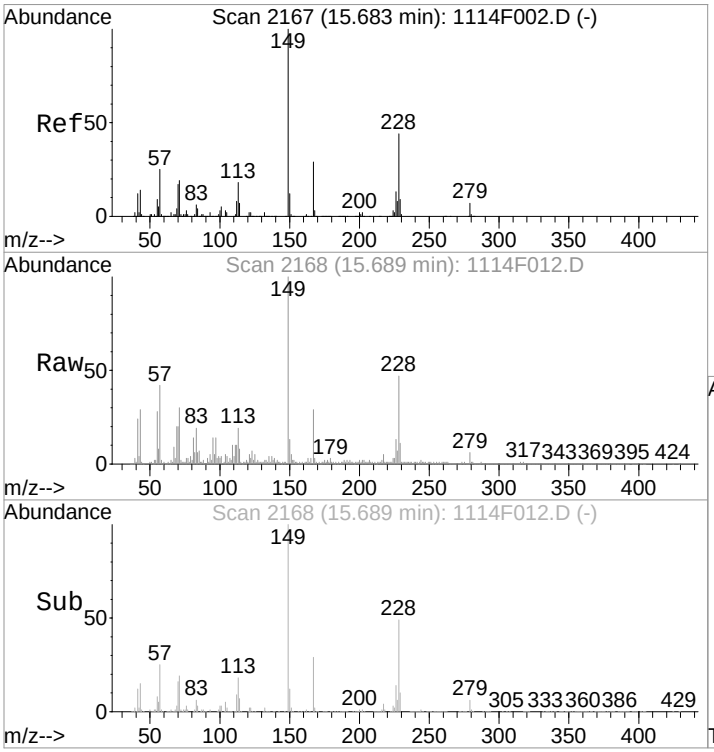
1st CC 11/17/18
2nd TP 11/30/18

Data File : J:\MS29\DATA\111418\1114F012.D Vial: 12
Acq On : 14 Nov 2018 3:50 pm Operator: CConover
Sample : K1810270-001 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 0:20 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



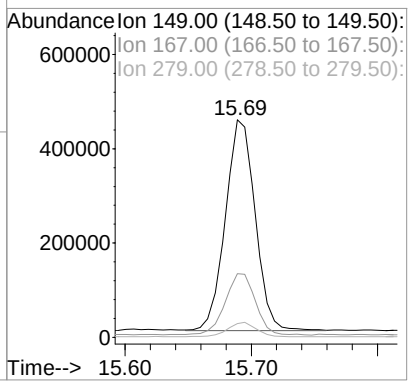
1st 11/17/18
2nd 11/30/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 3217.96 ng/ml
RT: 15.69 min Scan# 2168
Delta R.T. 0.03 min
Lab File: 1114F012.D
Acq: 14 Nov 2018 3:50 pm

Tgt Ion:149 Resp: 733400

Ion	Ratio	Lower	Upper
149	100		
167	28.9	0.0	59.7
279	6.3	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F012.D Vial: 12
Acq On : 14 Nov 2018 3:50 pm Operator: CConover
Sample : K1810270-001 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 00:20:44 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.65	240	267978	1000.00	ng/ml	0.04
System Monitoring Compounds						
2) Terphenyl-d14	14.01	244	437701	1621.78	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 64.87%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.69	149	733400	3217.96	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F048.D\
Lab ID: K1810270-004
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 05:35:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F048.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 05:35:00	**Vial:**	7
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-004	**Raw Units:**	ng/mL

Bottle ID:	K1810270-004.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		244176	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		383338	1558.81	62	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.66	+0.01	113996	548.94	30	J	Y

Prep Amount:	40.176 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	90.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

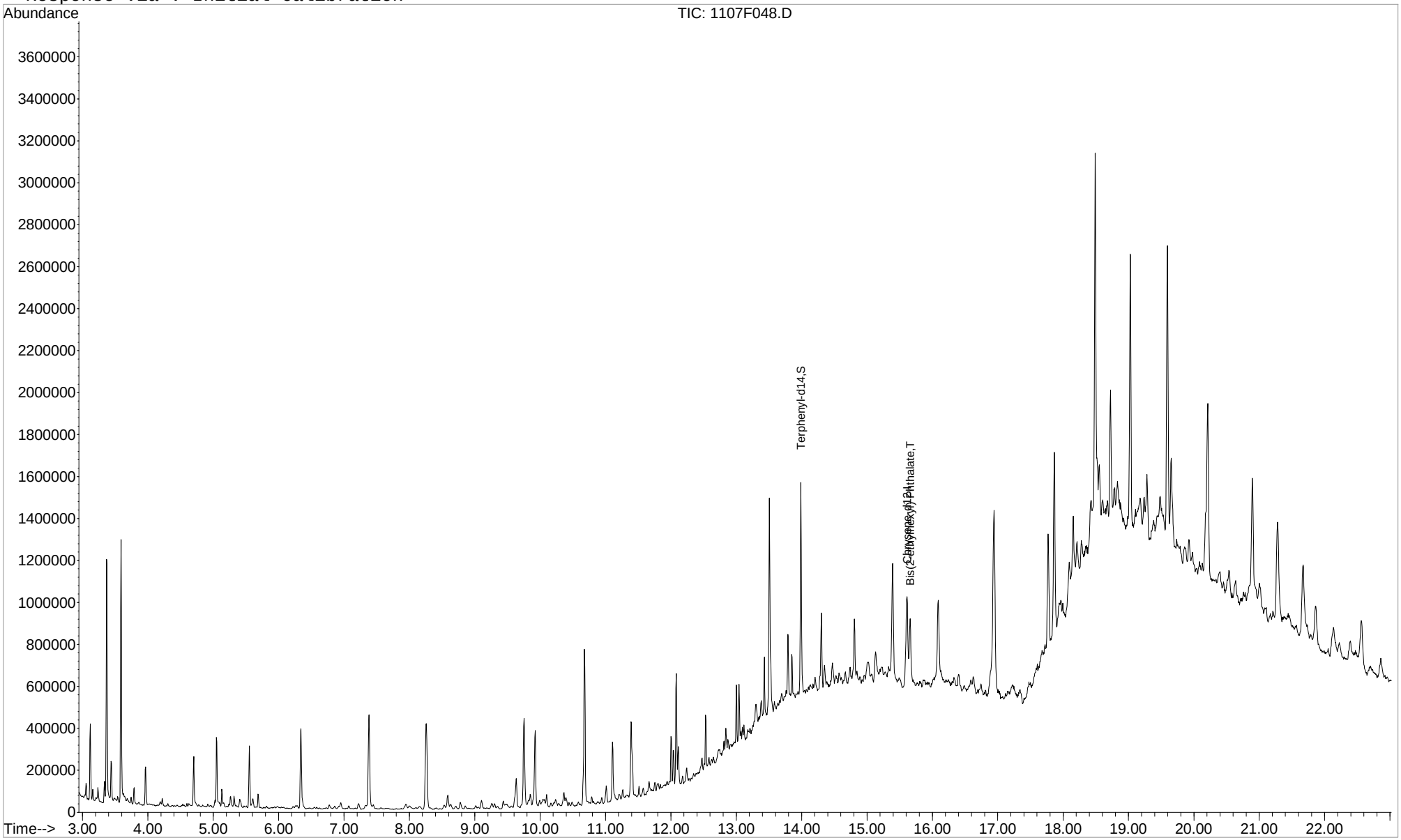
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Quantitation Report (QT Reviewed)

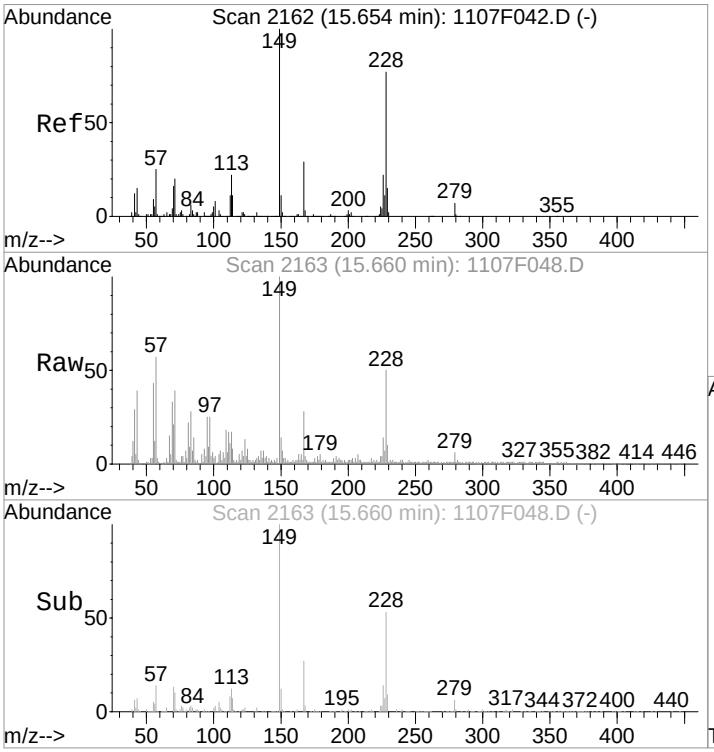
1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F048.D Vial: 26
Acq On : 8 Nov 2018 5:35 am Operator: CConover
Sample : K1810270-004 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



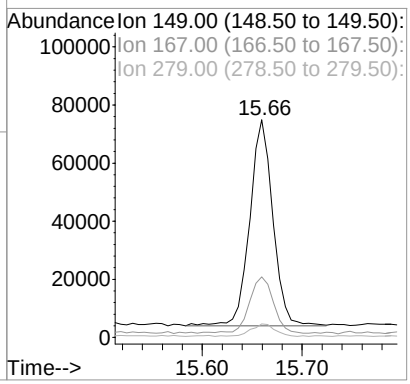
1st 11/09/18
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 548.94 ng/ml
RT: 15.66 min Scan# 2163
Delta R.T. 0.00 min
Lab File: 1107F048.D
Acq: 8 Nov 2018 5:35 am

Tgt Ion:149 Resp: 113996

Ion	Ratio	Lower	Upper
149	100		
167	27.3	0.0	59.7
279	6.0	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F048.D Vial: 26
Acq On : 8 Nov 2018 5:35 am Operator: CConover
Sample : K1810270-004 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:07 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	244176	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	383338	1558.81	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 62.35%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	113996	548.94	ng/ml	96

(#) = qualifier out of range (m) = manual integration

1st CE 11/09/18
2nd EW 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F049.D\
Lab ID: K1810270-006
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 06:04:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F049.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 06:04:00	**Vial:**	8
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-006	**Raw Units:**	ng/mL

Bottle ID:	K1810270-006.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		233221	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		349198	1486.68	59	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.66	+0.01	40734	205.37	13	J	Y

Prep Amount:	40.423 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	75.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

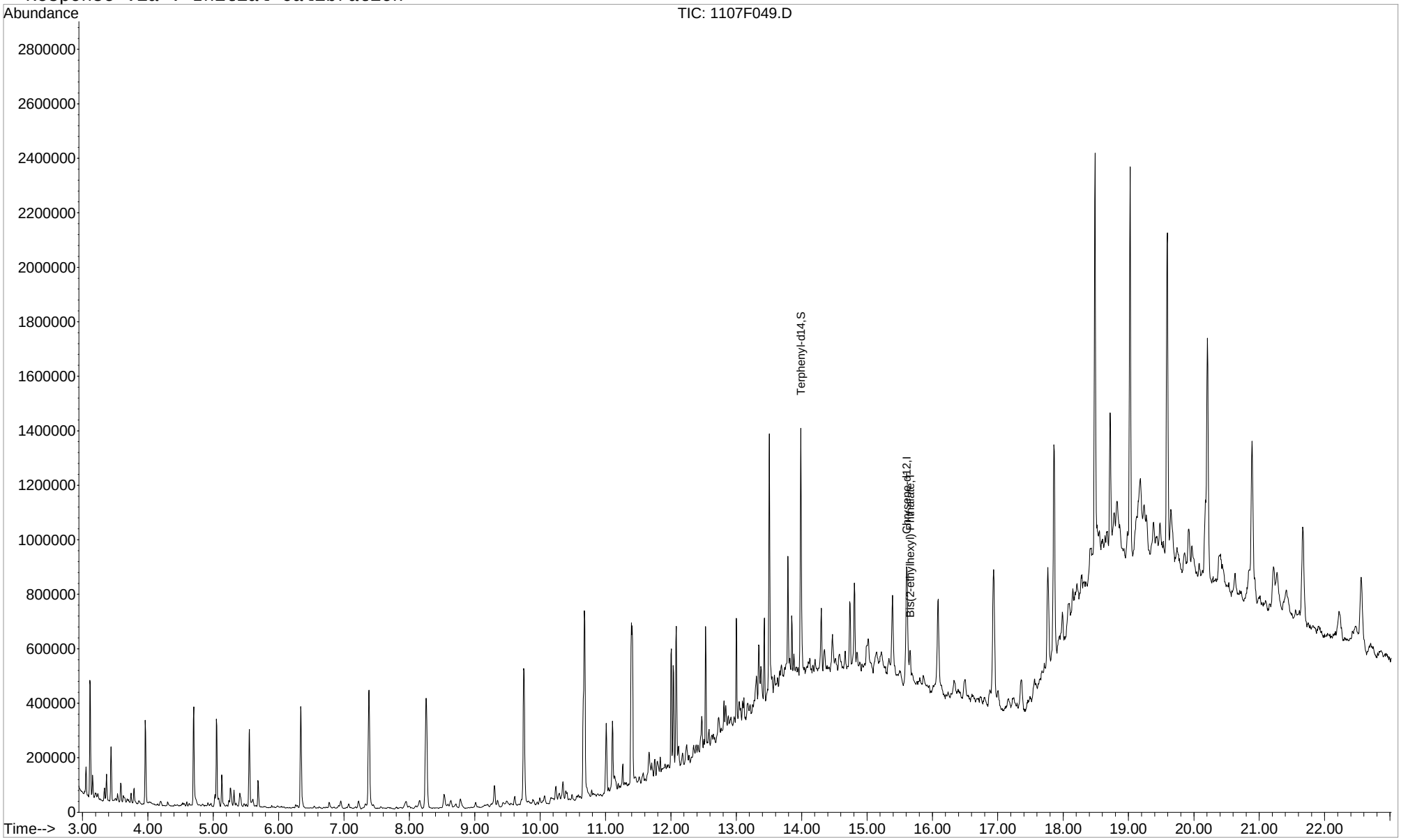
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

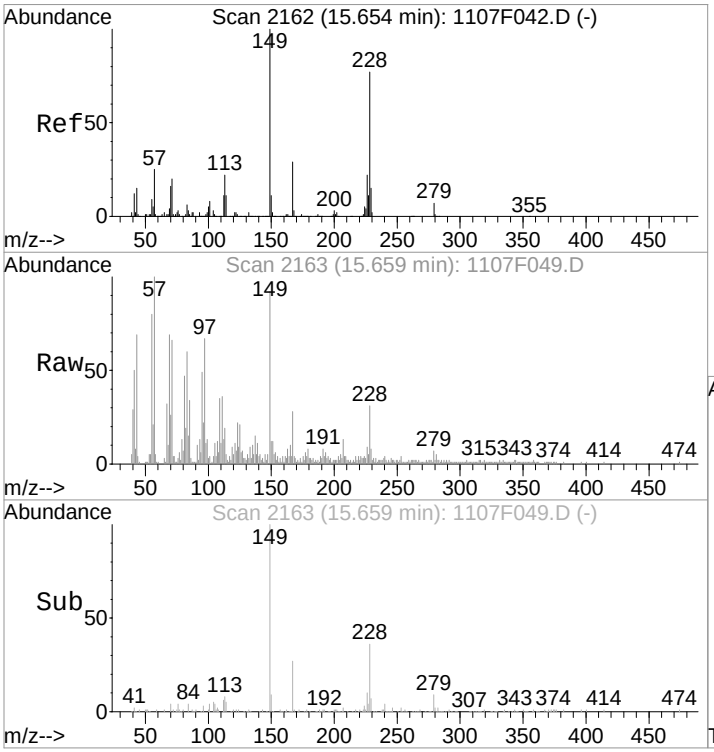
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Acq On : 8 Nov 2018 6:04 am Operator: CConover
Sample : K1810270-006 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

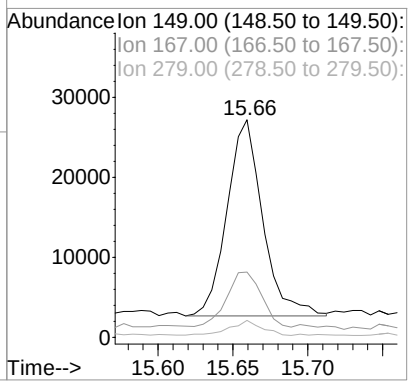
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 205.37 ng/ml
RT: 15.66 min Scan# 2163
Delta R.T. 0.00 min
Lab File: 1107F049.D
Acq: 8 Nov 2018 6:04 am

Tgt Ion:149 Resp: 40734

Ion	Ratio	Lower	Upper
149	100		
167	27.6	0.0	59.7
279	7.6	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F049.D Vial: 27
Acq On : 8 Nov 2018 6:04 am Operator: CConover
Sample : K1810270-006 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:07 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	233221	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	349198	1486.68	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	59.47%		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	40734	205.37	ng/ml	96

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F050.D\
Lab ID: K1810270-010
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 06:32:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F050.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 06:32:00	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-010	**Raw Units:**	ng/mL

Bottle ID:	K1810270-010.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		192237	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		340706	1759.77	70	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.65		9465	57.89	4.6	U	Y

Prep Amount:	40.144 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	63.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

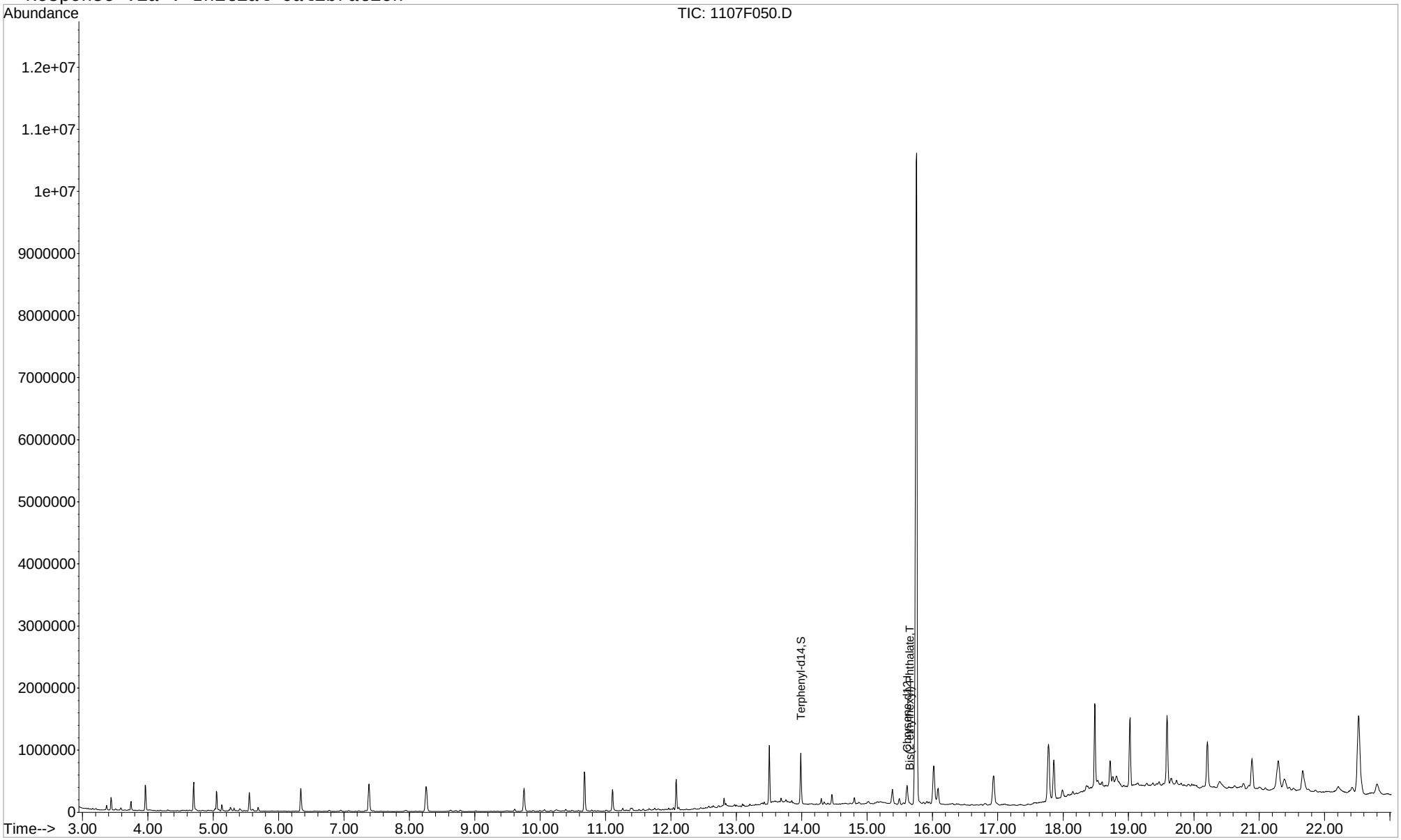
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

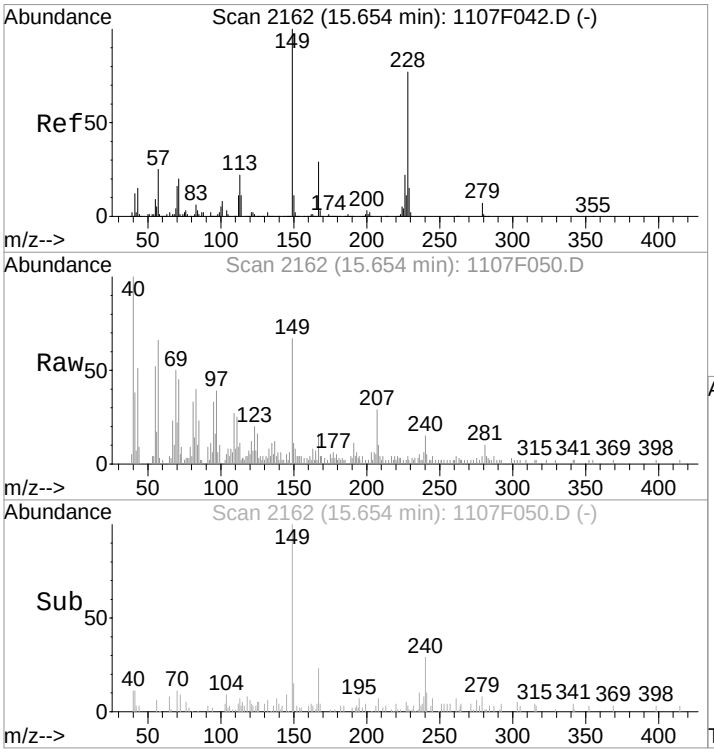
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Acq On : 8 Nov 2018 6:32 am Operator: CConover
Sample : K1810270-010 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

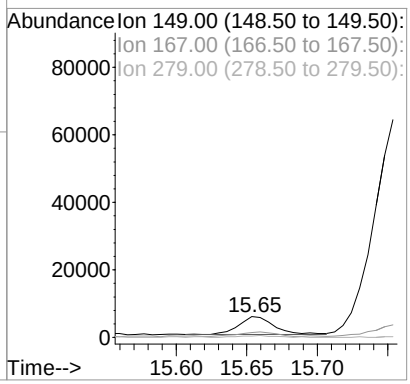
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 57.89 ng/ml
RT: 15.65 min Scan# 2162
Delta R.T. -0.01 min
Lab File: 1107F050.D
Acq: 8 Nov 2018 6:32 am

Tgt Ion:149 Resp: 9465

Ion	Ratio	Lower	Upper
149	100		
167	21.7	0.0	59.7
279	7.6	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F050.D Vial: 28
Acq On : 8 Nov 2018 6:32 am Operator: CConover
Sample : K1810270-010 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:07 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	192237	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	340706	1759.77	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 70.39%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.65	149	9465	57.89	ng/ml	87

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F047.D\
Lab ID: K1810270-011
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 05:07:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F047.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 05:07:00	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-011	**Raw Units:**	ng/mL

Bottle ID:	K1810270-011.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		244534	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		377126	1531.30	61	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.66	+0.01	94000	451.99	27	J	Y

Prep Amount:	40.194 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	83.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

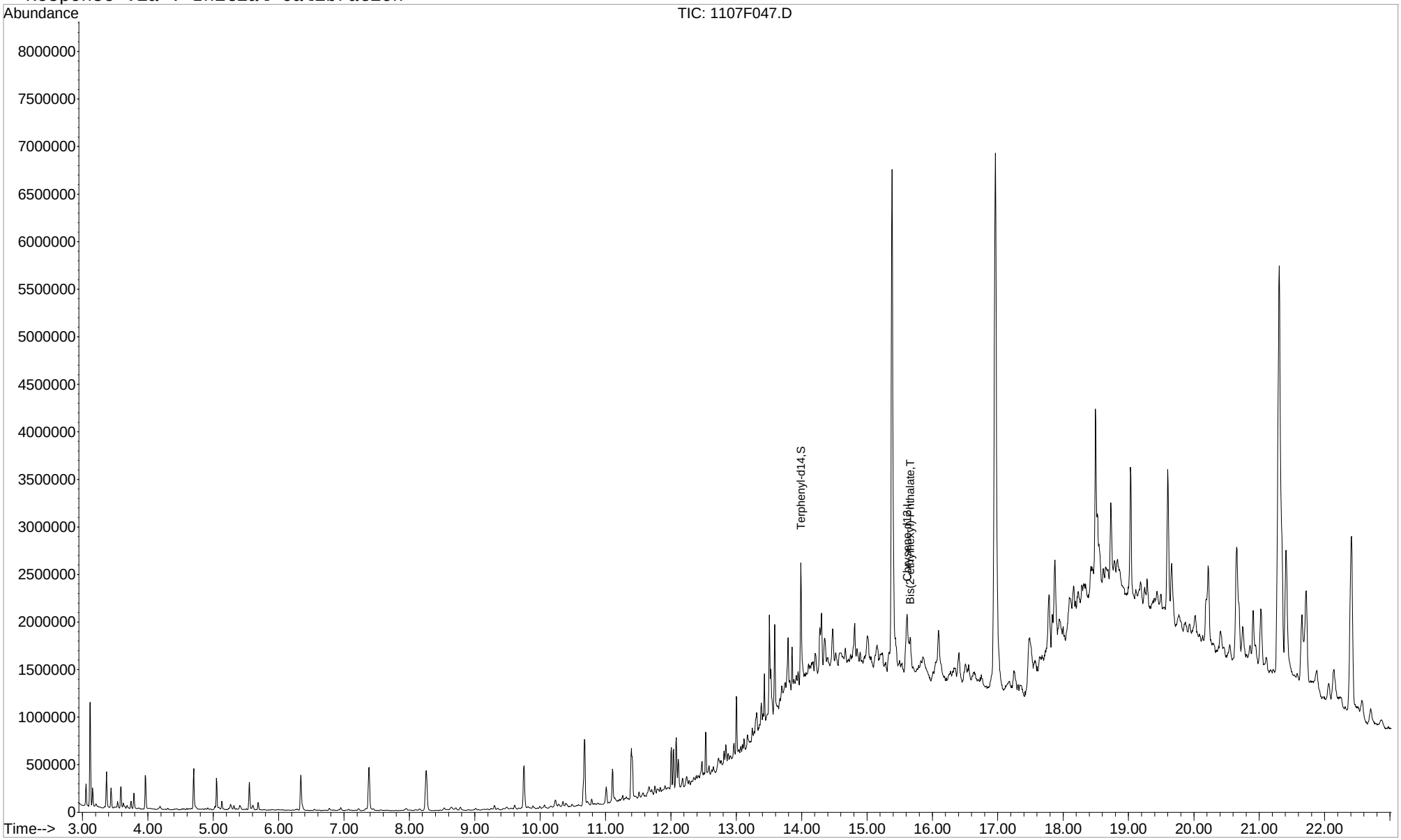
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 11/09/18
2nd 12/04/18

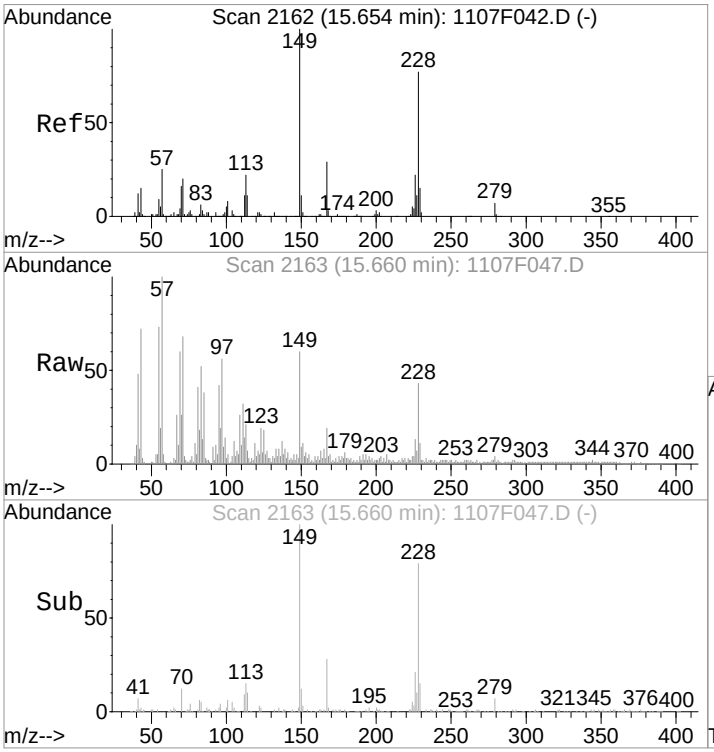
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Acq On : 8 Nov 2018 5:07 am Operator: CConover
Sample : K1810270-011 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

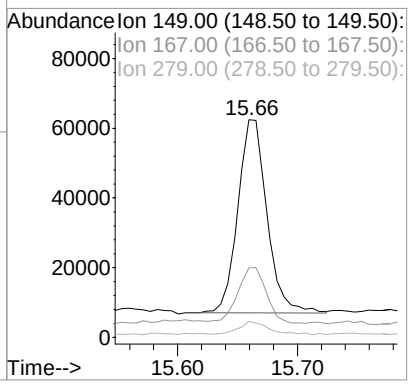
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 451.99 ng/ml
RT: 15.66 min Scan# 2163
Delta R.T. 0.00 min
Lab File: 1107F047.D
Acq: 8 Nov 2018 5:07 am

Tgt Ion:149 Resp: 94000

Ion	Ratio	Lower	Upper
149	100		
167	28.7	0.0	59.7
279	6.8	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F047.D Vial: 25
Acq On : 8 Nov 2018 5:07 am Operator: CConover
Sample : K1810270-011 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:06 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	244534	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	377126	1531.30	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 61.25%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	94000	451.99	ng/ml	98

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F051.D\
Lab ID: K1810270-012
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 07:00:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F051.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 07:00:00	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-012	**Raw Units:**	ng/mL

Bottle ID:	K1810270-012.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		250135	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		400284	1588.94	64	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.66	+0.01	61639	289.75	19	J	Y

Prep Amount:	40.264 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	76.70

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

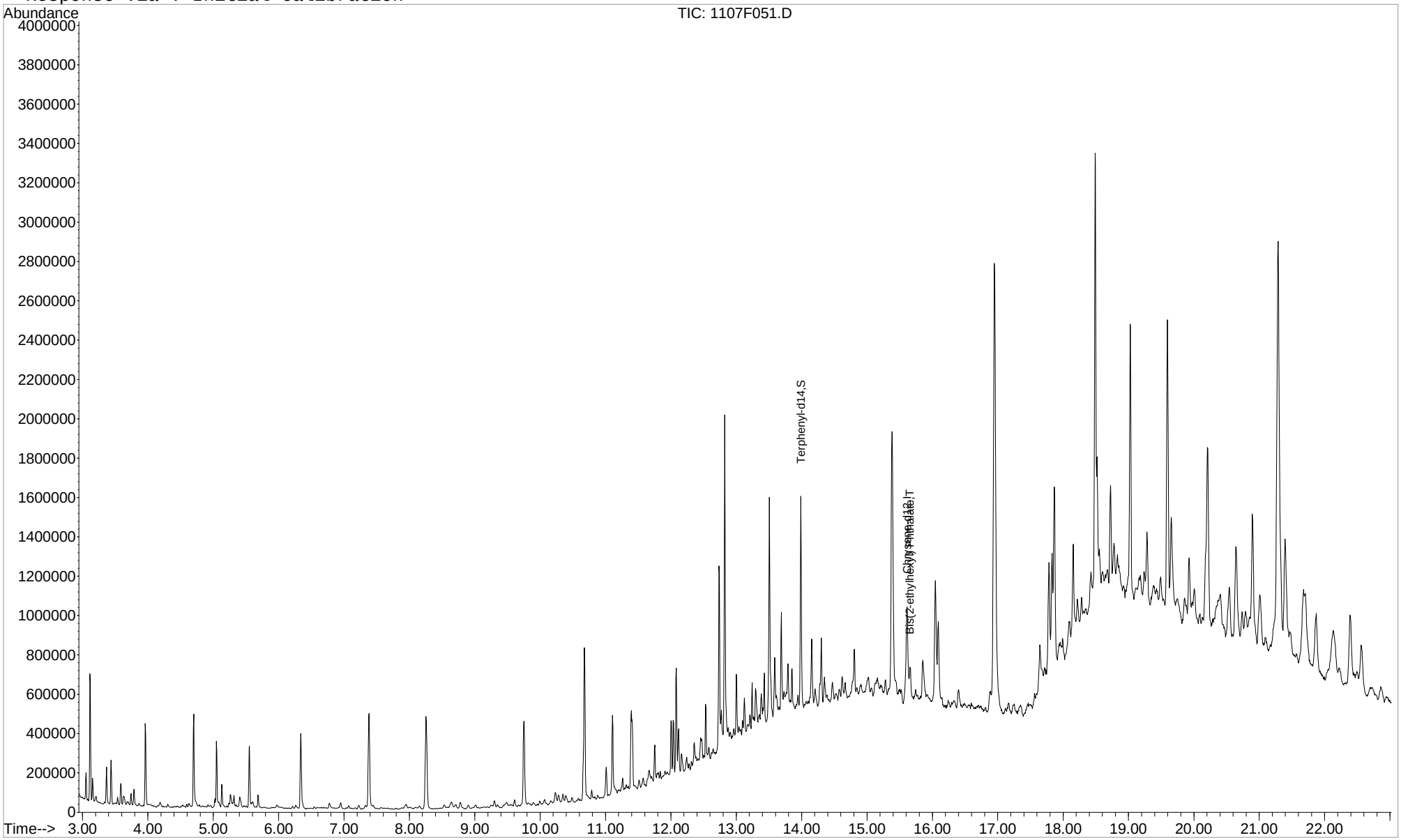
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Quantitation Report (QT Reviewed)

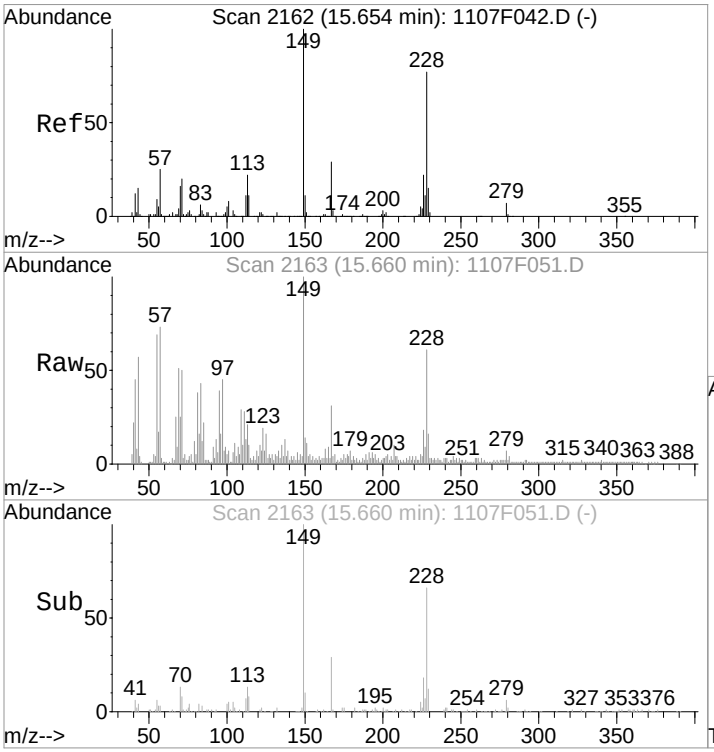
1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F051.D Vial: 29
Acq On : 8 Nov 2018 7:00 am Operator: CConover
Sample : K1810270-012 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



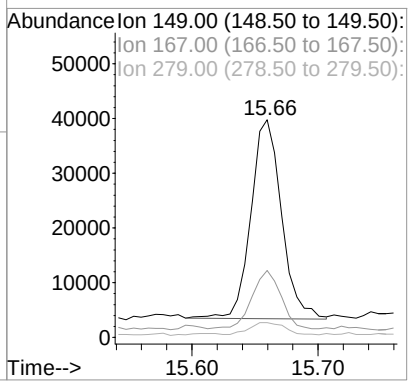
1st 11/09/18
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 289.75 ng/ml
RT: 15.66 min Scan# 2163
Delta R.T. 0.00 min
Lab File: 1107F051.D
Acq: 8 Nov 2018 7:00 am

Tgt Ion:149 Resp: 61639

Ion	Ratio	Lower	Upper
149	100		
167	28.9	0.0	59.7
279	6.2	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F051.D Vial: 29
Acq On : 8 Nov 2018 7:00 am Operator: CConover
Sample : K1810270-012 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:07 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	250135	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	400284	1588.94	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 63.56%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	61639	289.75	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st CL 11/09/18
2nd CL 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F052.D\
Lab ID: K1810270-013
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 07:29:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F052.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 07:29:00	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-013	**Raw Units:**	ng/mL

Bottle ID:	K1810270-013.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.62	+0.01	242976	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		385659	1575.99	63	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	621077	3005.53	340		Y

Prep Amount:	40.377 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	43.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

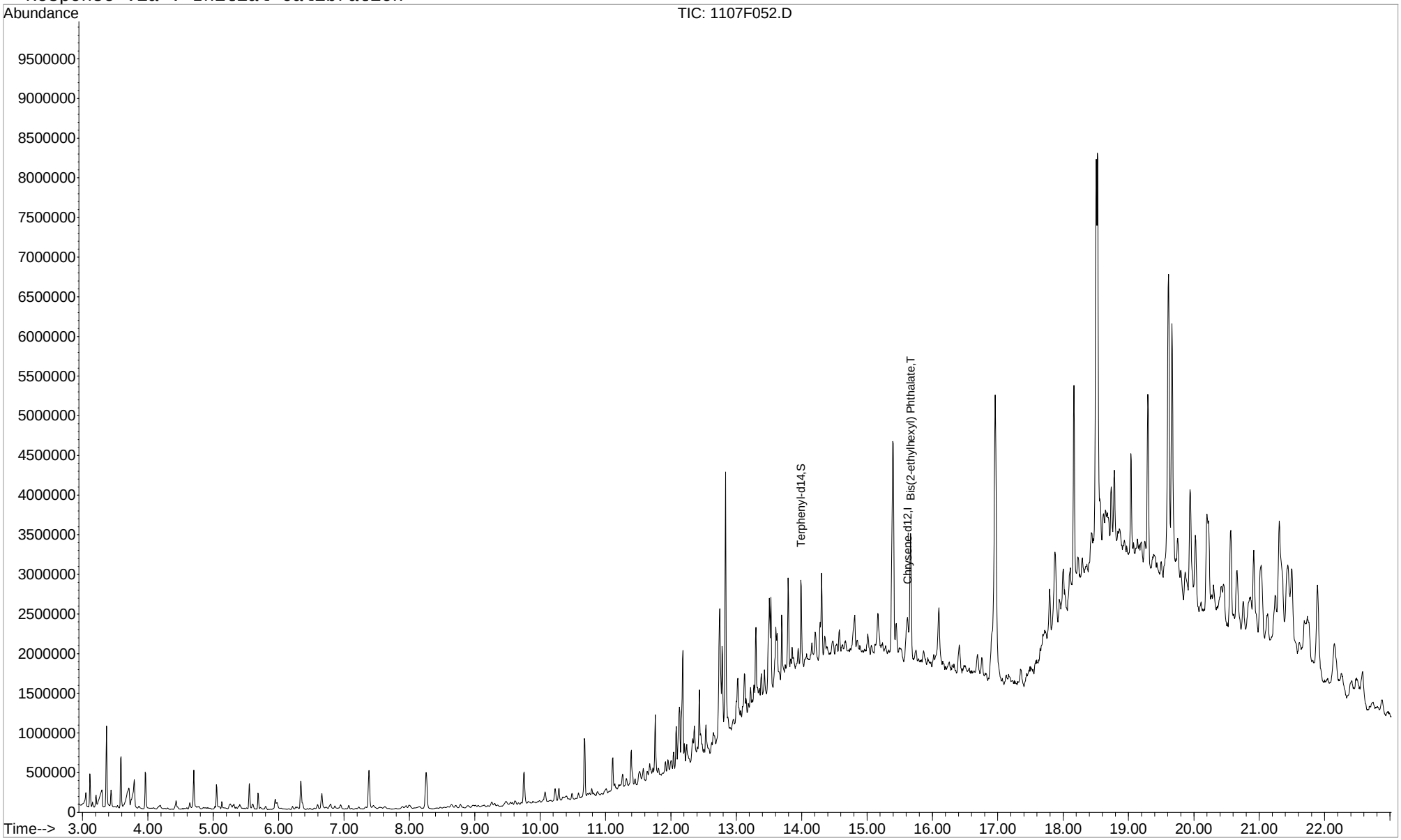
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

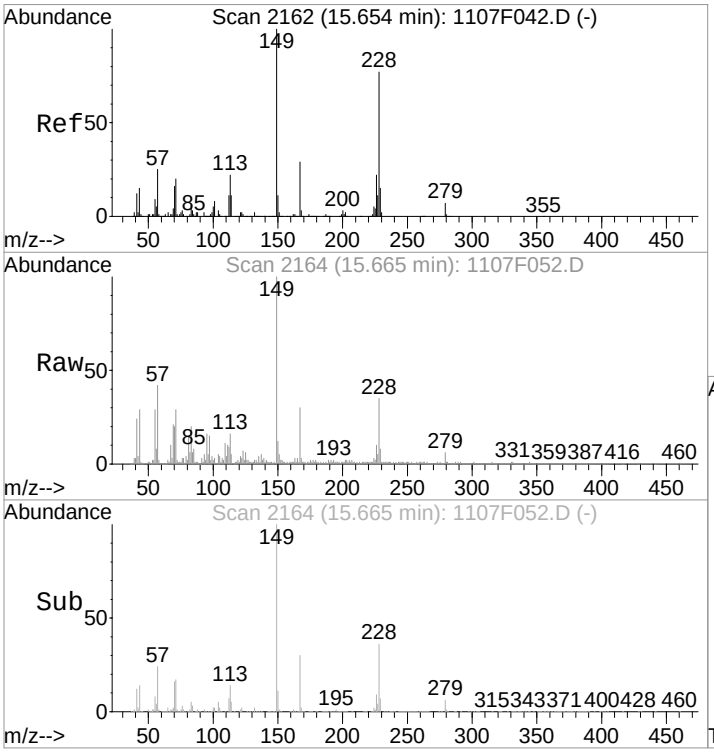
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Acq On : 8 Nov 2018 7:29 am Operator: CConover
Sample : K1810270-013 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

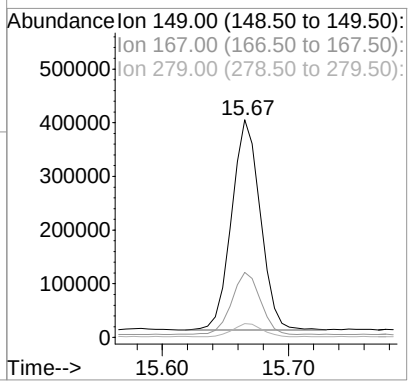
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 3005.53 ng/ml
RT: 15.67 min Scan# 2164
Delta R.T. 0.01 min
Lab File: 1107F052.D
Acq: 8 Nov 2018 7:29 am

Tgt Ion:149 Resp: 621077

Ion	Ratio	Lower	Upper
149	100		
167	29.4	0.0	59.7
279	6.2	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F052.D Vial: 30
Acq On : 8 Nov 2018 7:29 am Operator: CConover
Sample : K1810270-013 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:08 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	242976	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	385659	1575.99	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 63.04%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	621077	3005.53	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F053.D\
Lab ID: K1810270-015
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 07:57:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F053.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 07:57:00	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-015	**Raw Units:**	ng/mL

Bottle ID:	K1810270-015.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.62	+0.01	270723	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		399947	1466.87	59	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	623318	2707.22	340		Y

Prep Amount:	40.154 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	39.30

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

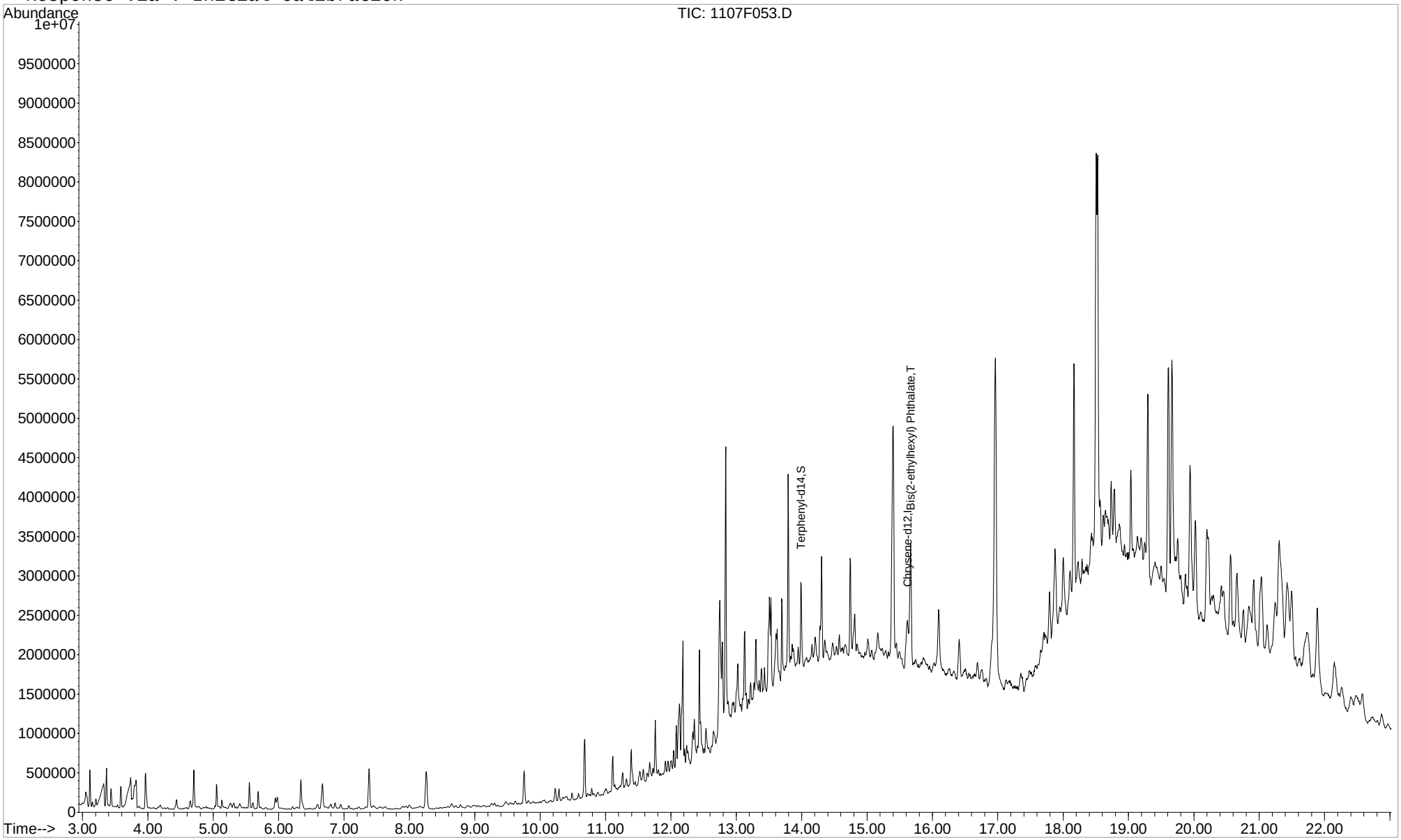
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

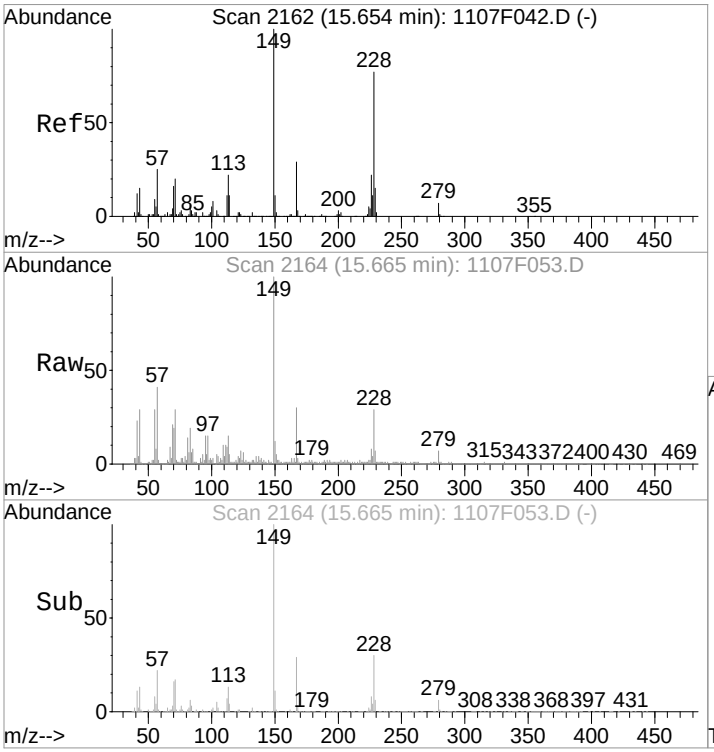
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Acq On : 8 Nov 2018 7:57 am Operator: CConover
Sample : K1810270-015 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

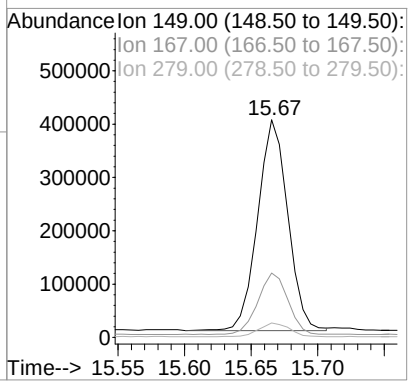
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 2707.22 ng/ml
RT: 15.67 min Scan# 2164
Delta R.T. 0.01 min
Lab File: 1107F053.D
Acq: 8 Nov 2018 7:57 am

Tgt Ion:149 Resp: 623318

Ion	Ratio	Lower	Upper
149	100		
167	29.1	0.0	59.7
279	6.5	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F053.D Vial: 31
Acq On : 8 Nov 2018 7:57 am Operator: CConover
Sample : K1810270-015 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:08 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	270723	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	399947	1466.87	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 58.67%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	623318	2707.22	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F054.D\
Lab ID: K1810270-016
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 08:25:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Printed: 11/9/18 7:18
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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F054.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 08:25:00	**Vial:**	14
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-016	**Raw Units:**	ng/mL

Bottle ID:	K1810270-016.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.64	+0.03	251836	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		383699	1512.81	61	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.68	+0.03	1417067	6616.24	690		Y

Prep Amount:	40.385 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	47.80

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

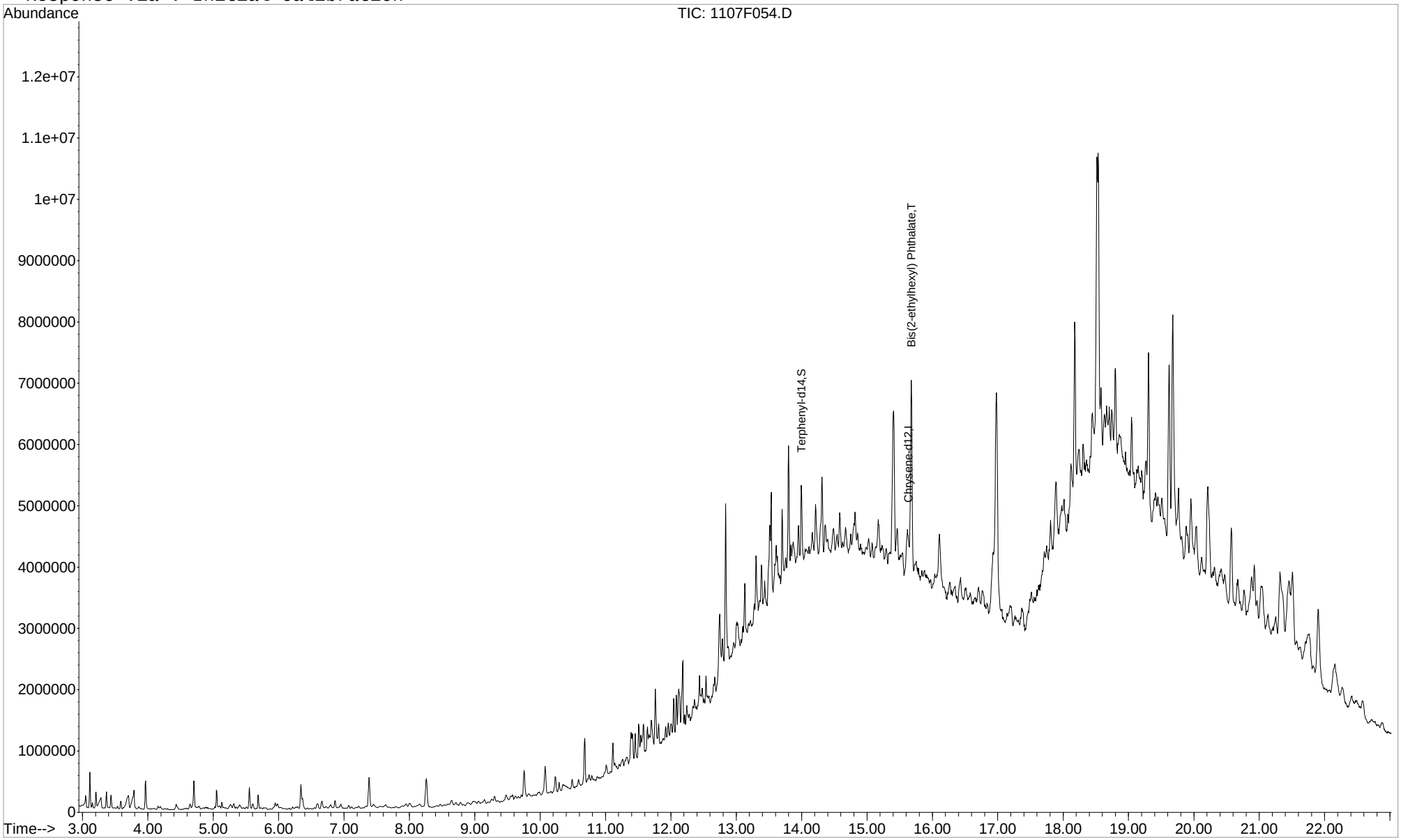
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

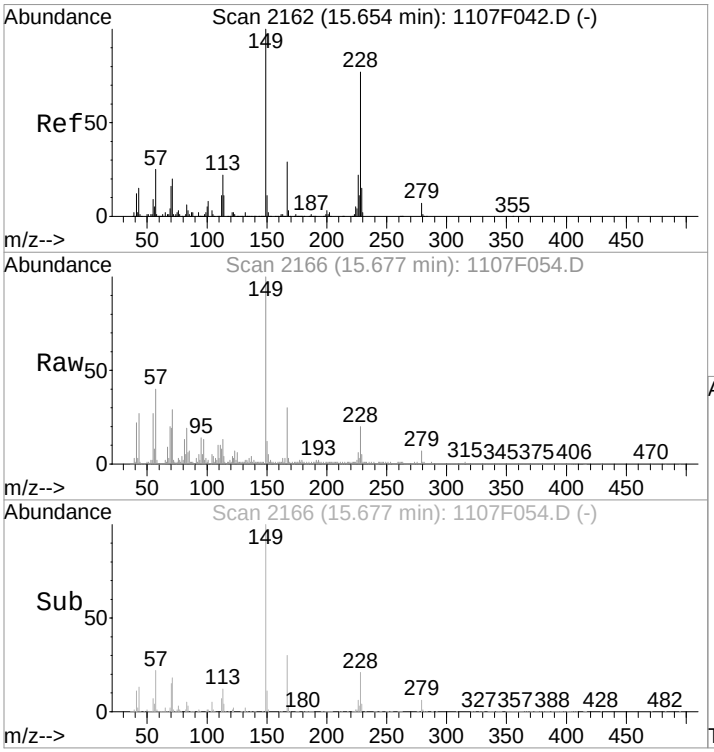
Data File : J:\MS29\DATA\110718\1107F054.D Vial: 32
Acq On : 8 Nov 2018 8:25 am Operator: CConover
Sample : K1810270-016 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

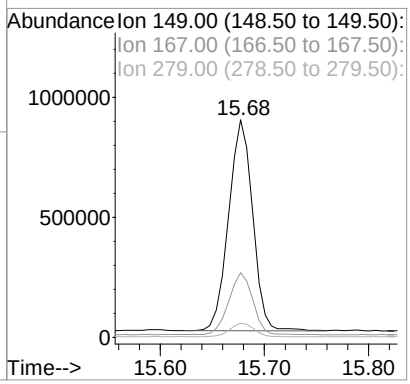
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 6616.24 ng/ml
RT: 15.68 min Scan# 2166
Delta R.T. 0.02 min
Lab File: 1107F054.D
Acq: 8 Nov 2018 8:25 am

Tgt Ion:149 Resp: 1417067

Ion	Ratio	Lower	Upper
149	100		
167	29.5	0.0	59.7
279	6.4	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F054.D Vial: 32
Acq On : 8 Nov 2018 8:25 am Operator: CConover
Sample : K1810270-016 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:08 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.64	240	251836	1000.00	ng/ml	0.02
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	383699	1512.81	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 60.51%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.68	149	1417067	6616.24	ng/ml	100

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F055.D\
Lab ID: K1810270-017
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 08:54:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F055.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 08:54:00	**Vial:**	15
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-017	**Raw Units:**	ng/mL

Bottle ID:	K1810270-017.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.63	+0.02	255467	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	14.00	+0.01	416959	1620.58	65	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	828665	3814.02	390		Y

Prep Amount:	40.271 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	48.70

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

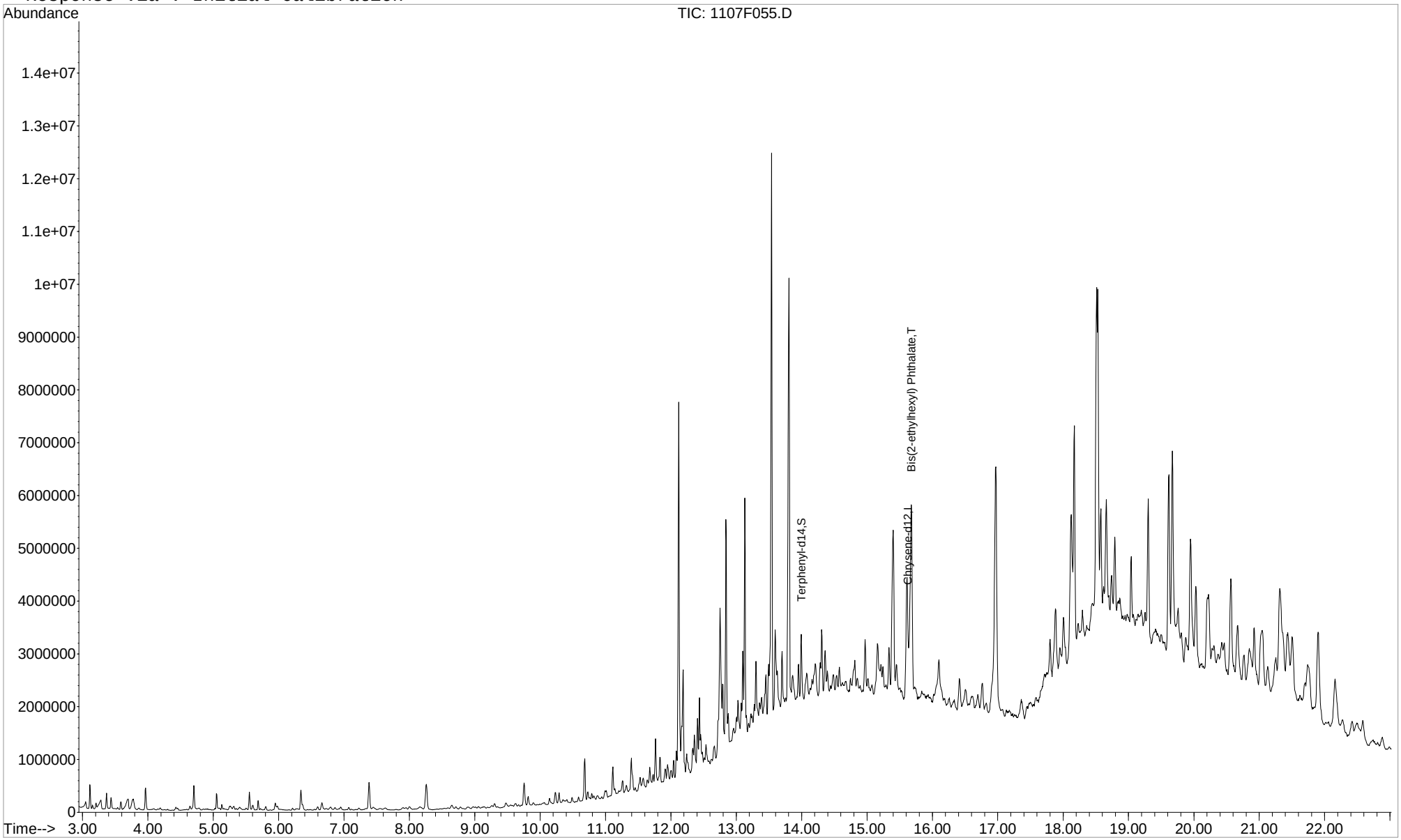
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Quantitation Report (QT Reviewed)

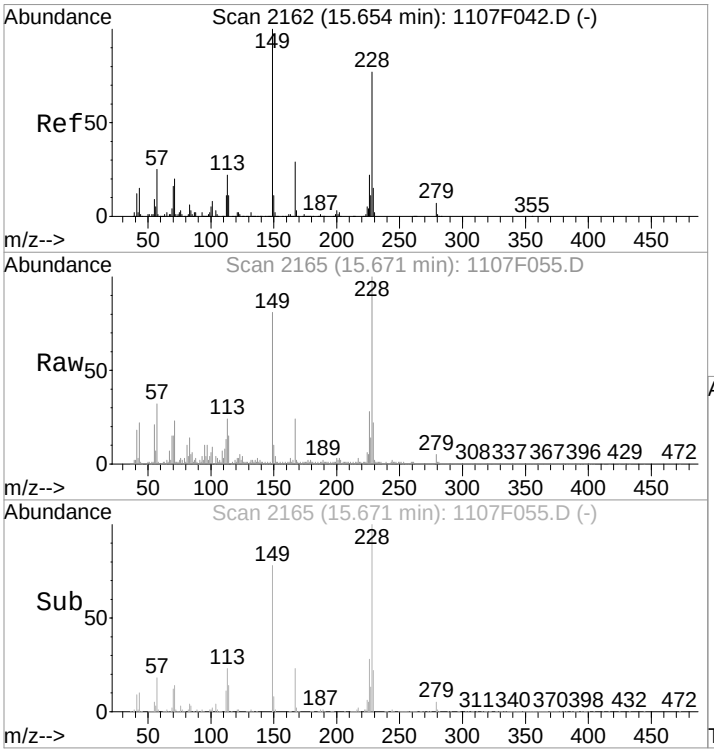
1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F055.D Vial: 33
Acq On : 8 Nov 2018 8:54 am Operator: CConover
Sample : K1810270-017 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



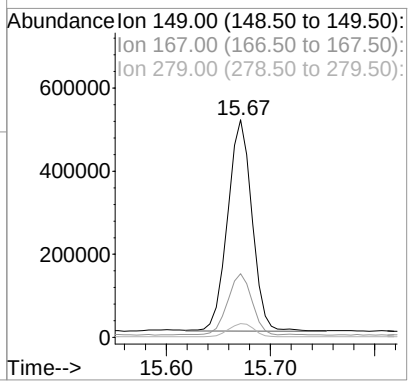
1st 11/09/18
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 3814.02 ng/ml
RT: 15.67 min Scan# 2165
Delta R.T. 0.01 min
Lab File: 1107F055.D
Acq: 8 Nov 2018 8:54 am

Tgt Ion:149 Resp: 828665

Ion	Ratio	Lower	Upper
149	100		
167	29.2	0.0	59.7
279	6.3	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F055.D Vial: 33
Acq On : 8 Nov 2018 8:54 am Operator: CConover
Sample : K1810270-017 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:09 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.63	240	255467	1000.00	ng/ml	0.02
System Monitoring Compounds						
2) Terphenyl-d14	14.00	244	416959	1620.58	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 64.82%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	828665	3814.02	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F056.D\
Lab ID: K1810270-018
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 09:22:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F056.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 09:22:00	**Vial:**	16
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-018	**Raw Units:**	ng/mL

Bottle ID:	K1810270-018.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.63	+0.02	252474	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		419679	1650.49	66	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	1237231	5761.99	620		Y

Prep Amount:	40.183 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	45.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

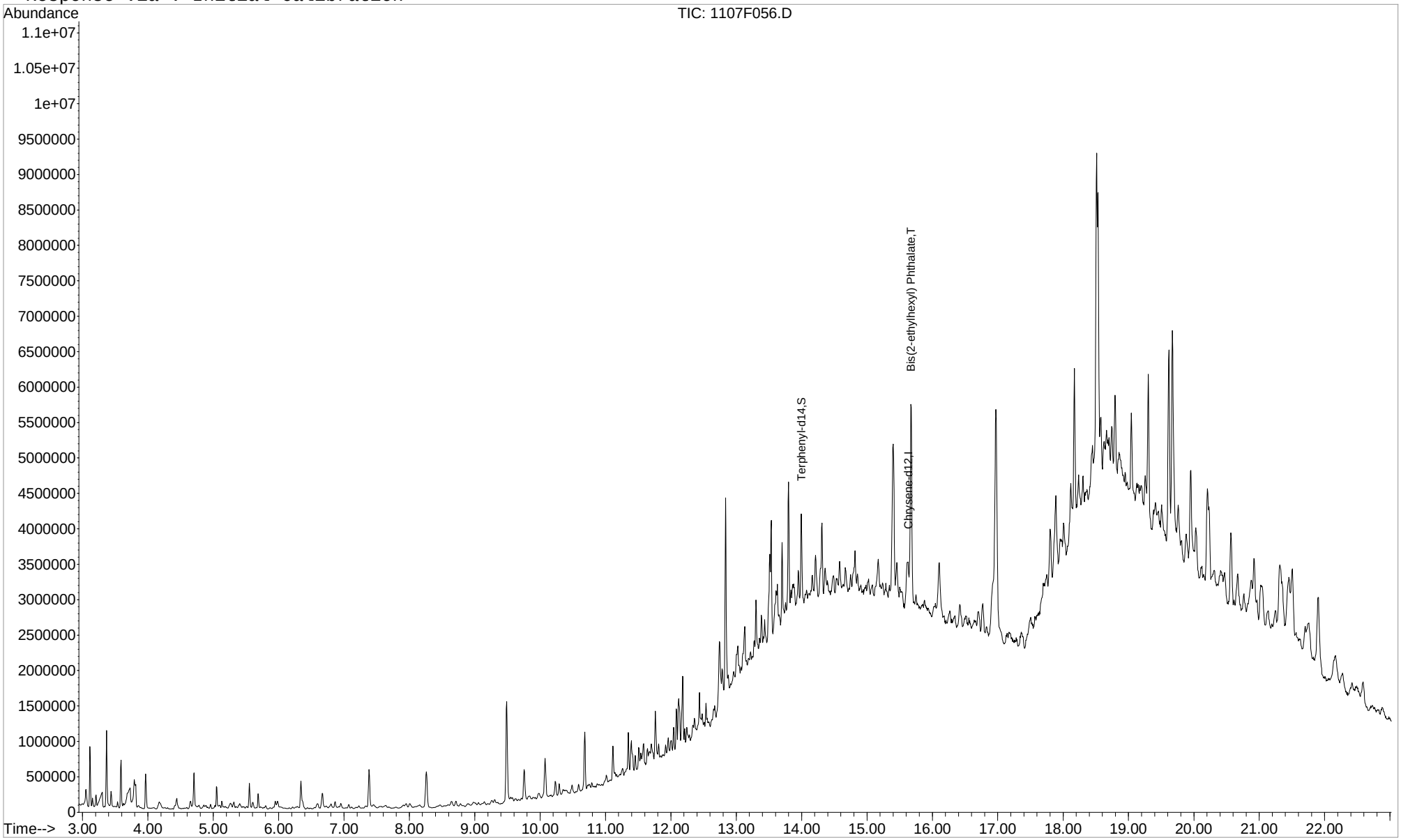
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 11/09/18
2nd 12/04/18

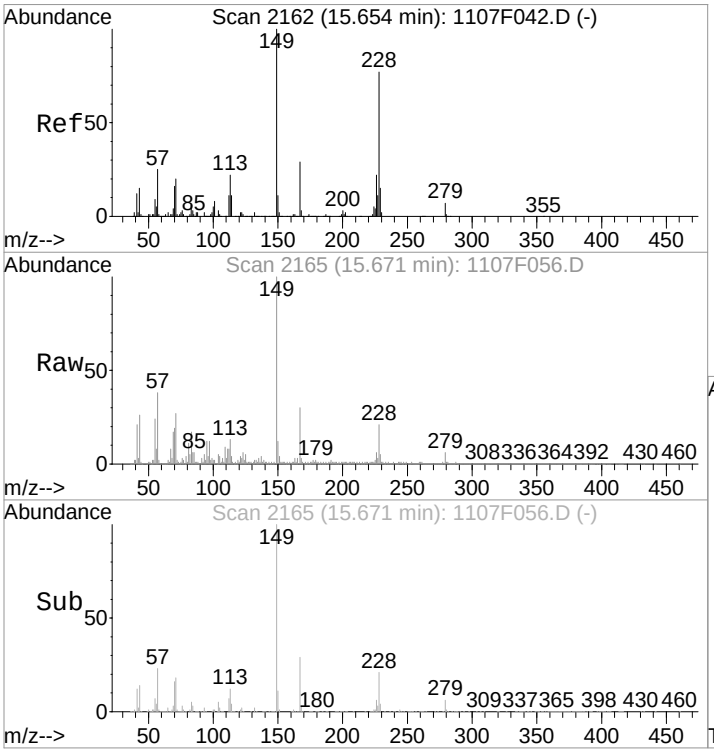
Data File : J:\MS29\DATA\110718\1107F056.D Vial: 34
Acq On : 8 Nov 2018 9:22 am Operator: CConover
Sample : K1810270-018 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

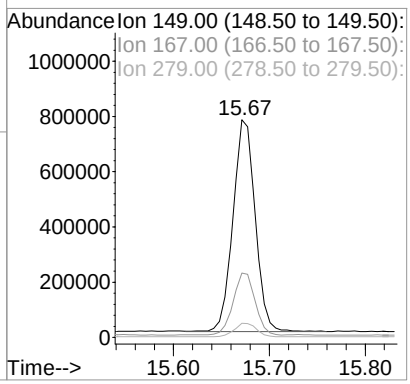
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 5761.99 ng/ml
RT: 15.67 min Scan# 2165
Delta R.T. 0.01 min
Lab File: 1107F056.D
Acq: 8 Nov 2018 9:22 am

Tgt Ion:149 Resp: 1237231

Ion	Ratio	Lower	Upper
149	100		
167	29.3	0.0	59.7
279	6.3	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F056.D Vial: 34
Acq On : 8 Nov 2018 9:22 am Operator: CConover
Sample : K1810270-018 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:09 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.63	240	252474	1000.00	ng/ml	0.02
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	419679	1650.49	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 66.02%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	1237231	5761.99	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F057.D\
Lab ID: K1810270-019
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 09:50:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F057.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 09:50:00	**Vial:**	17
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-019	**Raw Units:**	ng/mL

Bottle ID:	K1810270-019.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.62	+0.01	252533	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		391060	1537.58	62	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	824175	3837.42	470		Y

Prep Amount:	40.301 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	40.50

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

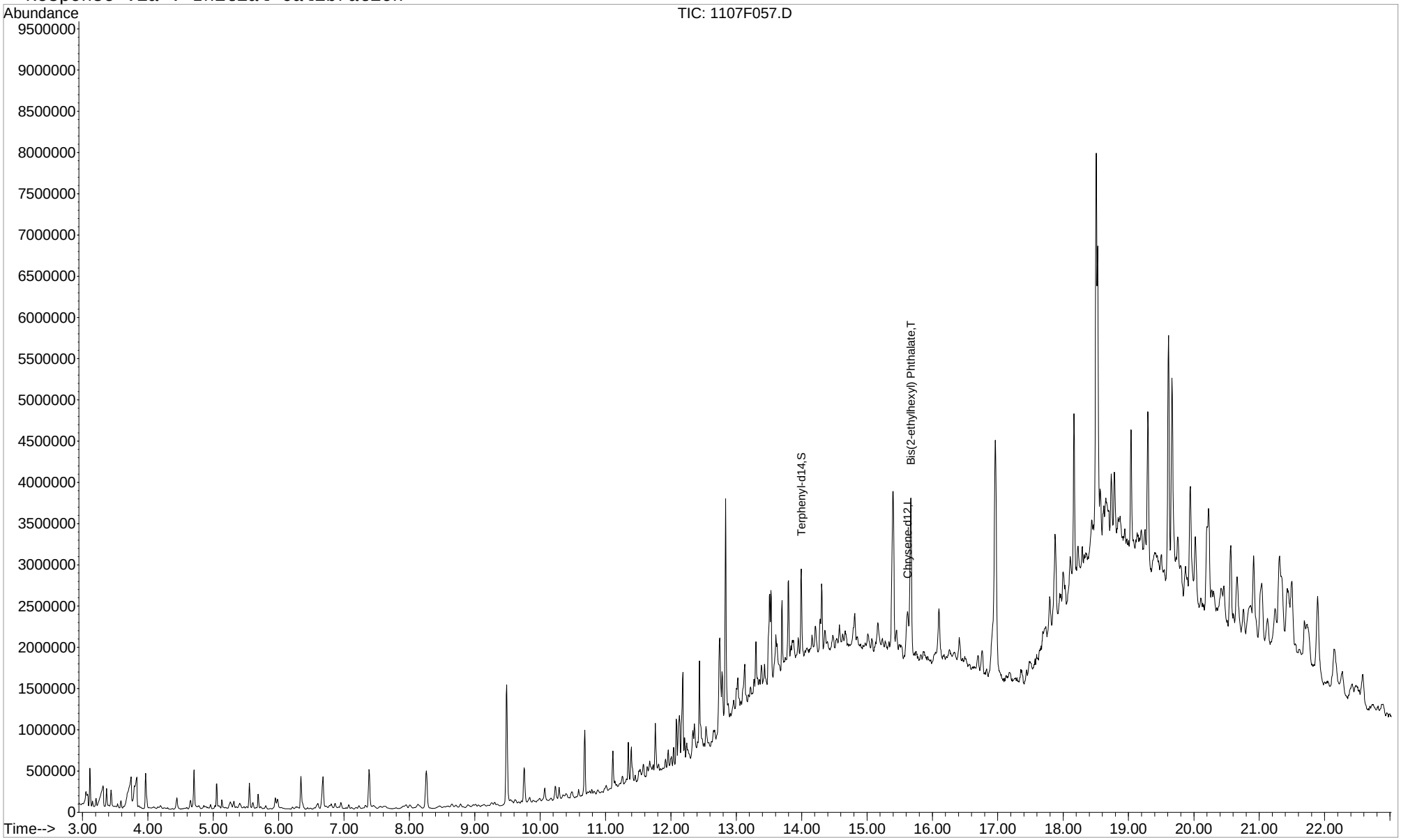
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

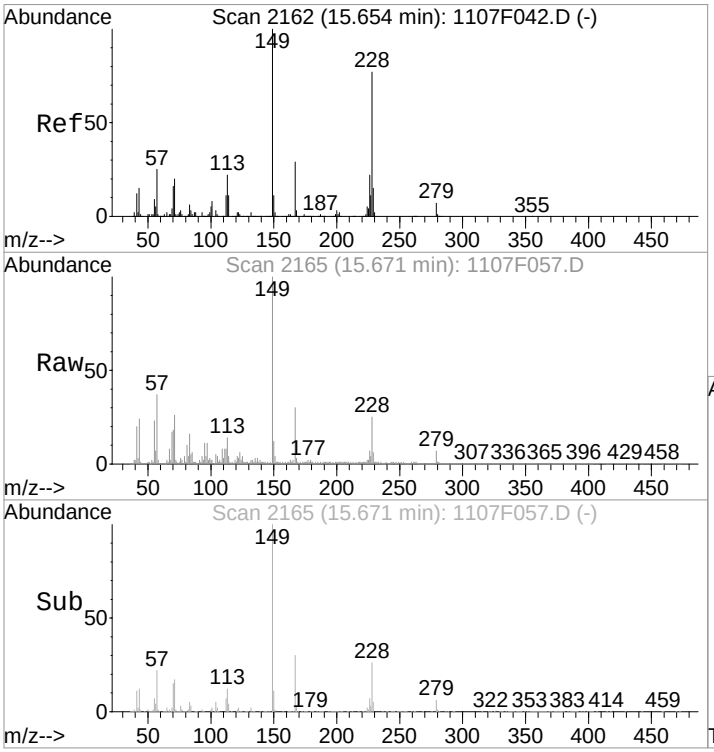
Data File : J:\MS29\DATA\110718\1107F057.D Vial: 35
Acq On : 8 Nov 2018 9:50 am Operator: CConover
Sample : K1810270-019 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

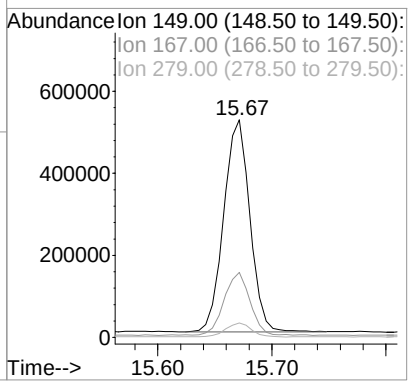
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 3837.42 ng/ml
RT: 15.67 min Scan# 2165
Delta R.T. 0.01 min
Lab File: 1107F057.D
Acq: 8 Nov 2018 9:50 am

Tgt Ion:149 Resp: 824175

Ion	Ratio	Lower	Upper
149	100		
167	29.6	0.0	59.7
279	6.4	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F057.D Vial: 35
Acq On : 8 Nov 2018 9:50 am Operator: CConover
Sample : K1810270-019 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:09 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	252533	1000.00	ng/ml	0.01
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	391060	1537.58	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 61.50%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	824175	3837.42	ng/ml	100

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F058.D\
Lab ID: K1810270-020
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 10:19:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F058.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 10:19:00	**Vial:**	18
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-020	**Raw Units:**	ng/mL

Bottle ID:	K1810270-020.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/16/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.62	+0.01	248066	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		423671	1695.80	68	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	1207094	5721.53	800		Y

Prep Amount:	40.412 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	35.20

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

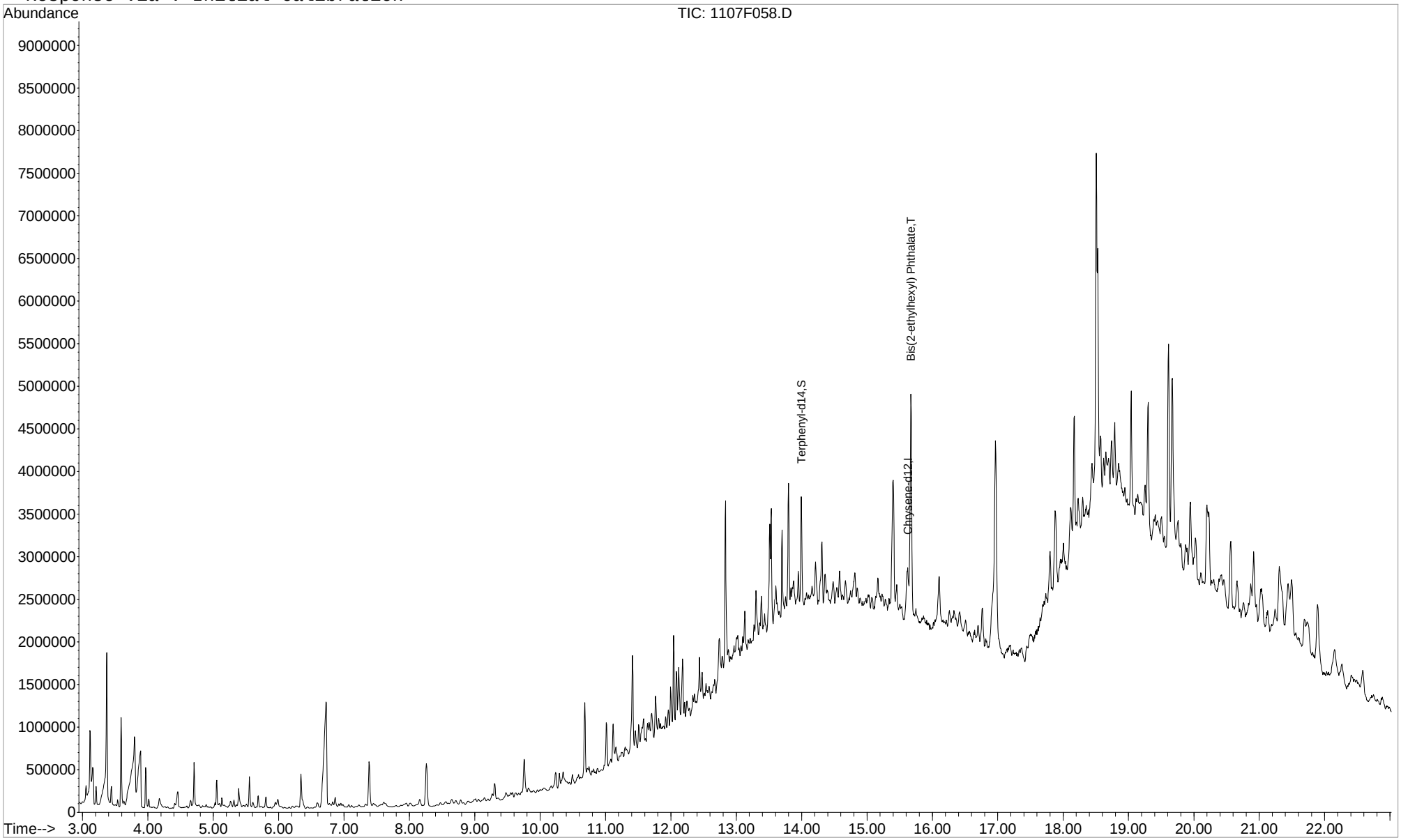
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

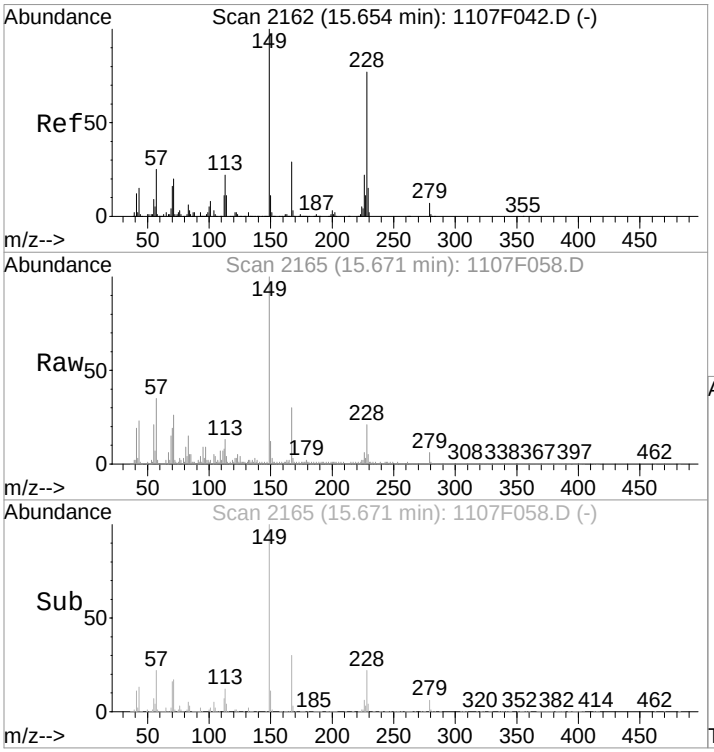
Data File : J:\MS29\DATA\110718\1107F058.D Vial: 36
Acq On : 8 Nov 2018 10:19 am Operator: CConover
Sample : K1810270-020 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

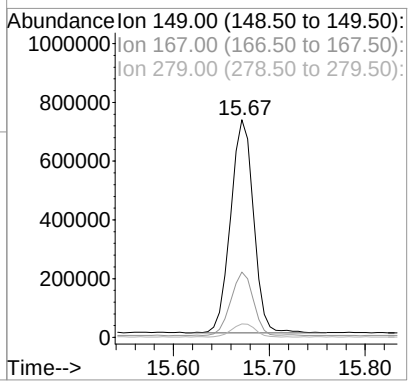
2nd 11/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 5721.53 ng/ml
RT: 15.67 min Scan# 2165
Delta R.T. 0.01 min
Lab File: 1107F058.D
Acq: 8 Nov 2018 10:19 am

Tgt Ion:149 Resp: 1207094

Ion	Ratio	Lower	Upper
149	100		
167	29.8	0.0	59.7
279	6.2	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F058.D Vial: 36
Acq On : 8 Nov 2018 10:19 am Operator: CConover
Sample : K1810270-020 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:10 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	248066	1000.00	ng/ml	0.01
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	423671	1695.80	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 67.83%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	1207094	5721.53	ng/ml	100

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F059.D\
Lab ID: K1810270-029
RunType: N/A
Matrix: Sediment

Date Acquired: 11/8/18 10:47:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F059.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 10:47:00	**Vial:**	19
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1810270-029	**Raw Units:**	ng/mL

Bottle ID:	K1810270-029.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	K1810270
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.62	+0.01	250928	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		419909	1661.57	66	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.67	+0.02	588104	2755.77	380		Y

Prep Amount:	40.425 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	36.10

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

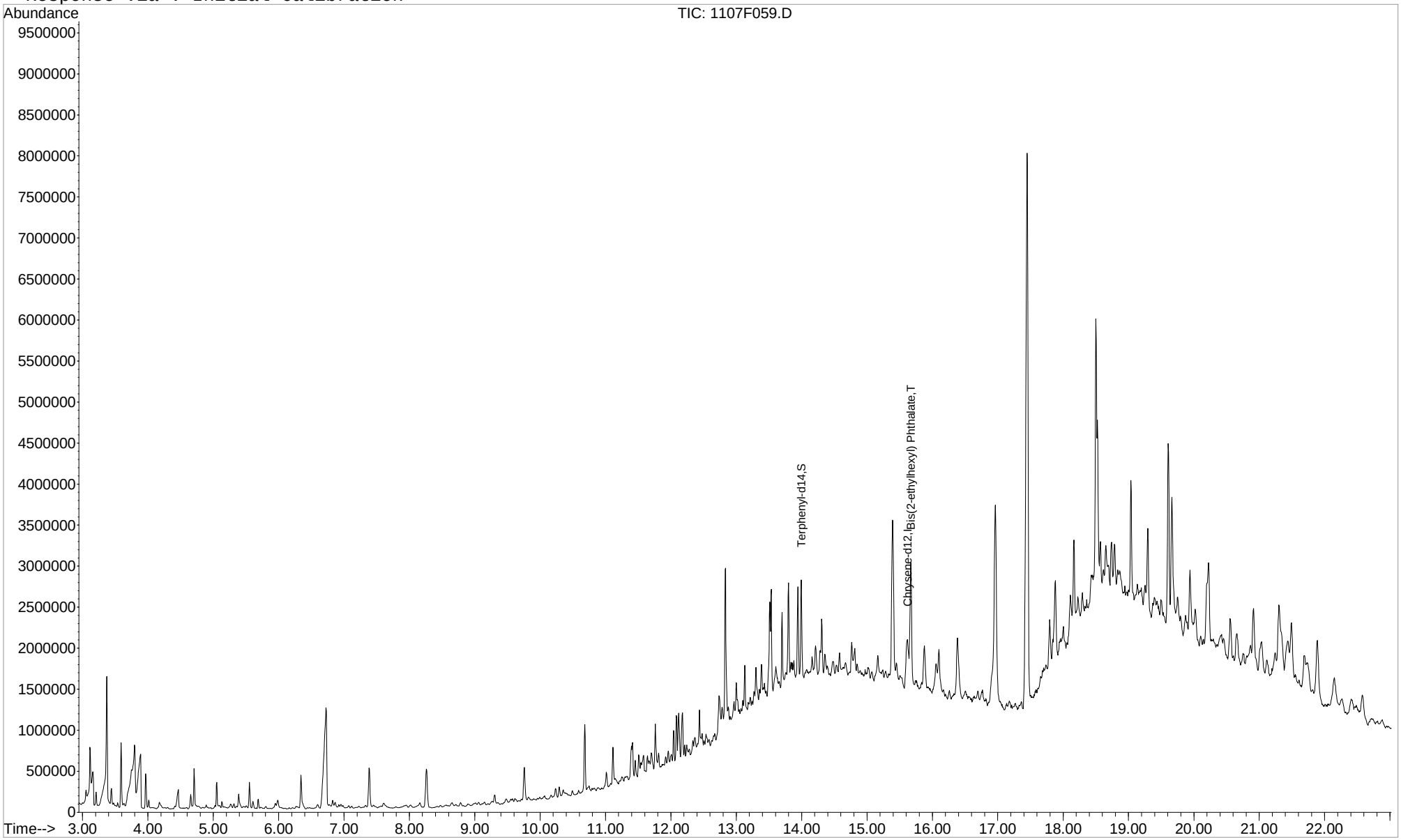
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 11/09/18
2nd 12/04/18

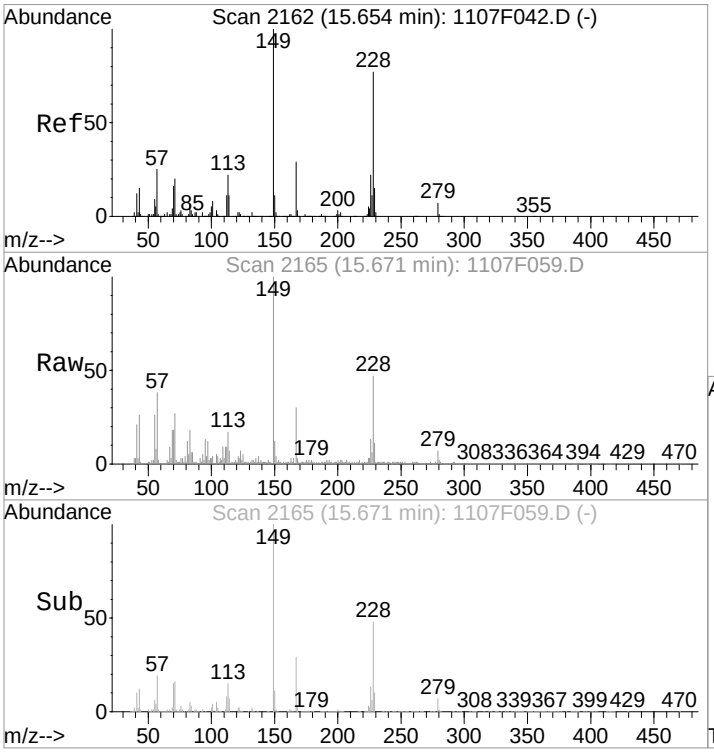
Data File : J:\MS29\DATA\110718\1107F059.D Vial: 37
Acq On : 8 Nov 2018 10:47 am Operator: CConover
Sample : K1810270-029 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

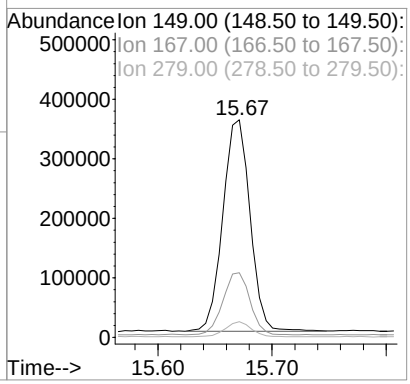
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 2755.77 ng/ml
RT: 15.67 min Scan# 2165
Delta R.T. 0.01 min
Lab File: 1107F059.D
Acq: 8 Nov 2018 10:47 am

Tgt Ion:149 Resp: 588104

Ion	Ratio	Lower	Upper
149	100		
167	29.3	0.0	59.7
279	7.0	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F059.D Vial: 37
Acq On : 8 Nov 2018 10:47 am Operator: CConover
Sample : K1810270-029 Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:10 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	250928	1000.00	ng/ml	0.01
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	419909	1661.57	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	66.46%		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.67	149	588104	2755.77	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F043.D\
Lab ID: KQ1815626-04
RunType: MB
Matrix: Sediment

Date Acquired: 11/8/18 03:13:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F043.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 03:13:00	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1815626-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	KQ1815626
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		195878	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.98	-0.01	306854	1555.46	62	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.65		5334	32.02	1.6	U	Y

Prep Amount:	40.4250 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

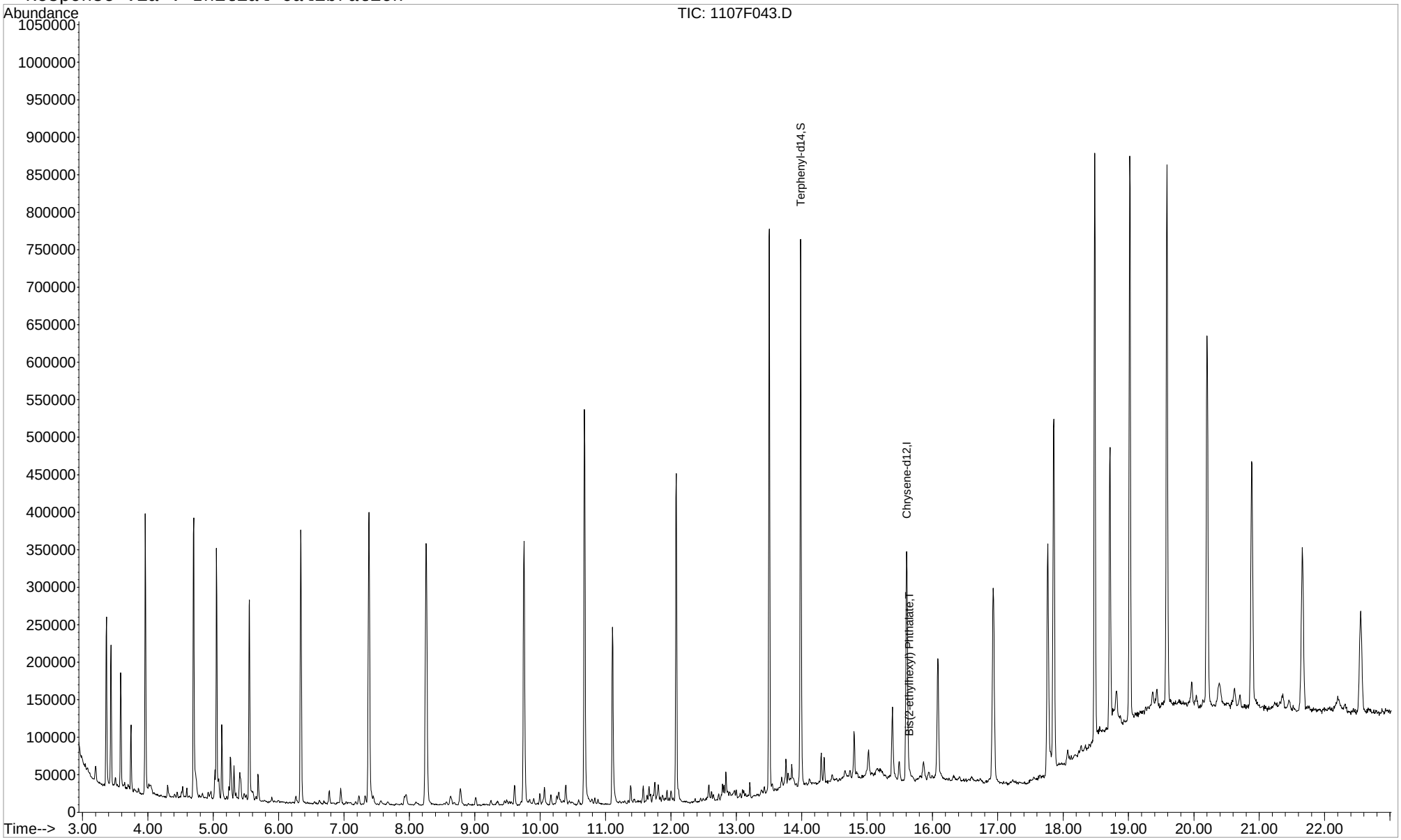
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

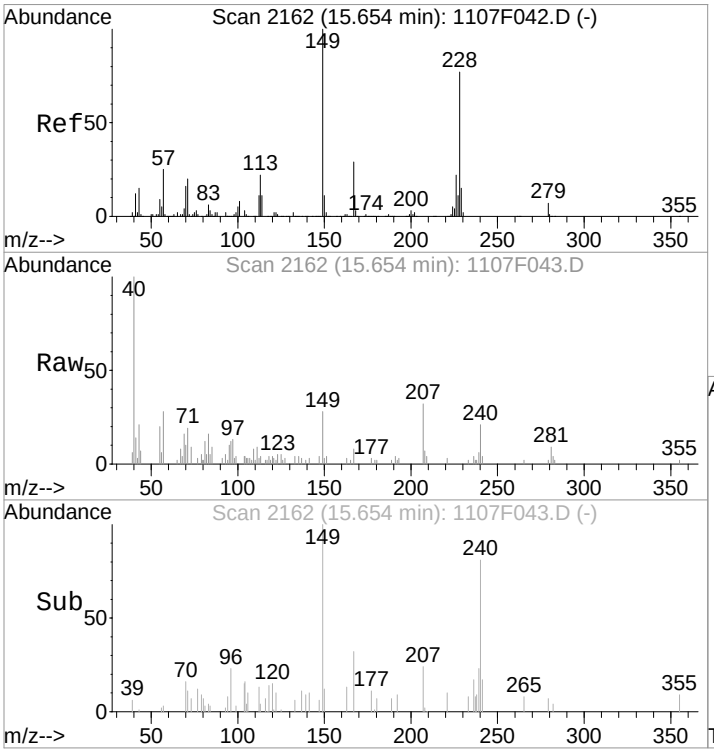
Data File : J:\MS29\DATA\110718\1107F043.D Vial: 21
Acq On : 8 Nov 2018 3:13 am Operator: CConover
Sample : KQ1815626-04 | MB Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



1st 11/09/18

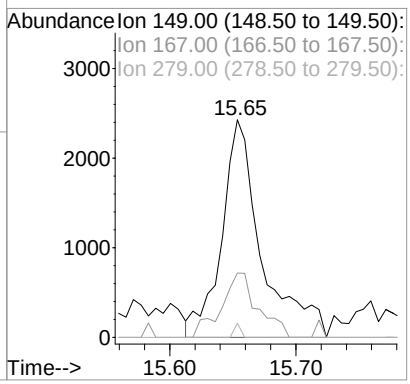
2nd 12/04/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 32.02 ng/ml
RT: 15.65 min Scan# 2162
Delta R.T. -0.01 min
Lab File: 1107F043.D
Acq: 8 Nov 2018 3:13 am

Tgt Ion:149 Resp: 5334

Ion	Ratio	Lower	Upper
149	100		
167	29.6	0.0	59.7
279	6.5	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F043.D Vial: 21
Acq On : 8 Nov 2018 3:13 am Operator: CConover
Sample : KQ1815626-04 | MB Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:05 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	195878	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.98	244	306854	1555.46	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 62.22%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.65	149	5334	32.02	ng/ml	100

(#) = qualifier out of range (m) = manual integration

1st 11/17/18
2nd 11/30/18

Validation Report

Data File: J:\MS29\DATA\111418\1114F004.D\
Lab ID: KQ1816032-04
RunType: MB
Matrix: Sediment

Date Acquired: 11/14/18 12:03:00
Batch ID: 615539
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

1st 11/17/18
2nd 11/30/18

Quantitation Report

Data File:	J:\MS29\DATA\111418\1114F004.D\	**Instrument:**	K-MS-29
Acqu Date:	11/14/18 12:03:00	**Vial:**	5
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1816032-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/31/18	**Receive Date:**	11/1/18

Analysis Lot:	615539	**Prep Lot:**	325584	**Report Group:**	KQ1816032
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	11/7/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.65	+0.01	206934	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	14.01		351546	1686.80	67	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.69	+0.01	5731	32.56	1.6	U	Y

Prep Amount:	40.3880 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

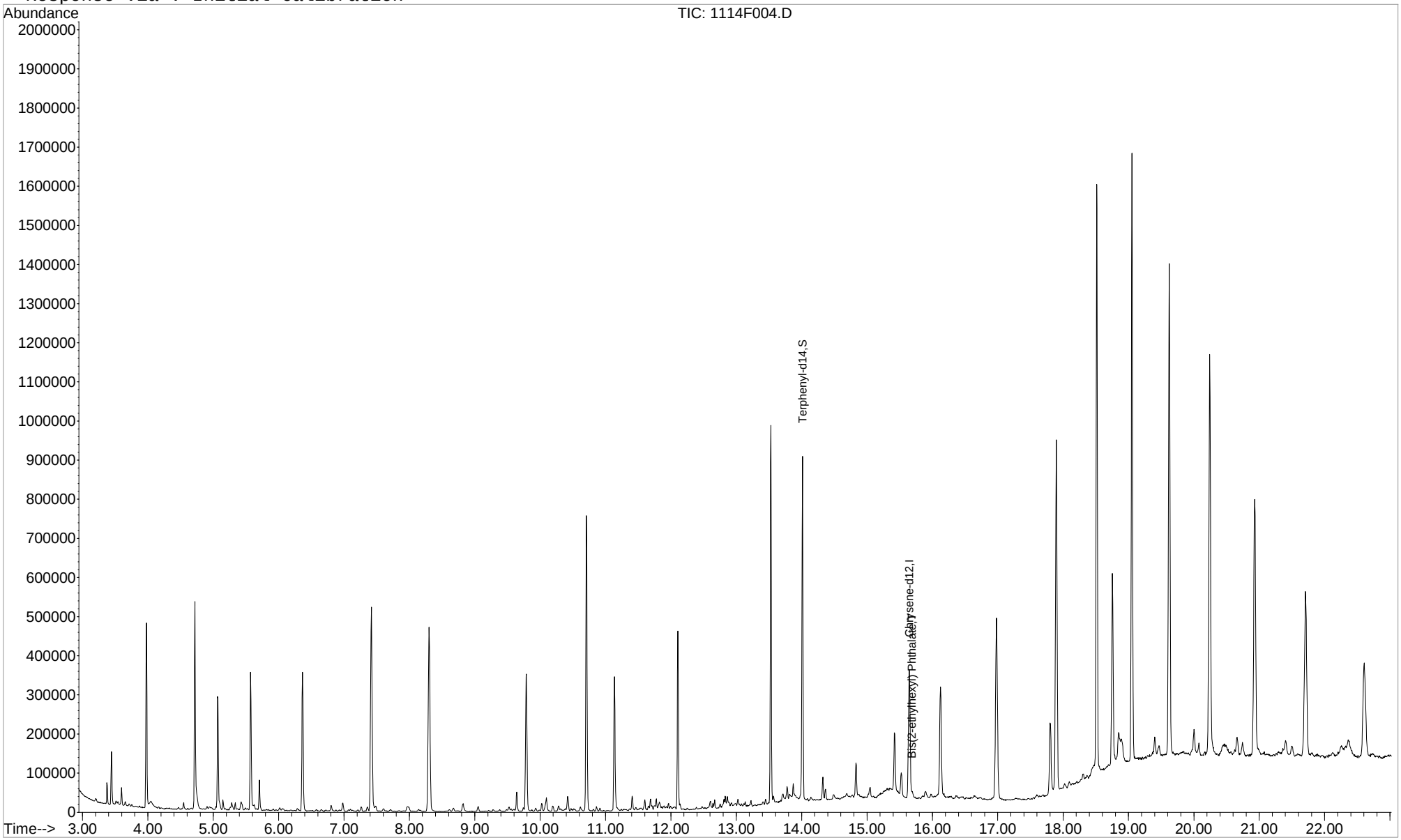
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Quantitation Report (QT Reviewed)

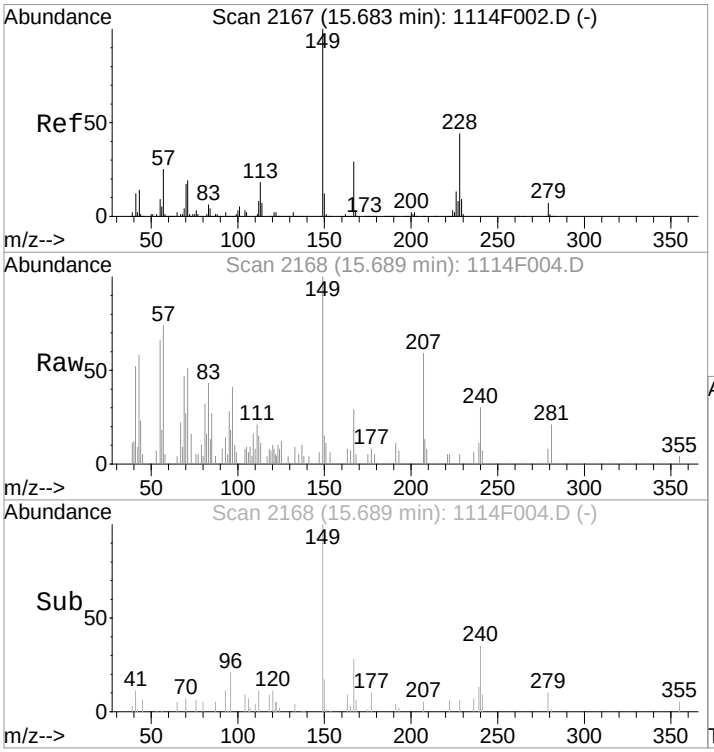
1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 12:03 pm Operator: CConover
Sample : KQ1816032-04 | MB Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 0:20 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



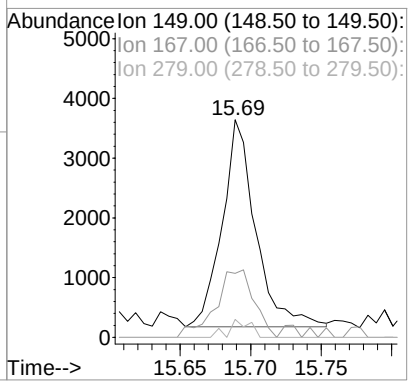
1st 11/17/18
2nd 11/30/18



#3
Bis(2-ethylhexyl) Phthalate
Concen: 32.56 ng/ml
RT: 15.69 min Scan# 2168
Delta R.T. 0.03 min
Lab File: 1114F004.D
Acq: 14 Nov 2018 12:03 pm

Tgt Ion:149 Resp: 5731

Ion	Ratio	Lower	Upper
149	100		
167	26.2	0.0	59.7
279	8.7	0.0	36.4



Quantitation Report (QT Reviewed)

1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 12:03 pm Operator: CConover
Sample : KQ1816032-04 | MB Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 00:20:42 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.65	240	206934	1000.00	ng/ml	0.04
System Monitoring Compounds						
2) Terphenyl-d14	14.01	244	351546	1686.80	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 67.47%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.69	149	5731	32.56	ng/ml	94

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F044.D\
Lab ID: KQ1815626-03
RunType: LCS
Matrix: Sediment

Date Acquired: 11/8/18 03:42:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F044.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 03:42:00	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1815626-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/17/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	KQ1815626
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		209866	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		328754	1555.40	62	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.65		294686	1651.03	165		Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

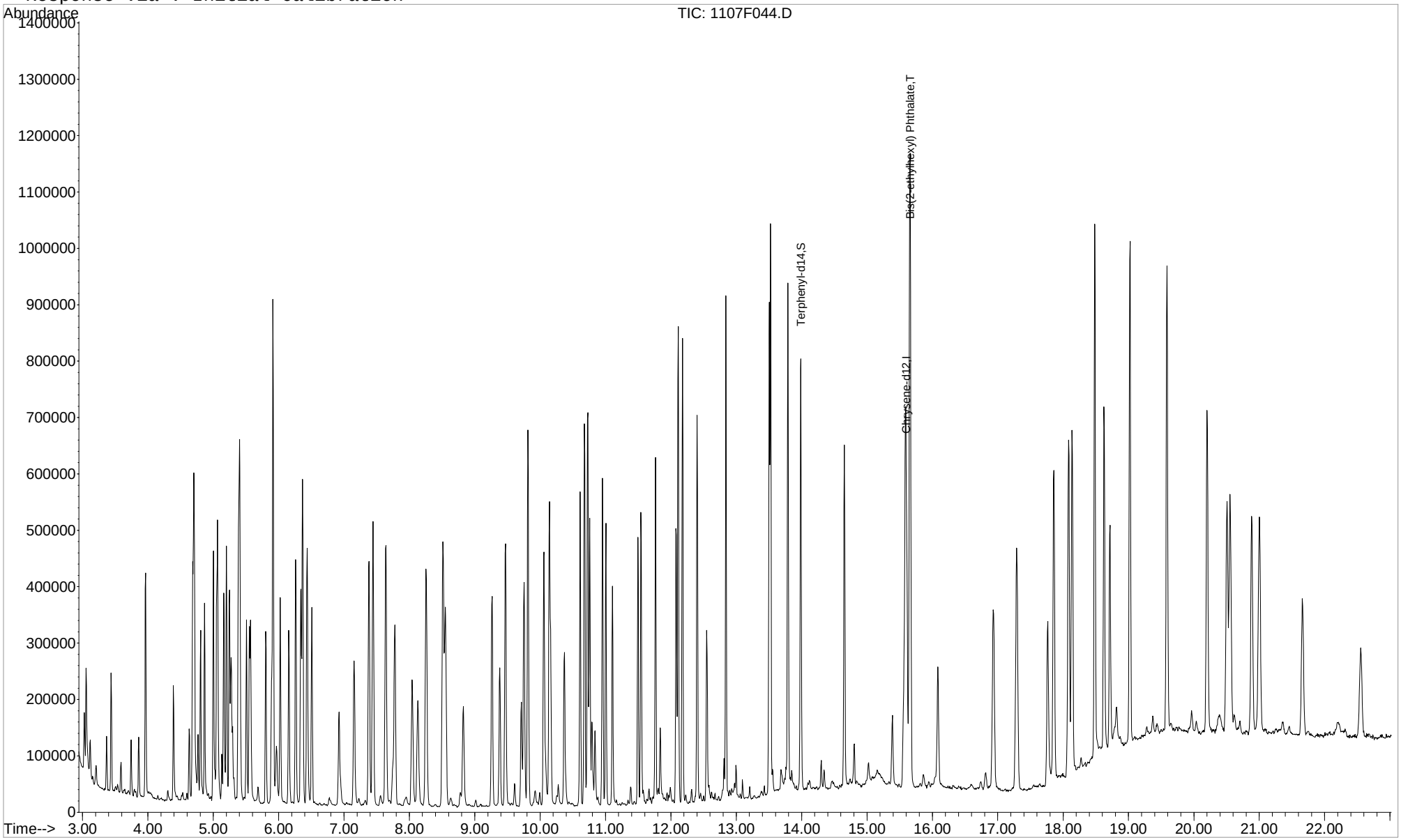
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F044.D Vial: 22
Acq On : 8 Nov 2018 3:42 am Operator: CConover
Sample : KQ1815626-03 | LCS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F044.D Vial: 22
Acq On : 8 Nov 2018 3:42 am Operator: CConover
Sample : KQ1815626-03 | LCS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:06 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	209866	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	328754	1555.40	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 62.22%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.65	149	294686	1651.03	ng/ml	100

(#) = qualifier out of range (m) = manual integration

1st 11/17/18
2nd 11/30/18

Validation Report

Data File: J:\MS29\DATA\111418\1114F005.D\
Lab ID: KQ1816032-03
RunType: LCS
Matrix: Sediment

Date Acquired: 11/14/18 12:31:00
Batch ID: 615539
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

1st CE 11/17/18
2nd TP 11/30/18

Quantitation Report

Data File:	J:\MS29\DATA\111418\1114F005.D\	**Instrument:**	K-MS-29
Acqu Date:	11/14/18 12:31:00	**Vial:**	6
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1816032-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/31/18	**Receive Date:**	11/1/18

Analysis Lot:	615539	**Prep Lot:**	325584	**Report Group:**	KQ1816032
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	11/7/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.64		200343	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	14.01		333622	1653.46	66	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.68		312132	1831.90	183		Y

Prep Amount:	20.00 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

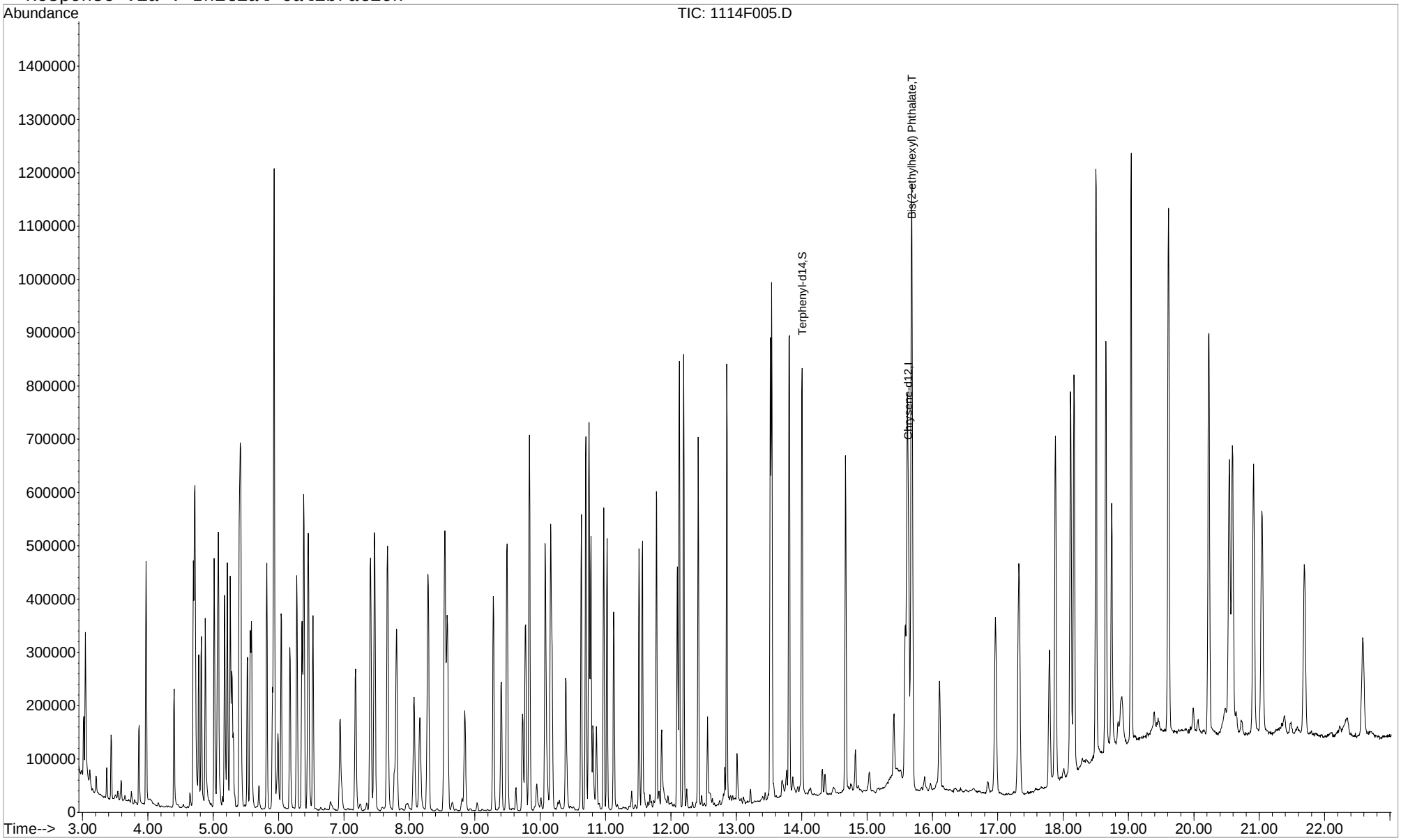
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Quantitation Report (QT Reviewed)

1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F005.D Vial: 5
Acq On : 14 Nov 2018 12:31 pm Operator: CConover
Sample : KQ1816032-03 | LCS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 0:20 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F005.D Vial: 5
Acq On : 14 Nov 2018 12:31 pm Operator: CConover
Sample : KQ1816032-03 | LCS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 00:20:42 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.64	240	200343	1000.00	ng/ml	0.02
System Monitoring Compounds						
2) Terphenyl-d14	14.01	244	333622	1653.46	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 66.14%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.68	149	312132	1831.90	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F045.D\
Lab ID: KQ1815626-01
RunType: MS
Matrix: Sediment

Date Acquired: 11/8/18 04:10:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F045.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 04:10:00	**Vial:**	5
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1815626-01	**Raw Units:**	ng/mL

Bottle ID:	K1810270-011.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	KQ1815626
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.62	+0.01	253859	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		396577	1551.13	62	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.66	+0.01	480843	2227.15	132		Y

Prep Amount:	40.352 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	83.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

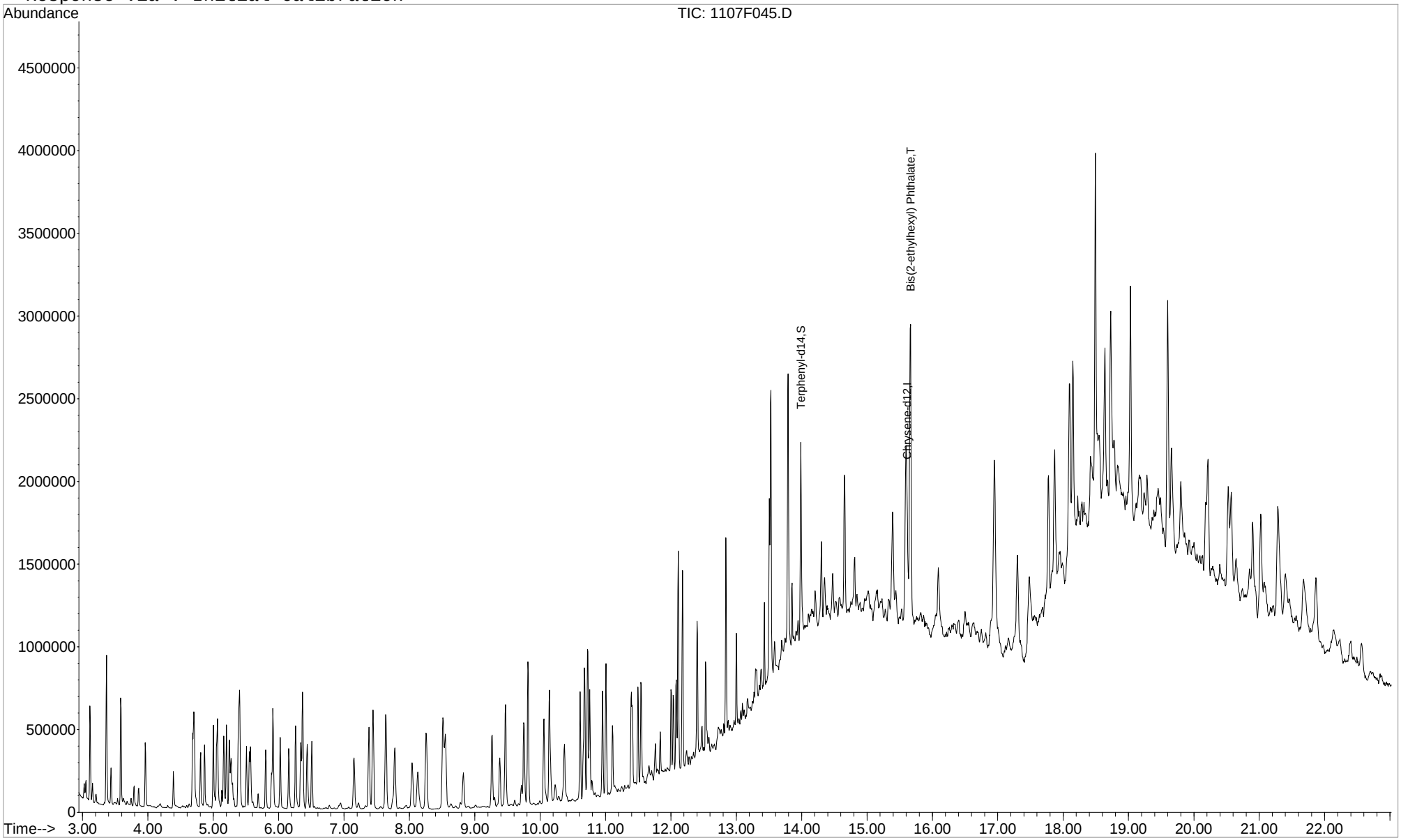
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F045.D Vial: 23
Acq On : 8 Nov 2018 4:10 am Operator: CConover
Sample : KQ1815626-01 | MS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F045.D Vial: 23
Acq On : 8 Nov 2018 4:10 am Operator: CConover
Sample : KQ1815626-01 | MS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:06 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	253859	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	396577	1551.13	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	62.05%		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	480843	2227.15	ng/ml	97

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F046.D\
Lab ID: KQ1815626-02
RunType: DMS
Matrix: Sediment

Date Acquired: 11/8/18 04:38:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F046.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 04:38:00	**Vial:**	6
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1815626-02	**Raw Units:**	ng/mL

Bottle ID:	K1810270-011.01	**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**	325139	**Report Group:**	KQ1815626
Analysis	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	10/29/18		

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		246213	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
p-Terphenyl-d14	13.99		365525	1474.07	59	30 - 102	Y

Target Compounds

Final Conc.Units: ug/Kg

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Bis(2-ethylhexyl) Phthalate	15.66	+0.01	395228	1887.45	112		Y

Prep Amount:	40.213 g	**Dilution:**	1
Prep Final Amount:	2.00 mL	**Basis Factor:**	83.90

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

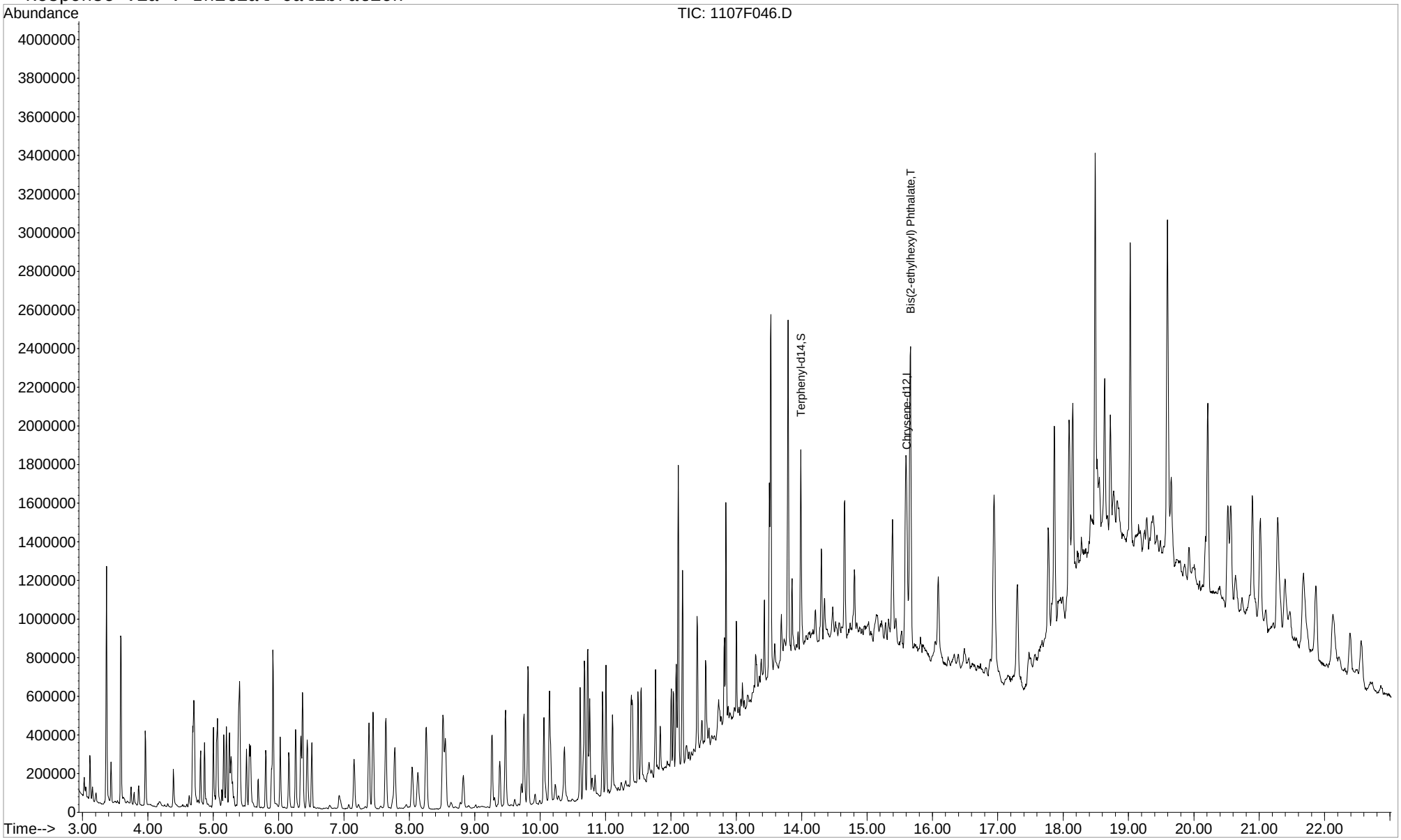
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F046.D Vial: 24
Acq On : 8 Nov 2018 4:38 am Operator: CConover
Sample : KQ1815626-02 | DMS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:04 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F046.D Vial: 24
Acq On : 8 Nov 2018 4:38 am Operator: CConover
Sample : KQ1815626-02 | DMS Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:04:06 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	246213	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	365525	1474.07	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 58.96%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	395228	1887.45	ng/ml	100

(#) = qualifier out of range (m) = manual integration

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F042.D\
Lab ID: KQ1816400-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/8/18 02:45:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Printed: 11/9/18 7:18
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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F042.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 02:45:00	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816400-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**		**Report Group:**	KQ1816400
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.61		241645	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
p-Terphenyl-d14	13.99		617041	2535.42	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Bis(2-ethylhexyl) Phthalate	15.65		542397	2639.23	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

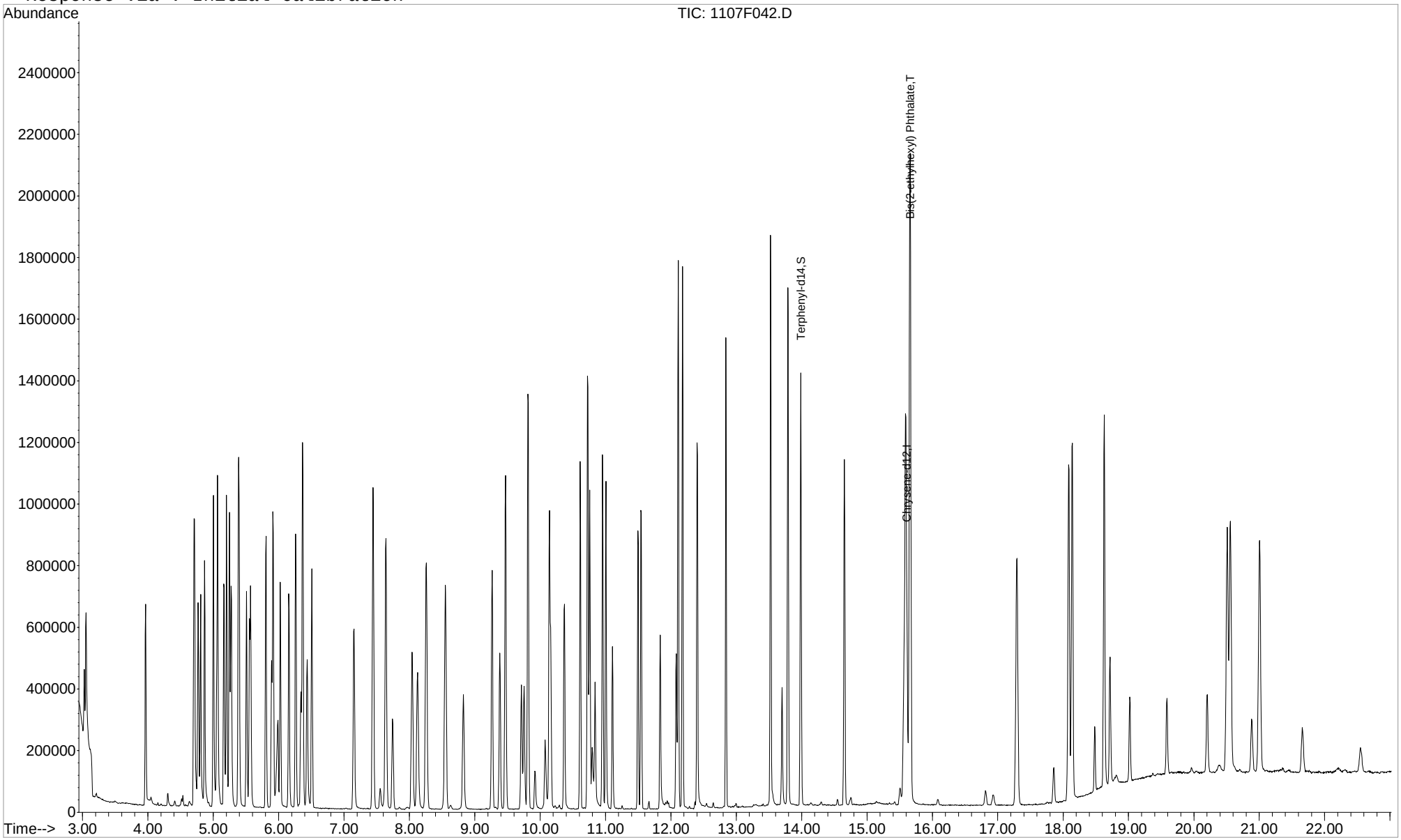
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Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F042.D Vial: 2
Acq On : 8 Nov 2018 2:45 am Operator: CConover
Sample : SVO_LL CCV @ 3.0ppm | SVM59-82G Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:02 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 16:03:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F042.D Vial: 2
Acq On : 8 Nov 2018 2:45 am Operator: CConover
Sample : SVO_LL CCV @ 3.0ppm | SVM59-82G Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 16:02:57 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	241645	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	617041	2535.42	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 101.42%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.65	149	542397	2639.23	ng/ml	98

(#) = qualifier out of range (m) = manual integration

1st CE 11/17/18
2nd TP 11/30/18

Validation Report

Data File: J:\MS29\DATA\111418\1114F002.D\
Lab ID: KQ1816925-02
RunType: CCV
Matrix: Sediment

Date Acquired: 11/14/18 09:22:00
Batch ID: 615539
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

1st 11/17/18
2nd 11/30/18

Quantitation Report

Data File:	J:\MS29\DATA\111418\1114F002.D\	**Instrument:**	K-MS-29
Acqu Date:	11/14/18 09:22:00	**Vial:**	2
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1816925-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/31/18	**Receive Date:**	11/1/18

Analysis Lot:	615539	**Prep Lot:**		**Report Group:**	KQ1816925
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
Chrysene-d12	15.64		182932	1000.00	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
p-Terphenyl-d14	14.01		494039	2681.54	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Bis(2-ethylhexyl) Phthalate	15.68		488623	3140.67	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

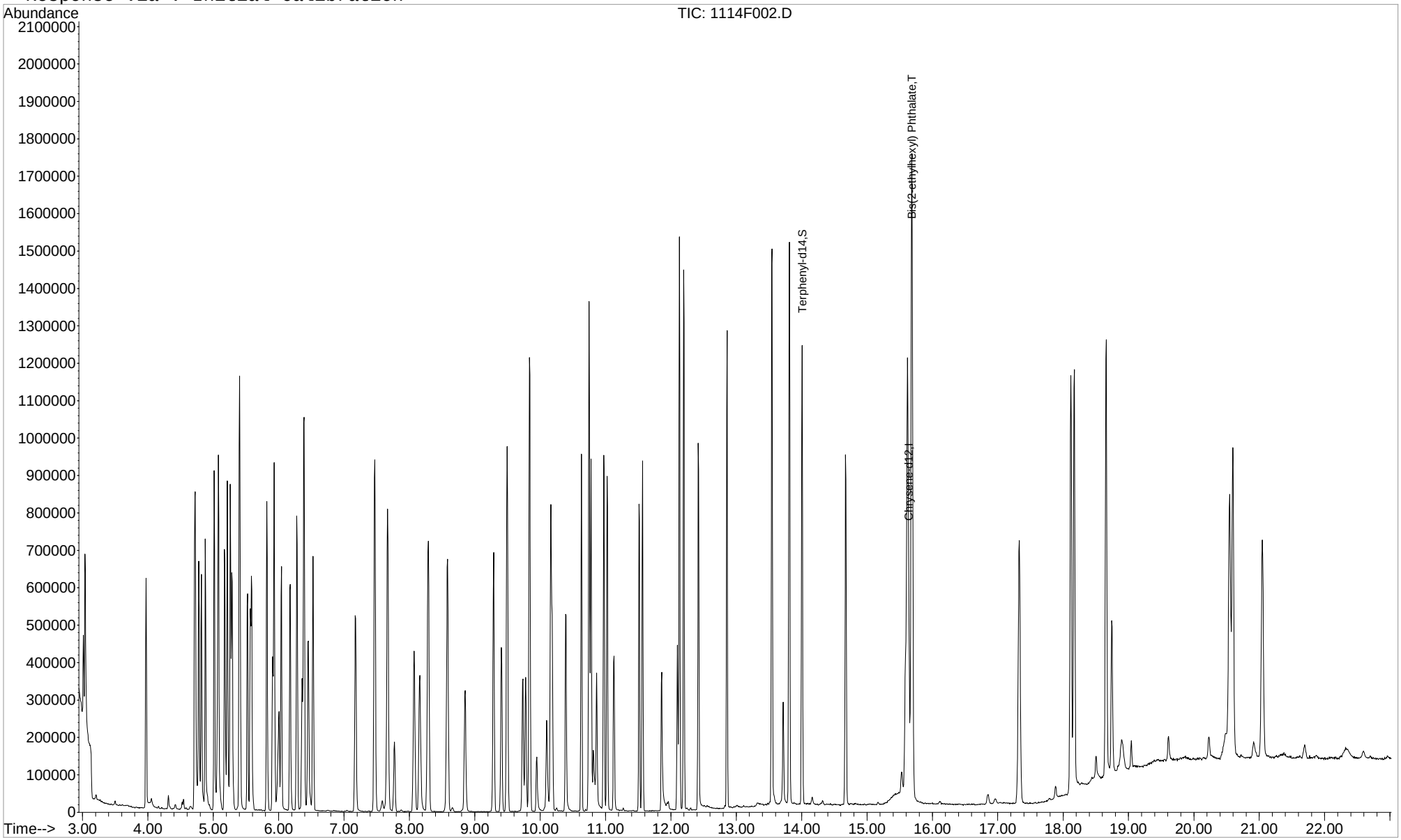
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Quantitation Report (QT Reviewed)

1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 9:22 am Operator: CConover
Sample : SVO_LL CCV @ 3.0ppm | SVM59-96B Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 0:20 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



1st 11/17/18
2nd 11/30/18

Quantitation Report (QT Reviewed)

Data File : J:\MS29\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 9:22 am Operator: CConover
Sample : SVO_LL CCV @ 3.0ppm | SVM59-96B Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 00:20:07 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.64	240	182932	1000.00	ng/ml	0.03
System Monitoring Compounds						
2) Terphenyl-d14	14.01	244	494039	2681.54	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 107.26%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.68	149	488623	3140.67	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Evaluate Continuing Calibration Report

1st 11/17/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 9:22 am Operator: CConover
Sample : SVO_LL CCV @ 3.0ppm | SVM59-96B Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Chrysene-d12	1000.000	1000.000	0.0	106	0.03
2	S	Terphenyl-d14	3000.000	2681.541	10.6	92	0.02
3	T	Bis(2-ethylhexyl) Phthalate	3000.000	3140.674	-4.7	100	0.02

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

1st 11/09/18
2nd 12/04/18

Validation Report

Data File: J:\MS29\DATA\110718\1107F041.D\
Lab ID: KQ1816400-01
RunType: TUNE
Matrix: Sediment

Date Acquired: 11/8/18 02:17:00
Batch ID: 614446
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Tune Ion Ratio	X	

Primary Review: _____

Printed: 11/9/18 7:18
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Secondary Review: _____

1st 11/09/18
2nd 12/04/18

Quantitation Report

Data File:	J:\MS29\DATA\110718\1107F041.D\	**Instrument:**	K-MS-29
Acqu Date:	11/8/18 02:17:00	**Vial:**	1
Run Type:	TUNE	**Dilution:**	1
Lab ID:	KQ1816400-01	**Raw Units:**	

Bottle ID:		**Tier:**	IV	**Matrix:**	Sediment
Prod Code:	SVO LL	**Collect Date:**	10/15/18	**Receive Date:**	10/19/18

Analysis Lot:	614446	**Prep Lot:**		**Report Group:**	KQ1816400
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	32.98	334362	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	38.18	387058	Pass
70	69	0	2	0.54	2093	Pass
127	198	10	80	45.02	456405	Pass
197	198	0	2	0.00	0	Pass
198	442	30	100	62.13	1013738	Pass
199	198	5	9	6.63	67216	Pass
275	198	10	60	30.64	310570	Pass
365	442	1	50	1.89	30877	Pass
441	443	0.01	100	81.19	251605	Pass
442	442	30	100	100.00	1631573	Pass
443	442	15	24	18.99	309888	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

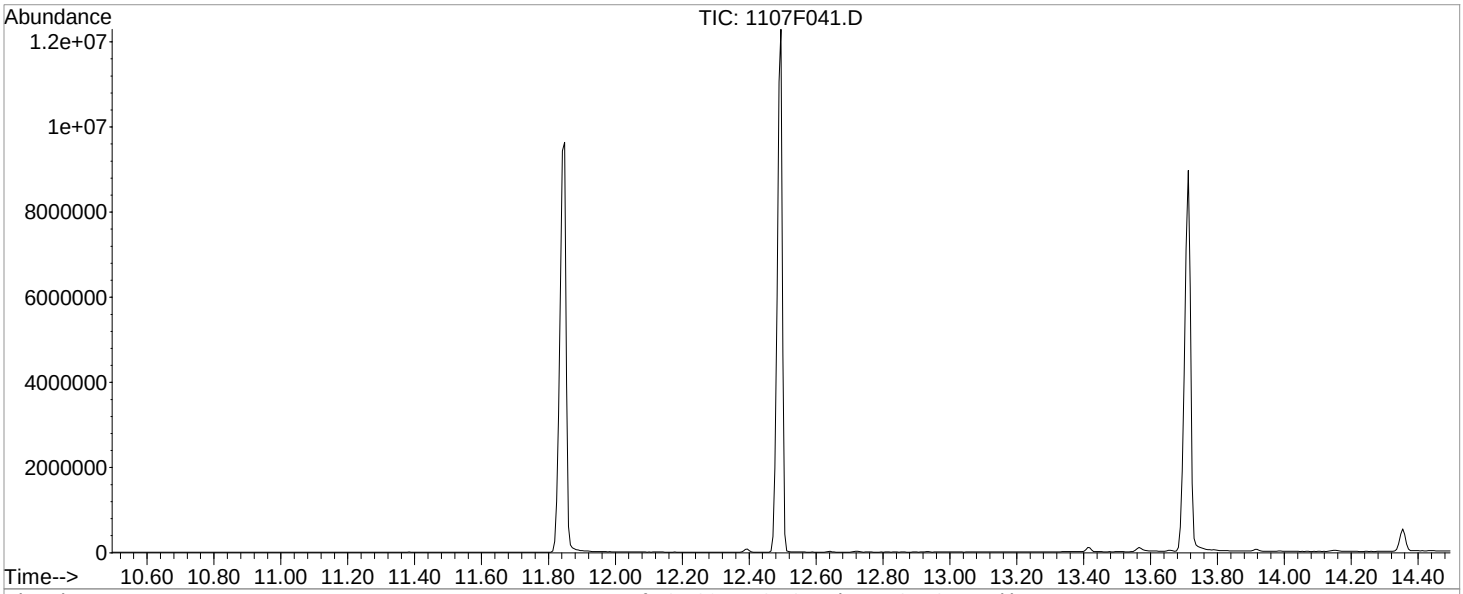
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

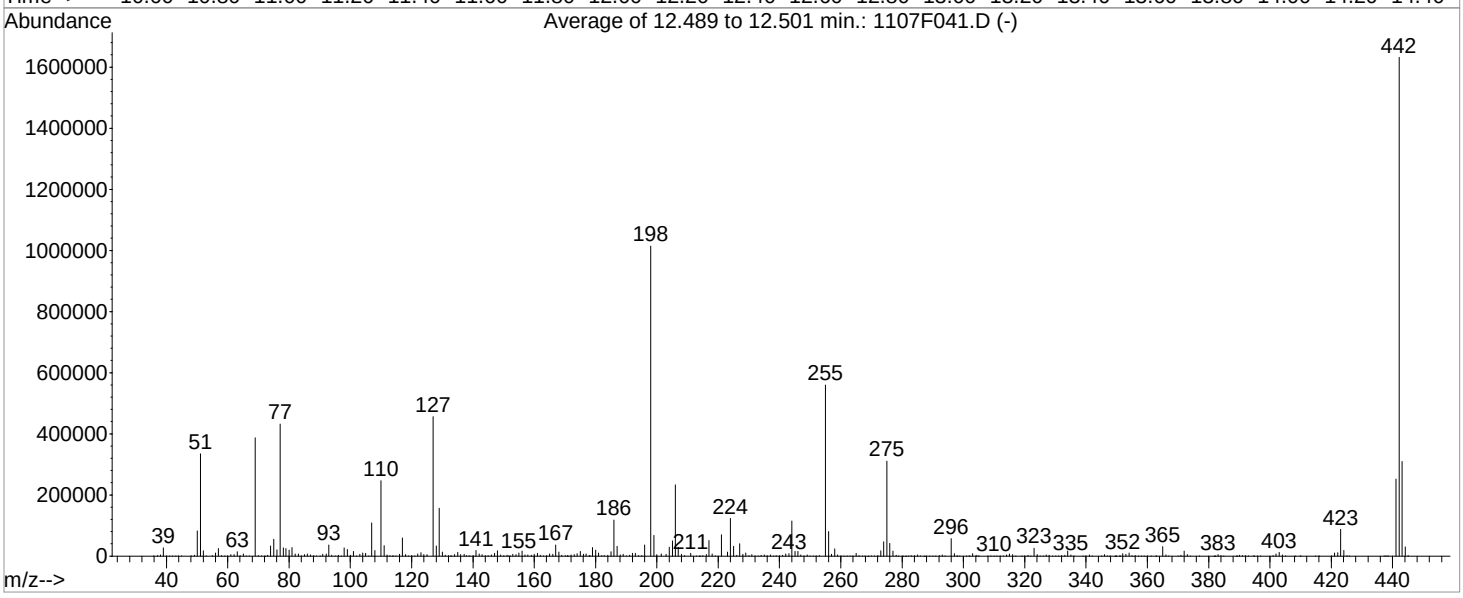
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 11/09/18
2nd 12/04/18

Data File : J:\MS29\DATA\110718\1107F041.D Vial: 1
Acq On : 8 Nov 2018 2:17 am Operator: CConover
Sample : MS29 DFTPP @ 50ug/mL | SVM59-12C Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS29\METHODS\SCAN\DFTPPLVI.M (RTE Integrator)
Title : DFTPP





AutoFind: Scans 1624, 1625, 1626; Background Corrected with Scan 1617

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.0	334362	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.2	387058	PASS
70	69	0.00	2	0.5	2093	PASS
127	198	10	80	45.0	456405	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	62.1	1013738	PASS
199	198	5	9	6.6	67216	PASS
275	198	10	60	30.6	310570	PASS
365	442	1	50	1.9	30877	PASS
441	443	0.01	100	81.2	251605	PASS
442	442	30	100	100.0	1631573	PASS
443	442	15	24	19.0	309888	PASS

1st 11/09/18
2nd 12/04/18

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	153	49.10	2386	61.05	4272	73.00	2575
37.10	1232	50.10	82056	62.10	4679	74.00	32551
38.10	4102	51.10	334362	63.10	13911	75.00	55326
39.05	26435	52.10	16928	64.05	1872	76.10	20067
40.00	775	53.00	938	65.05	7410	77.10	431717
41.05	914	55.00	1489	66.05	562	78.10	27138
42.00	166	56.00	10140	67.05	384	79.00	24983
43.05	182	57.00	25146	68.95	387058	80.00	19557
43.90	203	58.00	1110	70.05	2093	81.00	27462
45.00	725	59.00	295	71.00	117	82.00	7017
48.15	141	59.95	217	72.00	62	83.05	7092

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
84.00	645	95.05	908	106.00	320	117.00	59586
85.00	4484	96.05	2183	107.00	108418	118.00	4417
86.00	6784	97.05	420	108.00	17924	119.00	883
87.05	3404	98.00	27091	110.00	246365	120.05	1350
88.05	1295	99.00	21953	111.00	33765	121.05	568
89.00	801	100.05	2227	112.00	3718	122.00	6604
90.15	170	101.00	15447	112.95	1230	123.00	10561
91.00	6235	102.00	846	113.80	69	124.00	4756
92.10	6440	103.05	5767	114.00	152	125.00	4753
93.00	35888	104.00	9503	114.90	459	127.00	456405
93.95	2586	105.00	8575	116.05	6296	128.00	33535

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
129.00	156346	138.70	101	149.00	3911	159.00	2485
130.00	12758	139.00	873	150.05	1177	160.00	5645
131.00	2235	140.05	1713	151.15	2895	161.00	8865
132.00	1403	141.00	18790	151.60	965	161.95	2630
132.75	175	142.00	6871	152.20	142	163.00	858
133.10	675	143.00	4499	153.00	5850	164.10	1389
134.00	4303	144.05	1098	154.00	4540	164.95	6834
135.00	12397	145.00	1320	155.00	10270	166.05	6325
136.00	4546	146.00	3514	156.00	16155	167.00	35840
137.10	5845	147.00	9176	157.00	3617	168.00	13250
137.85	1454	148.00	17098	157.95	3584	169.00	2748

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.10	1302	179.00	27445	190.00	988	203.00	5357
170.85	1572	180.00	19351	191.10	3001	204.00	28551
171.10	219	181.00	9803	192.00	8487	205.05	49296
171.95	3410	182.05	1618	193.00	9414	206.00	233362
173.00	4469	182.85	1150	194.00	2145	207.00	29258
174.00	8212	184.00	2307	195.05	2023	208.00	6202
175.00	15065	185.05	14257	196.00	36319	209.00	1999
176.05	5874	186.00	117704	198.00	1013738	211.05	9130
176.95	7169	187.00	31773	199.00	67216	212.95	668
177.90	1260	188.05	3312	200.00	4584	213.90	63
178.10	1978	189.00	6066	201.45	6450	214.10	120

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
215.00	2002	228.00	5579	238.95	1598	250.00	832
216.10	4306	229.00	9547	240.00	1397	251.00	826
217.00	50922	230.00	1333	241.00	2644	252.00	956
218.00	6948	231.00	5080	242.00	6552	253.00	2159
219.05	754	232.00	911	243.10	8107	255.00	559957
221.05	69424	233.05	818	244.00	114346	256.00	80357
223.00	13077	234.00	2884	245.10	14834	257.00	6201
224.00	123312	235.00	3754	246.00	15152	258.00	23533
225.00	32402	235.95	2122	246.95	3245	259.00	3985
226.05	3177	237.00	4098	248.00	855	260.10	701
227.00	40309	238.00	648	249.00	4182	261.00	987

Average of 12.489 to 12.501 min.: 1107F041.D

1st 11/09/18
2nd 12/04/18

MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
262.05	203	273.00	17589	284.00	1589	296.00	56861
263.05	336	274.00	46829	285.00	3540	297.00	8190
263.95	999	275.00	310570	286.00	674	297.90	400
265.00	9220	276.00	40954	287.10	52	298.10	133
265.95	1450	277.00	16645	287.90	167	298.80	89
267.05	227	278.00	2767	289.00	801	301.00	932
267.90	176	278.90	648	290.05	654	301.90	430
268.90	50	280.10	54	290.95	641	302.10	782
270.00	635	281.05	47	292.10	1118	303.05	7495
271.00	1040	282.05	547	293.05	3942	304.10	2217
272.05	1449	283.00	1991	294.05	1014	304.80	117

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
305.05	215	319.05	134	330.10	166	345.10	65
308.00	986	320.00	403	331.10	87	346.00	4980
309.00	712	321.05	2261	332.05	1809	347.00	922
309.95	1079	322.00	831	333.05	2349	347.70	54
310.95	272	323.05	25478	334.05	16338	349.50	56
312.00	287	324.05	4479	335.10	4196	349.80	93
313.05	596	325.05	428	336.10	602	349.95	163
314.05	3606	326.05	504	339.00	465	350.90	258
315.00	6338	327.00	4091	340.00	385	351.20	160
316.05	4383	328.00	2226	341.10	3203	352.00	8252
317.05	786	329.05	400	342.00	950	353.00	6002

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
354.00	10003	365.00	30877	383.05	4703	396.00	72
355.00	1843	366.00	4204	384.05	1181	397.00	297
355.90	116	366.95	283	384.95	460	401.05	1188
356.10	76	370.00	919	389.00	50	402.00	7314
357.05	120	371.00	2568	389.30	92	403.05	11741
358.00	115	372.05	16530	390.10	2347	404.05	3887
359.00	675	373.05	4374	391.05	1923	405.05	626
359.95	170	374.00	459	392.00	1467	408.10	55
361.20	107	377.00	535	392.95	292	409.90	239
362.80	69	381.80	53	394.70	78	410.10	102
363.00	100	382.00	52	395.00	72	414.95	492

Average of 12.489 to 12.501 min.: 1107F041.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
415.80	57	438.60	130				
420.10	118	441.10	251605				
421.05	10510	442.10	1631573				
422.10	10769	443.10	309888				
423.10	87218	444.10	29485				
424.05	18087	445.10	1721				
425.10	1717						
426.00	86						
437.25	138						
437.80	72						
438.20	126						

1st 11/17/18
2nd 11/30/18

Validation Report

Data File: J:\MS29\DATA\111418\1114F001.D\
Lab ID: KQ1816925-03
RunType: TUNE
Matrix: Water

Date Acquired: 11/14/18 08:54:00
Batch ID: 615539
Analysis Method: 8270D/SVO LL

Validations

Validation Categories	Pass	Fail
Tune Ion Ratio	X	

Primary Review: _____

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Secondary Review: _____

1st 11/17/18
2nd 11/30/18

Quantitation Report

Data File:	J:\MS29\DATA\111418\1114F001.D\	**Instrument:**	K-MS-29
Acqu Date:	11/14/18 08:54:00	**Vial:**	3
Run Type:	TUNE	**Dilution:**	1
Lab ID:	KQ1816925-03	**Raw Units:**	

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	SVO LL	**Collect Date:**	10/26/18	**Receive Date:**	10/26/18

Analysis Lot:	615539	**Prep Lot:**		**Report Group:**	KQ1816925
Analysis	8270D	**Prep Method:**			
		Prep Date:			

Title:	Low Level Semivolatile Organic Compounds by GC/MS	**Calibration ID:**	KC1800516
		Report List ID:	18710

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	36.61	422677	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	41.39	477923	Pass
70	69	0	2	0.45	2172	Pass
127	198	10	80	47.02	542890	Pass
197	198	0	2	0.00	0	Pass
198	442	30	100	74.35	1154560	Pass
199	198	5	9	6.67	77037	Pass
275	198	10	60	28.74	331776	Pass
365	442	1	50	2.00	31008	Pass
441	443	0.01	100	79.59	239752	Pass
442	442	30	100	100.00	1552917	Pass
443	442	15	24	19.40	301248	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

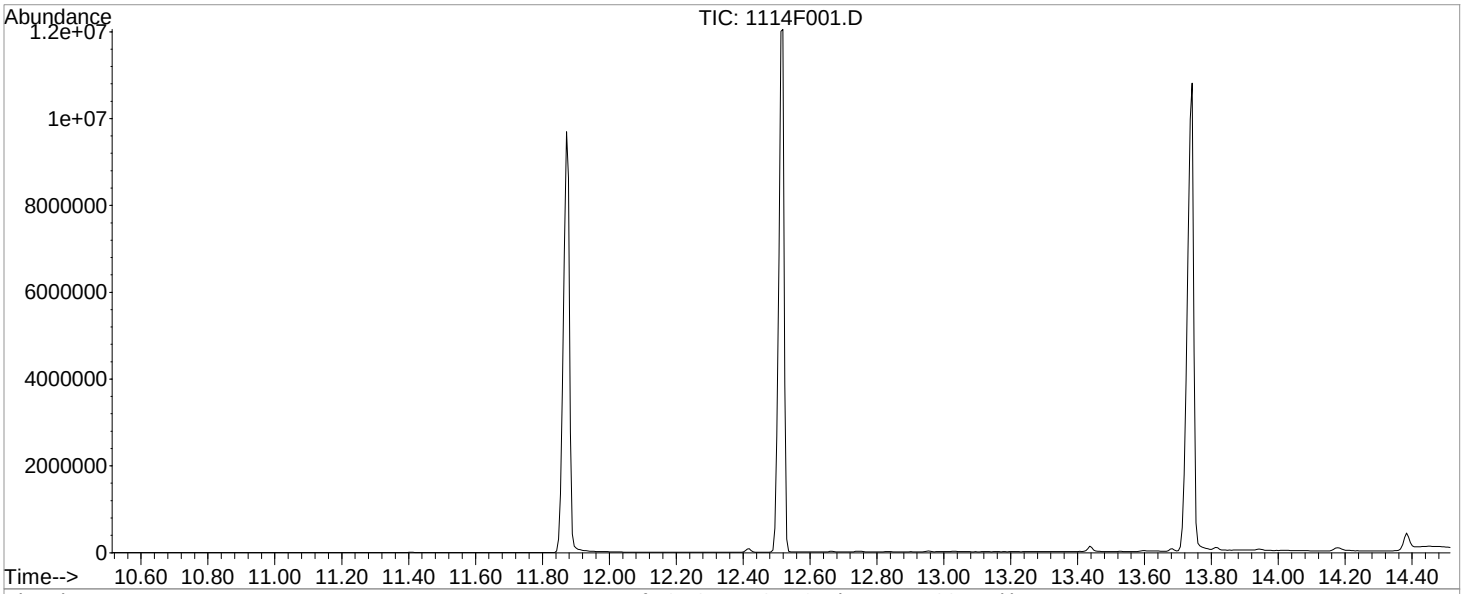
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

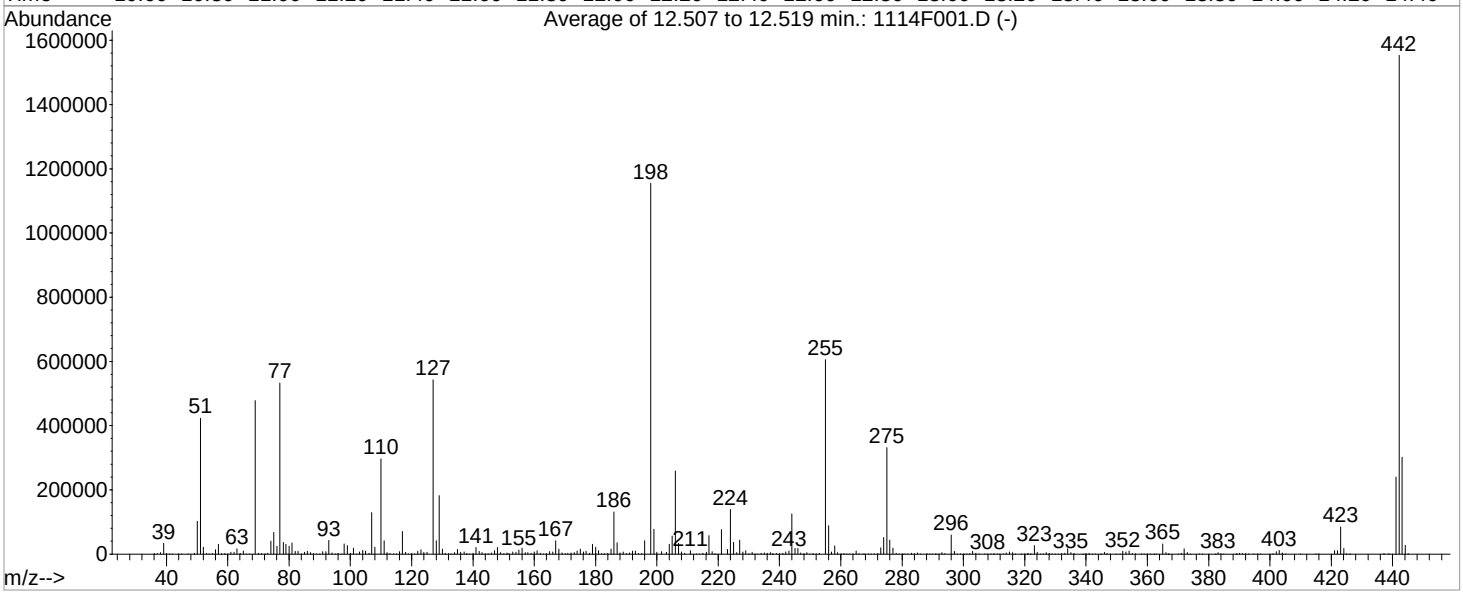
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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1st 12/05/18
2nd 11/30/18

Data File : J:\MS29\DATA\111418\1114F001.D Vial: 1
Acq On : 14 Nov 2018 8:54 am Operator: CConover
Sample : MS29 DFTPP @ 50ug/mL | SVM59-12C Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS29\METHODS\SCAN\DFTPPLVI.M (RTE Integrator)
Title : DFTPP





AutoFind: Scans 1627, 1628, 1629; Background Corrected with Scan 1619

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.6	422677	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	41.4	477923	PASS
70	69	0.00	2	0.5	2172	PASS
127	198	10	80	47.0	542890	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	74.3	1154560	PASS
199	198	5	9	6.7	77037	PASS
275	198	10	60	28.7	331776	PASS
365	442	1	50	2.0	31008	PASS
441	443	0.01	100	79.6	239752	PASS
442	442	30	100	100.0	1552917	PASS
443	442	15	24	19.4	301248	PASS

1st 12/05/18
2nd 11/30/18

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	9	49.15	2968	59.10	198	70.90	135
36.10	171	50.10	101922	60.05	375	71.00	236
37.05	1865	51.10	422677	61.05	5553	72.15	134
38.10	4989	52.10	21008	62.05	5828	73.00	2774
39.10	33322	53.05	1092	63.05	16531	74.10	40333
40.00	1299	53.90	142	64.05	2410	75.00	67528
41.05	1043	55.00	1788	65.10	9391	76.10	24864
42.00	134	56.00	13057	66.05	776	77.05	532299
44.00	240	57.00	30363	67.10	276	78.10	36082
45.00	851	58.05	1374	69.00	477923	79.00	30957
47.00	111	58.90	258	70.05	2172	80.00	24226

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.00	34353	92.00	8046	103.00	6692	115.05	582
82.00	8196	93.00	42594	104.00	11251	116.05	7731
83.00	8150	94.00	3383	105.00	9535	116.95	70031
84.05	942	95.05	754	106.10	2548	118.00	5448
85.00	5836	96.00	2210	106.95	129113	118.95	951
86.00	8186	97.00	191	108.00	21837	120.05	1817
87.05	4241	98.00	31362	110.00	296320	120.95	652
87.95	1542	99.00	26554	111.00	41108	122.00	8121
89.05	842	100.05	2550	112.00	4424	123.00	13228
90.05	224	101.00	18351	112.95	1386	124.00	5925
91.00	7545	102.00	976	114.15	398	125.00	5314

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.00	542890	137.85	1064	148.00	20103	158.95	3007
128.00	41053	138.05	1242	149.00	4289	160.00	6521
129.00	182421	139.00	1007	150.05	1443	160.95	10083
130.00	15264	140.00	2284	151.15	3325	161.95	2732
131.00	2522	141.00	20932	151.75	1974	163.05	912
132.05	2015	142.05	8078	153.00	6736	164.00	1667
132.85	808	142.95	4985	154.05	5649	165.00	7931
134.00	4819	144.00	1392	155.00	12094	166.00	6900
134.95	14306	145.00	1429	156.00	18930	167.00	41105
136.00	5608	146.00	3649	157.10	4221	168.00	15512
137.10	6470	147.00	10764	157.95	4164	169.05	3299

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.15	1518	181.00	10423	192.00	9718	205.00	56477
170.95	2179	182.00	1910	193.00	9883	206.00	258453
172.00	3821	182.95	1277	194.05	2021	207.05	33317
173.00	4954	183.95	2326	195.10	1422	208.00	6552
174.00	9346	185.00	15831	196.00	41424	209.00	2354
175.00	15762	186.00	130909	198.00	1154560	210.95	10345
176.05	6806	187.00	35565	199.00	77037	212.95	713
176.95	8105	188.00	3848	199.95	5396	213.90	274
178.00	2889	189.00	6710	201.55	7261	215.00	2266
179.00	30728	190.00	1161	203.05	5908	216.10	5064
180.00	21307	191.05	3618	204.05	30618	217.00	57520

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	7735	230.05	1587	240.05	1482	250.00	962
218.85	423	231.05	5216	241.05	2741	250.90	160
219.05	573	232.00	976	242.00	7004	251.05	651
221.05	76730	232.95	1024	243.10	9467	252.00	1000
223.00	14904	233.95	2974	244.05	125237	253.05	2200
224.00	138970	235.00	3784	245.05	17138	255.00	605589
225.00	36781	236.00	2416	246.00	17194	256.00	87800
226.05	4319	237.00	4362	246.95	3447	257.00	6748
227.00	43858	237.80	135	247.90	201	258.00	25003
228.00	6194	238.00	658	248.10	722	259.00	4174
229.00	10770	239.00	1784	248.95	4707	260.05	833

Average of 12.507 to 12.519 min.: 1114F001.D

MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

1st 12/05/18
2nd 11/30/18

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
261.00	1166	272.05	1492	283.05	2060	293.00	4937
261.95	150	273.00	19477	284.05	1695	293.95	1256
262.95	307	274.00	51224	285.05	3766	296.00	59002
263.95	505	275.00	331776	286.00	643	297.00	8983
265.00	9515	276.00	43666	287.90	95	297.95	707
265.90	1441	277.00	18637	288.15	160	299.00	229
267.25	154	278.00	3027	289.00	964	300.00	57
267.80	71	279.00	767	290.00	605	301.10	1015
269.05	100	280.00	63	290.90	108	302.05	1381
269.95	697	281.00	179	291.10	398	303.00	8255
271.00	977	281.95	654	292.05	947	304.05	2307

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
305.05	297	316.00	4714	327.00	4324	336.20	203
307.00	73	317.00	854	327.90	468	339.00	434
307.95	984	318.95	213	328.05	1939	339.90	267
308.95	733	320.05	347	328.90	486	340.10	169
309.90	192	320.90	436	329.95	187	341.00	3063
310.05	879	321.10	2069	331.00	89	342.05	971
311.00	263	322.05	1718	332.05	2022	343.00	67
311.90	236	323.10	26619	333.05	2551	344.80	63
313.00	694	324.05	5348	334.05	16330	346.00	5081
314.00	3608	325.10	638	335.05	4517	346.70	169
315.00	6603	326.05	359	336.00	326	347.00	797

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
347.90	127	361.05	166	374.05	546	392.05	1483
349.80	208	362.10	53	377.05	621	392.95	371
351.10	752	363.00	78	378.00	77	394.80	117
352.00	8284	365.00	31008	382.10	54	396.00	164
353.05	6242	366.00	4302	383.05	4523	396.90	198
354.05	9549	366.80	60	384.00	1250	401.05	1261
355.05	1874	366.95	270	384.95	399	402.05	7213
356.10	137	370.00	891	388.90	58	403.05	11274
358.10	119	371.05	2605	389.20	94	403.90	745
359.00	671	372.05	16779	390.05	2423	404.05	3219
360.00	118	373.05	4507	391.05	1887	405.00	569

Average of 12.507 to 12.519 min.: 1114F001.D
MS29 DFTPP @ 50ug/mL | SVM59-12C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
410.05	378	438.50	157				
415.05	443	439.00	143				
416.00	112	441.10	239752				
421.05	10115	442.10	1552917				
422.05	10590	443.10	301248				
423.10	84362	444.10	27573				
424.10	17740	445.10	1751				
425.05	1550						
426.00	59						
437.00	74						
437.40	118						

Injection Log

Directory: J:\MS29\DATA\110618A

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1106A001.D	1.	MS29 DFTPP @ 50ug/mL | SVM59-86M		6 Nov 2018 13:36
2	2	1106A002.D	1.	IB		6 Nov 2018 14:05
3	3	1106A003.D	1.	SVO_LL ICAL @ 0.05ppm | SVM59-69C		6 Nov 2018 14:33
4	4	1106A004.D	1.	SVO_LL ICAL @ 0.10ppm | SVM59-69D		6 Nov 2018 15:01
5	5	1106A005.D	1.	SVO_LL ICAL @ 0.20ppm | SVM59-69E		6 Nov 2018 15:30
6	6	1106A006.D	1.	SVO_LL ICAL @ 0.50ppm | SVM59-69F		6 Nov 2018 15:58
7	7	1106A007.D	1.	SVO_LL ICAL @ 1.0ppm | SVM59-69G		6 Nov 2018 16:27
8	8	1106A008.D	1.	SVO_LL ICAL @ 2.0ppm | SVM59-69H		6 Nov 2018 16:55
9	9	1106A009.D	1.	SVO_LL ICAL @ 3.0ppm | SVM59-69I		6 Nov 2018 17:23
10	10	1106A010.D	1.	SVO_LL ICAL @ 5.0ppm | SVM59-69J		6 Nov 2018 17:52
11	11	1106A011.D	1.	SVO_LL ICAL @ 7.0ppm | SVM59-69K		6 Nov 2018 18:20
12	12	1106A012.D	1.	SVO_LL ICAL @ 10ppm | SVM59-69L		6 Nov 2018 18:48
13	13	1106A013.D	1.	SVO_LL ICV @ 3.0ppm | SVM59-63B		6 Nov 2018 19:17

Bio only

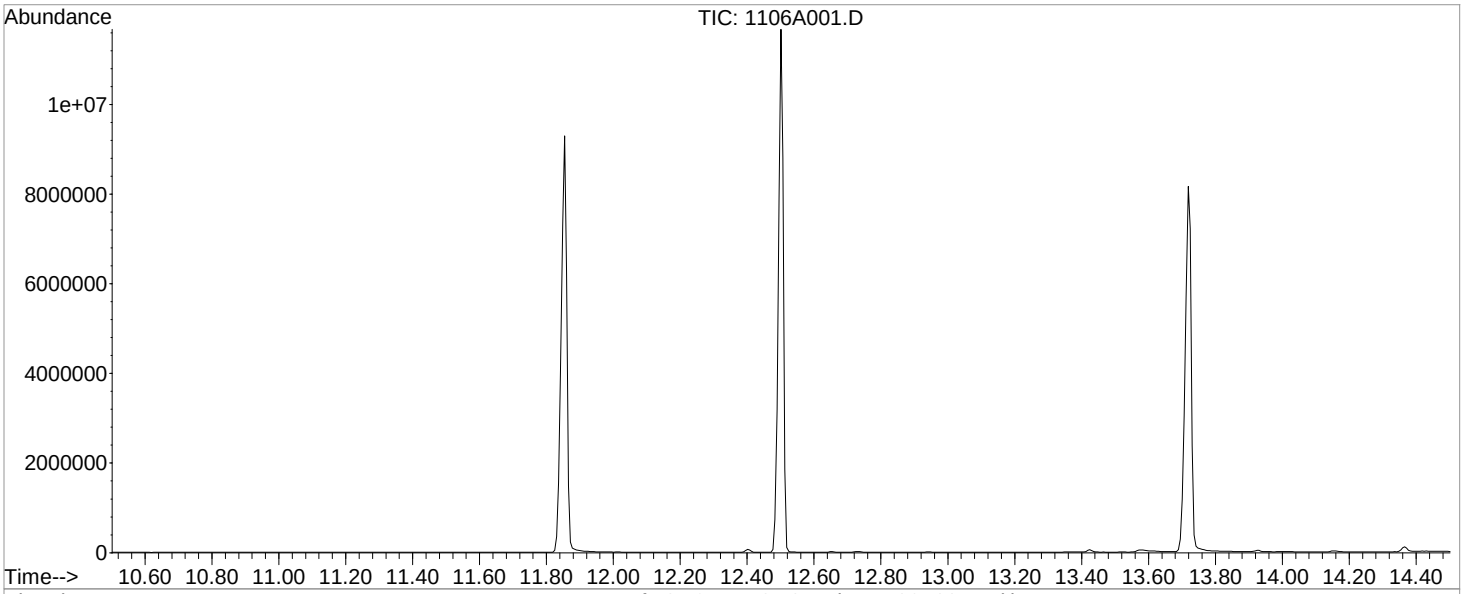
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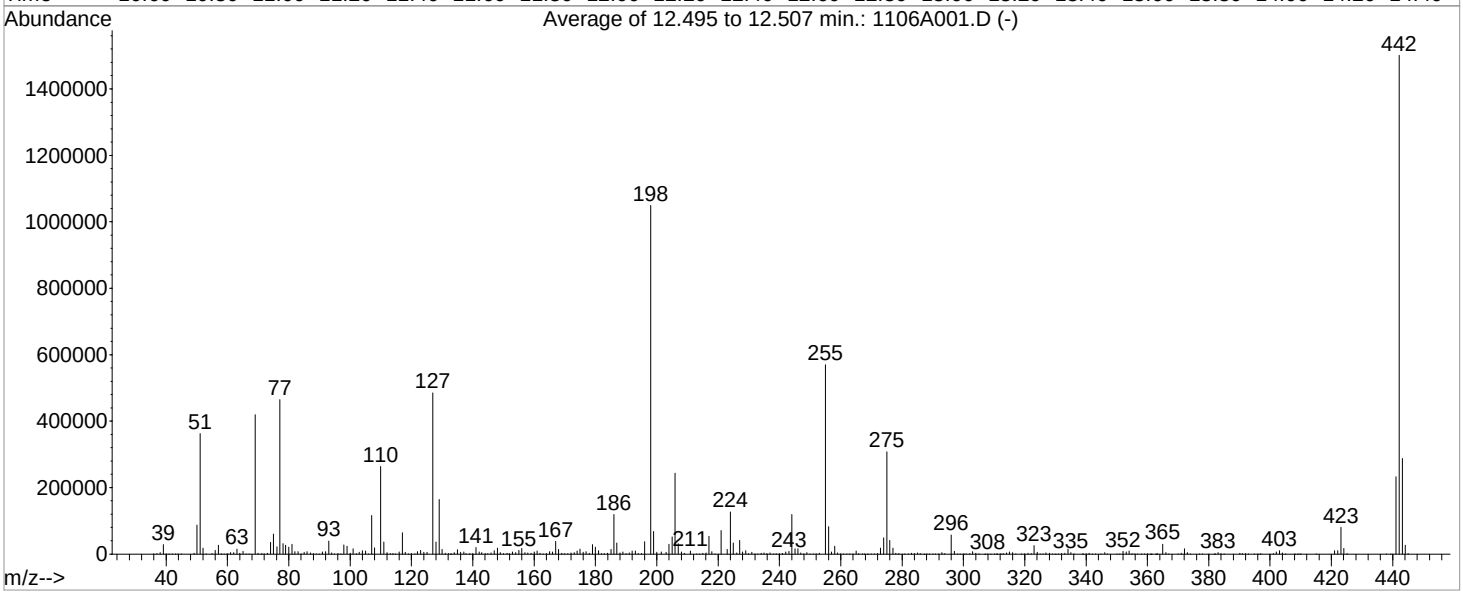
CL 11.08.18

11/15/18

DFTPP

Data File : J:\MS29\DATA\110618A\1106A001.D Vial: 1
Acq On : 6 Nov 2018 1:36 pm Operator: CConover
Sample : MS29 DFTPP @ 50ug/mL | SVM59-86M Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS29\METHODS\SCAN\DFTPPLVI.M (RTE Integrator)
Title : DFTPP





AutoFind: Scans 1625, 1626, 1627; Background Corrected with Scan 1618

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.5	362368	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.0	419434	PASS
70	69	0.00	2	0.5	2091	PASS
127	198	10	80	46.2	485333	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	69.9	1049429	PASS
199	198	5	9	6.5	67882	PASS
275	198	10	60	29.4	308160	PASS
365	442	1	50	2.0	29712	PASS
441	443	0.01	100	80.7	232384	PASS
442	442	30	100	100.0	1500757	PASS
443	442	15	24	19.2	288042	PASS

1st 11/08/18
2nd 11/15/18

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	276	50.10	86818	61.00	4517	72.00	66
37.05	1361	51.10	362368	62.05	4818	73.05	2937
38.10	4265	52.05	17940	63.10	15376	74.05	34752
39.10	28664	53.05	865	64.05	2063	75.00	60330
40.00	950	55.00	1636	65.10	7760	76.10	21285
41.00	862	56.00	11298	66.10	550	77.10	464448
42.00	73	57.00	26112	67.05	399	78.10	31008
43.05	183	58.00	1163	69.00	419434	79.00	26805
43.90	317	58.95	276	70.00	2091	80.00	20337
44.95	685	59.90	116	71.00	76	81.00	29576
49.15	2295	60.15	176	71.20	177	82.00	7490

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.00	7381	94.00	2951	105.00	8782	116.05	6458
84.05	637	94.95	816	106.00	785	117.00	64477
85.00	4931	96.05	1941	107.00	116541	118.00	5015
86.00	7536	97.05	646	108.00	18901	119.00	775
87.05	3377	98.00	27914	110.00	263466	120.00	1465
88.00	1286	99.00	23608	111.00	35768	121.10	599
89.00	767	100.00	2289	112.00	4091	122.00	7563
89.95	166	101.00	15870	113.05	1189	123.00	11620
91.00	6553	102.00	1026	113.90	111	124.00	5091
92.05	6947	103.00	5705	114.05	181	125.05	4999
93.00	38954	104.00	9721	114.90	324	127.00	485333

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	36536	137.85	1498	148.00	18232	159.00	2769
129.00	163968	138.90	555	149.00	4151	160.00	6135
130.00	14119	139.10	416	150.05	1196	161.00	8918
131.00	2657	140.00	1969	151.15	2766	161.95	2830
132.05	1754	141.00	19805	151.95	1413	163.00	888
132.85	739	142.05	6779	152.95	6207	164.05	1339
133.10	232	142.90	4405	154.00	4762	165.00	7048
134.00	4524	144.05	1142	155.00	11019	166.00	6210
135.00	13097	144.90	1264	156.00	16947	167.00	38074
136.00	5043	146.00	3548	157.05	4124	168.00	14376
137.05	5862	147.00	10239	157.95	3859	169.05	2899

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.95	1310	181.00	9871	192.00	8831	205.00	51642
170.95	1890	181.95	1534	193.00	9661	206.00	242794
172.00	3440	182.90	1184	194.00	1946	206.95	30951
173.05	4491	183.95	2178	195.00	1865	208.00	6264
174.00	8743	185.10	13838	196.00	37034	209.00	2051
175.00	15302	186.00	119434	198.00	1049429	210.95	9481
176.05	5698	187.00	33250	199.00	67882	213.00	644
176.95	7483	188.00	3202	200.05	5165	213.95	184
177.95	2398	188.95	5908	201.50	6560	215.00	2039
179.00	28888	189.95	1218	203.00	5378	216.05	3031
180.00	20784	191.05	3292	204.00	28928	217.00	54013

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	7012	231.00	5115	241.05	1812	251.95	793
218.95	802	232.00	862	242.05	6494	253.05	2224
221.00	70418	232.95	915	243.15	8388	255.00	569685
223.00	13865	234.00	2560	244.00	118528	256.00	82557
224.00	126882	235.00	3287	245.05	15648	257.00	6081
225.00	32840	235.95	1937	246.00	16052	258.00	23949
226.05	3367	237.00	3876	247.00	3422	259.00	3758
227.00	40520	238.00	622	247.95	929	259.95	911
228.00	6064	238.95	1577	249.00	4434	260.95	980
229.00	10311	239.95	1505	249.95	850	261.95	208
229.95	1403	240.90	698	251.05	825	262.90	305

Average of 12.495 to 12.507 min.: 1106A001.D

1st 11/08/18
2nd 11/15/18

MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
263.95	799	275.00	308160	285.90	160	297.05	7886
265.00	9411	276.00	40874	286.10	583	298.05	701
265.90	1395	277.00	17460	287.10	60	298.90	126
267.10	81	278.00	2892	288.10	275	300.00	53
267.75	132	278.90	137	288.95	915	300.95	848
268.70	54	279.05	471	290.05	652	302.05	1313
269.90	630	280.90	294	290.95	407	303.05	7672
270.95	931	282.00	521	291.95	933	304.05	2130
272.05	1516	283.05	2107	293.00	4848	305.05	276
273.00	17910	284.00	1401	293.95	1209	307.00	52
274.00	49053	285.05	3538	296.00	57018	307.95	1004

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
308.95	554	317.05	800	329.05	391	341.00	2900
310.05	858	319.00	92	329.90	50	342.00	814
310.80	51	319.95	409	331.10	109	343.10	184
310.95	152	321.05	2286	332.05	1817	344.80	67
312.00	93	322.15	1513	333.05	2438	346.05	4591
312.30	146	323.00	25541	334.05	15259	346.95	1001
312.90	156	324.05	5016	335.05	4150	350.05	232
313.10	520	325.00	406	336.05	522	351.00	621
314.05	3121	326.00	351	338.90	192	352.05	8360
315.00	6609	326.95	3878	339.10	230	353.10	6136
316.00	4363	328.00	2352	340.05	545	354.05	9451

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
355.00	1624	365.00	29712	382.10	82	397.05	201
355.95	197	366.00	4161	383.00	4384	401.05	1091
356.90	76	367.00	277	384.00	1142	402.05	6288
358.00	80	369.95	961	385.00	412	403.05	10557
359.05	776	371.00	2473	390.10	2437	404.00	3832
360.05	128	372.05	15757	391.00	1677	405.10	569
360.90	62	373.05	4131	392.05	1381	408.00	58
361.20	50	374.05	549	392.95	229	408.90	59
362.70	54	377.00	465	394.80	129	409.80	86
363.00	61	377.90	110	395.90	60	410.10	319
363.30	65	381.80	50	396.80	76	415.05	529

Average of 12.495 to 12.507 min.: 1106A001.D
MS29 DFTPP @ 50ug/mL | SVM59-86M
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
421.05	9998	445.05	1524				
422.10	10042						
423.10	80885						
424.05	16936						
425.10	1654						
437.95	201						
439.40	182						
441.10	232384						
442.10	1500757						
443.10	288042						
444.10	26680						

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A002.D Vial: 2
Acq On : 6 Nov 2018 2:05 pm Operator: CConover
Sample : IB Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:39 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	230808	1000.00	ng/ml	0.00

System Monitoring Compounds
2) Terphenyl-d14 0.00 244 0 0.00 ng/ml
Spiked Amount 2500.000 Range 54 - 158 Recovery = 0.00%#

Target Compounds Qvalue

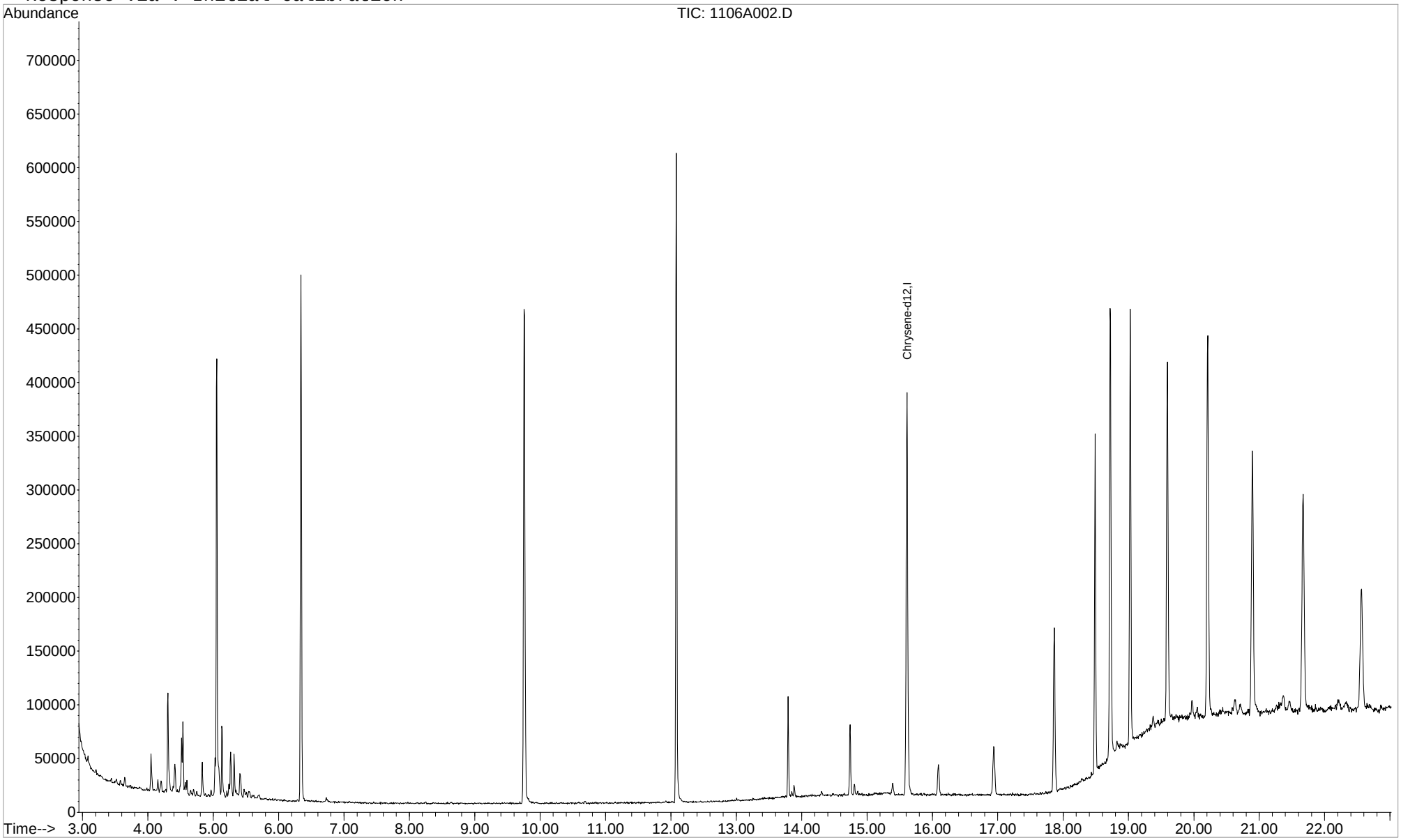
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A002.D Vial: 2
Acq On : 6 Nov 2018 2:05 pm Operator: CConover
Sample : IB Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A003.D Vial: 3
Acq On : 6 Nov 2018 2:33 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.05ppm | SVM59-69C Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:39 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

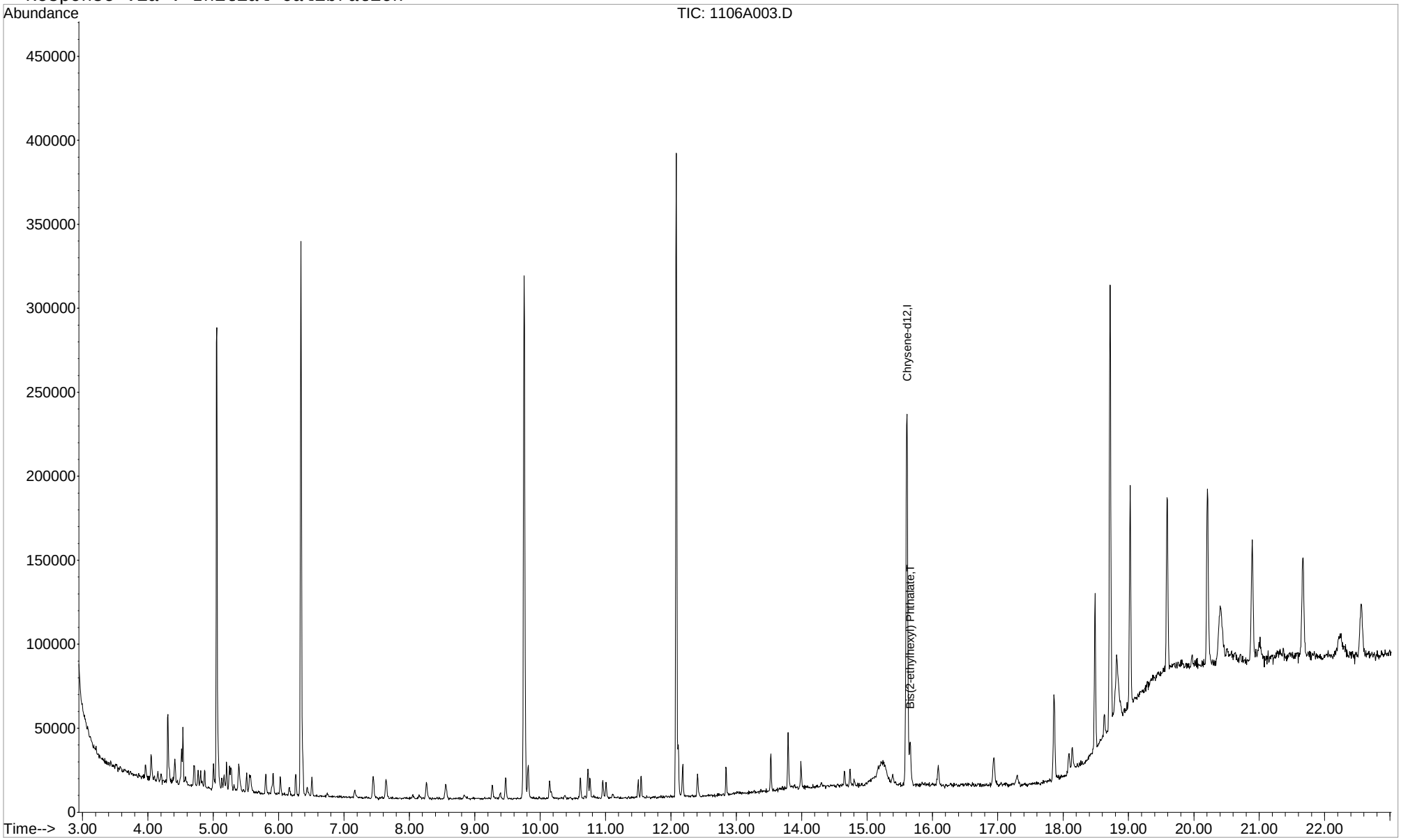
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	148844	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 2500.000	Range 54 - 158		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	5481	54.13	ng/ml	88

(#) = qualifier out of range (m) = manual integration

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A003.D Vial: 3
Acq On : 6 Nov 2018 2:33 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.05ppm | SVM59-69C Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:46 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A004.D Vial: 4
Acq On : 6 Nov 2018 3:01 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.10ppm | SVM59-69D Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:39 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	144602	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 2500.000	Range 54 - 158		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.65	149	11045	112.29	ng/ml	93

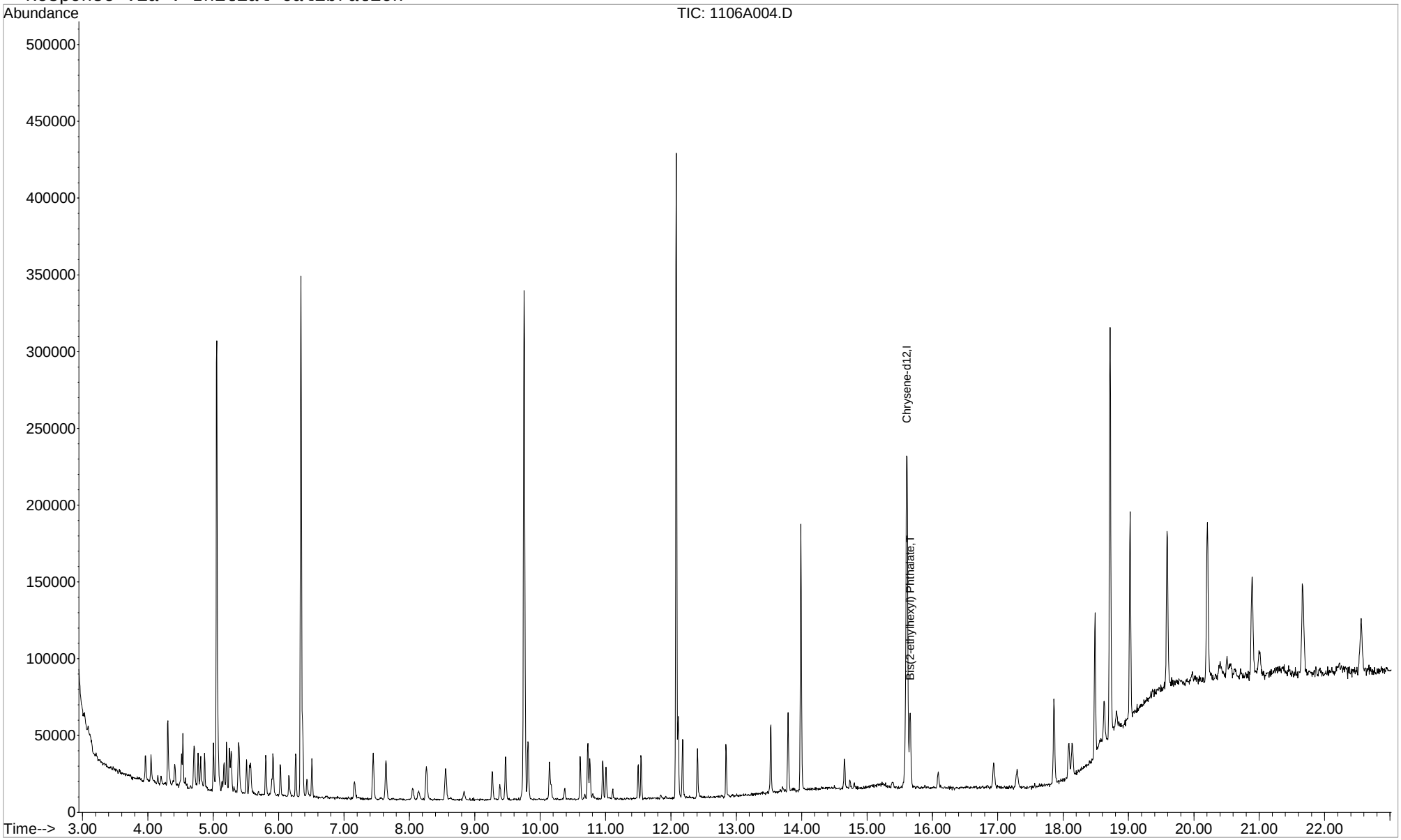
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A004.D Vial: 4
Acq On : 6 Nov 2018 3:01 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.10ppm | SVM59-69D Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:46 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A005.D Vial: 5
Acq On : 6 Nov 2018 3:30 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.20ppm | SVM59-69E Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:39 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	142176	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	31077	263.44	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 10.54%#			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	22178	229.32	ng/ml	92

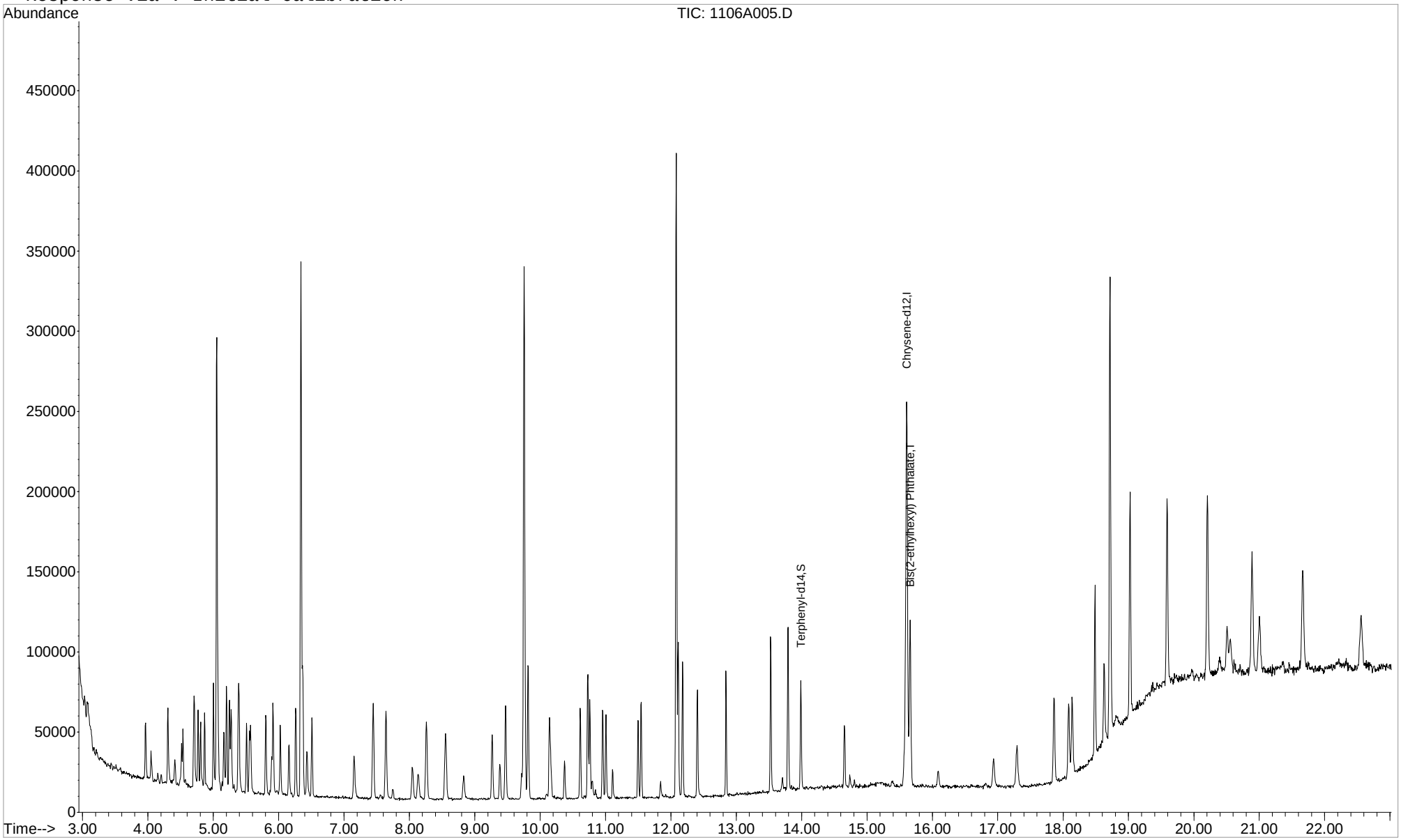
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A005.D Vial: 5
Acq On : 6 Nov 2018 3:30 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.20ppm | SVM59-69E Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A006.D Vial: 6
Acq On : 6 Nov 2018 3:58 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.50ppm | SVM59-69F Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:40 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	166913	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	79507	574.08	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 22.96%#			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.65	149	62022	546.26	ng/ml	100

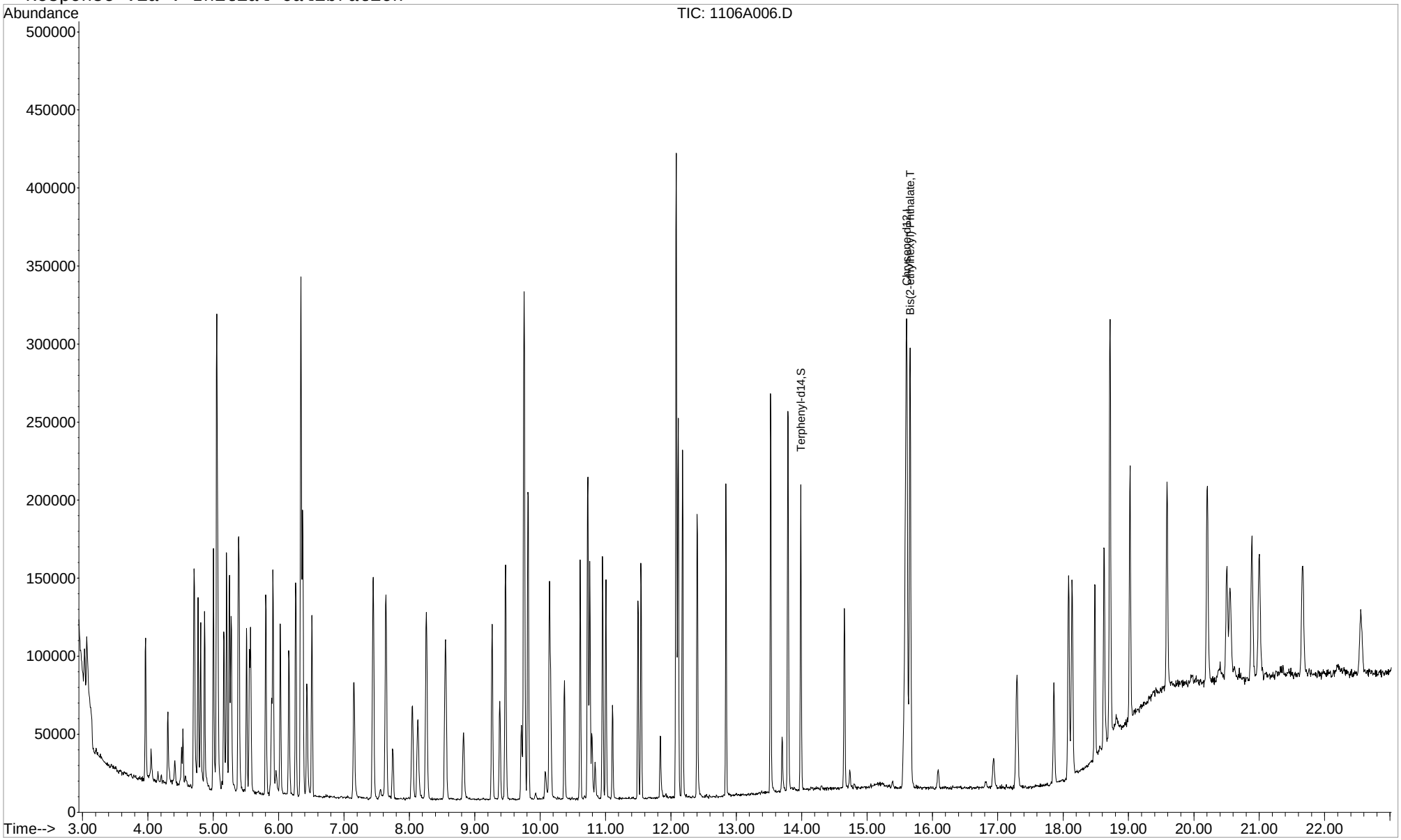
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A006.D Vial: 6
Acq On : 6 Nov 2018 3:58 pm Operator: CConover
Sample : SVO_LL ICAL @ 0.50ppm | SVM59-69F Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A007.D Vial: 7
Acq On : 6 Nov 2018 4:27 pm Operator: CConover
Sample : SVO_LL ICAL @ 1.0ppm | SVM59-69G Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:40 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	169299	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	164429	1170.54	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	46.82%#		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	141121	1225.42	ng/ml	100

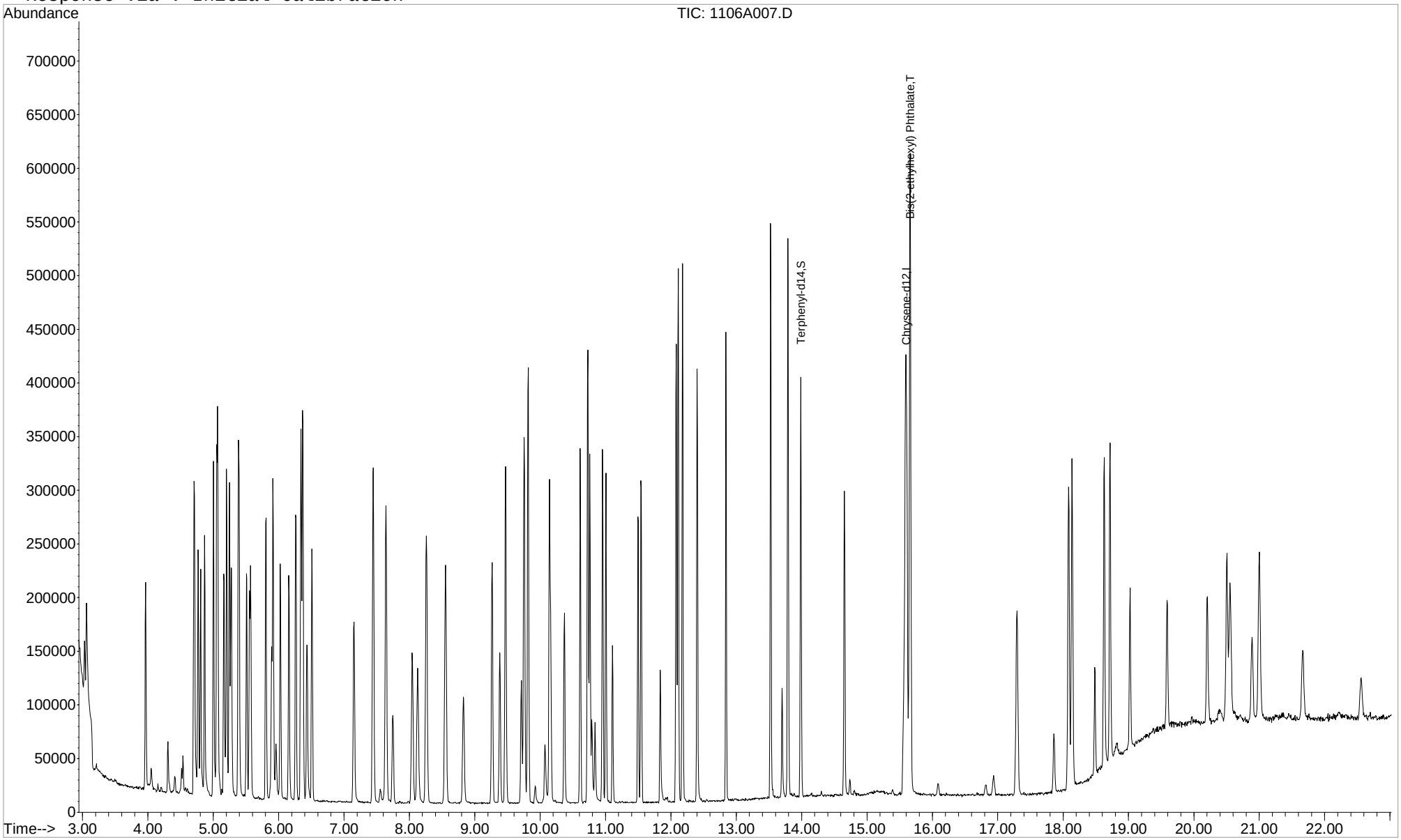
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A007.D Vial: 7
Acq On : 6 Nov 2018 4:27 pm Operator: CConover
Sample : SVO_LL ICAL @ 1.0ppm | SVM59-69G Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A008.D Vial: 8
Acq On : 6 Nov 2018 4:55 pm Operator: CConover
Sample : SVO_LL ICAL @ 2.0ppm | SVM59-69H Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:40 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	176588	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	344198	2349.14	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	93.97%		
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	307407	2559.17	ng/ml	98

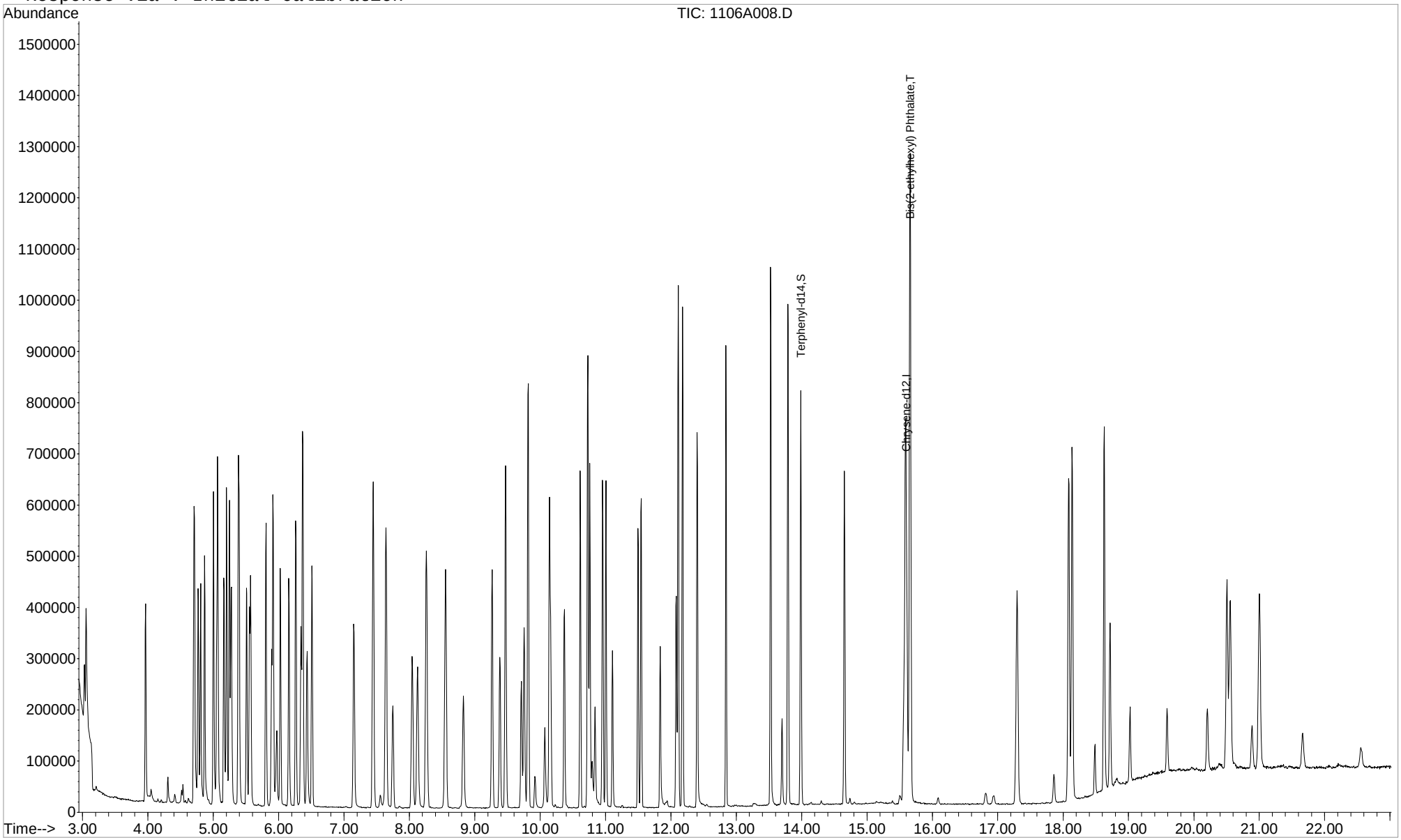
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A008.D Vial: 8
Acq On : 6 Nov 2018 4:55 pm Operator: CConover
Sample : SVO_LL ICAL @ 2.0ppm | SVM59-69H Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A009.D Vial: 9
Acq On : 6 Nov 2018 5:23 pm Operator: CConover
Sample : SVO_LL ICAL @ 3.0ppm | SVM59-69I Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:40 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	172310	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	535859	3748.01	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 149.92%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	489474	4176.05	ng/ml	100

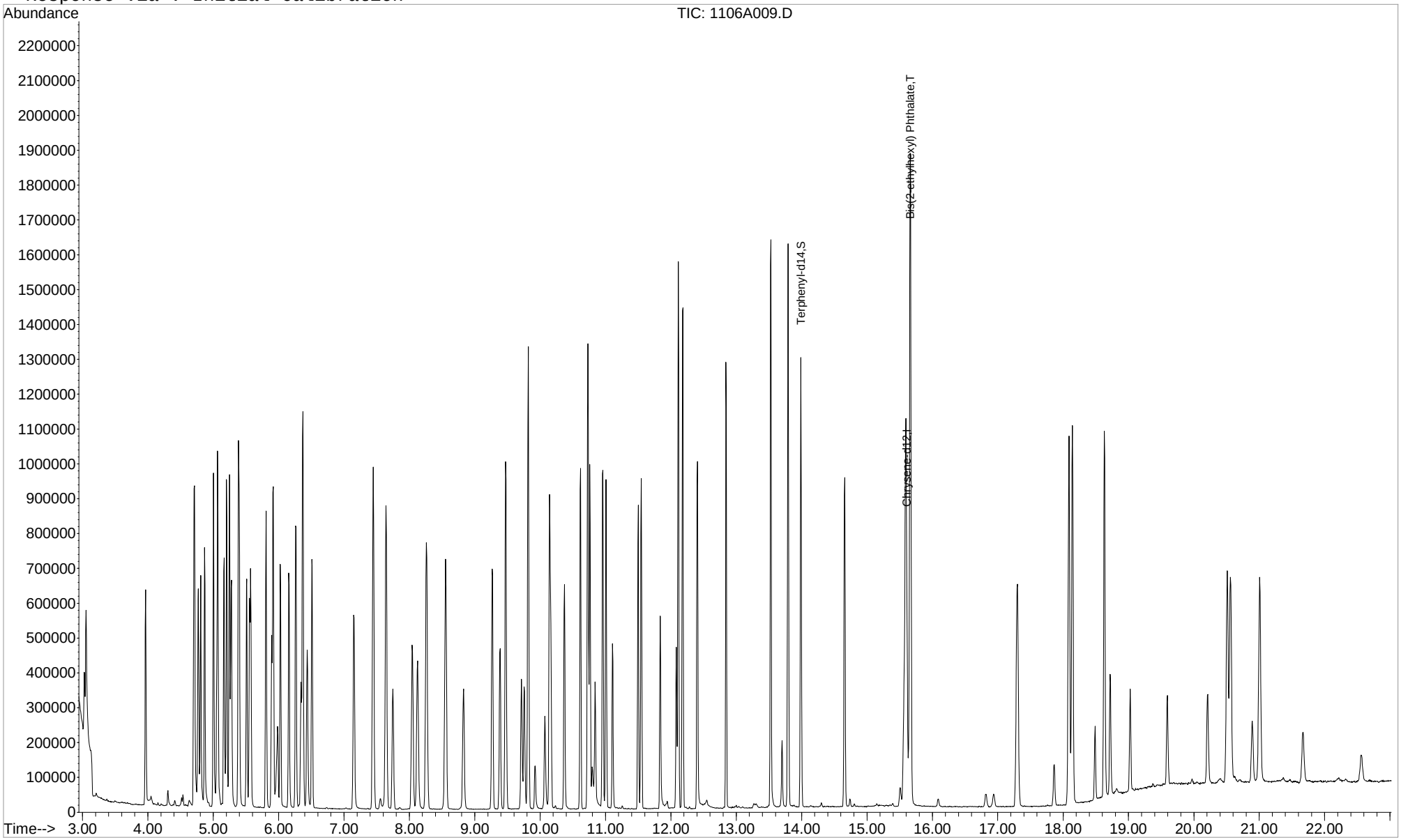
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A009.D Vial: 9
Acq On : 6 Nov 2018 5:23 pm Operator: CConover
Sample : SVO_LL ICAL @ 3.0ppm | SVM59-69I Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A010.D Vial: 10
Acq On : 6 Nov 2018 5:52 pm Operator: CConover
Sample : SVO_LL ICAL @ 5.0ppm | SVM59-69J Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:41 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	167802	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	894650	6425.65	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 257.03%#			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	822835	7208.78	ng/ml	99

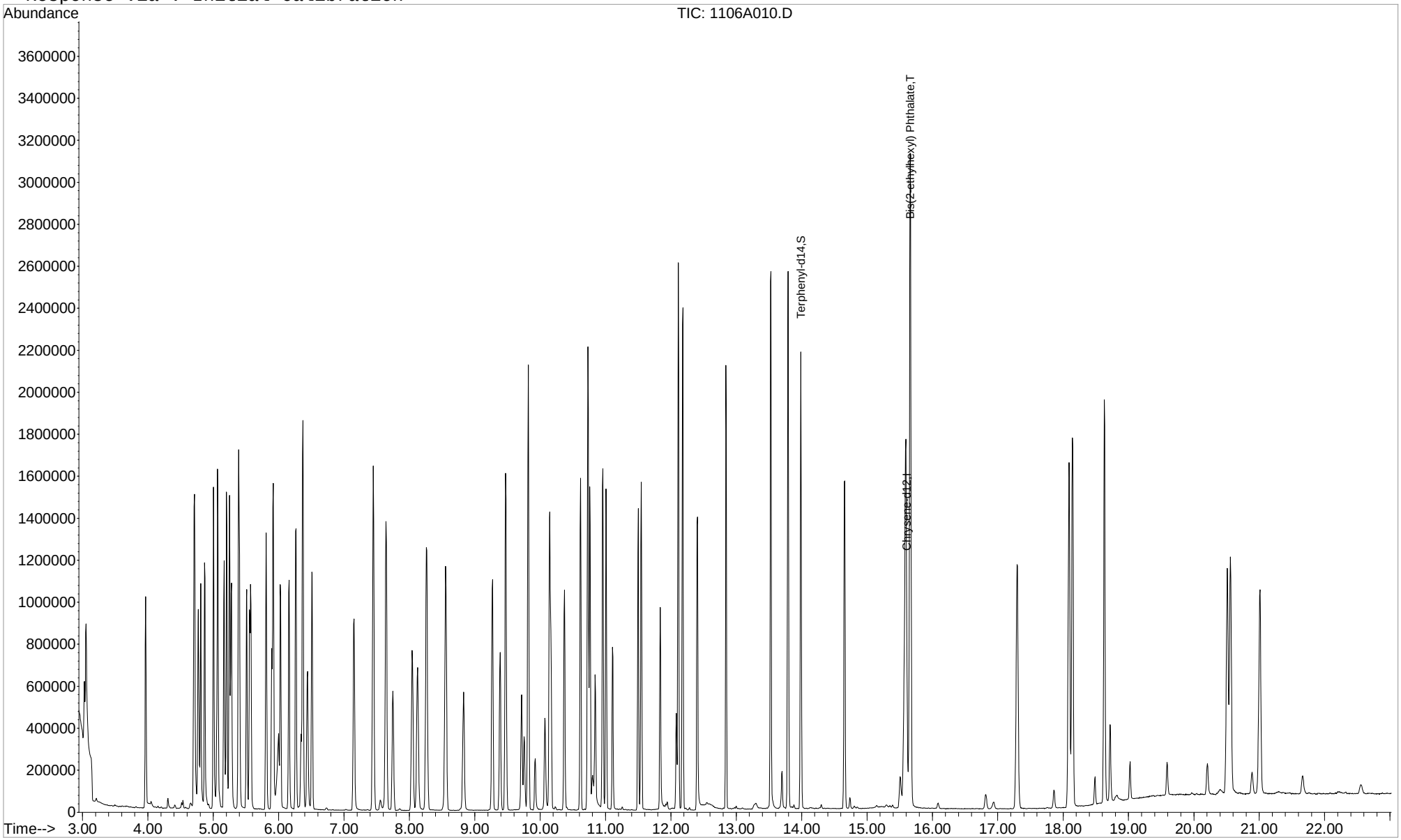
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A010.D Vial: 10
Acq On : 6 Nov 2018 5:52 pm Operator: CConover
Sample : SVO_LL ICAL @ 5.0ppm | SVM59-69J Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A011.D Vial: 11
Acq On : 6 Nov 2018 6:20 pm Operator: CConover
Sample : SVO_LL ICAL @ 7.0ppm | SVM59-69K Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:41 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	178928	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	1281973	8634.98	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 345.40%#			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	1201479	9871.52	ng/ml	99

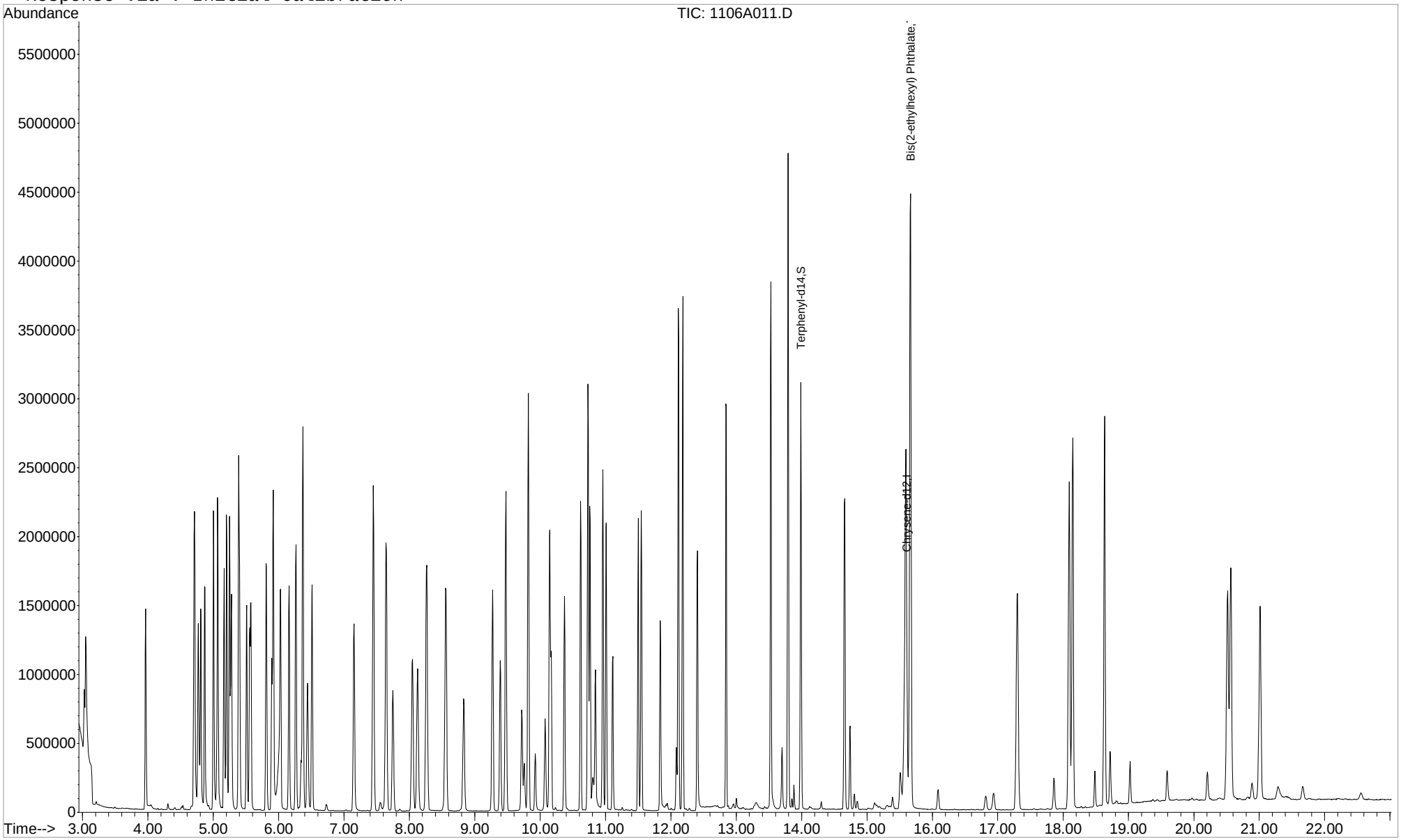
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A011.D Vial: 11
Acq On : 6 Nov 2018 6:20 pm Operator: CConover
Sample : SVO_LL ICAL @ 7.0ppm | SVM59-69K Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A012.D Vial: 12
Acq On : 6 Nov 2018 6:48 pm Operator: CConover
Sample : SVO_LL ICAL @ 10ppm | SVM59-69L Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:44:41 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:44:03 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.62	240	198419	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	1863558	11319.32	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 452.77%#			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	1766907	13091.11	ng/ml	100

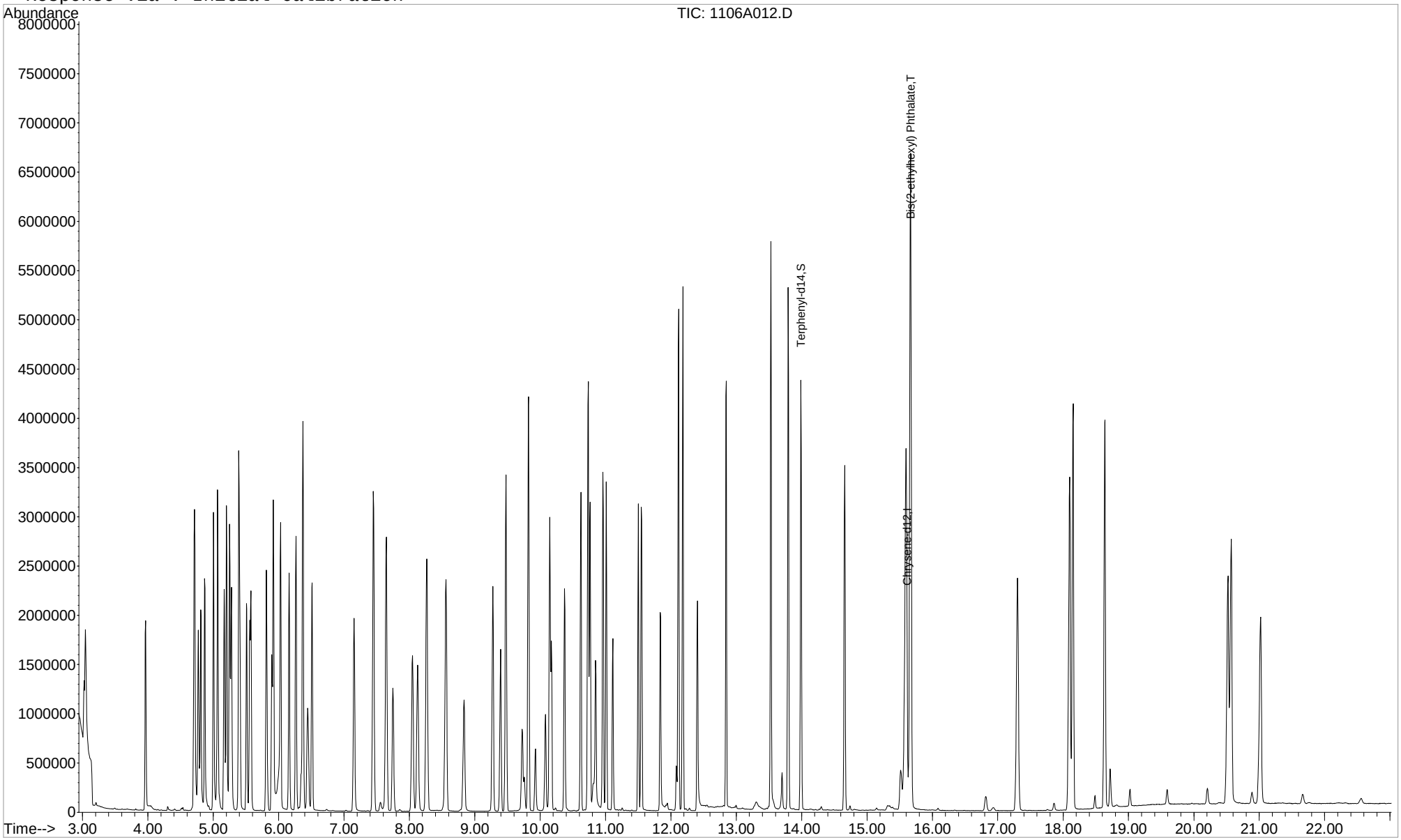
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A012.D Vial: 12
Acq On : 6 Nov 2018 6:48 pm Operator: CConover
Sample : SVO_LL ICAL @ 10ppm | SVM59-69L Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:44 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A013.D Vial: 13
Acq On : 6 Nov 2018 7:17 pm Operator: CConover
Sample : SVO_LL ICV @ 3.0ppm | SVM59-63B Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:50:19 2018 Quant Results File: 110618_BIS ONLY.RES

Quant Method : J:\MS29\M...\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration
DataAcq Meth : 8270_SVOLL

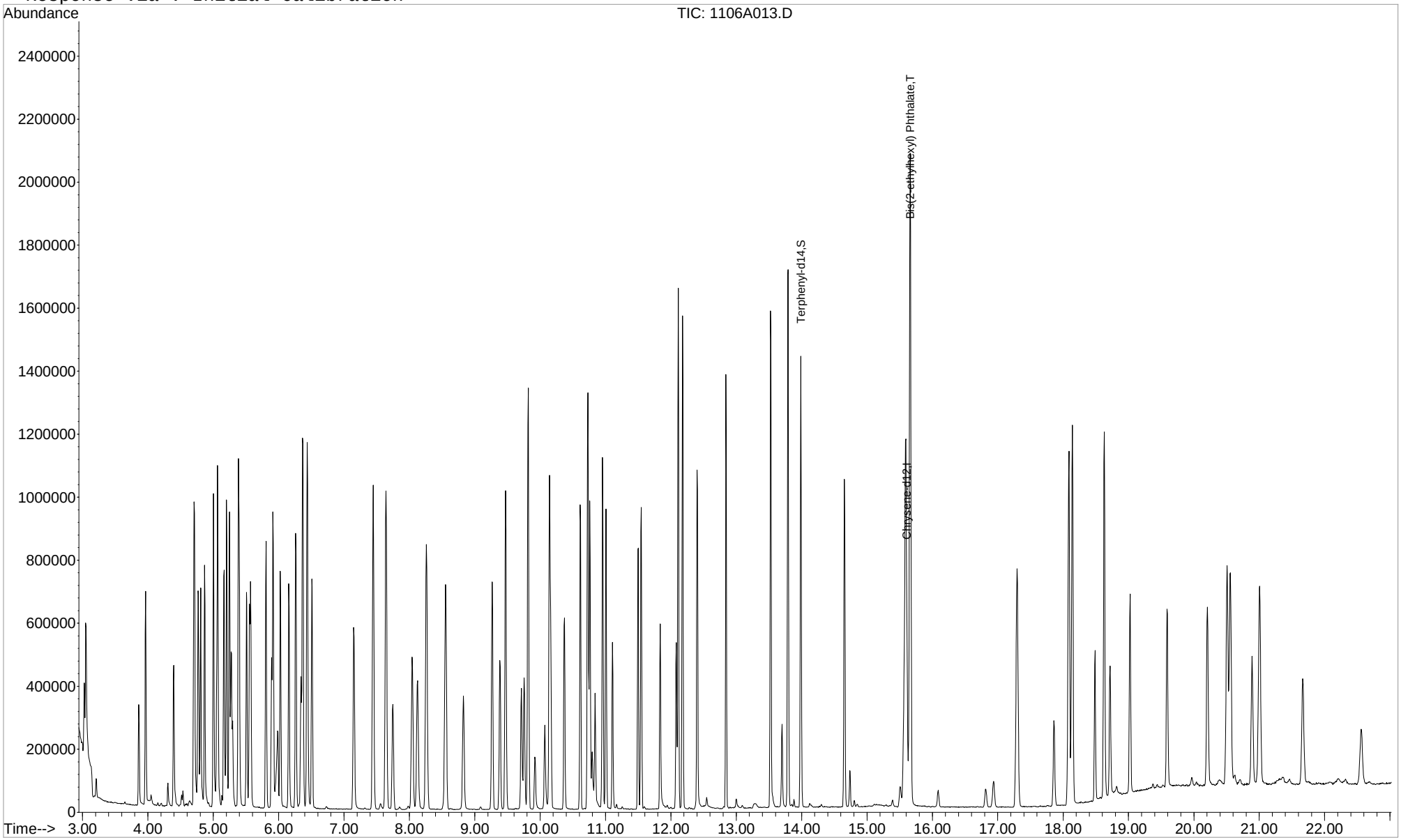
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	15.61	240	207673	1000.00	ng/ml	0.00
System Monitoring Compounds						
2) Terphenyl-d14	13.99	244	588595	2814.16	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 112.57%			
Target Compounds						Qvalue
3) Bis(2-ethylhexyl) Phthalat	15.66	149	518349	2934.82	ng/ml	99

(#) = qualifier out of range (m) = manual integration

1st 11/08/18
2nd 11/15/18

Data File : J:\MS29\DATA\110618A\1106A013.D Vial: 13
Acq On : 6 Nov 2018 7:17 pm Operator: CConover
Sample : SVO_LL ICV @ 3.0ppm | SVM59-63B Inst : MS29
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 15:50 2018 Quant Results File: 110618_BIS ONLY.RES

Method : J:\MS29\METHODS\SCAN\110618_BIS ONLY.M (RTE Integrator)
Title : 8270LL ICAL 15450
Last Update : Thu Nov 08 15:50:04 2018
Response via : Initial Calibration



Injection Log

Directory: J:\MS29\DATA\111418

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1114F001.D	1.	MS29 DFTPP @ 50ug/mL | SVM59-12C		14 Nov 2018 08:54
2	2	1114F002.D	1.	SVO_LL CCV @ 3.0ppm | SVM59-96B		14 Nov 2018 09:22
3	3	1114F003.D	1.	KQ1815727-04 | MB (NR)	uncleaned	14 Nov 2018 09:51
4	4	1114F004.D	1.	KQ1816032-04 | MB		14 Nov 2018 12:03
5	5	1114F005.D	1.	KQ1816032-03 | LCS		14 Nov 2018 12:31
6	6	1114F006.D	1.	KQ1816032-01 | MS		14 Nov 2018 13:00
7	7	1114F007.D	1.	KQ1816032-02 | DMS		14 Nov 2018 13:28
8	8	1114F008.D	1.	K1810683-002		14 Nov 2018 13:56
9	9	1114F009.D	1.	K1810683-001		14 Nov 2018 14:25
10	10	1114F010.D	1.	K1810683-003		14 Nov 2018 14:53
11	11	1114F011.D	1.	K1810683-004		14 Nov 2018 15:21
12	12	1114F012.D	1.	K1810270-001		14 Nov 2018 15:50
13	13	1114F013.D	1.	K1810302-016		14 Nov 2018 16:18
14	14	1114F014.D	1.	KQ1814984-04 | MB	reanalysis	14 Nov 2018 17:31
15	15	1114F015.D	1.	* KQ1815773-03 | MB 10X		14 Nov 2018 17:59
16	16	1114F016.D	1.	KQ1815773-01 | LCS 10X		14 Nov 2018 18:27
17	17	1114F017.D	1.	KQ1815773-02 | DLCS 10X		14 Nov 2018 18:55
18	18	1114F018.D	1.	K1810516-001 10X		14 Nov 2018 19:23
19	19	1114F019.D	1.	K1810083-002 5X		14 Nov 2018 19:52
20	20	1114F020.D	1.	K1810083-003 5X		14 Nov 2018 20:20
21	21	1114F021.D	1.	K1810088-019 5X		14 Nov 2018 20:48
22	22	1114F022.D	1.	KQ1815281-06 | MB	just a check	14 Nov 2018 21:16
23	23	1114F023.D	1.	K1810227-014 | DMS	just a check	14 Nov 2018 21:45
24	24	1114F024.D	1.	KQ1815027-04 | MB	just a check	14 Nov 2018 22:13
25	25	1114F025.D	1.	K1810088-014 | DMS	just a check	14 Nov 2018 22:41

NR

* needs response from PC: looks like it was spiked like an 8270D SVD, not LL

KC1800516
Starlims 615539
CL 11/16/18

Injection Log

Directory: J:\MS29\DATA\110718

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1107F001.D	1.	MS29 DFTPP @ 50ug/mL | SVM59-12C		7 Nov 2018 07:05
2	14	1107F002.D	1.	SVO_LL CCV @ 3.0ppm | SVM59-82G		7 Nov 2018 07:33
3	35	1107F003.D	1.	KQ1814962-04 | MB		7 Nov 2018 08:01
4	36	1107F004.D	1.	KQ1814962-03 | LCS		7 Nov 2018 08:30
5	37	1107F005.D	1.	K1809993-002		7 Nov 2018 08:58
6	38	1107F006.D	1.	K1809993-003		7 Nov 2018 09:26
7	39	1107F007.D	1.	K1809993-004		7 Nov 2018 09:55
8	40	1107F008.D	1.	K1809993-008		7 Nov 2018 10:23
9	41	1107F009.D	1.	K1809993-009		7 Nov 2018 10:51
10	42	1107F010.D	1.	K1809993-010		7 Nov 2018 11:19
11	43	1107F011.D	1.	K1809993-011		7 Nov 2018 11:48
12	44	1107F012.D	1.	K1809993-013		7 Nov 2018 12:16
13	45	1107F013.D	1.	K1809993-014		7 Nov 2018 12:44
14	46	1107F014.D	1.	K1809993-016		7 Nov 2018 13:12
15	47	1107F015.D	1.	K1809993-017		7 Nov 2018 13:41
16	48	1107F016.D	1.	K1809993-018		7 Nov 2018 14:09
17	49	1107F017.D	1.	K1809993-019		7 Nov 2018 14:37
18	50	1107F018.D	1.	K1809993-020		7 Nov 2018 15:05
19	2	1107F019.D	1.	IB		7 Nov 2018 15:34
20	14	1107F020.D	1.	SVO_LL CCV @ 3.0ppm | SVM59-82G		7 Nov 2018 16:02
21	1	1107F021.D	1.	MS29 DFTPP @ 50ug/mL | SVM59-12C		7 Nov 2018 16:31
22	2	1107F022.D	1.	SVO_LL CCV @ 3.0ppm | SVM59-82G		7 Nov 2018 16:59
23	3	1107F023.D	1.	KQ1815727-04 | MB		7 Nov 2018 17:47
24	4	1107F024.D	1.	KQ1815727-03 | LCS		7 Nov 2018 18:15
25	5	1107F025.D	1.	KQ1815727-01 | MS		7 Nov 2018 18:43
26	6	1107F026.D	1.	KQ1815727-02 | DMS		7 Nov 2018 19:12
27	7	1107F027.D	1.	K1810417-022		7 Nov 2018 19:40
28	8	1107F028.D	1.	K1810417-023		7 Nov 2018 20:08
29	9	1107F029.D	1.	K1810417-024		7 Nov 2018 20:37
30	10	1107F030.D	1.	K1810417-025		7 Nov 2018 21:05
31	11	1107F031.D	1.	K1810417-026		7 Nov 2018 21:33
32	12	1107F032.D	1.	K1810510-001		7 Nov 2018 22:01
33	13	1107F033.D	1.	K1810565-001		7 Nov 2018 22:30
34	14	1107F034.D	1.	K1810565-002		7 Nov 2018 22:58
35	15	1107F035.D	1.	KQ1816008-03 | MB		7 Nov 2018 23:27
36	16	1107F036.D	1.	KQ1816008-01 | LCS		7 Nov 2018 23:55
37	17	1107F037.D	1.	KQ1816008-02 | DLCS		8 Nov 2018 00:23
38	18	1107F038.D	1.	K1810679-001		8 Nov 2018 00:52
39	19	1107F039.D	1.	K1810680-001		8 Nov 2018 01:20
40	20	1107F040.D	1.	K1810683-005		8 Nov 2018 01:48
41	1	1107F041.D	1.	MS29 DFTPP @ 50ug/mL | SVM59-12C		8 Nov 2018 02:17
42	2	1107F042.D	1.	SVO_LL CCV @ 3.0ppm | SVM59-82G		8 Nov 2018 02:45
43	21	1107F043.D	1.	KQ1815626-04 | MB		8 Nov 2018 03:13
44	22	1107F044.D	1.	KQ1815626-03 | LCS		8 Nov 2018 03:42
45	23	1107F045.D	1.	KQ1815626-01 | MS		8 Nov 2018 04:10
46	24	1107F046.D	1.	KQ1815626-02 | DMS		8 Nov 2018 04:38
47	25	1107F047.D	1.	K1810270-011		8 Nov 2018 05:07
48	26	1107F048.D	1.	K1810270-004		8 Nov 2018 05:35
49	27	1107F049.D	1.	K1810270-006		8 Nov 2018 06:04
50	28	1107F050.D	1.	K1810270-010		8 Nov 2018 06:32
51	29	1107F051.D	1.	K1810270-012		8 Nov 2018 07:00
52	30	1107F052.D	1.	K1810270-013		8 Nov 2018 07:29
53	31	1107F053.D	1.	K1810270-015		8 Nov 2018 07:57
54	32	1107F054.D	1.	K1810270-016		8 Nov 2018 08:25
55	33	1107F055.D	1.	K1810270-017		8 Nov 2018 08:54

KC1800516
Starlims 614446
CL 11.09.18
12/4/18

Injection Log

Directory: J:\MS29\DATA\110718

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
56	34	1107F056.D	1.	K1810270-018		8 Nov 2018 09:22
57	35	1107F057.D	1.	K1810270-019		8 Nov 2018 09:50
58	36	1107F058.D	1.	K1810270-020		8 Nov 2018 10:19
59	37	1107F059.D	1.	K1810270-029		8 Nov 2018 10:47

CL 11.09.18

11/14/18