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Naval Facilities Engineering Command

Groundwater Sample Results, Level 2 Laboratory Summary, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, Sample Location Report, SDG 1700851

MCAS
El Toro, CA
April 2021

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

July 31, 2017

Vista Work Order No. 1700851

Ms. Nia Nikmanesh
KMEA
2423 Hoover Avenue
National City, CA 91950

Dear Ms. Nikmanesh,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 12, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'MCAS El Toro, BRAC PFAS'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

Vista Work Order No. 1700851
Case Narrative

Sample Condition on Receipt:

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

Modified EPA Method 537

Samples "18-GW-18MCAS03-2-20170710" and "24-GW-24EX11-20170710" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of 14 PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

As requested, an MS/MSD was performed on sample "SGV-GW-SGV Transfer Station-20170710".

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1700851-04	18-GW-18MCAS03-2-20170710	Modified EPA Method 537	13C2-PFTeDA	H	39.3
1700851-05	18-GW-18MCAS02-5-20170710	Modified EPA Method 537	13C3-PFBS	H	181
1700851-06	18-GW-18MCAS07-3-20170710	Modified EPA Method 537	13C2-PFTeDA	H	12.7
1700851-07	24-GW-24MW08B-20170710	Modified EPA Method 537	13C2-PFTeDA	H	7.80
1700851-09	24-GW-24EX11-20170710	Modified EPA Method 537	13C3-PFBS	H	224
1700851-10	SGV-GW-SGV Transfer Station-20170710	Modified EPA Method 537	13C3-PFBS	H	180
1700851-10	SGV-GW-SGV Transfer Station-20170710	Modified EPA Method 537	13C2-PFTeDA	H	26.6
B7G0107-BLK1	B7G0107-BLK1	Modified EPA Method 537	13C3-PFBS	H	153
B7G0107-BLK1	B7G0107-BLK1	Modified EPA Method 537	13C2-PFTeDA	H	20.4
B7G0107-BS1	B7G0107-BS1	Modified EPA Method 537	13C3-PFBS	H	157
B7G0107-BS1	B7G0107-BS1	Modified EPA Method 537	13C2-PFTeDA	H	36.5
B7G0107-MS2	B7G0107-MS2	Modified EPA Method 537	13C2-PFTeDA	H	39.1

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700851-01	SB 01_20170710		10-Jul-17 10:00	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-02	EB 01_20170710		10-Jul-17 11:00	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-03	18-GW-18MCAS03-5-20170710		10-Jul-17 13:30	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-04	18-GW-18MCAS03-2-20170710		10-Jul-17 13:50	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-05	18-GW-18MCAS02-5-20170710		10-Jul-17 11:45	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-06	18-GW-18MCAS07-3-20170710		10-Jul-17 10:15	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-07	24-GW-24MW08B-20170710		10-Jul-17 15:10	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-08	DUP03-20170710		10-Jul-17 13:50	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-09	24-GW-24EX11-20170710		10-Jul-17 16:00	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-10	SGV-GW-SGV Transfer Station-20170710	MS/MSD	10-Jul-17 13:45	12-Jul-17 09:12	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Vista Analytical Laboratory

Sample ID: Method Blank — Modified EPA Method 537

Matrix: Aqueous
Sample Size: 0.125 L

QC Batch: B7G0107
Date Extracted: 24-Jul-2017 10:44

Lab Sample: B7G0107-BLK1
Date Analyzed: 25-Jul-17 14:58 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	5.00	8.00	
PFHxA	ND	2.18	5.00	8.00	
PFHpA	ND	0.591	5.00	8.00	
PFHxS	ND	0.947	5.00	8.00	
PFOA	ND	0.651	5.00	8.00	
PFOS	ND	0.807	5.00	8.00	
PFNA	ND	0.810	5.00	8.00	
PFDA	ND	1.49	5.00	8.00	
MeFOSAA	ND	1.65	5.00	8.00	
PFUnA	ND	1.05	5.00	8.00	
EtFOSAA	ND	1.37	5.00	8.00	
PFDoA	ND	0.792	5.00	8.00	
PFTrDA	ND	0.494	5.00	8.00	
PFTeDA	ND	0.755	5.00	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	153	50 - 150	H
IS	13C2-PFHxA	115	50 - 150	
IS	13C4-PFHpA	97.5	50 - 150	
IS	18O2-PFHxS	120	50 - 150	
IS	13C2-PFOA	103	50 - 150	
IS	13C8-PFOS	120	50 - 150	
IS	13C5-PFNA	92.0	50 - 150	
IS	13C2-PFDA	97.6	50 - 150	
IS	d3-MeFOSAA	90.3	50 - 150	
IS	13C2-PFUnA	85.8	50 - 150	
IS	d5-EtFOSAA	82.1	50 - 150	
IS	13C2-PFDoA	65.5	50 - 150	
IS	13C2-PFTeDA	20.4	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7G0107	Lab Sample:	B7G0107-BS1
Sample Size:	0.125 L	Date Extracted:	24-Jul-2017 10:44	Date Analyzed:	25-Jul-17 14:36 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFBS	73.4	80.0	91.8	70 - 130	IS	13C3-PFBS	157	50 - 150
PFHxA	69.6	80.0	87.0	70 - 130	IS	13C2-PFHxA	124	50 - 150
PFHpA	76.9	80.0	96.1	70 - 130	IS	13C4-PFHpA	97.1	50 - 150
PFHxS	73.3	80.0	91.6	70 - 130	IS	18O2-PFHxS	127	50 - 150
PFOA	74.6	80.0	93.3	70 - 130	IS	13C2-PFOA	117	50 - 150
PFOS	64.1	80.0	80.1	70 - 130	IS	13C8-PFOS	125	50 - 150
PFNA	78.4	80.0	98.0	70 - 130	IS	13C5-PFNA	108	50 - 150
PFDA	73.6	80.0	92.0	70 - 130	IS	13C2-PFDA	104	50 - 150
MeFOSAA	71.4	80.0	89.2	70 - 130	IS	d3-MeFOSAA	107	50 - 150
PFUnA	74.4	80.0	93.0	70 - 130	IS	13C2-PFUnA	91.1	50 - 150
EtFOSAA	72.7	80.0	90.9	70 - 130	IS	d5-EtFOSAA	102	50 - 150
PFDoA	74.3	80.0	92.9	70 - 130	IS	13C2-PFDoA	90.7	50 - 150
PFTrDA	49.1	80.0	61.4	60 - 130	IS	13C2-PFTeDA	36.5	50 - 150
PFTeDA	74.6	80.0	93.3	70 - 130				

LCL-UCL - Lower control limit - upper control limit

Sample ID: SB 01_20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 10:00
Location:

Sample Data

Matrix: Water
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700851-01 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:12 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.86	5.21	8.31	
PFHxA	ND	2.26	5.21	8.31	
PFHpA	ND	0.614	5.21	8.31	
PFHxS	ND	0.984	5.21	8.31	
PFOA	ND	0.676	5.21	8.31	
PFOS	ND	0.838	5.21	8.31	
PFNA	ND	0.842	5.21	8.31	
PFDA	ND	1.55	5.21	8.31	
MeFOSAA	ND	1.71	5.21	8.31	
PFUnA	ND	1.09	5.21	8.31	
EtFOSAA	ND	1.42	5.21	8.31	
PFDoA	ND	0.823	5.21	8.31	
PFTrDA	ND	0.513	5.21	8.31	
PFTeDA	ND	0.784	5.21	8.31	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	139	50 - 150	
IS	13C2-PFHxA	110	50 - 150	
IS	13C4-PFHpA	93.7	50 - 150	
IS	18O2-PFHxS	114	50 - 150	
IS	13C2-PFOA	103	50 - 150	
IS	13C8-PFOS	104	50 - 150	
IS	13C5-PFNA	98.6	50 - 150	
IS	13C2-PFDA	86.2	50 - 150	
IS	d3-MeFOSAA	80.5	50 - 150	
IS	13C2-PFUnA	77.8	50 - 150	
IS	d5-EtFOSAA	78.5	50 - 150	
IS	13C2-PFDoA	79.2	50 - 150	
IS	13C2-PFTeDA	89.1	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: EB 01_20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 11:00
Location:

Sample Data

Matrix: Water
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700851-02 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:22 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.87	5.21	8.36	
PFHxA	ND	2.28	5.21	8.36	
PFHpA	ND	0.618	5.21	8.36	
PFHxS	ND	0.990	5.21	8.36	
PFOA	ND	0.680	5.21	8.36	
PFOS	ND	0.843	5.21	8.36	
PFNA	ND	0.846	5.21	8.36	
PFDA	ND	1.56	5.21	8.36	
MeFOSAA	ND	1.72	5.21	8.36	
PFUnA	ND	1.10	5.21	8.36	
EtFOSAA	ND	1.43	5.21	8.36	
PFDoA	ND	0.828	5.21	8.36	
PFTrDA	ND	0.516	5.21	8.36	
PFTeDA	ND	0.789	5.21	8.36	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	134	50 - 150	
IS	13C2-PFHxA	102	50 - 150	
IS	13C4-PFHpA	85.7	50 - 150	
IS	18O2-PFHxS	101	50 - 150	
IS	13C2-PFOA	99.8	50 - 150	
IS	13C8-PFOS	91.9	50 - 150	
IS	13C5-PFNA	88.8	50 - 150	
IS	13C2-PFDA	86.3	50 - 150	
IS	d3-MeFOSAA	79.7	50 - 150	
IS	13C2-PFUnA	85.3	50 - 150	
IS	d5-EtFOSAA	78.2	50 - 150	
IS	13C2-PFDoA	80.5	50 - 150	
IS	13C2-PFTeDA	93.8	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS03-5-20170710 — Modified EPA Method 537

Client Data

Name:	KMEA
Project:	MCAS El Toro, BRAC PFAS
Date Collected:	10-Jul-2017 13:30
Location:	

Sample Data

Matrix:	Groundwater
Sample Size:	0.116 L

Laboratory Data

Lab Sample:	1700851-03	Date Received:	12-Jul-2017 9:12
QC Batch:	B7G0107	Date Extracted:	24-Jul-2017 10:44
Date Analyzed:	28-Jul-17 19:33 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	4.82	1.93	5.39	8.62	J
PFHxA	25.7	2.35	5.39	8.62	
PFHpA	4.53	0.637	5.39	8.62	J
PFHxS	26.5	1.02	5.39	8.62	
PFOA	34.8	0.702	5.39	8.62	
PFOS	14.9	0.870	5.39	8.62	
PFNA	ND	0.873	5.39	8.62	
PFDA	ND	1.61	5.39	8.62	
MeFOSAA	ND	1.78	5.39	8.62	
PFUnA	ND	1.13	5.39	8.62	
EtFOSAA	ND	1.48	5.39	8.62	
PFDoA	ND	0.853	5.39	8.62	
PFTrDA	ND	0.532	5.39	8.62	
PFTeDA	ND	0.814	5.39	8.62	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	139	50 - 150	
IS	13C2-PFHxA	102	50 - 150	
IS	13C4-PFHpA	80.5	50 - 150	
IS	18O2-PFHxS	102	50 - 150	
IS	13C2-PFOA	101	50 - 150	
IS	13C8-PFOS	102	50 - 150	
IS	13C5-PFNA	99.0	50 - 150	
IS	13C2-PFDA	92.4	50 - 150	
IS	d3-MeFOSAA	74.0	50 - 150	
IS	13C2-PFUnA	80.7	50 - 150	
IS	d5-EtFOSAA	70.4	50 - 150	
IS	13C2-PFDoA	71.3	50 - 150	
IS	13C2-PFTeDA	58.4	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS03-2-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 13:50
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.116 L

Laboratory Data

Lab Sample: 1700851-04 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 26-Jul-17 11:34 Column: BEH C18
28-Jul-17 19:44 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	57.3	1.93	5.39	8.61	
PFHxA	331	2.35	5.39	8.61	
PFHpA	92.0	0.636	5.39	8.61	
PFHxS	714	10.2	53.9	86.1	D
PFOA	3720	7.00	53.9	86.1	D
PFOS	106	0.868	5.39	8.61	
PFNA	1.42	0.871	5.39	8.61	J
PFDA	ND	1.60	5.39	8.61	
MeFOSAA	ND	1.77	5.39	8.61	
PFUnA	ND	1.13	5.39	8.61	
EtFOSAA	ND	1.47	5.39	8.61	
PFDoA	ND	0.852	5.39	8.61	
PFTrDA	ND	0.531	5.39	8.61	
PFTeDA	ND	0.812	5.39	8.61	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	146	50 - 150	
IS	13C2-PFHxA	104	50 - 150	
IS	13C4-PFHpA	85.2	50 - 150	
IS	18O2-PFHxS	130	50 - 150	D
IS	13C2-PFOA	104	50 - 150	D
IS	13C8-PFOS	103	50 - 150	
IS	13C5-PFNA	92.8	50 - 150	
IS	13C2-PFDA	94.8	50 - 150	
IS	d3-MeFOSAA	87.7	50 - 150	
IS	13C2-PFUnA	99.1	50 - 150	
IS	d5-EtFOSAA	86.8	50 - 150	
IS	13C2-PFDoA	79.6	50 - 150	
IS	13C2-PFTeDA	39.3	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS02-5-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 11:45
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700851-05 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 26-Jul-17 12:18 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.85	5.17	8.26	
PFHxA	5.03	2.25	5.17	8.26	J
PFHpA	1.81	0.610	5.17	8.26	J
PFHxS	48.3	0.978	5.17	8.26	
PFOA	15.1	0.672	5.17	8.26	
PFOS	7.91	0.833	5.17	8.26	J
PFNA	ND	0.837	5.17	8.26	
PFDA	ND	1.54	5.17	8.26	
MeFOSAA	ND	1.70	5.17	8.26	
PFUnA	ND	1.08	5.17	8.26	
EtFOSAA	ND	1.41	5.17	8.26	
PFDoA	ND	0.818	5.17	8.26	
PFTrDA	ND	0.510	5.17	8.26	
PFTeDA	ND	0.780	5.17	8.26	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	181	50 - 150	H
IS	13C2-PFHxA	130	50 - 150	
IS	13C4-PFHpA	106	50 - 150	
IS	18O2-PFHxS	133	50 - 150	
IS	13C2-PFOA	133	50 - 150	
IS	13C8-PFOS	134	50 - 150	
IS	13C5-PFNA	126	50 - 150	
IS	13C2-PFDA	117	50 - 150	
IS	d3-MeFOSAA	133	50 - 150	
IS	13C2-PFUnA	93.4	50 - 150	
IS	d5-EtFOSAA	134	50 - 150	
IS	13C2-PFDoA	97.9	50 - 150	
IS	13C2-PFTeDA	63.6	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS07-3-20170710 — Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 10:15
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.117 L

Laboratory Data

Lab Sample: 1700851-06 — Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 — Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:55 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	2.35	1.91	5.34	8.52	J
PFHxA	9.72	2.32	5.34	8.52	
PFHpA	2.50	0.630	5.34	8.52	J
PFHxS	43.4	1.01	5.34	8.52	
PFOA	81.2	0.694	5.34	8.52	
PFOS	20.3	0.860	5.34	8.52	
PFNA	ND	0.863	5.34	8.52	
PFDA	ND	1.59	5.34	8.52	
MeFOSAA	ND	1.76	5.34	8.52	
PFUnA	ND	1.12	5.34	8.52	
EtFOSAA	ND	1.46	5.34	8.52	
PFDoA	ND	0.844	5.34	8.52	
PFTrDA	ND	0.526	5.34	8.52	
PFTeDA	ND	0.804	5.34	8.52	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	137	50 - 150	
IS	13C2-PFHxA	97.0	50 - 150	
IS	13C4-PFHpA	88.6	50 - 150	
IS	18O2-PFHxS	102	50 - 150	
IS	13C2-PFOA	99.6	50 - 150	
IS	13C8-PFOS	93.1	50 - 150	
IS	13C5-PFNA	92.3	50 - 150	
IS	13C2-PFDA	82.7	50 - 150	
IS	d3-MeFOSAA	97.0	50 - 150	
IS	13C2-PFUnA	82.5	50 - 150	
IS	d5-EtFOSAA	87.0	50 - 150	
IS	13C2-PFDoA	52.7	50 - 150	
IS	13C2-PFTeDA	12.7	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 24-GW-24MW08B-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 15:10
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700851-07 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 20:05 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	10.8	1.86	5.21	8.30	
PFHxA	38.0	2.26	5.21	8.30	
PFHpA	5.90	0.613	5.21	8.30	J
PFHxS	18.6	0.983	5.21	8.30	
PFOA	30.4	0.675	5.21	8.30	
PFOS	1.58	0.837	5.21	8.30	J
PFNA	ND	0.840	5.21	8.30	
PFDA	ND	1.55	5.21	8.30	
MeFOSAA	ND	1.71	5.21	8.30	
PFUnA	ND	1.09	5.21	8.30	
EtFOSAA	ND	1.42	5.21	8.30	
PFDoA	ND	0.822	5.21	8.30	
PFTrDA	ND	0.513	5.21	8.30	
PFTeDA	ND	0.783	5.21	8.30	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	130	50 - 150	
IS	13C2-PFHxA	103	50 - 150	
IS	13C4-PFHpA	84.7	50 - 150	
IS	18O2-PFHxS	100	50 - 150	
IS	13C2-PFOA	104	50 - 150	
IS	13C8-PFOS	98.9	50 - 150	
IS	13C5-PFNA	102	50 - 150	
IS	13C2-PFDA	97.9	50 - 150	
IS	d3-MeFOSAA	93.0	50 - 150	
IS	13C2-PFUnA	92.2	50 - 150	
IS	d5-EtFOSAA	82.2	50 - 150	
IS	13C2-PFDoA	53.1	50 - 150	
IS	13C2-PFTeDA	7.80	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: DUP03-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 13:50
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700851-08 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 20:16 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	80.5	1.85	5.17	8.28	
PFHxA	267	2.26	5.17	8.28	
PFHpA	50.9	0.612	5.17	8.28	
PFHxS	264	0.981	5.17	8.28	
PFOA	232	0.674	5.17	8.28	
PFOS	407	0.836	5.17	8.28	
PFNA	8.17	0.839	5.17	8.28	J
PFDA	ND	1.54	5.17	8.28	
MeFOSAA	ND	1.71	5.17	8.28	
PFUnA	ND	1.09	5.17	8.28	
EtFOSAA	ND	1.42	5.17	8.28	
PFDoA	ND	0.820	5.17	8.28	
PFTrDA	ND	0.512	5.17	8.28	
PFTeDA	ND	0.782	5.17	8.28	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	132	50 - 150	
IS	13C2-PFHxA	104	50 - 150	
IS	13C4-PFHpA	84.1	50 - 150	
IS	18O2-PFHxS	106	50 - 150	
IS	13C2-PFOA	104	50 - 150	
IS	13C8-PFOS	106	50 - 150	
IS	13C5-PFNA	99.7	50 - 150	
IS	13C2-PFDA	95.3	50 - 150	
IS	d3-MeFOSAA	83.9	50 - 150	
IS	13C2-PFUnA	92.7	50 - 150	
IS	d5-EtFOSAA	78.9	50 - 150	
IS	13C2-PFDoA	82.6	50 - 150	
IS	13C2-PFTeDA	50.7	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 24-GW-24EX11-20170710

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	KMEA	Matrix:	Groundwater	Lab Sample:	1700851-09	Date Received:	12-Jul-2017 9:12
Project:	MCAS El Toro, BRAC PFAS	Sample Size:	0.114 L	QC Batch:	B7G0107	Date Extracted:	24-Jul-2017 10:44
Date Collected:	10-Jul-2017 16:00			Date Analyzed:	26-Jul-17 11:45 Column: BEH C18		
Location:					28-Jul-17 20:27 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	64.9	1.97	5.48	8.78	
PFHxA	403	2.39	5.48	8.78	
PFHpA	94.2	0.649	5.48	8.78	
PFHxS	633	1.04	5.48	8.78	
PFOA	2600	7.15	54.8	87.8	D
PFOS	126	0.886	5.48	8.78	
PFNA	2.30	0.889	5.48	8.78	J
PFDA	ND	1.64	5.48	8.78	
MeFOSAA	ND	1.81	5.48	8.78	
PFUnA	ND	1.15	5.48	8.78	
EtFOSAA	ND	1.50	5.48	8.78	
PFDoA	ND	0.870	5.48	8.78	
PFTrDA	ND	0.542	5.48	8.78	
PFTeDA	ND	0.829	5.48	8.78	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	224	50 - 150	H
IS	13C2-PFHxA	116	50 - 150	
IS	13C4-PFHpA	99.8	50 - 150	
IS	18O2-PFHxS	118	50 - 150	
IS	13C2-PFOA	140	50 - 150	D
IS	13C8-PFOS	110	50 - 150	
IS	13C5-PFNA	98.7	50 - 150	
IS	13C2-PFDA	88.3	50 - 150	
IS	d3-MeFOSAA	109	50 - 150	
IS	13C2-PFUnA	97.3	50 - 150	
IS	d5-EtFOSAA	107	50 - 150	
IS	13C2-PFDoA	106	50 - 150	
IS	13C2-PFTeDA	127	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: SGV-GW-SGV Transfer Station-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 13:45
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700851-10 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 26-Jul-17 12:28 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	76.0	1.86	5.17	8.30	
PFHxA	268	2.26	5.17	8.30	
PFHpA	48.8	0.613	5.17	8.30	
PFHxS	295	0.982	5.17	8.30	
PFOA	234	0.675	5.17	8.30	
PFOS	395	0.837	5.17	8.30	
PFNA	8.39	0.840	5.17	8.30	
PFDA	ND	1.55	5.17	8.30	
MeFOSAA	ND	1.71	5.17	8.30	
PFUnA	ND	1.09	5.17	8.30	
EtFOSAA	ND	1.42	5.17	8.30	
PFDoA	ND	0.821	5.17	8.30	
PFTrDA	ND	0.512	5.17	8.30	
PFTeDA	ND	0.783	5.17	8.30	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	180	50 - 150	H
IS	13C2-PFHxA	116	50 - 150	
IS	13C4-PFHpA	97.0	50 - 150	
IS	18O2-PFHxS	121	50 - 150	
IS	13C2-PFOA	124	50 - 150	
IS	13C8-PFOS	120	50 - 150	
IS	13C5-PFNA	122	50 - 150	
IS	13C2-PFDA	127	50 - 150	
IS	d3-MeFOSAA	128	50 - 150	
IS	13C2-PFUnA	104	50 - 150	
IS	d5-EtFOSAA	101	50 - 150	
IS	13C2-PFDoA	77.4	50 - 150	
IS	13C2-PFTeDA	26.6	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Matrix Spike Results

Modified EPA Method 537

Source Client ID:	SGV-GW-SGV Transfer Station-2017(	QC Batch:	B7G0107	Lab Sample:	B7G0107-MS2/B7G0107-MSD2
Source LabNumber:	1700851-10	Date Extracted:	24-Jul-2017 10:44	Date Analyzed:	28-Jul-17 20:38 Column: BEH C18
Matrix:	Aqueous				28-Jul-17 20:49 Column: BEH C18
Sample Size:	0.119/0.121 L				

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFBS	83.7	105		82.7	102	2.90		70 - 130	25
PFHxA	83.7	115		82.7	81.5	**34.1**	H	70 - 130	25
PFHpA	83.7	102		82.7	97.6	4.41		70 - 130	25
PFHxS	83.7	**52.4**	H	82.7	96.0	**58.8**	H	70 - 130	25
PFOA	83.7	73.8		82.7	96.6	**26.8**	H	70 - 130	25
PFOS	83.7	**139**	H	82.7	**169**	19.5	H	70 - 130	25
PFNA	83.7	105		82.7	99.0	5.88		70 - 130	25
PFDA	83.7	100		82.7	98.2	1.82		70 - 130	25
MeFOSAA	83.7	99.4		82.7	102	2.58		70 - 130	25
PFUnA	83.7	103		82.7	97.4	5.59		70 - 130	25
EtFOSAA	83.7	98.3		82.7	110	11.2		70 - 130	25
PFDoA	83.7	101		82.7	104	2.93		70 - 130	25
PFTrDA	83.7	87.3		82.7	87.5	0.229		60 - 130	25
PFTeDA	83.7	96.6		82.7	100	3.46		70 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C3-PFBS	143		140	
IS	13C2-PFHxA	104		107	
IS	13C4-PFHpA	91.9		89.6	
IS	18O2-PFHxS	106		106	
IS	13C2-PFOA	104		105	
IS	13C8-PFOS	95.8		96.7	
IS	13C5-PFNA	97.6		101	
IS	13C2-PFDA	93.0		92.2	
IS	d3-MeFOSAA	83.4		94.7	
IS	13C2-PFUnA	83.6		104	
IS	d5-EtFOSAA	76.1		86.3	
IS	13C2-PFDoA	67.4		93.6	
IS	13C2-PFTeDA	39.1	H	67.0	

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Reporting Limit/LOQ.**
M	**Estimated Maximum Possible Concentration. (CA Region 2 projects only)**
*****	**See Cover Letter**
Conc.	**Concentration**
NA	**Not applicable**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
Nevada Division of Environmental Protection	CA004132017-1
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Vista Analytical

1104 Windfield Way
El Dorado Hills, CA 95762
TEL: 916-673-1520

1700851

Vista PM: Karen Volpendesta

-0.50

CHAIN OF CUSTODY RECORD

DATE: 7/10/2017

PAGE: 1 OF 1

LABORATORY CLIENT: AMEC Foster Wheeler E & I, Inc.	CLIENT PROJECT NAME / NUMBER: MCAS El Toro, BRAC PFAS
ADDRESS: 9210 Sky Park Court	P.O. NO.: TO 008
CITY: San Diego, CA 92123	PROJECT CONTACT: Medora Hackler/Marie Bevier
TEL: 503.639.3400 / E-Mail: medora.hackler@amecfw.com / E-MAIL: marie.bevier@amecfw.com	CONTRACT NO.: N62473-16-D-2405
	SAMPLER(S): (SIGNATURE) [signature]
	LAB USE ONLY

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	QC Level	PFOA, PFOS, and PFBS (U.S. EPA 537 Mod.)
	SB01	7/10/17	10:00	BW	2		X
	EB01		11:00	"	2		X
	18-GW-18MCAS03-5-20170710		13:30	GW	2		X
	18-GW-18MCAS03-2-20170710		13:50		2		X
	18-GW-18MCAS02-5-20170710		11:45		2		X
	18-GW-18MCAS07-3-20170710		10:15		2		X
	24-GW-24MW08B-20170710		15:10		2		X
*	SGU-GW-SGU Transfer Station-20170710		13:45		6	IV	X MS / MSD
	DUP03-20170710		13:50		2		X
	24-GW-24EX11-20170710		16:00		2		X

Relinquished by: (Signature)	Received by: (Signature) / Carrier Tracking Number	Date:	Time:
[signature]	FedEx	7/10/17	17:00
FedEx [signature] 07/12/17	[signature]	07/12/17	0900

Sample logged in to work order 1700859 [signature] 7/12/17

Vista Analytical Laboratory

Sample Log-in Checklist

Vista Work Order #: 1700851 **TAT** 14

Samples Arrival:	**Date/Time** 07/12/17 0912	**Initials:** VBB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 07/12/17 1041	**Initials:** VBB	**Location:** WR-2 **Shelf/Rack:** A4

Delivered By:	FedEx	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None

Temp °C: 0.2 (uncorrected)	**Time:** 0920	**Thermometer ID:** DT-3
Temp °C: -0.5 (corrected)	**Probe used:** Yes ☑ No ☐	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 808190794100	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Preservation Documented:	$Na_2S_2O_3$	Trizma	None	Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose	

Comments:

July 31, 2017

Vista Work Order No. 1700851

Ms. Nia Nikmanesh
KMEA
2423 Hoover Avenue
National City, CA 91950

Dear Ms. Nikmanesh,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 12, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'MCAS El Toro, BRAC PFAS'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

Vista Work Order No. 1700851
Case Narrative

Sample Condition on Receipt:

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

Modified EPA Method 537

Samples "18-GW-18MCAS03-2-20170710" and "24-GW-24EX11-20170710" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of 14 PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

As requested, an MS/MSD was performed on sample "SGV-GW-SGV Transfer Station-20170710".

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1700851-04	18-GW-18MCAS03-2-20170710	Modified EPA Method 537	13C2-PFTeDA	H	39.3
1700851-05	18-GW-18MCAS02-5-20170710	Modified EPA Method 537	13C3-PFBS	H	181
1700851-06	18-GW-18MCAS07-3-20170710	Modified EPA Method 537	13C2-PFTeDA	H	12.7
1700851-07	24-GW-24MW08B-20170710	Modified EPA Method 537	13C2-PFTeDA	H	7.80
1700851-09	24-GW-24EX11-20170710	Modified EPA Method 537	13C3-PFBS	H	224
1700851-10	SGV-GW-SGV Transfer Station-20170710	Modified EPA Method 537	13C3-PFBS	H	180
1700851-10	SGV-GW-SGV Transfer Station-20170710	Modified EPA Method 537	13C2-PFTeDA	H	26.6
B7G0107-BLK1	B7G0107-BLK1	Modified EPA Method 537	13C3-PFBS	H	153
B7G0107-BLK1	B7G0107-BLK1	Modified EPA Method 537	13C2-PFTeDA	H	20.4
B7G0107-BS1	B7G0107-BS1	Modified EPA Method 537	13C3-PFBS	H	157
B7G0107-BS1	B7G0107-BS1	Modified EPA Method 537	13C2-PFTeDA	H	36.5
B7G0107-MS2	B7G0107-MS2	Modified EPA Method 537	13C2-PFTeDA	H	39.1

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700851-01	SB 01_20170710		10-Jul-17 10:00	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-02	EB 01_20170710		10-Jul-17 11:00	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-03	18-GW-18MCAS03-5-20170710		10-Jul-17 13:30	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-04	18-GW-18MCAS03-2-20170710		10-Jul-17 13:50	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-05	18-GW-18MCAS02-5-20170710		10-Jul-17 11:45	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-06	18-GW-18MCAS07-3-20170710		10-Jul-17 10:15	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-07	24-GW-24MW08B-20170710		10-Jul-17 15:10	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-08	DUP03-20170710		10-Jul-17 13:50	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-09	24-GW-24EX11-20170710		10-Jul-17 16:00	12-Jul-17 09:12	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700851-10	SGV-GW-SGV Transfer Station-20170710	MS/MSD	10-Jul-17 13:45	12-Jul-17 09:12	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Vista Analytical Laboratory

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7G0107	Lab Sample:	B7G0107-BLK1
Sample Size:	0.125 L	Date Extracted:	24-Jul-2017 10:44	Date Analyzed:	25-Jul-17 14:58 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	5.00	8.00		IS	13C3-PFBS	153	50 - 150	H
PFHxA	ND	2.18	5.00	8.00		IS	13C2-PFHxA	115	50 - 150	
PFHpA	ND	0.591	5.00	8.00		IS	13C4-PFHpA	97.5	50 - 150	
PFHxS	ND	0.947	5.00	8.00		IS	18O2-PFHxS	120	50 - 150	
PFOA	ND	0.651	5.00	8.00		IS	13C2-PFOA	103	50 - 150	
PFOS	ND	0.807	5.00	8.00		IS	13C8-PFOS	120	50 - 150	
PFNA	ND	0.810	5.00	8.00		IS	13C5-PFNA	92.0	50 - 150	
PFDA	ND	1.49	5.00	8.00		IS	13C2-PFDA	97.6	50 - 150	
MeFOSAA	ND	1.65	5.00	8.00		IS	d3-MeFOSAA	90.3	50 - 150	
PFUnA	ND	1.05	5.00	8.00		IS	13C2-PFUnA	85.8	50 - 150	
EtFOSAA	ND	1.37	5.00	8.00		IS	d5-EtFOSAA	82.1	50 - 150	
PFDoA	ND	0.792	5.00	8.00		IS	13C2-PFDoA	65.5	50 - 150	
PFTrDA	ND	0.494	5.00	8.00		IS	13C2-PFTeDA	20.4	50 - 150	H
PFTeDA	ND	0.755	5.00	8.00						

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7G0107	Lab Sample:	B7G0107-BS1
Sample Size:	0.125 L	Date Extracted:	24-Jul-2017 10:44	Date Analyzed:	25-Jul-17 14:36 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFBS	73.4	80.0	91.8	70 - 130	IS	13C3-PFBS	157	50 - 150
PFHxA	69.6	80.0	87.0	70 - 130	IS	13C2-PFHxA	124	50 - 150
PFHpA	76.9	80.0	96.1	70 - 130	IS	13C4-PFHpA	97.1	50 - 150
PFHxS	73.3	80.0	91.6	70 - 130	IS	18O2-PFHxS	127	50 - 150
PFOA	74.6	80.0	93.3	70 - 130	IS	13C2-PFOA	117	50 - 150
PFOS	64.1	80.0	80.1	70 - 130	IS	13C8-PFOS	125	50 - 150
PFNA	78.4	80.0	98.0	70 - 130	IS	13C5-PFNA	108	50 - 150
PFDA	73.6	80.0	92.0	70 - 130	IS	13C2-PFDA	104	50 - 150
MeFOSAA	71.4	80.0	89.2	70 - 130	IS	d3-MeFOSAA	107	50 - 150
PFUnA	74.4	80.0	93.0	70 - 130	IS	13C2-PFUnA	91.1	50 - 150
EtFOSAA	72.7	80.0	90.9	70 - 130	IS	d5-EtFOSAA	102	50 - 150
PFDoA	74.3	80.0	92.9	70 - 130	IS	13C2-PFDoA	90.7	50 - 150
PFTrDA	49.1	80.0	61.4	60 - 130	IS	13C2-PFTeDA	36.5	50 - 150
PFTeDA	74.6	80.0	93.3	70 - 130				

LCL-UCL - Lower control limit - upper control limit

Sample ID: SB 01_20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 10:00
Location:

Sample Data

Matrix: Water
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700851-01 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:12 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.86	5.21	8.31	
PFHxA	ND	2.26	5.21	8.31	
PFHpA	ND	0.614	5.21	8.31	
PFHxS	ND	0.984	5.21	8.31	
PFOA	ND	0.676	5.21	8.31	
PFOS	ND	0.838	5.21	8.31	
PFNA	ND	0.842	5.21	8.31	
PFDA	ND	1.55	5.21	8.31	
MeFOSAA	ND	1.71	5.21	8.31	
PFUnA	ND	1.09	5.21	8.31	
EtFOSAA	ND	1.42	5.21	8.31	
PFDoA	ND	0.823	5.21	8.31	
PFTrDA	ND	0.513	5.21	8.31	
PFTeDA	ND	0.784	5.21	8.31	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	139	50 - 150	
IS	13C2-PFHxA	110	50 - 150	
IS	13C4-PFHpA	93.7	50 - 150	
IS	18O2-PFHxS	114	50 - 150	
IS	13C2-PFOA	103	50 - 150	
IS	13C8-PFOS	104	50 - 150	
IS	13C5-PFNA	98.6	50 - 150	
IS	13C2-PFDA	86.2	50 - 150	
IS	d3-MeFOSAA	80.5	50 - 150	
IS	13C2-PFUnA	77.8	50 - 150	
IS	d5-EtFOSAA	78.5	50 - 150	
IS	13C2-PFDoA	79.2	50 - 150	
IS	13C2-PFTeDA	89.1	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: EB 01_20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 11:00
Location:

Sample Data

Matrix: Water
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700851-02 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:22 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.87	5.21	8.36	
PFHxA	ND	2.28	5.21	8.36	
PFHpA	ND	0.618	5.21	8.36	
PFHxS	ND	0.990	5.21	8.36	
PFOA	ND	0.680	5.21	8.36	
PFOS	ND	0.843	5.21	8.36	
PFNA	ND	0.846	5.21	8.36	
PFDA	ND	1.56	5.21	8.36	
MeFOSAA	ND	1.72	5.21	8.36	
PFUnA	ND	1.10	5.21	8.36	
EtFOSAA	ND	1.43	5.21	8.36	
PFDoA	ND	0.828	5.21	8.36	
PFTrDA	ND	0.516	5.21	8.36	
PFTeDA	ND	0.789	5.21	8.36	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	134	50 - 150	
IS	13C2-PFHxA	102	50 - 150	
IS	13C4-PFHpA	85.7	50 - 150	
IS	18O2-PFHxS	101	50 - 150	
IS	13C2-PFOA	99.8	50 - 150	
IS	13C8-PFOS	91.9	50 - 150	
IS	13C5-PFNA	88.8	50 - 150	
IS	13C2-PFDA	86.3	50 - 150	
IS	d3-MeFOSAA	79.7	50 - 150	
IS	13C2-PFUnA	85.3	50 - 150	
IS	d5-EtFOSAA	78.2	50 - 150	
IS	13C2-PFDoA	80.5	50 - 150	
IS	13C2-PFTeDA	93.8	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS03-5-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 13:30
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.116 L

Laboratory Data

Lab Sample: 1700851-03 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:33 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	4.82	1.93	5.39	8.62	J
PFHxA	25.7	2.35	5.39	8.62	
PFHpA	4.53	0.637	5.39	8.62	J
PFHxS	26.5	1.02	5.39	8.62	
PFOA	34.8	0.702	5.39	8.62	
PFOS	14.9	0.870	5.39	8.62	
PFNA	ND	0.873	5.39	8.62	
PFDA	ND	1.61	5.39	8.62	
MeFOSAA	ND	1.78	5.39	8.62	
PFUnA	ND	1.13	5.39	8.62	
EtFOSAA	ND	1.48	5.39	8.62	
PFDoA	ND	0.853	5.39	8.62	
PFTrDA	ND	0.532	5.39	8.62	
PFTeDA	ND	0.814	5.39	8.62	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	139	50 - 150	
IS	13C2-PFHxA	102	50 - 150	
IS	13C4-PFHpA	80.5	50 - 150	
IS	18O2-PFHxS	102	50 - 150	
IS	13C2-PFOA	101	50 - 150	
IS	13C8-PFOS	102	50 - 150	
IS	13C5-PFNA	99.0	50 - 150	
IS	13C2-PFDA	92.4	50 - 150	
IS	d3-MeFOSAA	74.0	50 - 150	
IS	13C2-PFUnA	80.7	50 - 150	
IS	d5-EtFOSAA	70.4	50 - 150	
IS	13C2-PFDoA	71.3	50 - 150	
IS	13C2-PFTeDA	58.4	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS03-2-20170710 — Modified EPA Method 537

Client Data

Name:	KMEA
Project:	MCAS El Toro, BRAC PFAS
Date Collected:	10-Jul-2017 13:50
Location:	

Sample Data

Matrix:	Groundwater
Sample Size:	0.116 L

Laboratory Data

Lab Sample:	1700851-04	Date Received:	12-Jul-2017 9:12
QC Batch:	B7G0107	Date Extracted:	24-Jul-2017 10:44
Date Analyzed:	26-Jul-17 11:34 Column: BEH C18		
	28-Jul-17 19:44 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	57.3	1.93	5.39	8.61	
PFHxA	331	2.35	5.39	8.61	
PFHpA	92.0	0.636	5.39	8.61	
PFHxS	714	10.2	53.9	86.1	D
PFOA	3720	7.00	53.9	86.1	D
PFOS	106	0.868	5.39	8.61	
PFNA	1.42	0.871	5.39	8.61	J
PFDA	ND	1.60	5.39	8.61	
MeFOSAA	ND	1.77	5.39	8.61	
PFUnA	ND	1.13	5.39	8.61	
EtFOSAA	ND	1.47	5.39	8.61	
PFDoA	ND	0.852	5.39	8.61	
PFTrDA	ND	0.531	5.39	8.61	
PFTeDA	ND	0.812	5.39	8.61	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	146	50 - 150	
IS	13C2-PFHxA	104	50 - 150	
IS	13C4-PFHpA	85.2	50 - 150	
IS	18O2-PFHxS	130	50 - 150	D
IS	13C2-PFOA	104	50 - 150	D
IS	13C8-PFOS	103	50 - 150	
IS	13C5-PFNA	92.8	50 - 150	
IS	13C2-PFDA	94.8	50 - 150	
IS	d3-MeFOSAA	87.7	50 - 150	
IS	13C2-PFUnA	99.1	50 - 150	
IS	d5-EtFOSAA	86.8	50 - 150	
IS	13C2-PFDoA	79.6	50 - 150	
IS	13C2-PFTeDA	39.3	50 - 150	H

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS02-5-20170710 — Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 11:45
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700851-05 — Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 — Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 26-Jul-17 12:18 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.85	5.17	8.26	
PFHxA	5.03	2.25	5.17	8.26	J
PFHpA	1.81	0.610	5.17	8.26	J
PFHxS	48.3	0.978	5.17	8.26	
PFOA	15.1	0.672	5.17	8.26	
PFOS	7.91	0.833	5.17	8.26	J
PFNA	ND	0.837	5.17	8.26	
PFDA	ND	1.54	5.17	8.26	
MeFOSAA	ND	1.70	5.17	8.26	
PFUnA	ND	1.08	5.17	8.26	
EtFOSAA	ND	1.41	5.17	8.26	
PFDoA	ND	0.818	5.17	8.26	
PFTrDA	ND	0.510	5.17	8.26	
PFTeDA	ND	0.780	5.17	8.26	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	181	50 - 150	H
IS	13C2-PFHxA	130	50 - 150	
IS	13C4-PFHpA	106	50 - 150	
IS	18O2-PFHxS	133	50 - 150	
IS	13C2-PFOA	133	50 - 150	
IS	13C8-PFOS	134	50 - 150	
IS	13C5-PFNA	126	50 - 150	
IS	13C2-PFDA	117	50 - 150	
IS	d3-MeFOSAA	133	50 - 150	
IS	13C2-PFUnA	93.4	50 - 150	
IS	d5-EtFOSAA	134	50 - 150	
IS	13C2-PFDoA	97.9	50 - 150	
IS	13C2-PFTeDA	63.6	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 18-GW-18MCAS07-3-20170710 — Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 10:15
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.117 L

Laboratory Data

Lab Sample: 1700851-06 — Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 — Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 19:55 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	2.35	1.91	5.34	8.52	J
PFHxA	9.72	2.32	5.34	8.52	
PFHpA	2.50	0.630	5.34	8.52	J
PFHxS	43.4	1.01	5.34	8.52	
PFOA	81.2	0.694	5.34	8.52	
PFOS	20.3	0.860	5.34	8.52	
PFNA	ND	0.863	5.34	8.52	
PFDA	ND	1.59	5.34	8.52	
MeFOSAA	ND	1.76	5.34	8.52	
PFUnA	ND	1.12	5.34	8.52	
EtFOSAA	ND	1.46	5.34	8.52	
PFDoA	ND	0.844	5.34	8.52	
PFTrDA	ND	0.526	5.34	8.52	
PFTeDA	ND	0.804	5.34	8.52	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	137	50 - 150	
IS	13C2-PFHxA	97.0	50 - 150	
IS	13C4-PFHpA	88.6	50 - 150	
IS	18O2-PFHxS	102	50 - 150	
IS	13C2-PFOA	99.6	50 - 150	
IS	13C8-PFOS	93.1	50 - 150	
IS	13C5-PFNA	92.3	50 - 150	
IS	13C2-PFDA	82.7	50 - 150	
IS	d3-MeFOSAA	97.0	50 - 150	
IS	13C2-PFUnA	82.5	50 - 150	
IS	d5-EtFOSAA	87.0	50 - 150	
IS	13C2-PFDoA	52.7	50 - 150	
IS	13C2-PFTeDA	12.7	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 24-GW-24MW08B-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 15:10
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700851-07 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 20:05 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	10.8	1.86	5.21	8.30	
PFHxA	38.0	2.26	5.21	8.30	
PFHpA	5.90	0.613	5.21	8.30	J
PFHxS	18.6	0.983	5.21	8.30	
PFOA	30.4	0.675	5.21	8.30	
PFOS	1.58	0.837	5.21	8.30	J
PFNA	ND	0.840	5.21	8.30	
PFDA	ND	1.55	5.21	8.30	
MeFOSAA	ND	1.71	5.21	8.30	
PFUnA	ND	1.09	5.21	8.30	
EtFOSAA	ND	1.42	5.21	8.30	
PFDoA	ND	0.822	5.21	8.30	
PFTrDA	ND	0.513	5.21	8.30	
PFTeDA	ND	0.783	5.21	8.30	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	130	50 - 150	
IS	13C2-PFHxA	103	50 - 150	
IS	13C4-PFHpA	84.7	50 - 150	
IS	18O2-PFHxS	100	50 - 150	
IS	13C2-PFOA	104	50 - 150	
IS	13C8-PFOS	98.9	50 - 150	
IS	13C5-PFNA	102	50 - 150	
IS	13C2-PFDA	97.9	50 - 150	
IS	d3-MeFOSAA	93.0	50 - 150	
IS	13C2-PFUnA	92.2	50 - 150	
IS	d5-EtFOSAA	82.2	50 - 150	
IS	13C2-PFDoA	53.1	50 - 150	
IS	13C2-PFTeDA	7.80	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: DUP03-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 13:50
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700851-08 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 28-Jul-17 20:16 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	80.5	1.85	5.17	8.28	
PFHxA	267	2.26	5.17	8.28	
PFHpA	50.9	0.612	5.17	8.28	
PFHxS	264	0.981	5.17	8.28	
PFOA	232	0.674	5.17	8.28	
PFOS	407	0.836	5.17	8.28	
PFNA	8.17	0.839	5.17	8.28	J
PFDA	ND	1.54	5.17	8.28	
MeFOSAA	ND	1.71	5.17	8.28	
PFUnA	ND	1.09	5.17	8.28	
EtFOSAA	ND	1.42	5.17	8.28	
PFDoA	ND	0.820	5.17	8.28	
PFTrDA	ND	0.512	5.17	8.28	
PFTeDA	ND	0.782	5.17	8.28	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	132	50 - 150	
IS	13C2-PFHxA	104	50 - 150	
IS	13C4-PFHpA	84.1	50 - 150	
IS	18O2-PFHxS	106	50 - 150	
IS	13C2-PFOA	104	50 - 150	
IS	13C8-PFOS	106	50 - 150	
IS	13C5-PFNA	99.7	50 - 150	
IS	13C2-PFDA	95.3	50 - 150	
IS	d3-MeFOSAA	83.9	50 - 150	
IS	13C2-PFUnA	92.7	50 - 150	
IS	d5-EtFOSAA	78.9	50 - 150	
IS	13C2-PFDoA	82.6	50 - 150	
IS	13C2-PFTeDA	50.7	50 - 150	

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: 24-GW-24EX11-20170710

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	KMEA	Matrix:	Groundwater	Lab Sample:	1700851-09	Date Received:	12-Jul-2017 9:12
Project:	MCAS El Toro, BRAC PFAS	Sample Size:	0.114 L	QC Batch:	B7G0107	Date Extracted:	24-Jul-2017 10:44
Date Collected:	10-Jul-2017 16:00			Date Analyzed:	26-Jul-17 11:45 Column: BEH C18		
Location:					28-Jul-17 20:27 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	64.9	1.97	5.48	8.78	
PFHxA	403	2.39	5.48	8.78	
PFHpA	94.2	0.649	5.48	8.78	
PFHxS	633	1.04	5.48	8.78	
PFOA	2600	7.15	54.8	87.8	D
PFOS	126	0.886	5.48	8.78	
PFNA	2.30	0.889	5.48	8.78	J
PFDA	ND	1.64	5.48	8.78	
MeFOSAA	ND	1.81	5.48	8.78	
PFUnA	ND	1.15	5.48	8.78	
EtFOSAA	ND	1.50	5.48	8.78	
PFDoA	ND	0.870	5.48	8.78	
PFTrDA	ND	0.542	5.48	8.78	
PFTeDA	ND	0.829	5.48	8.78	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	224	50 - 150	H
IS	13C2-PFHxA	116	50 - 150	
IS	13C4-PFHpA	99.8	50 - 150	
IS	18O2-PFHxS	118	50 - 150	
IS	13C2-PFOA	140	50 - 150	D
IS	13C8-PFOS	110	50 - 150	
IS	13C5-PFNA	98.7	50 - 150	
IS	13C2-PFDA	88.3	50 - 150	
IS	d3-MeFOSAA	109	50 - 150	
IS	13C2-PFUnA	97.3	50 - 150	
IS	d5-EtFOSAA	107	50 - 150	
IS	13C2-PFDoA	106	50 - 150	
IS	13C2-PFTeDA	127	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: SGV-GW-SGV Transfer Station-20170710

Modified EPA Method 537

Client Data

Name: KMEA
Project: MCAS El Toro, BRAC PFAS
Date Collected: 10-Jul-2017 13:45
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700851-10 Date Received: 12-Jul-2017 9:12
QC Batch: B7G0107 Date Extracted: 24-Jul-2017 10:44
Date Analyzed: 26-Jul-17 12:28 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	76.0	1.86	5.17	8.30	
PFHxA	268	2.26	5.17	8.30	
PFHpA	48.8	0.613	5.17	8.30	
PFHxS	295	0.982	5.17	8.30	
PFOA	234	0.675	5.17	8.30	
PFOS	395	0.837	5.17	8.30	
PFNA	8.39	0.840	5.17	8.30	
PFDA	ND	1.55	5.17	8.30	
MeFOSAA	ND	1.71	5.17	8.30	
PFUnA	ND	1.09	5.17	8.30	
EtFOSAA	ND	1.42	5.17	8.30	
PFDoA	ND	0.821	5.17	8.30	
PFTrDA	ND	0.512	5.17	8.30	
PFTeDA	ND	0.783	5.17	8.30	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	180	50 - 150	H
IS	13C2-PFHxA	116	50 - 150	
IS	13C4-PFHpA	97.0	50 - 150	
IS	18O2-PFHxS	121	50 - 150	
IS	13C2-PFOA	124	50 - 150	
IS	13C8-PFOS	120	50 - 150	
IS	13C5-PFNA	122	50 - 150	
IS	13C2-PFDA	127	50 - 150	
IS	d3-MeFOSAA	128	50 - 150	
IS	13C2-PFUnA	104	50 - 150	
IS	d5-EtFOSAA	101	50 - 150	
IS	13C2-PFDoA	77.4	50 - 150	
IS	13C2-PFTeDA	26.6	50 - 150	H

DL - Detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to DL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Matrix Spike Results

Modified EPA Method 537

Source Client ID: SGV-GW-SGV Transfer Station-2017(
Source LabNumber: 1700851-10
Matrix: Aqueous
Sample Size: 0.119/0.121 L

QC Batch: B7G0107
Date Extracted: 24-Jul-2017 10:44

Lab Sample: B7G0107-MS2/B7G0107-MSD2
Date Analyzed: 28-Jul-17 20:38 Column: BEH C18
28-Jul-17 20:49 Column: BEH C18

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFBS	83.7	105		82.7	102	2.90		70 - 130	25
PFHxA	83.7	115		82.7	81.5	**34.1**	H	70 - 130	25
PFHpA	83.7	102		82.7	97.6	4.41		70 - 130	25
PFHxS	83.7	**52.4**	H	82.7	96.0	**58.8**	H	70 - 130	25
PFOA	83.7	73.8		82.7	96.6	**26.8**	H	70 - 130	25
PFOS	83.7	**139**	H	82.7	**169**	19.5	H	70 - 130	25
PFNA	83.7	105		82.7	99.0	5.88		70 - 130	25
PFDA	83.7	100		82.7	98.2	1.82		70 - 130	25
MeFOSAA	83.7	99.4		82.7	102	2.58		70 - 130	25
PFUnA	83.7	103		82.7	97.4	5.59		70 - 130	25
EtFOSAA	83.7	98.3		82.7	110	11.2		70 - 130	25
PFDoA	83.7	101		82.7	104	2.93		70 - 130	25
PFTrDA	83.7	87.3		82.7	87.5	0.229		60 - 130	25
PFTeDA	83.7	96.6		82.7	100	3.46		70 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C3-PFBS	143		140	
IS	13C2-PFHxA	104		107	
IS	13C4-PFHpA	91.9		89.6	
IS	18O2-PFHxS	106		106	
IS	13C2-PFOA	104		105	
IS	13C8-PFOS	95.8		96.7	
IS	13C5-PFNA	97.6		101	
IS	13C2-PFDA	93.0		92.2	
IS	d3-MeFOSAA	83.4		94.7	
IS	13C2-PFUnA	83.6		104	
IS	d5-EtFOSAA	76.1		86.3	
IS	13C2-PFDoA	67.4		93.6	
IS	13C2-PFTeDA	39.1	H	67.0	

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Reporting Limit/LOQ.**
M	**Estimated Maximum Possible Concentration. (CA Region 2 projects only)**
*****	**See Cover Letter**
Conc.	**Concentration**
NA	**Not applicable**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
Nevada Division of Environmental Protection	CA004132017-1
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Vista Analytical

1104 Windfield Way
El Dorado Hills, CA 95762
TEL: 916-673-1520

1700851

Vista PM: Karen Volpendesta

CHAIN OF CUSTODY RECORD

DATE: 7/10/2017

PAGE: 1 OF 1

-0.50

LABORATORY CLIENT: AMEC Foster Wheeler E & I, Inc.	CLIENT PROJECT NAME / NUMBER: MCAS El Toro, BRAC PFAS
ADDRESS: 9210 Sky Park Court	P.O. NO.: TO 008
CITY: San Diego, CA 92123	PROJECT CONTACT: Medora Hackler/Marie Bevier
TEL: 503.639.3400 / E-Mail: medora.hackler@amecfw.com / E-MAIL: marie.bevier@amecfw.com	CONTRACT NO.: N62473-16-D-2405
	SAMPLER(S): (SIGNATURE) [signature]
	LAB USE ONLY

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	QC Level	PFOA, PFOS, and PFBS (U.S. EPA 537 Mod.)
	SB01	7/10/17	10:00	BW	2		X
	EB01		11:00	"	2		X
	18-GW-18MCAS03-5-20170710		13:30	GW	2		X
	18-GW-18MCAS03-2-20170710		13:50		2		X
	18-GW-18MCAS02-5-20170710		11:45		2		X
	18-GW-18MCAS07-3-20170710		10:15		2		X
	24-GW-24MW08B-20170710		15:10		2		X
*	SGU-GW-SGU Transfer Station-20170710		13:45		6	IV	X MS / MSD
	DUP03-20170710		13:50		2		X
	24-GW-24EX11-20170710		16:00		2		X

Relinquished by: (Signature) [signature]	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 7/10/17	Time: 17:00
Relinquished by: (Signature) FedEx 07/12/17	Received by: (Signature) [signature]	Date: 07/12/17	Time: 0900
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample logged in to work order 1700859 BSB 7/12/17

Vista Analytical Laboratory

Sample Log-in Checklist

Vista Work Order #: 1700851 **TAT** 14

Samples Arrival:	**Date/Time** 07/12/17 0912	**Initials:** VBB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 07/12/17 1041	**Initials:** VBB	**Location:** WR-2 **Shelf/Rack:** A4

Delivered By:	FedEx	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None

Temp °C: 0.2 (uncorrected)	**Time:** 0920	**Thermometer ID:** DT-3
Temp °C: -0.5 (corrected)	**Probe used:** Yes ☑ No ☐	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 808190794100	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Preservation Documented:	$Na_2S_2O_3$	Trizma	None	Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose	

Comments:

EXTRACTION INFORMATION

Process Sheet

Workorder: 1700851

RX

Prep Expiration: 2017-Jul-24
Client: KMEA

Workorder Due: 26-Jul-17 00:00

TAT: 14

Method: **537M PFAS DOD (LOQ as mRL)**
Matrix: **Aqueous**

Prep Batch: B7G0107

Prep Data Entered: HB 7/25/17
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700851-01 B	☐	~~SB 01_20170710~~ SB01 HB 7/24/17	12-Jul-17 09:12	WR-2 A-4	
1700851-02 B	☐	~~EB 01_20170710~~ EB01 HB 7/24/17	12-Jul-17 09:12	WR-2 A-4	
1700851-03 B	☑	18-GW-18MCAS03-5-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-04 B	☑	18-GW-18MCAS03-2-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-05 B	☑	18-GW-18MCAS02-5-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-06 B	☑	18-GW-18MCAS07-3-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-07 B	☑	24-GW-24MW08B-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-08 B	☑	DUP03-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-09 B	☑	24-GW-24EX11-20170710	12-Jul-17 09:12	WR-2 A-4	
1700851-10 ~~B~~ B DEF HB 7/24/17	☑	SGV-GW-SGV Transfer Station-2017(	12-Jul-17 09:12	WR-2 A-4	**MS/MSD**

Vista PM: Martha Maier

Vial Box ID: Sophisticated

Sample Reconciled By: AB 7/24/17 / /

Page 1 of 1

Batch: B7G0107

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700851-01RE1	0.12032	NA	NA	1000	24-Jul-17 10:44	BAP			Water	537M PFAS DOD (LOQ as
1700851-02RE1	0.11963			1000	24-Jul-17 10:44	BAP			Water	537M PFAS DOD (LOQ as
1700851-03RE1	0.116			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-04RE1	0.1162			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-05RE1	0.12103			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-06RE1	0.11733			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-07RE1	0.12048			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-08RE1	0.12071			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-09RE1	0.11384			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700851-10RE1	0.12055			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-01RE1	0.12122			1000	24-Jul-17 10:44	BAP			Water	537M PFAS DOD (LOQ as
1700852-02RE1	0.11996			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-03RE1	0.11649			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-04RE1	0.12068			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-05RE1	0.11874			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-06RE1	0.12355			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-07RE1	0.10845			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-08RE1	0.10965			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
1700852-09RE1	0.11738			1000	24-Jul-17 10:44	BAP			Groundwater	537M PFAS DOD (LOQ as
B7G0107-BLK1	0.125			1000	24-Jul-17 10:44	BAP				QC
B7G0107-BS1	0.125			1000	24-Jul-17 10:44	BAP	17D2705	10		QC
B7G0107-MS1	0.12078			1000	24-Jul-17 10:44	BAP	17D2705	10		QC
B7G0107-MS2	0.11945			1000	24-Jul-17 10:44	BAP	17D2705	10		QC
B7G0107-MSD1	0.11599			1000	24-Jul-17 10:44	BAP	17D2705	10		QC
B7G0107-MSD2	0.12098			1000	24-Jul-17 10:44	BAP	17D2705	10		QC

HB 7/25/17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOO as mRL)

B7G0107

Chemist: BP

Prep Date/Time: 24-Jul-17 10:44

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE C7G0085	RS CHEM/WIT DATE
☐	B7G0107-BLK1	5	2	0	2	NA	NA	(0.125) ✓	BP KBF 7/24/17	BP 7.24.17	BP 7.25.17
☐	B7G0107-BS1	5	2	0	2	↓	↓	↓ ✓			
☐	B7G0107-MS1 1700852-03RE1	6	2	0	2	147.99	27.21	0.12078 ✓			
☐	B7G0107-MS2 1700851-10RE1	6	2	0	2	146.87	27.42	0.11945 ✓			
☐	B7G0107-MSD1 1700852-03RE1	6	2	0	2	143.24	27.25	0.11599			
☐	B7G0107-MSD2 1700851-10RE1	6	2	0	2	148.38	27.40	0.12098 ✓			
☐	1700851-01RE1	5	2	0	~~MB 7/24/17~~ 2	147.52	27.20	0.12032 ✓			
☐	1700851-02RE1	5	2	0	2	146.85	27.22	0.11963 ✓			
☐	1700851-03RE1	6	2	0	2	143.32	27.32	0.11600 ✓			
☐	1700851-04RE1 (A)	6	2	0	2	143.55	27.35	0.11620 ✓			
☐	1700851-05RE1	6	2	0	2	148.23	27.20	0.12103 ✓			
☐	1700851-06RE1	7	2	0	2	144.49	27.16	0.11733 ✓			
☐	1700851-07RE1	7	2	0	2	147.48	27.00	0.12048 ✓			
☐	1700851-08RE1	6	2	0	2	~~148~~ 147.85	27.14	0.12071 ✓			
☐	1700851-09RE1 (A)	6	2	0	2	141.03	27.19	0.11384 ✓			

(A) sample was centrifuged to remove particulate HB 7/24/17

IS Name (V6)	NS Name (V1)	RS Name
17G1307, 10uL	17D2705, 10uL	17F3038, 10uL (2)

SPE Chem: Strata X-AW 33u 200mg/6mL

Ele SOLV: 0.5% NH4 OH in MeOH/MeOH

Final Volume(s) 1 mL

Check Out: Chemist/Date: HB 7/24/17

Check In: Chemist/Date: empty NA

Balance ID: HRMS-8

pH Adjusted: Chemist/Date: HB 7/24/17

Comments: Assume 1 g = 1 mL

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOO as mRL)

B7G0107

Chemist: BP

Prep Date/Time: 24-Jul-17 10:44

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE G760085	RS CHEM/WIT DATE
☐	1700851-10RE1	6	2	0	2	148.01	27.46	0.12055	BP HB 7/24/17	7.24.17 BP	BP 7.25.17
☐	1700852-01RE1	5	2	0	2	148.23	27.01	0.12122			
☐	1700852-02RE1 (A)	7	2	0	2	147.12	27.16	0.11996			
☐	1700852-03RE1	6	2	0	2	143.78	27.29	0.11649			
☐	1700852-04RE1	6	2	0	2	147.91	27.23	0.12068			
☐	1700852-05RE1	6	2	0	2	146.00	27.26	0.11874			
☐	1700852-06RE1	6	2	0	2	150.78	27.23	0.12355			
☐	1700852-07RE1 (A)	7	2	0	2	136.19	27.24	0.10895			
☐	1700852-08RE1 (A)	7	2	0	2	136.99	27.34	0.10965			
☐	1700852-09RE1	6	2	0	2	144.64	27.26	0.11738			

(A) sample was centrifuged to remove particulate - HB 7/24/17

IS Name	NS Name	RS Name		
(V6) 17G1307, 10mL	(V1) 17D2705, 10mL	17F3038, 10mL (V2)	SPE Chem: Strata X-AW 33µm 200mg 6mL Ele SOLV: 0.5% NH4OH : MeOH / MeOH Final Volume(s) ____ mL	Check Out: Chemist/Date: HB 7/24/17 Check In: Chemist/Date: empty NA Balance ID: HRMS-8 pH Adjusted: Chemist/Date: HB 7/24/17

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Vista Analytical Laboratory

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:13 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	1.15e0	6.58e3	0.125		2.96	3.00	0.00219		
2	4	PFHxA	313.2 > 268.9		1.76e4	0.125		3.19				
3	5	PFHpA	363 > 318.9		4.13e4	0.125		3.45				
4	6	PFHxS	398.9 > 79.6	4.29e1	4.54e3	0.125		3.56	3.55	0.118	0.606	
5	8	PFOA	413 > 368.7		5.18e4	0.125		3.65				
6	10	PFNA	462.9 > 418.8		4.27e4	0.125		3.83				
7	12	PFOS	499 > 79.9		9.68e3	0.125		3.89				
8	13	PFDA	513 > 468.8	6.58e1	3.82e4	0.125		4.01	4.01	0.0215		
9	15	N-MeFOSAA	570.1 > 419		6.24e3	0.125		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.79e3	0.125		4.10				
11	17	PFUnA	562.9 > 518.9	1.08e2	3.21e4	0.125		4.17	4.20	0.0419	0.306	
12	19	PFDoA	612.9 > 318.8		2.40e3	0.125		4.34				

AC 7/26/17

Vista Analytical Laboratory

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:35 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		2.40e3	0.125		4.50				
2	22	PFTeDA	712.9 > 668.8		5.50e3	0.125		4.68				
3	28	13C3-PFBA	216.1 > 171.8	3.19e4	3.35e4	0.125	0.820	1.54	1.55	11.9	116	116.1
4	29	13C3-PFPeA	266 > 221.8	4.65e4	5.55e4	0.125	0.248	2.77	2.80	4.19	135	135.1
5	30	13C3-PFBS	302 > 98.8	6.58e3	5.55e4	0.125	0.031	2.96	3.00	0.593	153	152.6
6	31	13C2-PFHxA	315 > 269.8	1.76e4	5.55e4	0.125	0.276	3.19	3.22	1.59	46.0	114.9
7	32	13C4-PFHpA	367.2 > 321.8	4.13e4	5.55e4	0.125	0.306	3.45	3.48	3.73	97.5	97.5
8	33	18O2-PFHxS	403 > 102.6	4.54e3	9.60e3	0.125	0.393	3.56	3.55	5.91	120	120.3
9	34	13C2-6:2 FTS	429.1 > 408.9	8.61e3	4.71e4	0.125	0.158	3.64	3.67	2.28	116	115.9
10	35	13C2-PFOA	414.9 > 369.7	5.18e4	4.71e4	0.125	1.067	3.65	3.68	13.8	103	103.0
11	36	13C5-PFNA	468.2 > 422.9	4.27e4	5.44e4	0.125	0.852	3.83	3.85	9.80	92.0	92.0
12	37	13C8-PFOSA	506.1 > 77.7	2.26e3	3.89e4	0.125	0.098	3.84	3.86	0.726	59.1	59.1
13	38	13C8-PFOS	507 > 79.9	9.68e3	8.65e3	0.125	0.936	3.89	3.90	14.0	120	119.5
14	39	13C2-PFDA	515.1 > 469.9	3.82e4	4.83e4	0.125	0.810	4.01	4.02	9.88	97.6	97.6
15	40	13C2-8:2 FTS	529.1 > 508.7	4.47e3	4.83e4	0.125	0.086	4.00	4.02	1.16	108	108.1
16	41	d3-N-MeFOSAA	573.3 > 419	6.24e3	3.89e4	0.125	0.014	4.03	4.05	2.01	1170	90.3
17	42	d5-N-EtFOSAA	589.3 > 419	5.79e3	3.89e4	0.125	0.014	4.12	4.11	1.86	1070	82.1
18	43	13C2-PFUnA	565 > 519.8	3.21e4	3.89e4	0.125	0.962	4.17	4.18	10.3	85.8	85.8
19	44	13C2-PFDoA	615 > 569.7	2.40e3	3.89e4	0.125	0.094	4.34	4.34	0.773	65.5	65.5
20	46	13C2-PFTeDA	714.8 > 669.6	5.50e3	3.89e4	0.125	0.694	4.68	4.69	1.77	20.4	20.4
21	48	13C2-PFHxDA	815 > 769.7	1.25e3	3.89e4	0.125	0.843	5.06	5.05	0.403	3.82	9.6
22	51	13C4-PFBA	217 > 171.8	3.35e4	3.35e4	0.125	1.000	1.54	1.55	12.5	100	100.0
23	52	13C5-PFHxA	318 > 272.9	5.55e4	5.55e4	0.125	1.000	3.19	3.22	5.00	40.0	100.0
24	53	13C3-PFHxS	401.9 > 79.9	9.60e3	9.60e3	0.125	1.000	3.56	3.55	12.5	100	100.0
25	54	13C8-PFOA	421.3 > 376	4.71e4	4.71e4	0.125	1.000	3.65	3.67	12.5	100	100.0
26	55	13C9-PFNA	472.2 > 426.9	5.44e4	5.44e4	0.125	1.000	3.83	3.85	12.5	100	100.0
27	56	13C4-PFOS	503 > 79.9	8.65e3	8.65e3	0.125	1.000	3.89	3.90	12.5	100	100.0
28	57	13C6-PFDA	519.1 > 473.7	4.83e4	4.83e4	0.125	1.000	4.01	4.02	12.5	100	100.0
29	58	13C7-PFUnA	570.1 > 524.8	3.89e4	3.89e4	0.125	1.000	4.17	4.18	12.5	100	100.0
30	59	Total PFBS	299 > 79.7	1.15e0	6.58e3	0.125		2.96		0.000		
31	60	Total PFHxS	398.9 > 79.6	4.29e1	4.54e3	0.125		3.52		0.118	0.606	
32	61	Total PFOA	413 > 368.7	0.00e0	5.18e4	0.125		3.65		0.000		

AC 7/26/17

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:35 Pacific Daylight Time

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	62	Total PFOS	499 > 79.9	0.00e0	9.68e3	0.125		3.89		0.000		
34	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.24e3	0.125		4.03		0.000		
35	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.79e3	0.125		4.17		0.000		

AC 7/26/17

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
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Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.00	1.154	6582.323	0.002	MMI	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.55	42.868	4538.808	0.118	bb	0.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9			9678.167		MM-I	

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419			6244.668		MM-I	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419			5785.626		MM-I	

AC 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

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Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

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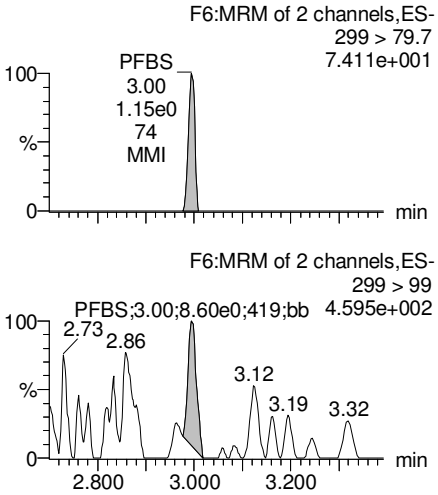
Total PFBS



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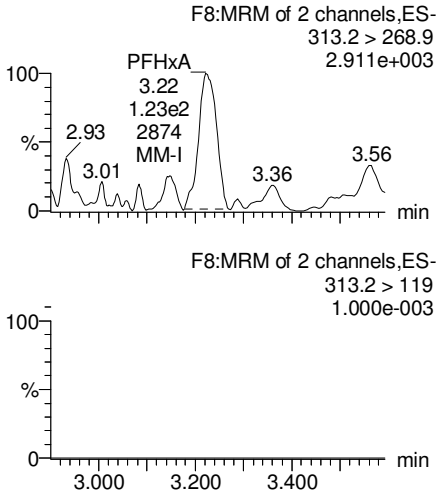

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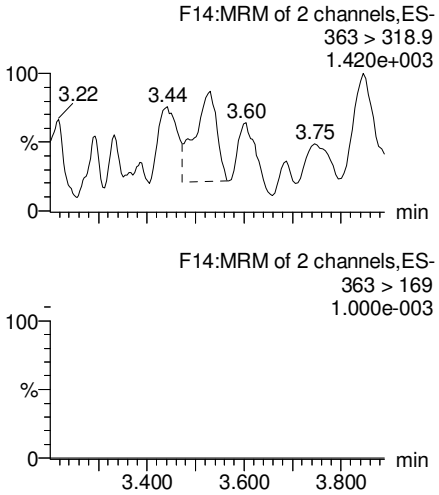
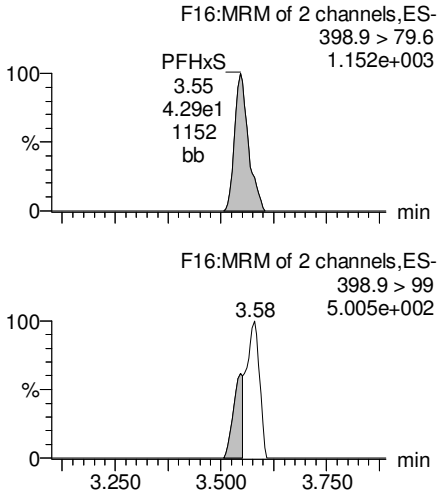


Total PFHxS



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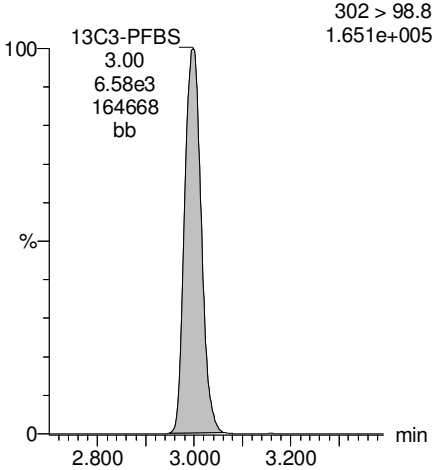

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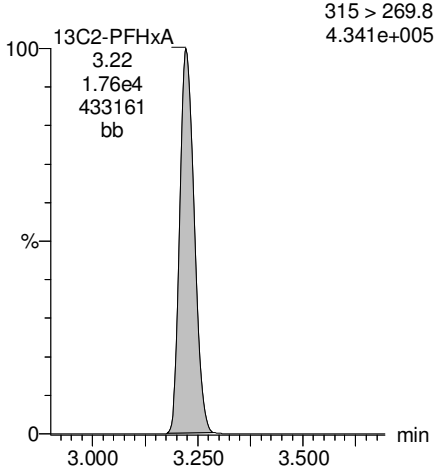

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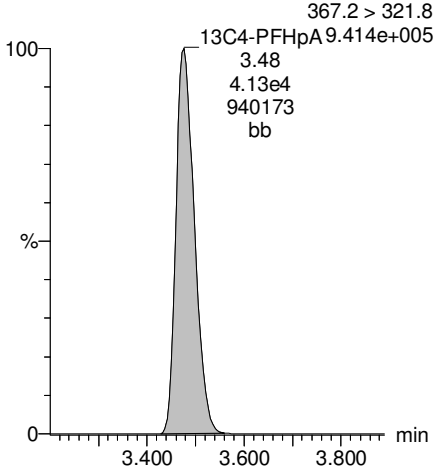

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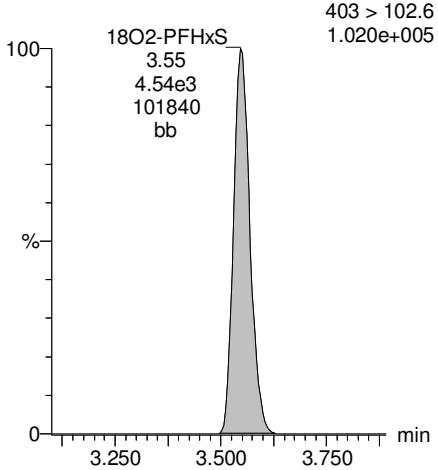

AC 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:13 Pacific Daylight Time

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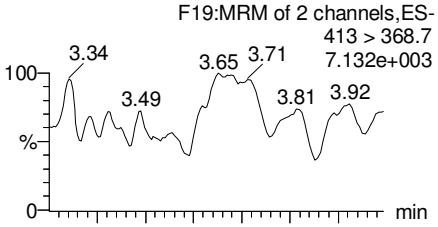
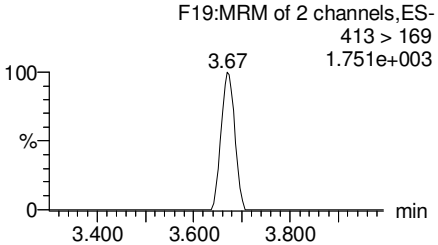
Total PFOA





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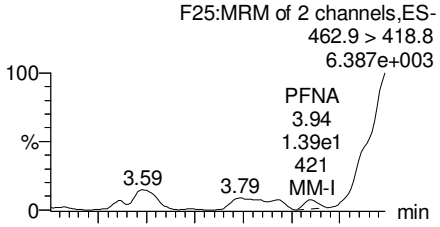
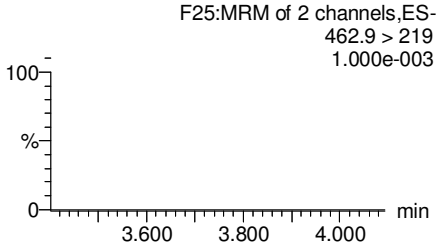
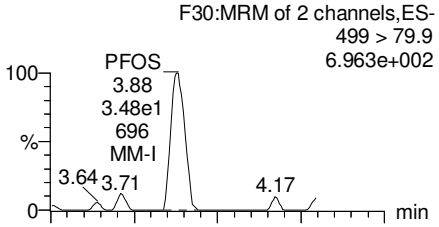
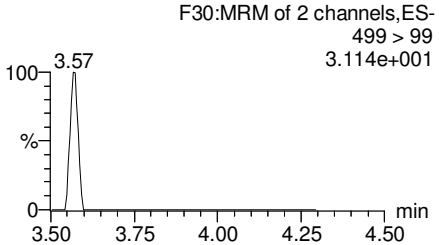




Total PFOS





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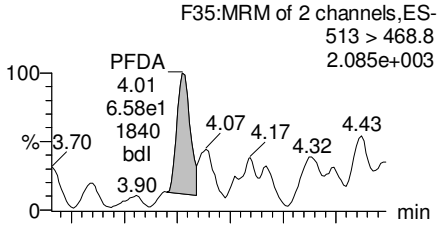

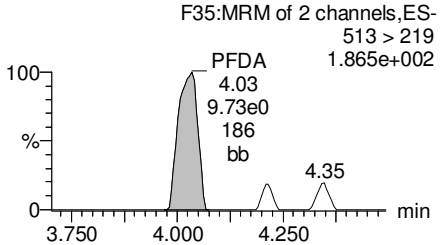

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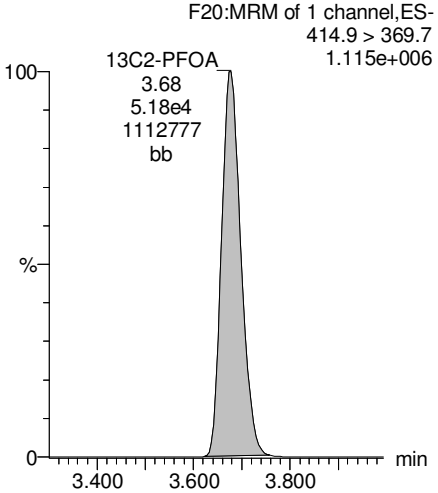

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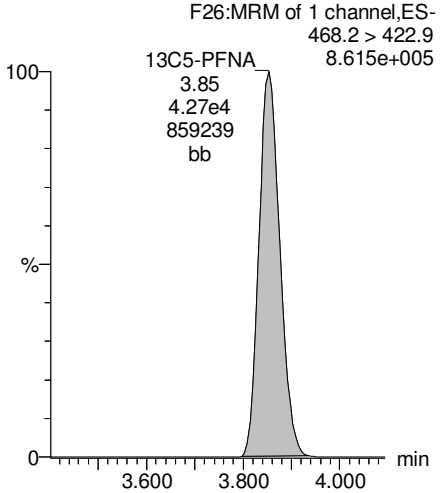

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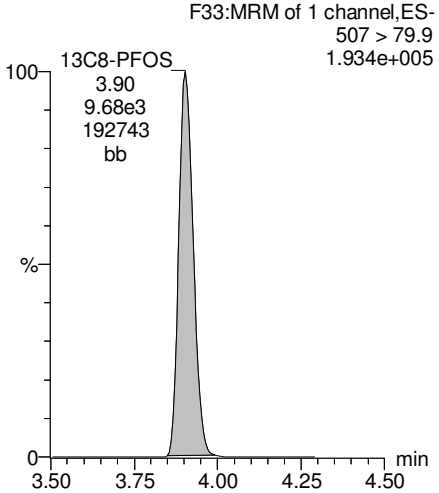
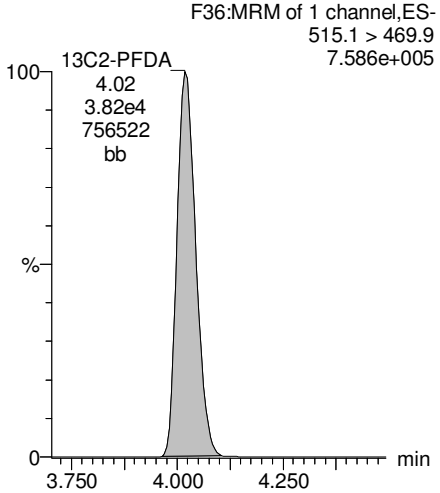


13C2-PFDA



AC 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:13 Pacific Daylight Time

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

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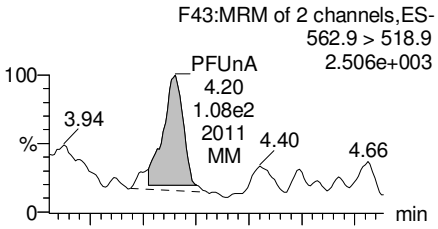
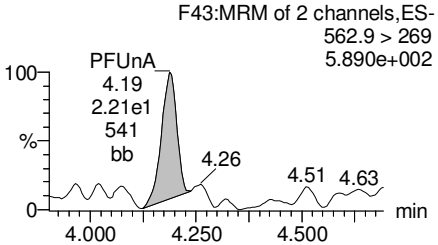
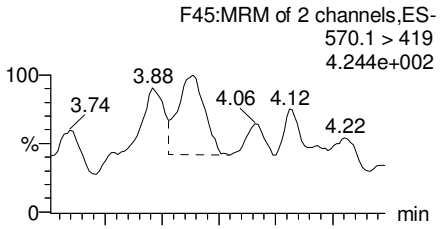
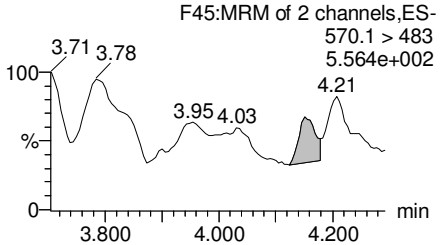




N-MeFOSAA





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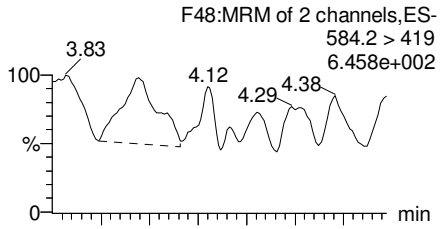
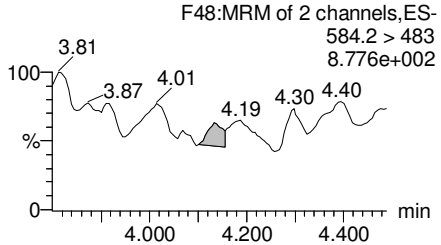
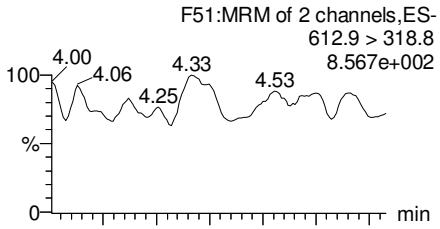
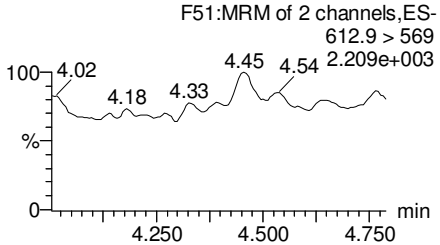




PFDoA





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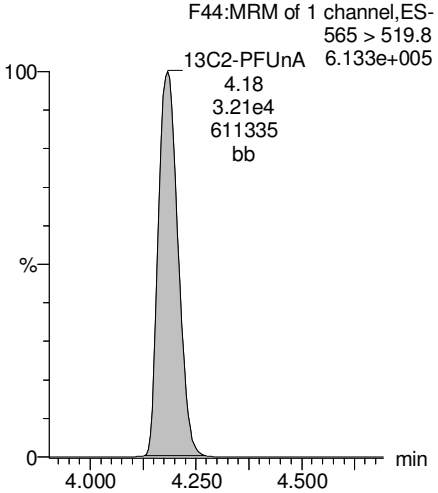
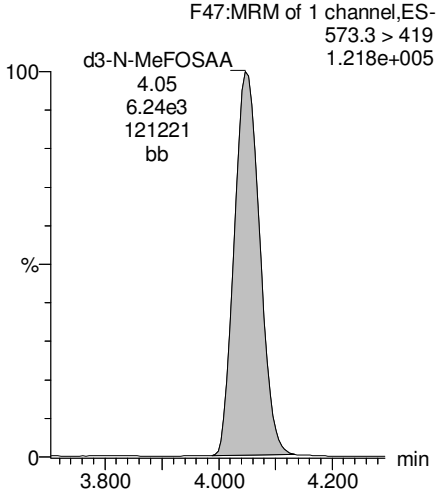
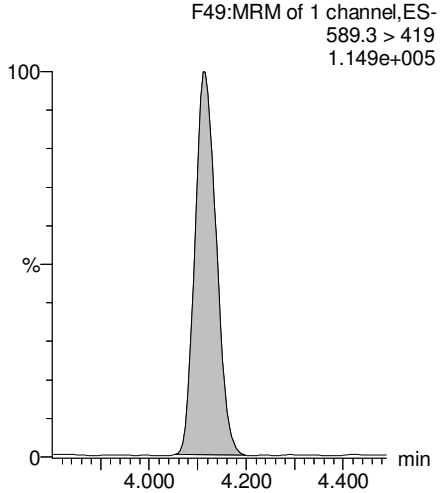


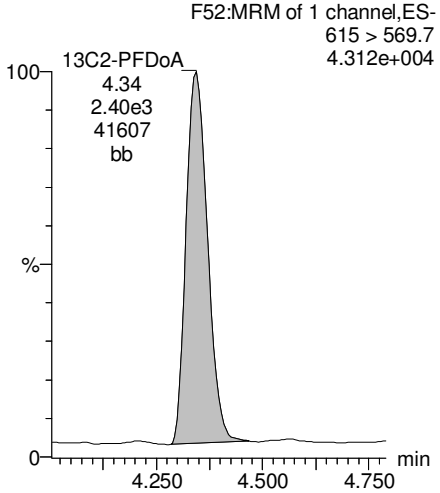
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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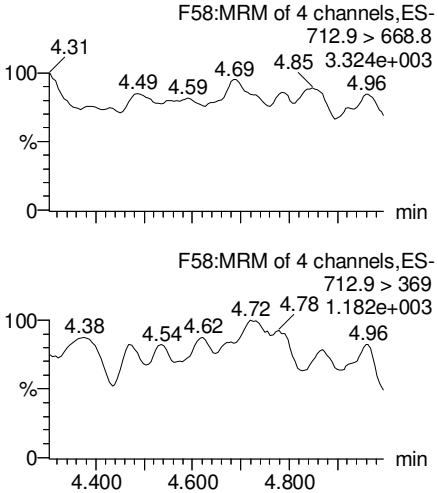
Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:13 Pacific Daylight Time

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

PFTeDA



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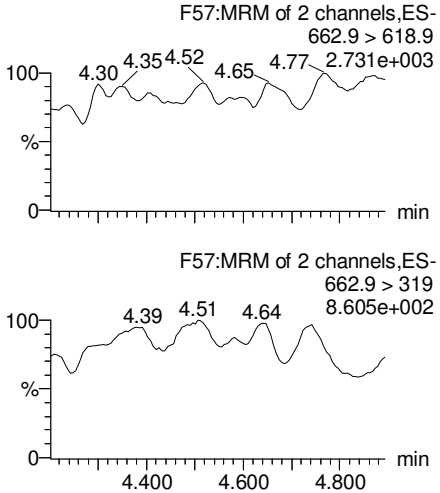
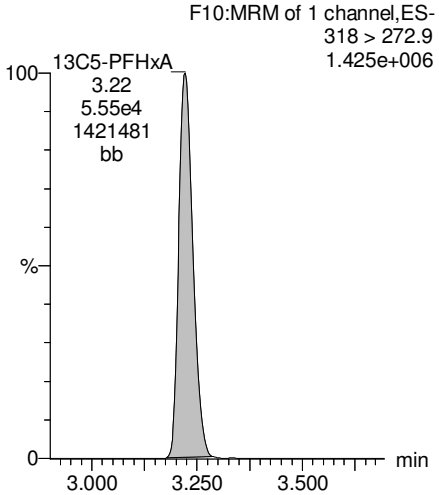
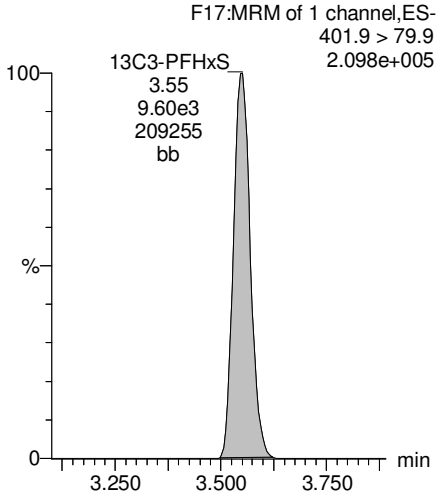


13C5-PFHxA



13C3-PFHxS



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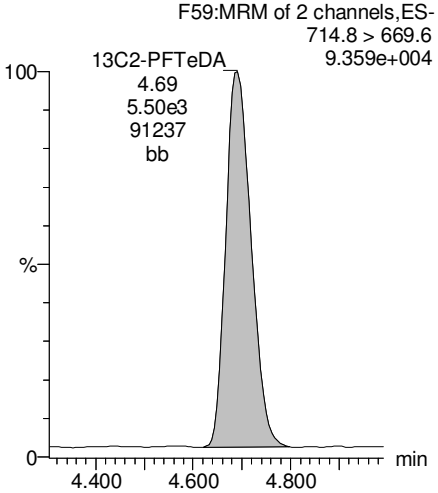

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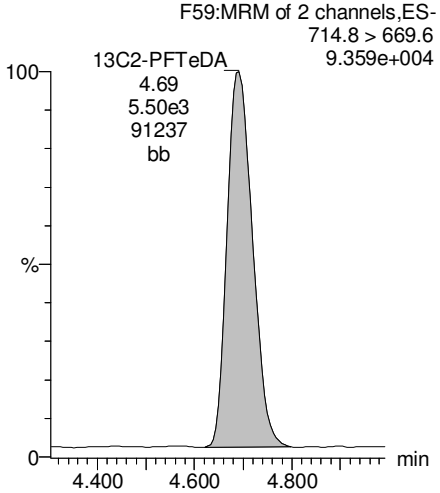
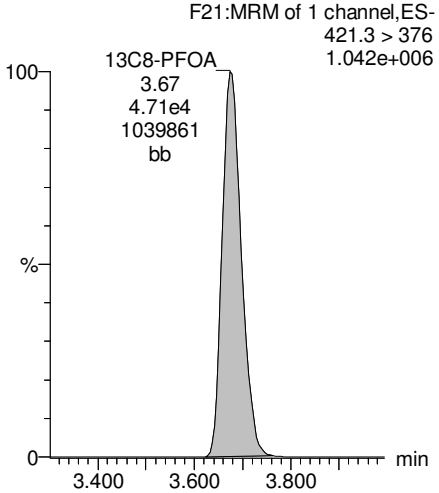
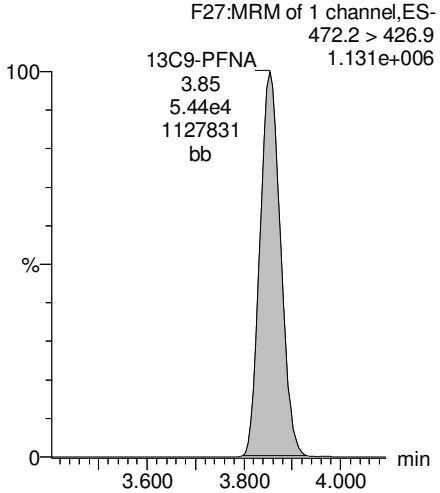


13C8-PFOA



13C9-PFNA



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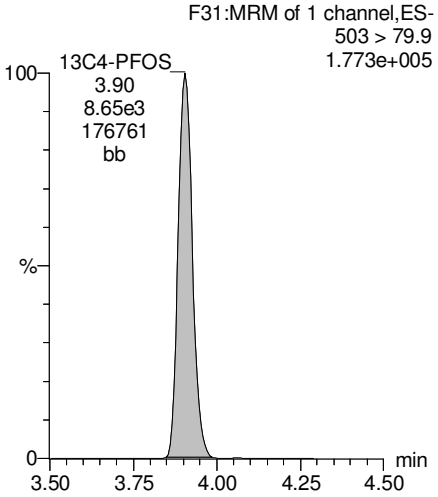
Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-5.qld

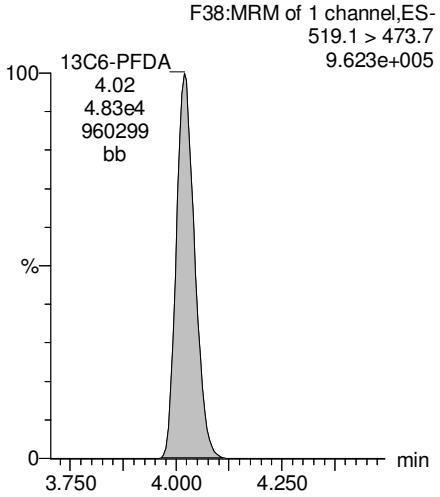
Last Altered: Wednesday, July 26, 2017 10:39:58 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:40:13 Pacific Daylight Time

Name: 170725M1_5, Date: 25-Jul-2017, Time: 14:58:18, ID: B7G0107-BLK1 Method Blank 0.125, Description: Method Blank

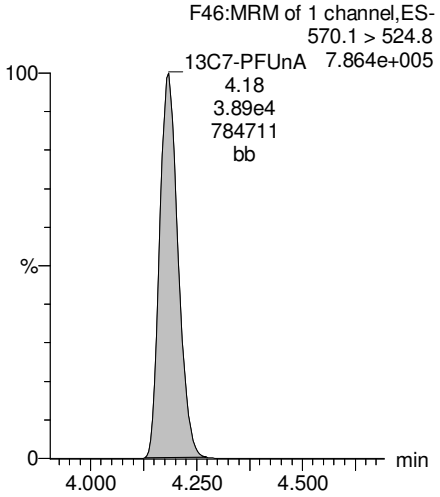
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	8.23e3	6.02e3	0.125		2.96	3.00	17.1	73.4	91.8
2	4	PFHxA	313.2 > 268.9	4.47e4	1.68e4	0.125		3.19	3.22	13.3	69.6	87.0
3	5	PFHpA	363 > 318.9	3.54e4	3.65e4	0.125		3.45	3.48	12.1	76.9	96.1
4	6	PFHxS	398.9 > 79.6	5.37e3	4.32e3	0.125		3.56	3.55	15.5	73.3	91.6
5	8	PFOA	413 > 368.7	3.79e4	5.12e4	0.125		3.65	3.68	9.26	74.6	93.3
6	10	PFNA	462.9 > 418.8	3.64e4	4.16e4	0.125		3.83	3.85	10.9	78.4	98.0
7	12	PFOS	499 > 79.9	7.59e3	1.00e4	0.125		3.89	3.90	9.48	64.1	80.1
8	13	PFDA	513 > 468.8	3.77e4	3.91e4	0.125		4.01	4.02	12.1	73.6	92.0
9	15	N-MeFOSAA	570.1 > 419	8.33e3	7.63e3	0.125		4.03	4.05	177	71.4	89.2
10	16	N-EtFOSAA	584.2 > 419	6.67e3	7.39e3	0.125		4.10	4.12	147	72.7	90.9
11	17	PFUnA	562.9 > 518.9	2.31e4	3.52e4	0.125		4.17	4.19	8.22	74.4	93.0
12	19	PFDoA	612.9 > 318.8	2.41e3	3.44e3	0.125		4.34	4.34	8.77	74.3	92.9

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Vista Analytical Laboratory

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:26 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	1.90e4	3.44e3	0.125		4.50	4.52	68.9	49.1	61.4
2	22	PFTeDA	712.9 > 668.8	8.76e3	1.02e4	0.125		4.68	4.70	10.8	74.6	93.3
3	28	13C3-PFBA	216.1 > 171.8	2.83e4	2.98e4	0.125	0.820	1.54	1.54	11.9	116	115.8
4	29	13C3-PFPeA	266 > 221.8	4.20e4	4.92e4	0.125	0.248	2.77	2.80	4.27	138	137.6
5	30	13C3-PFBS	302 > 98.8	6.02e3	4.92e4	0.125	0.031	2.96	2.99	0.612	157	157.4
6	31	13C2-PFHxA	315 > 269.8	1.68e4	4.92e4	0.125	0.276	3.19	3.22	1.71	49.4	123.5
7	32	13C4-PFHpA	367.2 > 321.8	3.65e4	4.92e4	0.125	0.306	3.45	3.48	3.71	97.1	97.1
8	33	18O2-PFHxS	403 > 102.6	4.32e3	8.71e3	0.125	0.393	3.56	3.55	6.21	126	126.5
9	34	13C2-6:2 FTS	429.1 > 408.9	8.53e3	4.12e4	0.125	0.158	3.64	3.67	2.59	131	131.4
10	35	13C2-PFOA	414.9 > 369.7	5.12e4	4.12e4	0.125	1.067	3.65	3.68	15.6	117	116.6
11	36	13C5-PFNA	468.2 > 422.9	4.16e4	4.53e4	0.125	0.852	3.83	3.85	11.5	108	108.0
12	37	13C8-PFOSA	506.1 > 77.7	2.69e3	4.01e4	0.125	0.098	3.84	3.87	0.839	68.3	68.3
13	38	13C8-PFOS	507 > 79.9	1.00e4	8.53e3	0.125	0.936	3.89	3.90	14.7	125	125.4
14	39	13C2-PFDA	515.1 > 469.9	3.91e4	4.64e4	0.125	0.810	4.01	4.02	10.5	104	104.0
15	40	13C2-8:2 FTS	529.1 > 508.7	5.38e3	4.64e4	0.125	0.086	4.00	4.02	1.45	136	135.5
16	41	d3-N-MeFOSAA	573.3 > 419	7.63e3	4.01e4	0.125	0.014	4.03	4.05	2.38	1390	106.8
17	42	d5-N-EtFOSAA	589.3 > 419	7.39e3	4.01e4	0.125	0.014	4.12	4.12	2.30	1320	101.6
18	43	13C2-PFUnA	565 > 519.8	3.52e4	4.01e4	0.125	0.962	4.17	4.19	11.0	91.1	91.1
19	44	13C2-PFDoA	615 > 569.7	3.44e3	4.01e4	0.125	0.094	4.34	4.34	1.07	90.7	90.7
20	46	13C2-PFTeDA	714.8 > 669.6	1.02e4	4.01e4	0.125	0.694	4.68	4.70	3.17	36.5	36.5
21	48	13C2-PFHxDA	815 > 769.7	2.57e3	4.01e4	0.125	0.843	5.06	5.06	0.802	7.61	19.0
22	51	13C4-PFBA	217 > 171.8	2.98e4	2.98e4	0.125	1.000	1.54	1.55	12.5	100	100.0
23	52	13C5-PFHxA	318 > 272.9	4.92e4	4.92e4	0.125	1.000	3.19	3.22	5.00	40.0	100.0
24	53	13C3-PFHxS	401.9 > 79.9	8.71e3	8.71e3	0.125	1.000	3.56	3.55	12.5	100	100.0
25	54	13C8-PFOA	421.3 > 376	4.12e4	4.12e4	0.125	1.000	3.65	3.68	12.5	100	100.0
26	55	13C9-PFNA	472.2 > 426.9	4.53e4	4.53e4	0.125	1.000	3.83	3.85	12.5	100	100.0
27	56	13C4-PFOS	503 > 79.9	8.53e3	8.53e3	0.125	1.000	3.89	3.91	12.5	100	100.0
28	57	13C6-PFDA	519.1 > 473.7	4.64e4	4.64e4	0.125	1.000	4.01	4.02	12.5	100	100.0
29	58	13C7-PFUnA	570.1 > 524.8	4.01e4	4.01e4	0.125	1.000	4.17	4.19	12.5	100	100.0
30	59	Total PFBS	299 > 79.7	8.23e3	6.02e3	0.125		2.96		17.1	73.4	
31	60	Total PFHxS	398.9 > 79.6	5.37e3	4.32e3	0.125		3.52		15.5	73.3	
32	61	Total PFOA	413 > 368.7	3.79e4	5.12e4	0.125		3.65		9.26	74.6	

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Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:26 Pacific Daylight Time

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	62	Total PFOS	499 > 79.9	7.59e3	1.00e4	0.125		3.89		9.48	64.1	
34	63	Total N-Me-FOSAA	570.1 > 419	8.33e3	7.63e3	0.125		4.03		177	71.4	
35	64	Total N-EtFOSAA	584.2 > 419	6.67e3	7.39e3	0.125		4.17		147	72.7	

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Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.00	8225.857	6023.405	17.071	bb	73.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.55	5367.093	4324.375	15.514	MM	73.3

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.68	37932.793	51228.836	9.256	bb	74.6

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.90	7593.815	10013.058	9.480	bb	64.1

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.05	8330.892	7630.618	177.413	bb	71.4

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.12	6673.021	7392.395	146.687	bb	72.7

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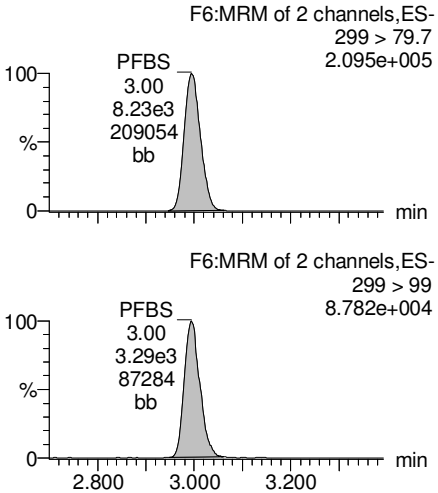
Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

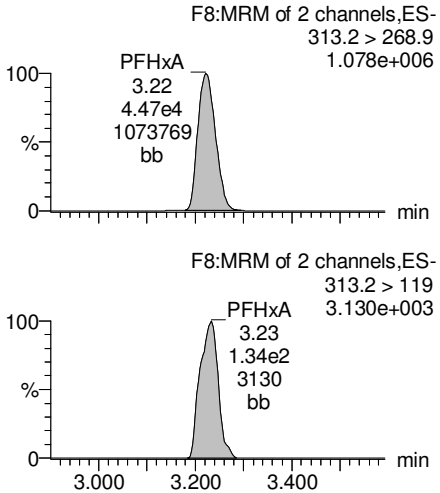
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

Total PFBS



PFHxA



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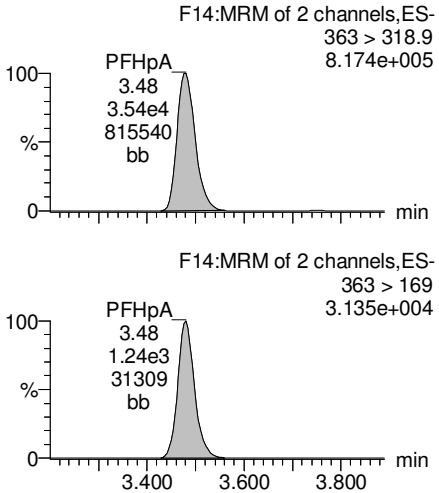

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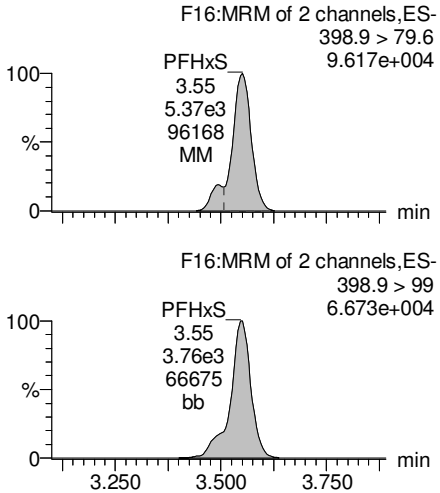
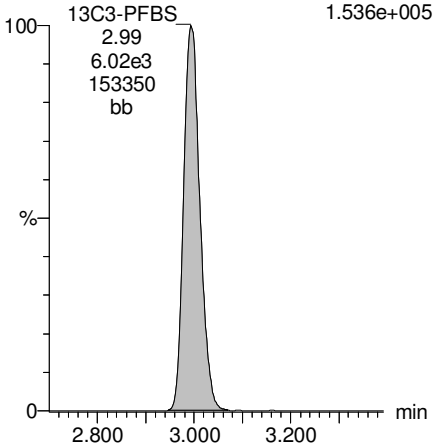


13C3-PFBS



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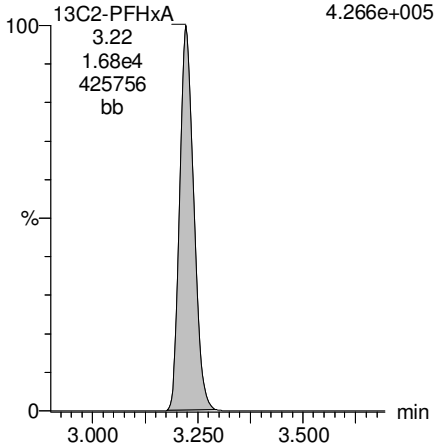

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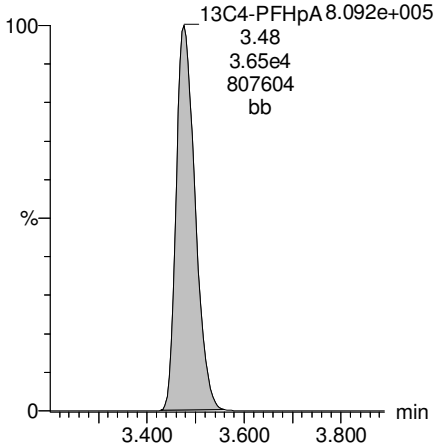

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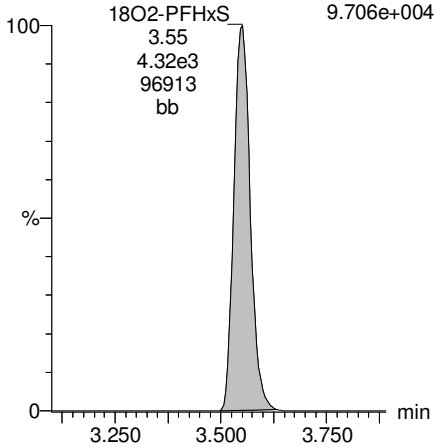

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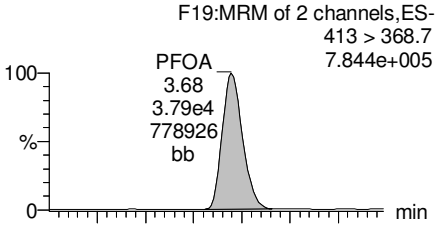
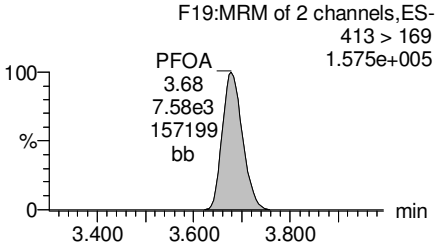
Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

Total PFOA





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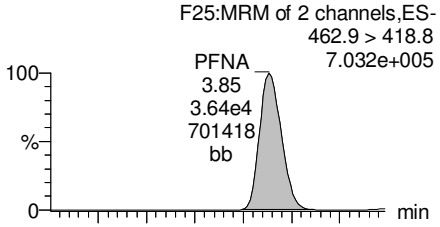
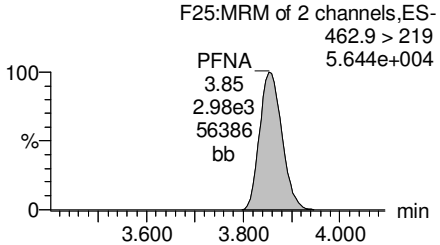
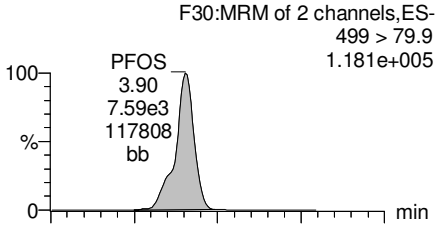
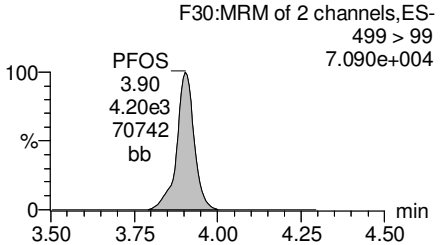




Total PFOS





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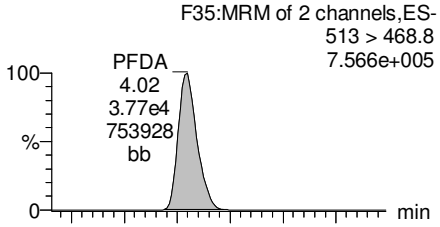
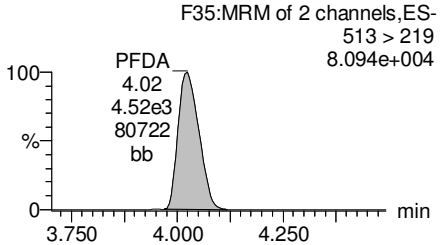
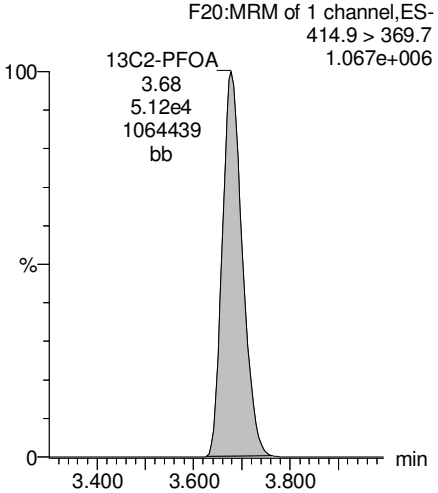




13C2-PFOA



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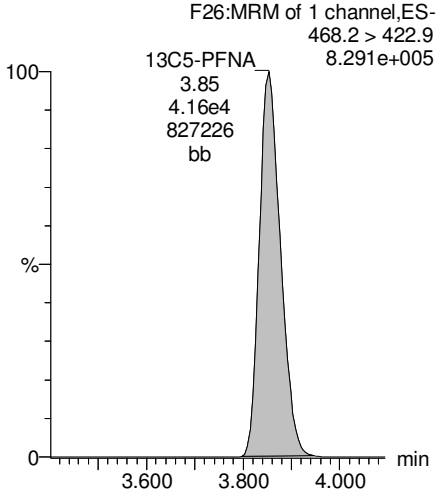
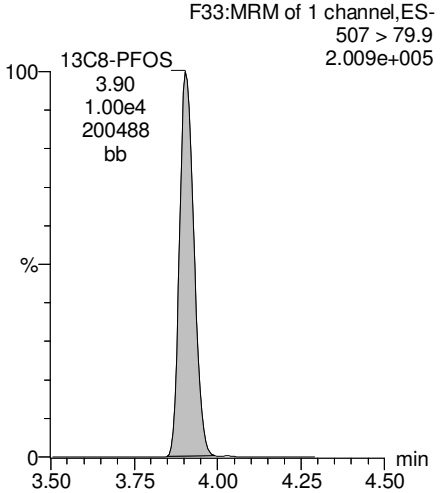


13C8-PFOS



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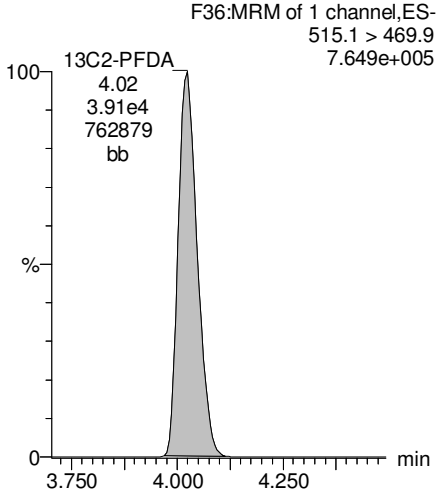

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Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

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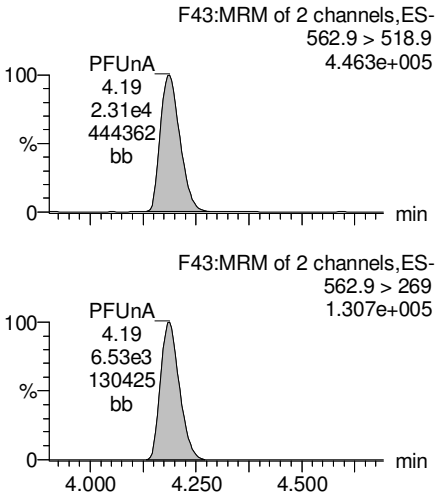
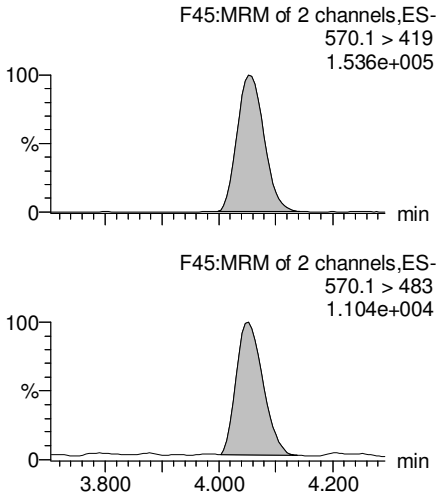


N-MeFOSAA



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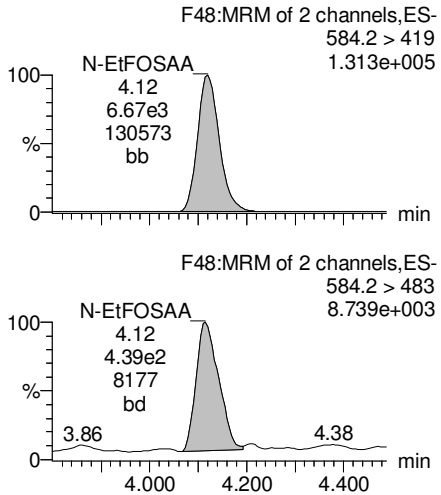
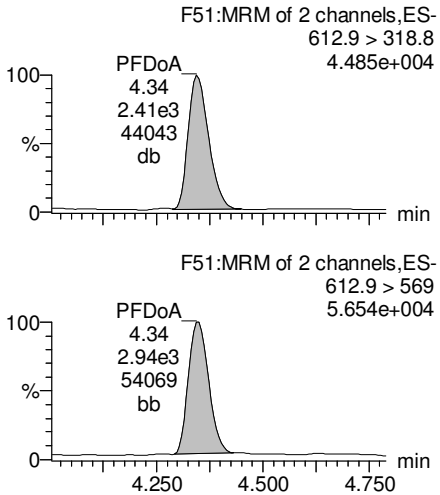


PFDoA



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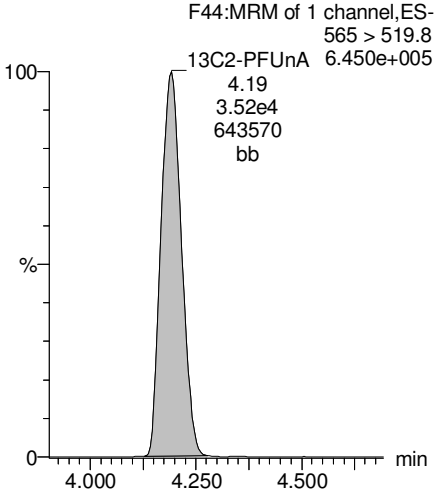

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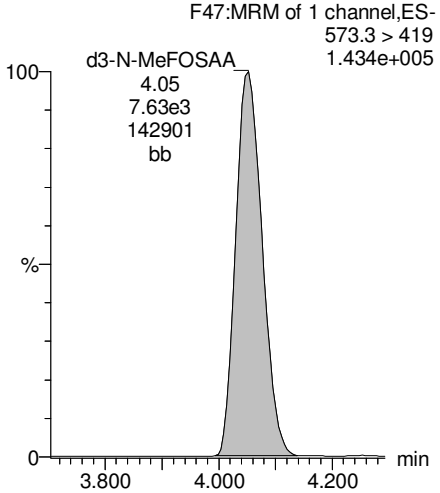

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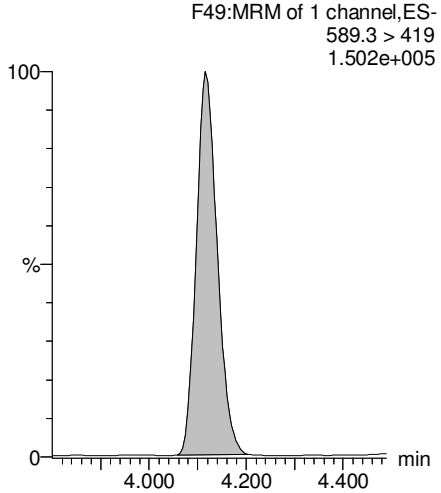

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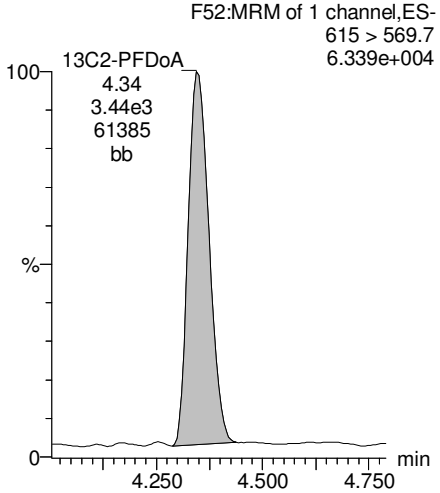

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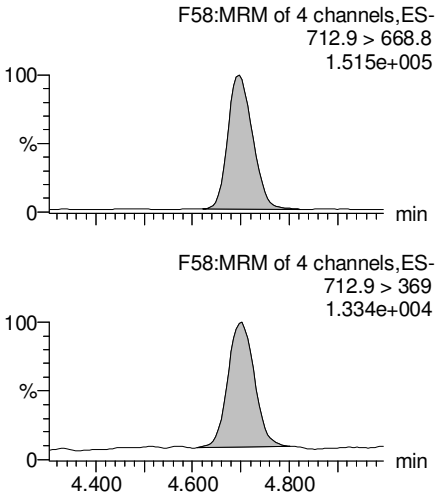
Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

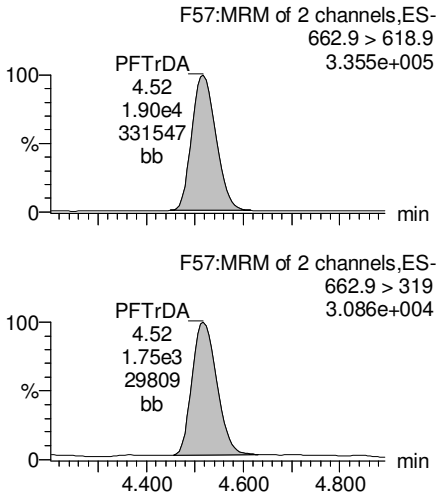
Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

PFTeDA



PFTrDA



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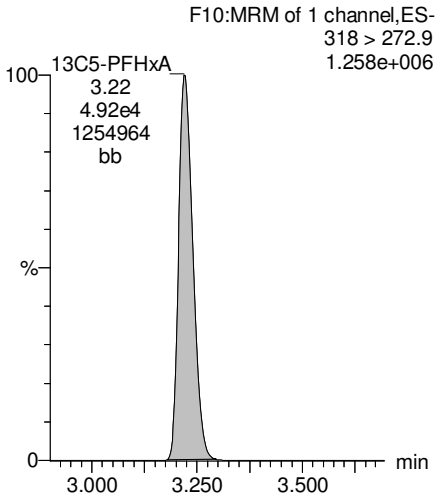
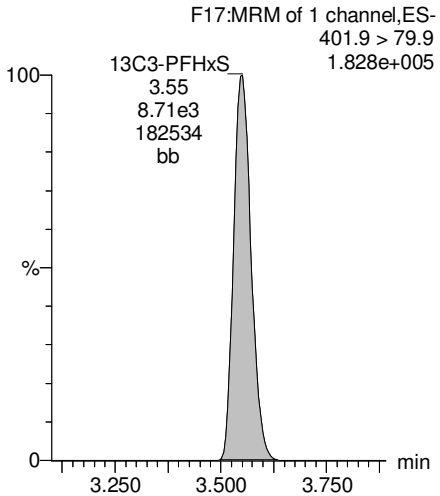


13C3-PFHxS



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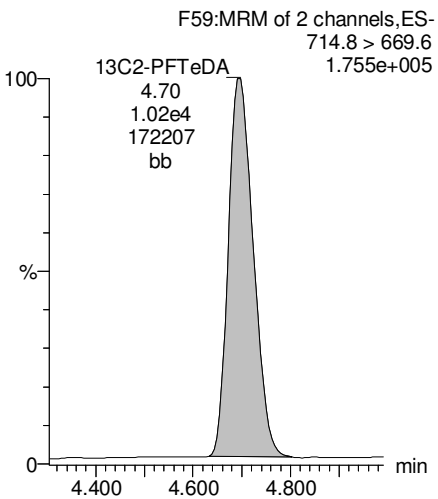

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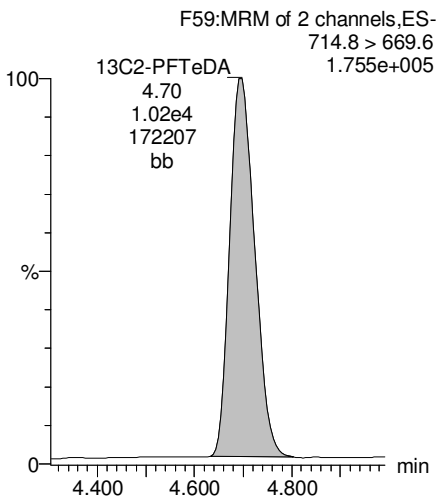
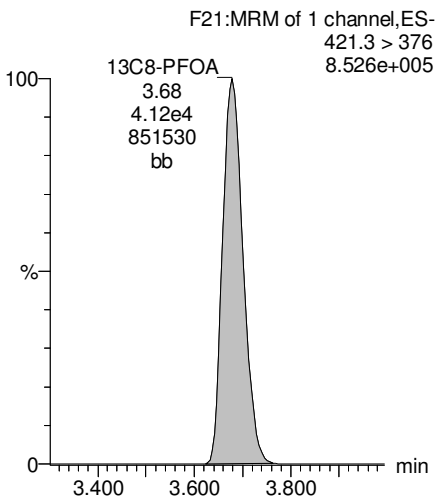
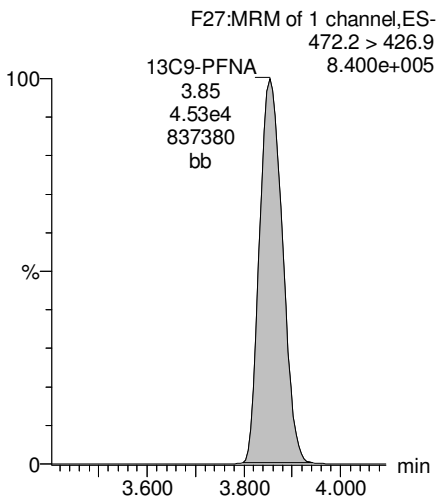


13C8-PFOA



13C9-PFNA



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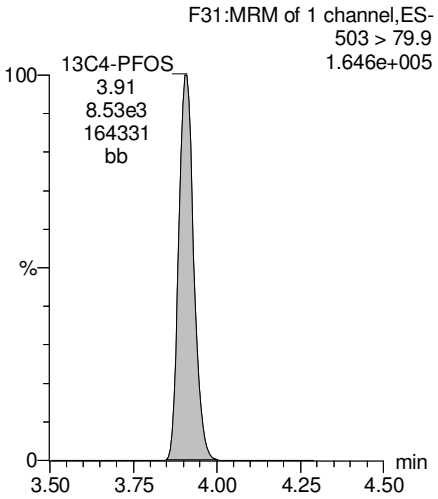
Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170725M1\170725M1-3.qld

Last Altered: Wednesday, July 26, 2017 10:34:33 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:36:04 Pacific Daylight Time

Name: 170725M1_3, Date: 25-Jul-2017, Time: 14:36:53, ID: B7G0107-BS1 OPR 0.125, Description: OPR

13C4-PFOS



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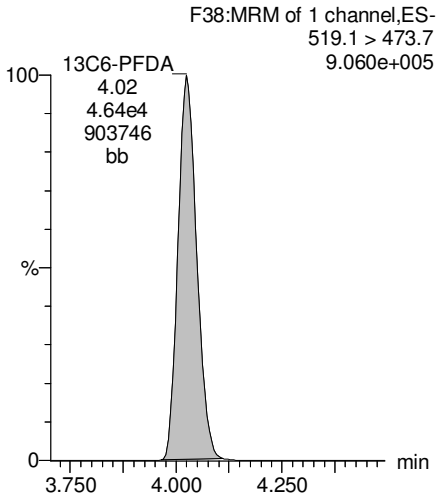

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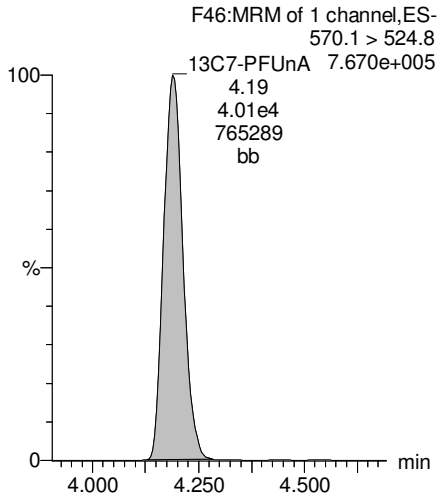

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		5.68e3	0.120		2.96				
2	4	PFHxA	313.2 > 268.9		1.84e4	0.120		3.19				
3	5	PFHpA	363 > 318.9		4.29e4	0.120		3.45				
4	6	PFHxS	398.9 > 79.6		4.10e3	0.120		3.56				
5	7	PFOA	413 > 368.7		5.71e4	0.120		3.65				
6	9	PFNA	462.9 > 418.8		4.67e4	0.120		3.83				
7	11	PFOS	499 > 79.9		9.64e3	0.120		3.89				
8	12	PFDA	513 > 468.8		4.54e4	0.120		4.01				
9	13	N-MeFOSAA	570.1 > 419		8.93e3	0.120		4.03				
10	14	N-EtFOSAA	584.2 > 419		8.75e3	0.120		4.10				
11	15	PFUnA	562.9 > 518.9		4.24e4	0.120		4.11				
12	17	PFDoA	612.9 > 318.8		4.43e3	0.120		4.34				
13	18	PFTrDA	662.9 > 618.9		4.43e3	0.120		4.50				
14	19	PFTeDA	712.9 > 668.8		3.27e4	0.120		4.68				
15	22	13C3-PFBS	302 > 98.8	5.68e3	4.96e4	0.120	0.033	2.96	2.90	0.573	144	138.5
16	23	13C2-PFHxA	315 > 269.8	1.84e4	4.96e4	0.120	0.335	3.19	3.14	1.85	45.9	110.4
17	24	13C4-PFHpA	367.2 > 321.8	4.29e4	4.96e4	0.120	0.369	3.45	3.42	4.32	97.3	93.7
18	25	18O2-PFHxS	403 > 102.6	4.10e3	7.84e3	0.120	0.460	3.56	3.49	6.55	118	113.8
19	26	13C2-PFOA	414.9 > 369.7	5.71e4	4.29e4	0.120	1.293	3.65	3.61	16.7	107	103.1
20	27	13C5-PFNA	468.2 > 422.9	4.67e4	4.81e4	0.120	0.986	3.83	3.79	12.2	102	98.6
21	28	13C8-PFOSA	506.1 > 77.7	3.50e3	4.82e4	0.120	0.132	3.84	3.80	0.906	56.8	54.7
22	29	13C8-PFOS	507 > 79.9	9.64e3	7.86e3	0.120	1.184	3.89	3.84	15.3	108	103.5
23	30	13C2-PFDA	515.1 > 469.9	4.54e4	5.27e4	0.120	0.998	4.01	3.96	10.8	89.6	86.2
24	31	d3-N-MeFOSAA	573.3 > 419	8.93e3	4.82e4	0.120	0.018	4.03	3.99	2.31	1090	80.5
25	32	d5-N-EtFOSAA	589.3 > 419	8.75e3	4.82e4	0.120	0.018	4.12	4.05	2.27	1060	78.5
26	33	13C2-PFUnA	565 > 519.8	4.24e4	4.82e4	0.120	1.129	4.17	4.12	11.0	80.8	77.8
27	34	13C2-PFDoA	615 > 569.7	4.43e3	4.82e4	0.120	0.116	4.34	4.29	1.15	82.3	79.2
28	35	13C2-PFTeDA	714.8 > 669.6	3.27e4	4.82e4	0.120	0.762	4.68	4.63	8.49	92.5	89.1
29	36	13C4-PFBA	217 > 171.8	2.20e4	2.20e4	0.120	1.000	1.32	1.40	12.5	104	100.0
30	37	13C5-PFHxA	318 > 272.9	4.96e4	4.96e4	0.120	1.000	3.19	3.14	5.00	41.6	100.0
31	38	13C3-PFHxS	401.9 > 79.9	7.84e3	7.84e3	0.120	1.000	3.56	3.48	12.5	104	100.0
32	39	13C8-PFOA	421.3 > 376	4.29e4	4.29e4	0.120	1.000	3.65	3.61	12.5	104	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	4.81e4	4.81e4	0.120	1.000	3.83	3.79	12.5	104	100.0
34	41	13C4-PFOS	503 > 79.9	7.86e3	7.86e3	0.120	1.000	3.89	3.84	12.5	104	100.0
35	42	13C6-PFDA	519.1 > 473.7	5.27e4	5.27e4	0.120	1.000	4.01	3.96	12.5	104	100.0
36	43	13C7-PFUnA	570.1 > 524.8	4.82e4	4.82e4	0.120	1.000	4.17	4.13	12.5	104	100.0
37	44	Total PFBS	299 > 79.7	0.00e0	5.68e3	0.120		2.96		0.000		
38	45	Total PFHxS	398.9 > 79.6	0.00e0	4.10e3	0.120		3.52		0.000		
39	46	Total PFOA	413 > 368.7	0.00e0	5.71e4	0.120		3.65		0.000		
40	47	Total PFOS	499 > 79.9	0.00e0	9.64e3	0.120		3.89		0.000		
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	8.93e3	0.120		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	8.75e3	0.120		4.17		0.000		

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6			4104.312		MM-I	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7			57149.277		MM-I	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

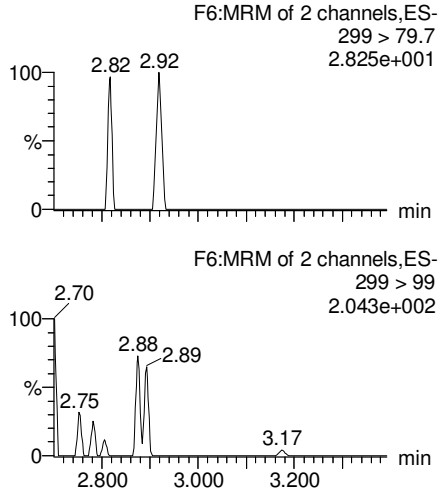
Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

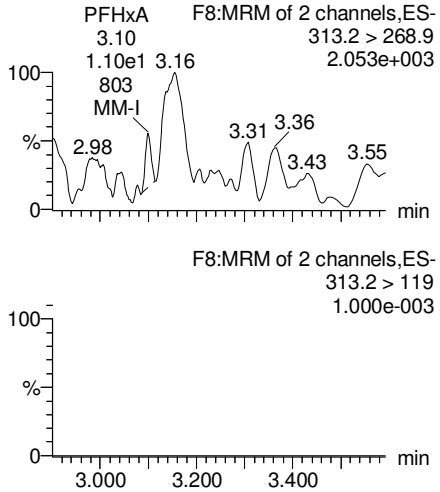
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

Total PFBS



PFHxA



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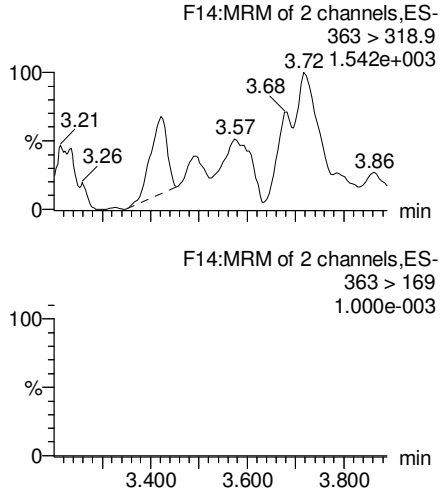
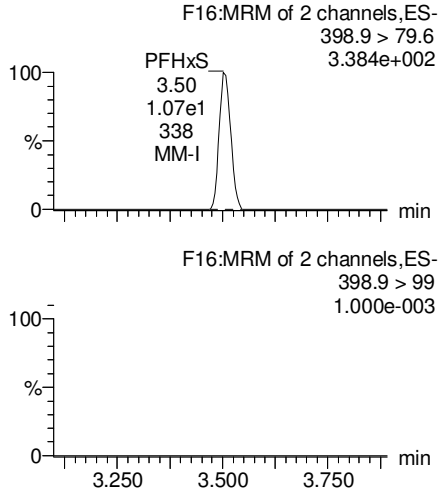
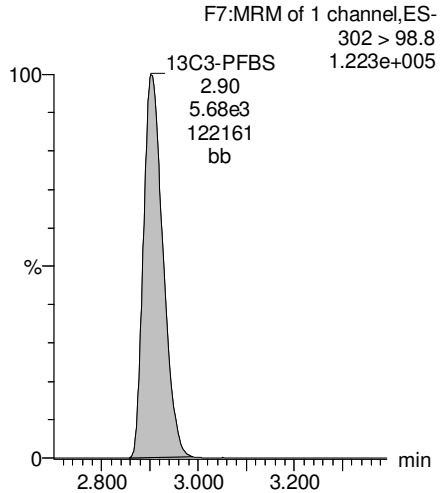


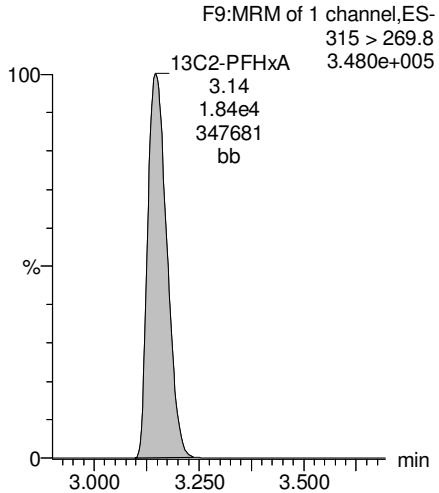
Total PFHxS



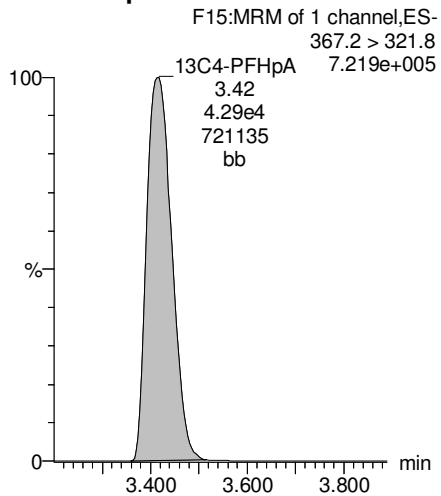
13C3-PFBS



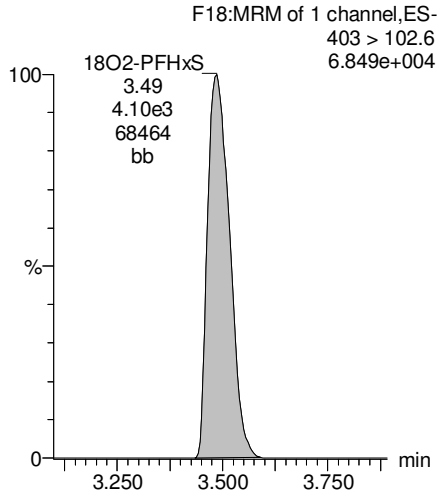
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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Vista Analytical Laboratory

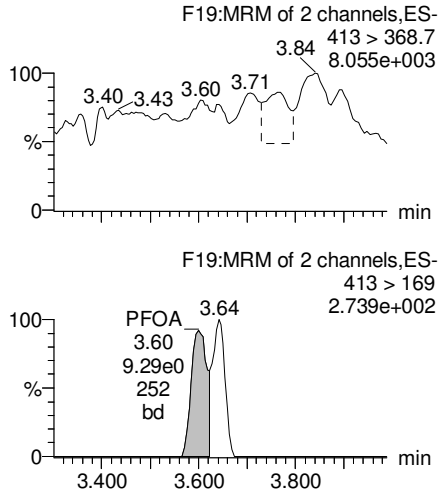
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

Total PFOA



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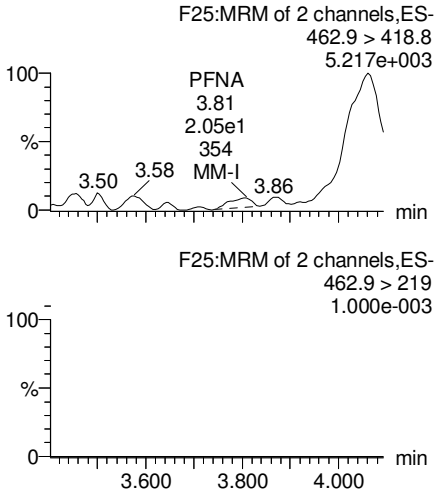
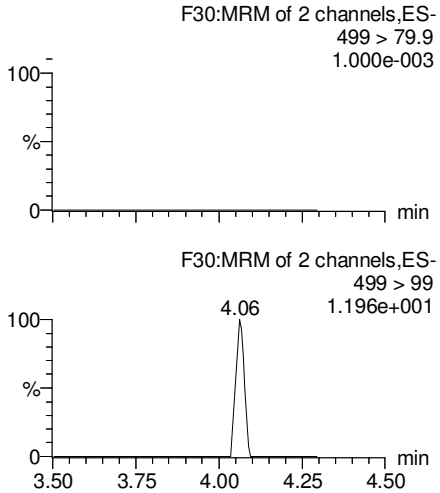
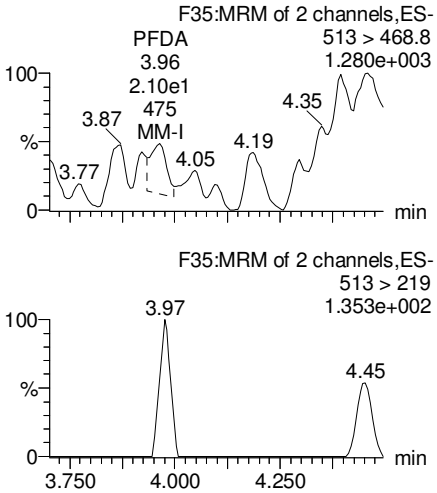


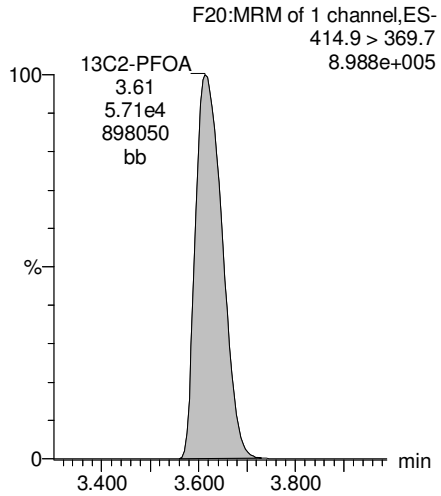
Total PFOS



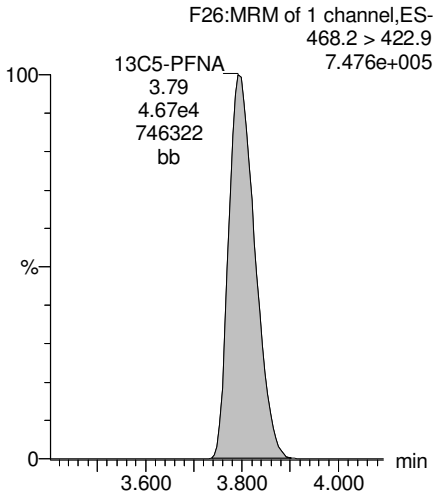
PFDA



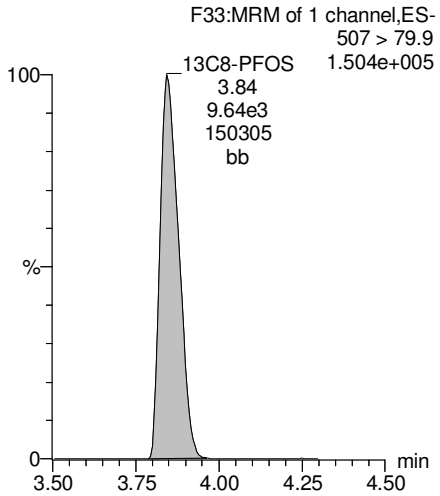
13C2-PFOA



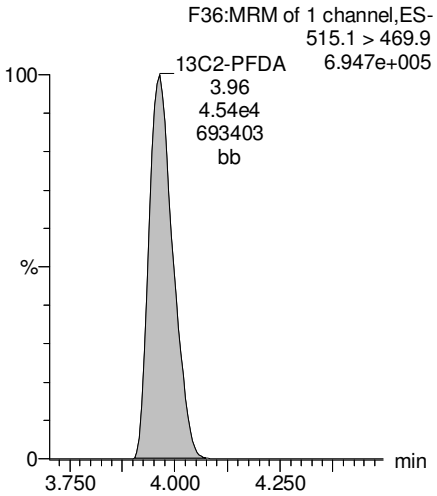
13C5-PFNA



13C8-PFOS



13C2-PFDA



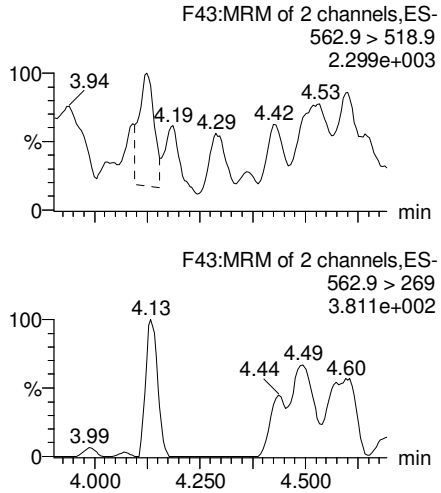
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

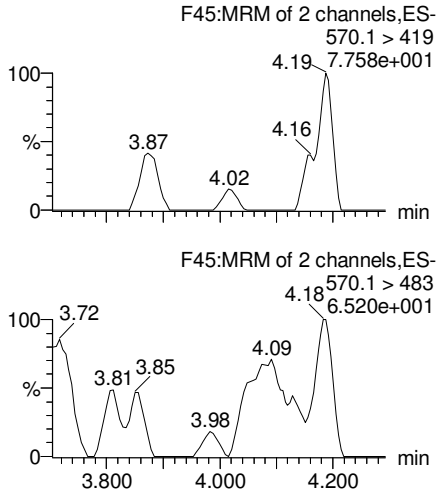
Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

PFUnA



N-MeFOSAA



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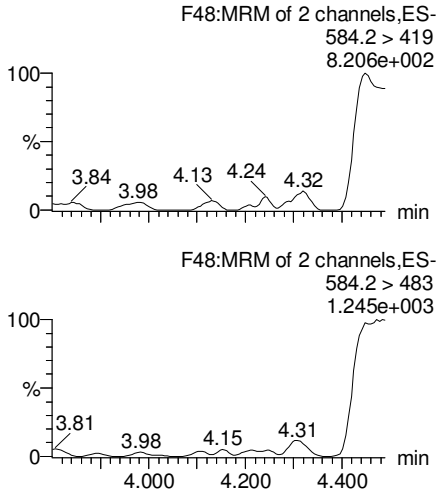
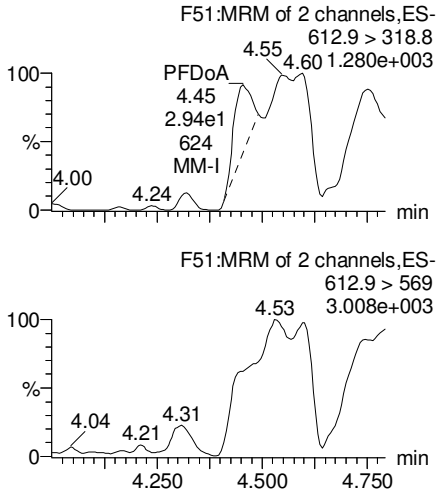
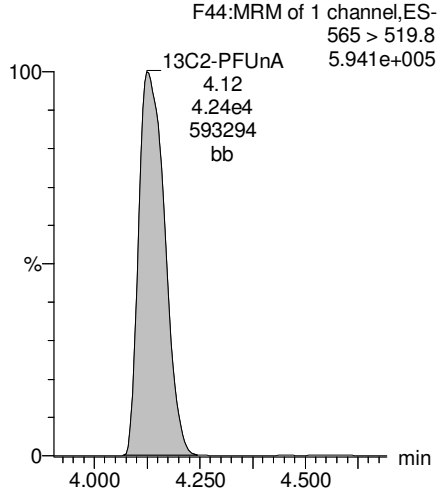


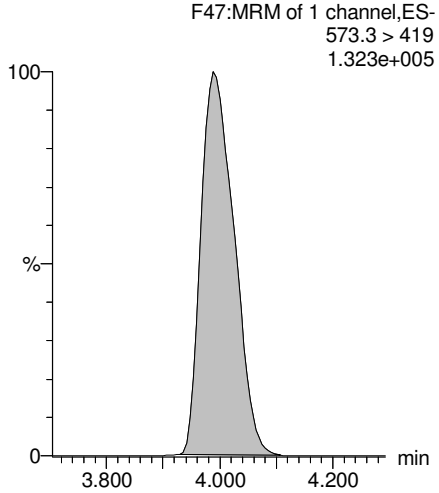
PFDoA



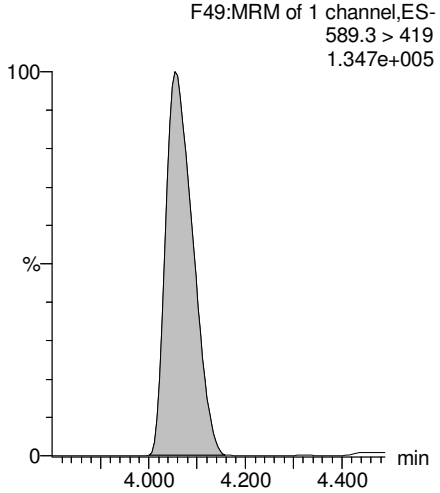
13C2-PFUnA



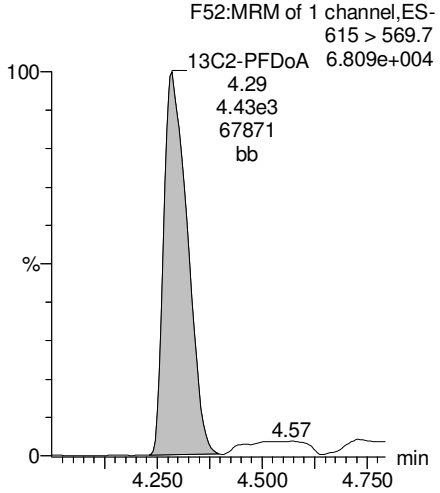
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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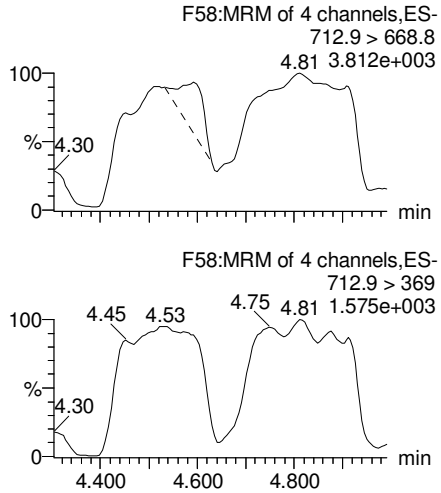
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

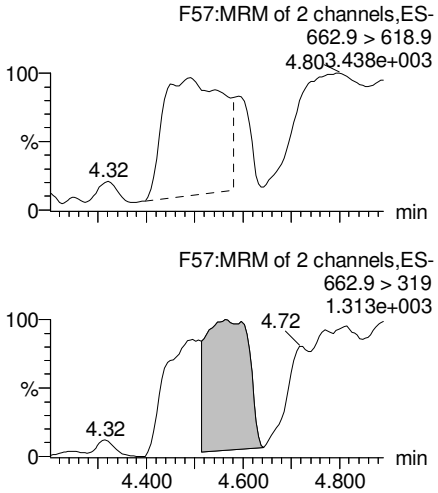
Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

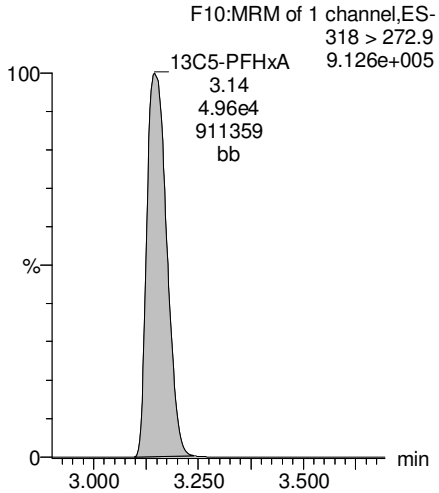
PFTeDA



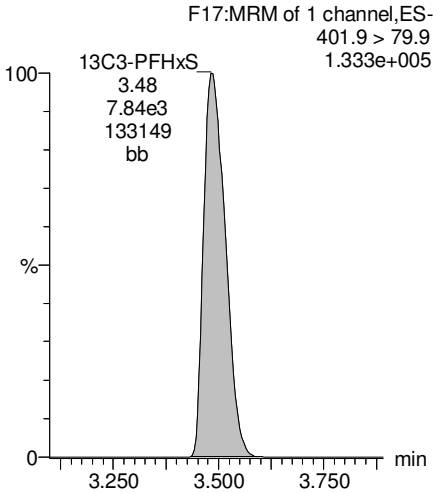
PFTrDA



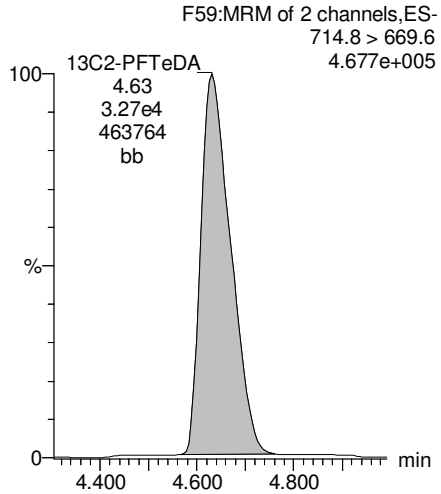
13C5-PFHxA



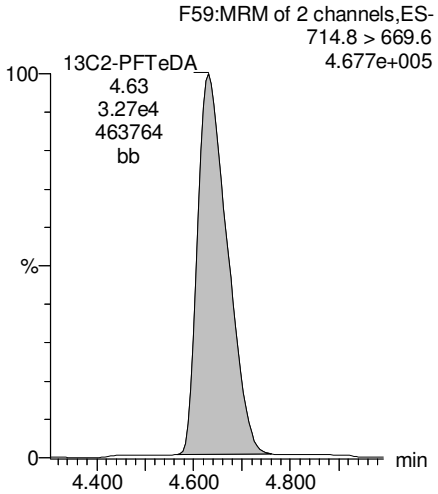
13C3-PFHxS



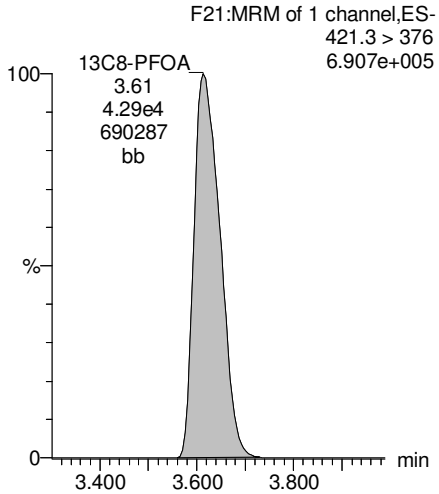
13C2-PFTeDA



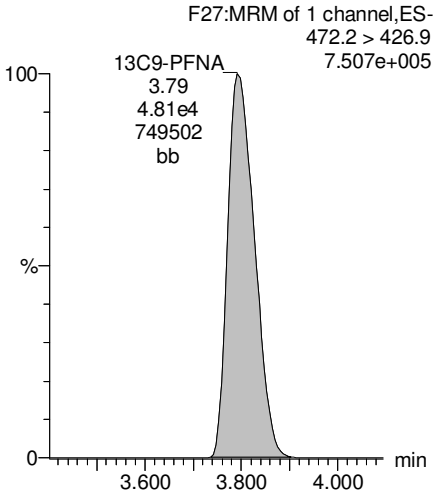
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

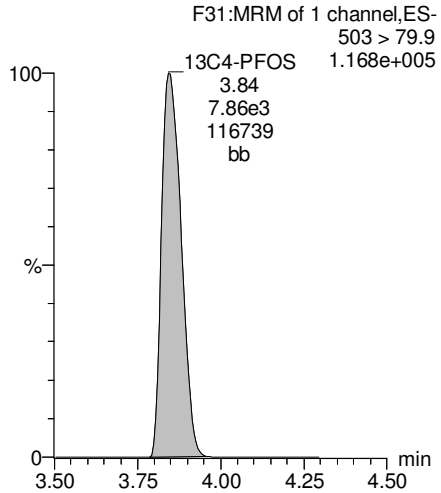
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-18.qld

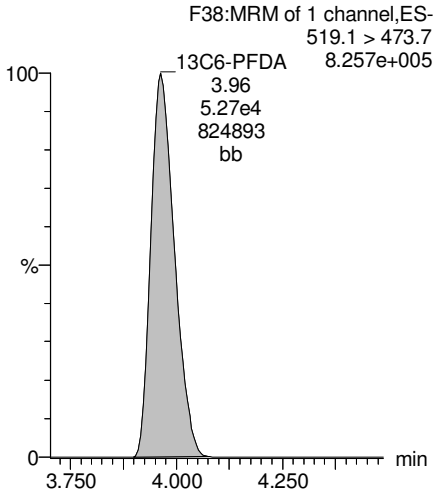
Last Altered: Monday, July 31, 2017 10:01:38 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:01:51 Pacific Daylight Time

Name: 170728M2_18, Date: 28-Jul-2017, Time: 19:12:13, ID: 1700851-01RE1 SB 01_20170710 0.12032, Description: SB 01_20170710

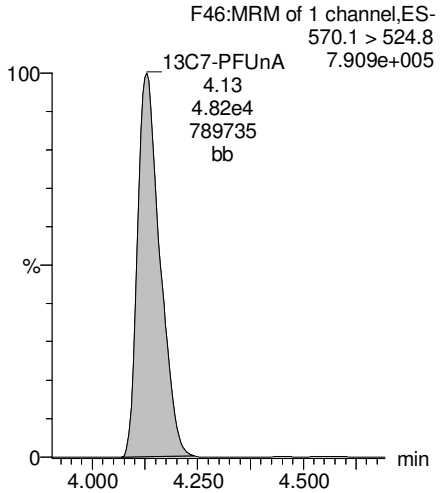
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:04:42 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.88e3	0.120		2.96				
2	4	PFHxA	313.2 > 268.9		1.51e4	0.120		3.19				
3	5	PFHpA	363 > 318.9		3.49e4	0.120		3.45				
4	6	PFHxS	398.9 > 79.6	1.54e1	3.52e3	0.120		3.56	3.48	0.0547	0.00949	
5	7	PFOA	413 > 368.7		4.84e4	0.120		3.65				
6	9	PFNA	462.9 > 418.8		4.01e4	0.120		3.83				
7	11	PFOS	499 > 79.9		8.60e3	0.120		3.89				
8	12	PFDA	513 > 468.8		3.88e4	0.120		4.01				
9	13	N-MeFOSAA	570.1 > 419		7.20e3	0.120		4.03				
10	14	N-EtFOSAA	584.2 > 419		7.10e3	0.120		4.10				
11	15	PFUnA	562.9 > 518.9		3.78e4	0.120		4.11				
12	17	PFDoA	612.9 > 318.8		3.67e3	0.120		4.34				
13	18	PFTrDA	662.9 > 618.9		3.67e3	0.120		4.50				
14	19	PFTeDA	712.9 > 668.8		2.81e4	0.120		4.68				
15	22	13C3-PFBS	302 > 98.8	4.88e3	4.42e4	0.120	0.033	2.96	2.90	0.553	140	133.7
16	23	13C2-PFHxA	315 > 269.8	1.51e4	4.42e4	0.120	0.335	3.19	3.15	1.70	42.5	101.6
17	24	13C4-PFHpA	367.2 > 321.8	3.49e4	4.42e4	0.120	0.369	3.45	3.41	3.95	89.6	85.7
18	25	18O2-PFHxS	403 > 102.6	3.52e3	7.57e3	0.120	0.460	3.56	3.48	5.80	105	100.9
19	26	13C2-PFOA	414.9 > 369.7	4.84e4	3.75e4	0.120	1.293	3.65	3.62	16.1	104	99.8
20	27	13C5-PFNA	468.2 > 422.9	4.01e4	4.58e4	0.120	0.986	3.83	3.79	10.9	92.8	88.8
21	28	13C8-PFOSA	506.1 > 77.7	2.64e3	3.93e4	0.120	0.132	3.84	3.80	0.840	53.0	50.7
22	29	13C8-PFOS	507 > 79.9	8.60e3	7.90e3	0.120	1.184	3.89	3.84	13.6	96.0	91.9
23	30	13C2-PFDA	515.1 > 469.9	3.88e4	4.51e4	0.120	0.998	4.01	3.96	10.8	90.2	86.3
24	31	d3-N-MeFOSAA	573.3 > 419	7.20e3	3.93e4	0.120	0.018	4.03	3.99	2.29	1080	79.7
25	32	d5-N-EtFOSAA	589.3 > 419	7.10e3	3.93e4	0.120	0.018	4.12	4.05	2.26	1060	78.2
26	33	13C2-PFUnA	565 > 519.8	3.78e4	3.93e4	0.120	1.129	4.17	4.12	12.0	89.1	85.3
27	34	13C2-PFDoA	615 > 569.7	3.67e3	3.93e4	0.120	0.116	4.34	4.29	1.17	84.1	80.5
28	35	13C2-PFTeDA	714.8 > 669.6	2.81e4	3.93e4	0.120	0.762	4.68	4.63	8.93	98.0	93.8
29	36	13C4-PFBA	217 > 171.8	2.13e4	2.13e4	0.120	1.000	1.32	1.40	12.5	104	100.0
30	37	13C5-PFHxA	318 > 272.9	4.42e4	4.42e4	0.120	1.000	3.19	3.14	5.00	41.8	100.0
31	38	13C3-PFHxS	401.9 > 79.9	7.57e3	7.57e3	0.120	1.000	3.56	3.49	12.5	104	100.0
32	39	13C8-PFOA	421.3 > 376	3.75e4	3.75e4	0.120	1.000	3.65	3.62	12.5	104	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:04:42 Pacific Daylight Time

Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	4.58e4	4.58e4	0.120	1.000	3.83	3.79	12.5	104	100.0
34	41	13C4-PFOS	503 > 79.9	7.90e3	7.90e3	0.120	1.000	3.89	3.84	12.5	104	100.0
35	42	13C6-PFDA	519.1 > 473.7	4.51e4	4.51e4	0.120	1.000	4.01	3.96	12.5	104	100.0
36	43	13C7-PFUnA	570.1 > 524.8	3.93e4	3.93e4	0.120	1.000	4.17	4.13	12.5	104	100.0
37	44	Total PFBS	299 > 79.7	0.00e0	4.88e3	0.120		2.96		0.000		
38	45	Total PFHxS	398.9 > 79.6	1.54e1	3.52e3	0.120		3.52		0.0547	0.00949	
39	46	Total PFOA	413 > 368.7	0.00e0	4.84e4	0.120		3.65		0.000		
40	47	Total PFOS	499 > 79.9	0.00e0	8.60e3	0.120		3.89		0.000		
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.20e3	0.120		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	7.10e3	0.120		4.17		0.000		

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:04:42 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.48	15.370	3515.014	0.055	bb	0.0

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7			48411.773		MM-I	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			7196.643		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			7100.167		MM-I	

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
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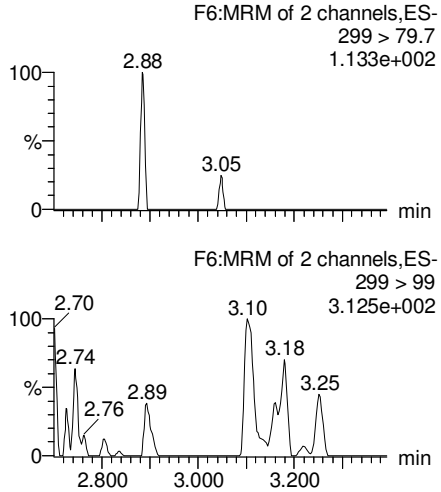
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

Total PFBS



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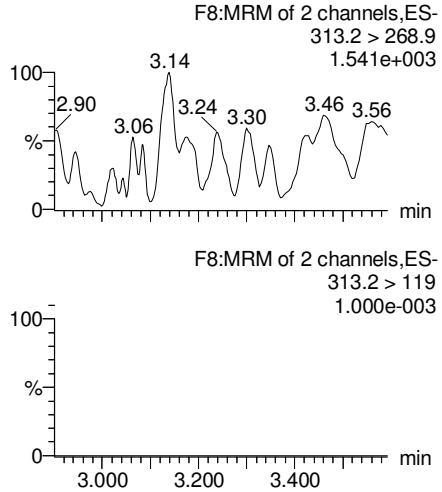

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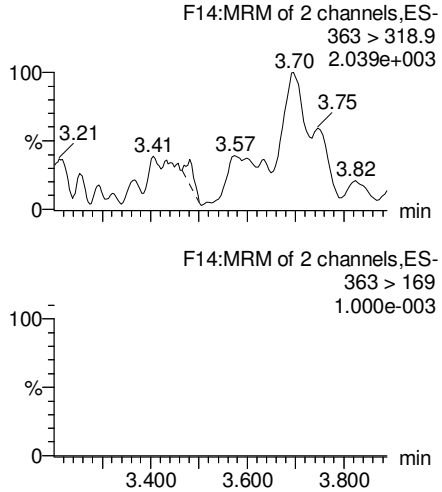

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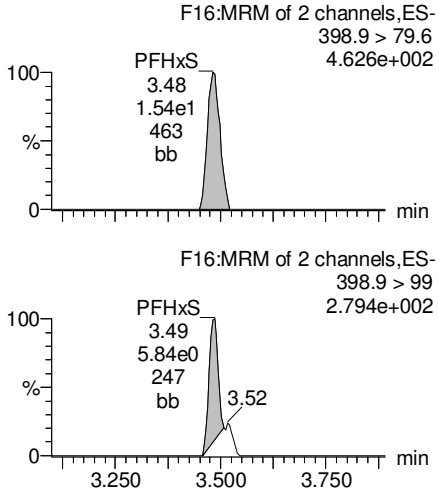

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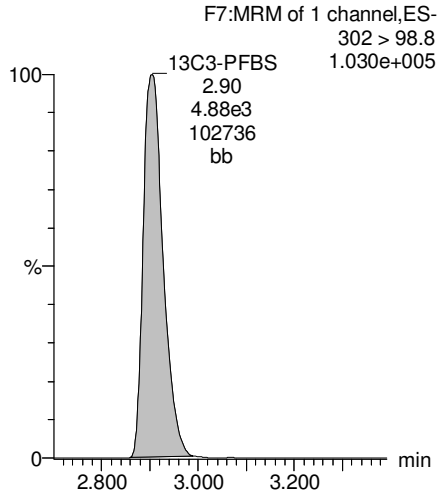

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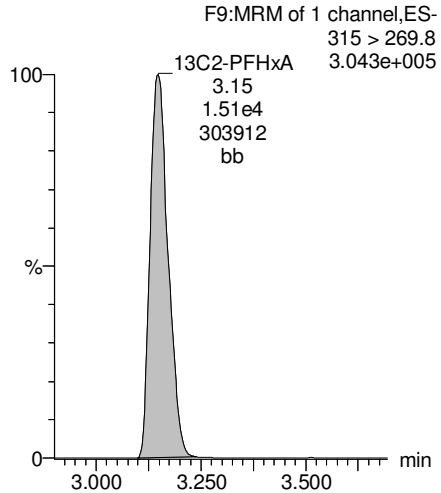

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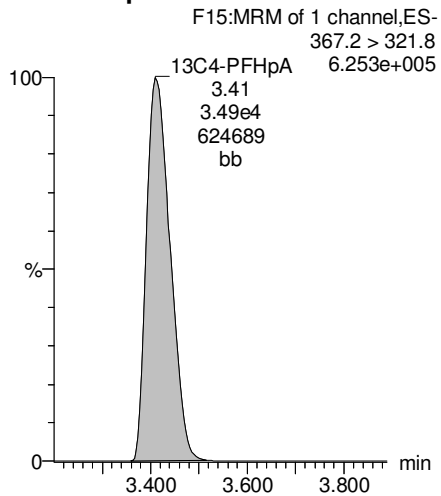

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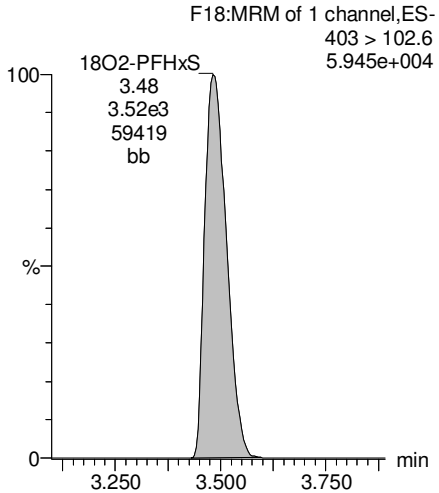

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
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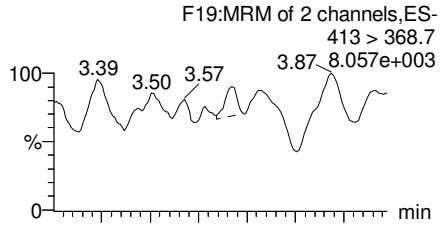
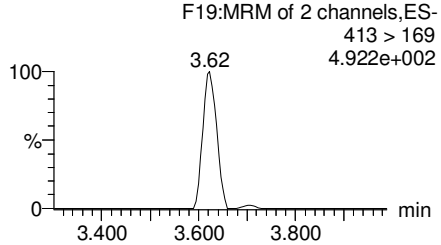
Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

Total PFOA





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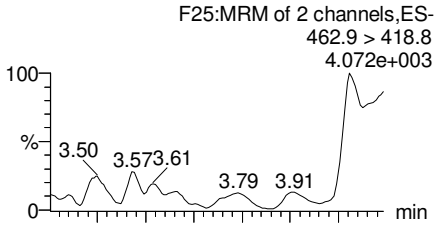
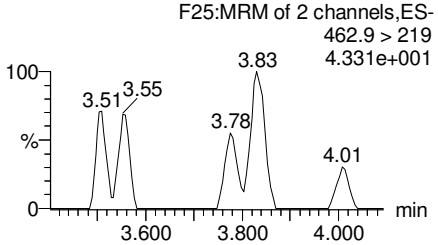
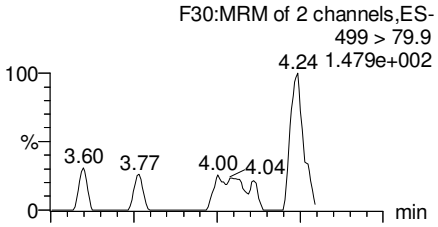
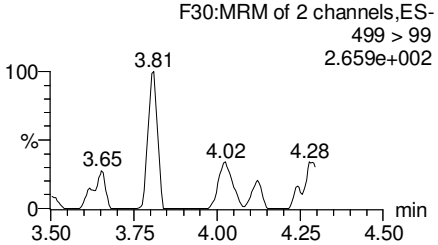




Total PFOS





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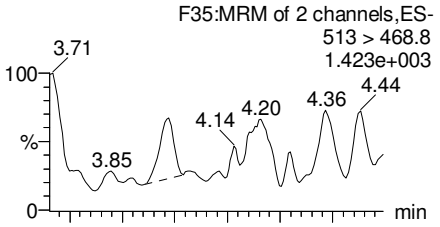

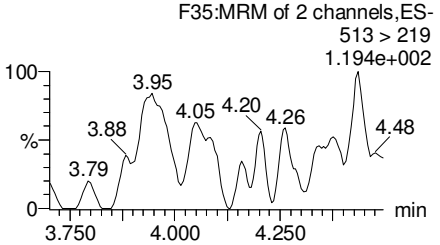

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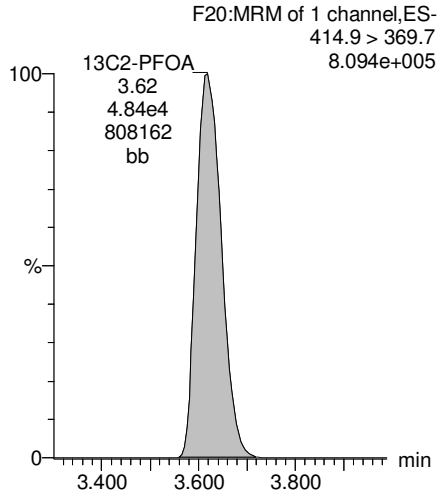

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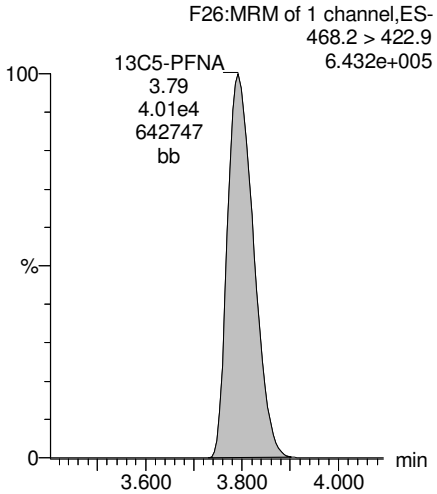

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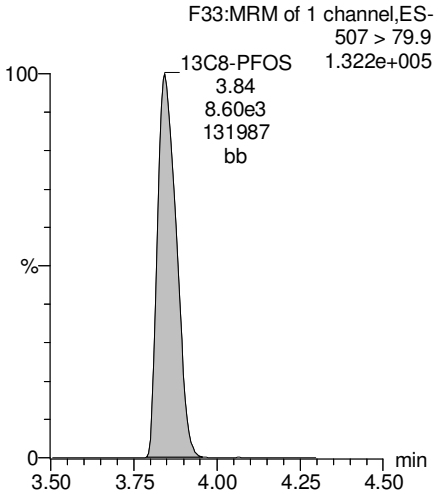

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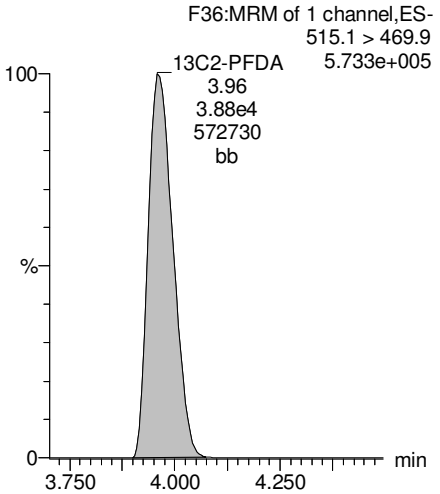

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
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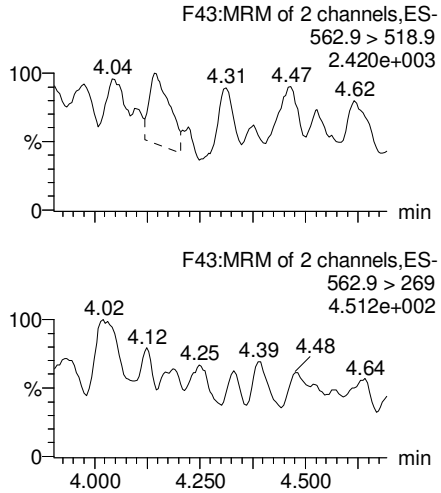
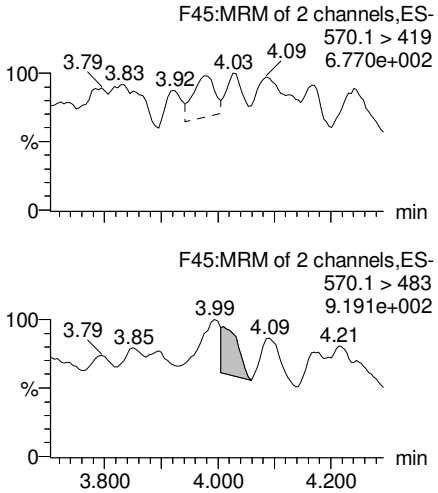
Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

PFUnA



N-MeFOSAA



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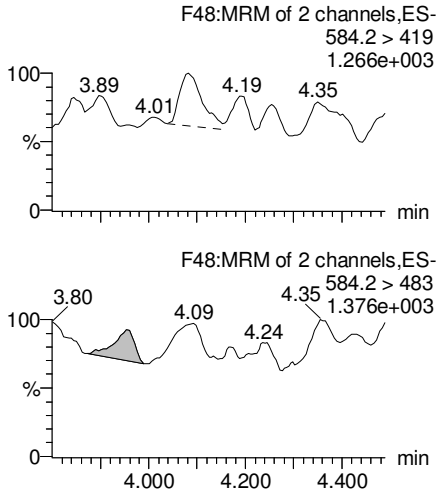
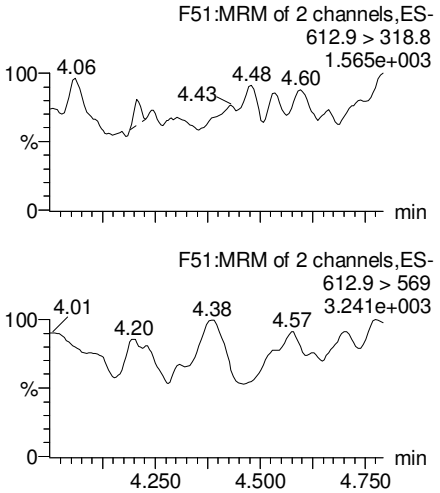


PFDoA



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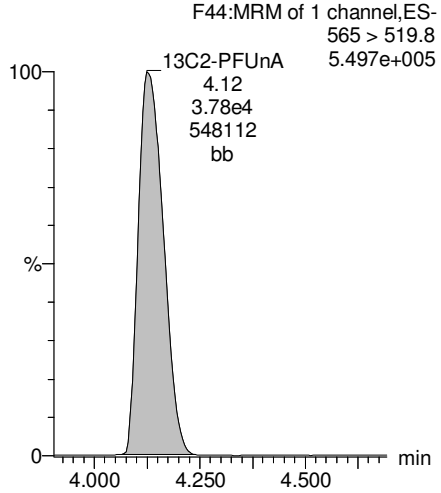

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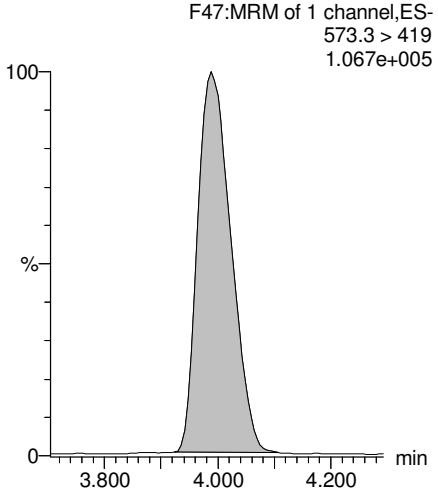

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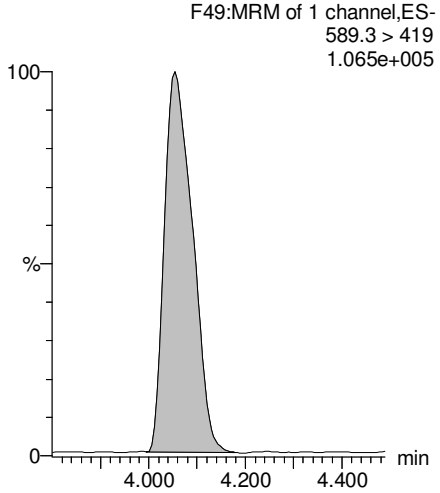

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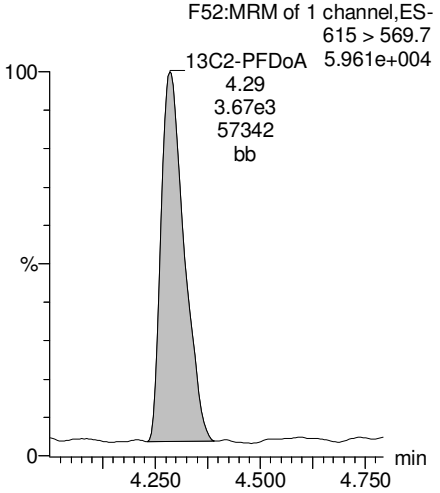

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
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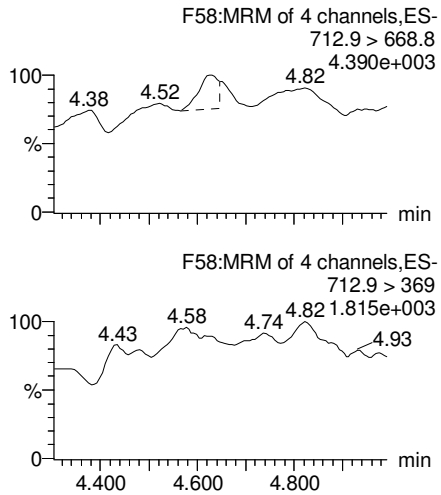
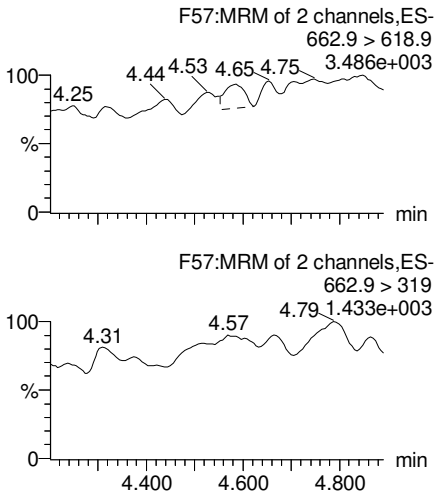
Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

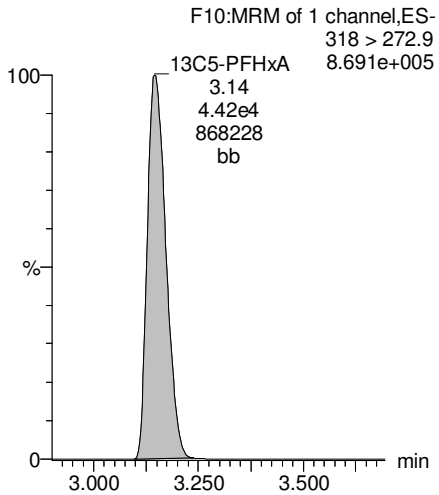
PFTeDA



PFTrDA



13C5-PFHxA



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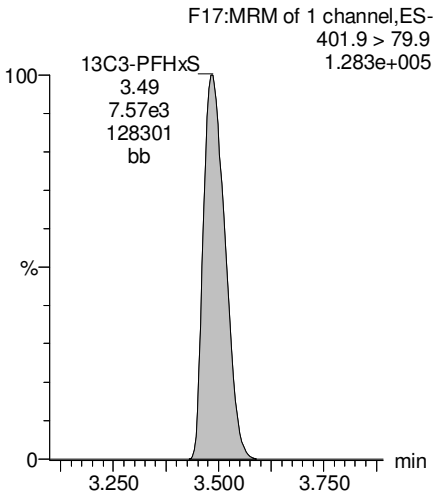

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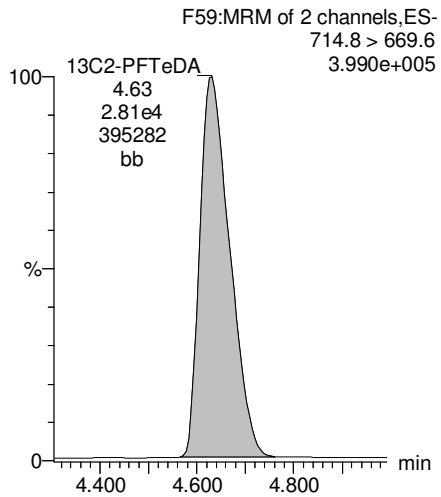

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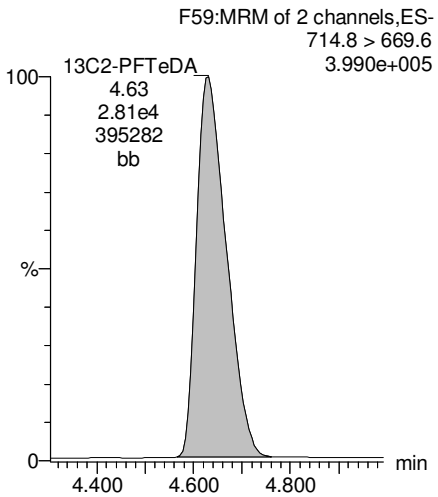

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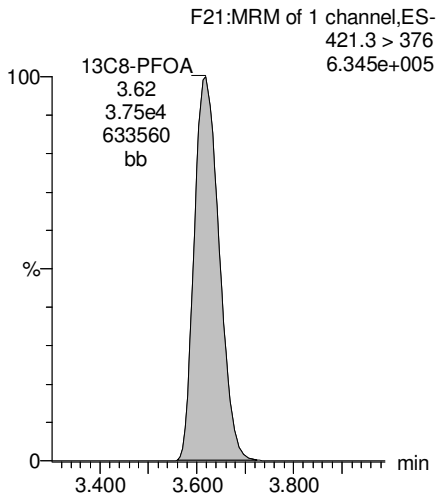
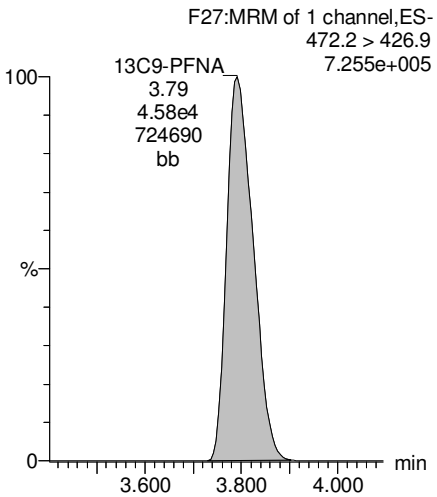


13C9-PFNA



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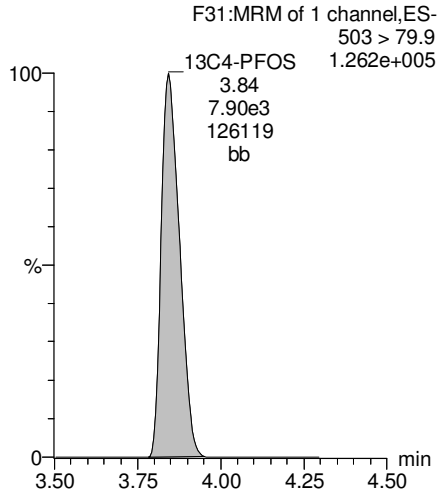
Dataset: U:\Q4.PRO\results\170728M2\170728M2-19.qld

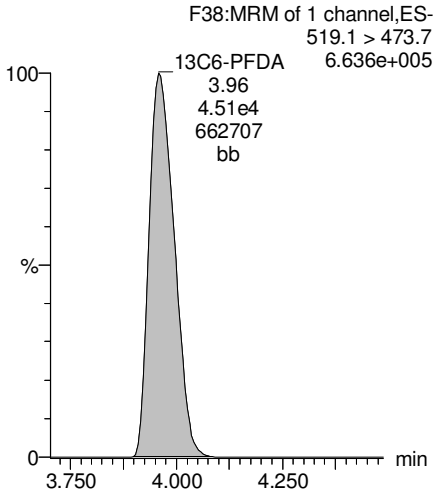
Last Altered: Monday, July 31, 2017 10:04:25 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:04:42 Pacific Daylight Time

Name: 170728M2_19, Date: 28-Jul-2017, Time: 19:22:51, ID: 1700851-02RE1 EB 01_20170710 0.11963, Description: EB 01_20170710

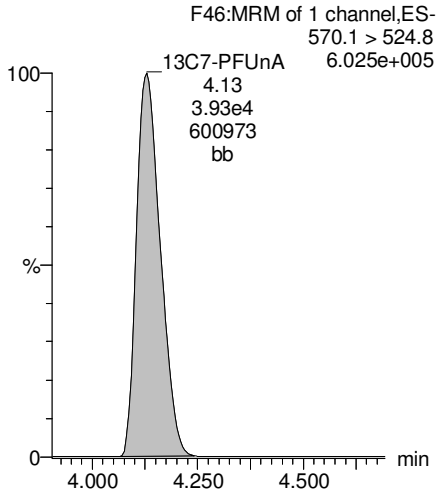
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	4.72e2	5.70e3	0.116		2.96	2.90	1.04	4.82	
2	4	PFHxA	313.2 > 268.9	1.46e4	1.69e4	0.116		3.19	3.14	4.30	25.7	
3	5	PFHpA	363 > 318.9	2.03e3	3.69e4	0.116		3.45	3.41	0.688	4.53	
4	6	PFHxS	398.9 > 79.6	1.67e3	4.03e3	0.116		3.56	3.49	5.17	26.5	
5	7	PFOA	413 > 368.7	1.56e4	5.27e4	0.116		3.65	3.61	3.70	31.8	
6	9	PFNA	462.9 > 418.8	3.74e2	4.61e4	0.116		3.83	3.79	0.101	0.141	
7	11	PFOS	499 > 79.9	1.38e3	9.87e3	0.116		3.89	3.79	1.75	14.9	
8	12	PFDA	513 > 468.8		4.37e4	0.116		4.01				
9	13	N-MeFOSAA	570.1 > 419		8.40e3	0.116		4.03				
10	14	N-EtFOSAA	584.2 > 419		8.04e3	0.116		4.10				
11	15	PFUnA	562.9 > 518.9		4.50e4	0.116		4.11				
12	17	PFDoA	612.9 > 318.8		4.09e3	0.116		4.34				
13	18	PFTrDA	662.9 > 618.9		4.09e3	0.116		4.50				
14	19	PFTeDA	712.9 > 668.8		2.20e4	0.116		4.68				
15	22	13C3-PFBS	302 > 98.8	5.70e3	4.97e4	0.116	0.033	2.96	2.90	0.573	149	138.7
16	23	13C2-PFHxA	315 > 269.8	1.69e4	4.97e4	0.116	0.335	3.19	3.14	1.70	43.8	101.7
17	24	13C4-PFHpA	367.2 > 321.8	3.69e4	4.97e4	0.116	0.369	3.45	3.41	3.71	86.7	80.5
18	25	18O2-PFHxS	403 > 102.6	4.03e3	8.63e3	0.116	0.460	3.56	3.48	5.84	109	101.6
19	26	13C2-PFOA	414.9 > 369.7	5.27e4	4.05e4	0.116	1.293	3.65	3.61	16.3	108	100.5
20	27	13C5-PFNA	468.2 > 422.9	4.61e4	4.73e4	0.116	0.986	3.83	3.79	12.2	107	99.0
21	28	13C8-PFOSA	506.1 > 77.7	4.17e3	4.94e4	0.116	0.132	3.84	3.80	1.06	68.6	63.7
22	29	13C8-PFOS	507 > 79.9	9.87e3	8.21e3	0.116	1.184	3.89	3.84	15.0	109	101.5
23	30	13C2-PFDA	515.1 > 469.9	4.37e4	4.74e4	0.116	0.998	4.01	3.96	11.5	99.6	92.4
24	31	d3-N-MeFOSAA	573.3 > 419	8.40e3	4.94e4	0.116	0.018	4.03	3.99	2.13	1040	74.0
25	32	d5-N-EtFOSAA	589.3 > 419	8.04e3	4.94e4	0.116	0.018	4.12	4.05	2.03	987	70.4
26	33	13C2-PFUnA	565 > 519.8	4.50e4	4.94e4	0.116	1.129	4.17	4.12	11.4	86.9	80.7
27	34	13C2-PFDoA	615 > 569.7	4.09e3	4.94e4	0.116	0.116	4.34	4.29	1.03	76.9	71.3
28	35	13C2-PFTeDA	714.8 > 669.6	2.20e4	4.94e4	0.116	0.762	4.68	4.63	5.57	62.9	58.4
29	36	13C4-PFBA	217 > 171.8	2.57e4	2.57e4	0.116	1.000	1.32	1.40	12.5	108	100.0
30	37	13C5-PFHxA	318 > 272.9	4.97e4	4.97e4	0.116	1.000	3.19	3.14	5.00	43.1	100.0
31	38	13C3-PFHxS	401.9 > 79.9	8.63e3	8.63e3	0.116	1.000	3.56	3.49	12.5	108	100.0
32	39	13C8-PFOA	421.3 > 376	4.05e4	4.05e4	0.116	1.000	3.65	3.61	12.5	108	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	4.73e4	4.73e4	0.116	1.000	3.83	3.79	12.5	108	100.0
34	41	13C4-PFOS	503 > 79.9	8.21e3	8.21e3	0.116	1.000	3.89	3.84	12.5	108	100.0
35	42	13C6-PFDA	519.1 > 473.7	4.74e4	4.74e4	0.116	1.000	4.01	3.96	12.5	108	100.0
36	43	13C7-PFUnA	570.1 > 524.8	4.94e4	4.94e4	0.116	1.000	4.17	4.12	12.5	108	100.0
37	44	Total PFBS	299 > 79.7	4.72e2	5.70e3	0.116		2.96		1.04	4.82	
38	45	Total PFHxS	398.9 > 79.6	1.67e3	4.03e3	0.116		3.52		5.17	26.5	
39	46	Total PFOA	413 > 368.7	1.75e4	5.27e4	0.116		3.65		4.16	34.8	
40	47	Total PFOS	499 > 79.9	1.38e3	9.87e3	0.116		3.89		1.75	14.9	
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	8.40e3	0.116		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	8.04e3	0.116		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.90	472.146	5700.296	1.035	bb	4.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.49	1668.397	4032.212	5.172	MM	26.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.61	15609.969	52691.191	3.703	MM	31.8
2	46	Total PFOA	413 > 368.7	3.58	1926.446	52691.191	0.457	MM	3.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.79	1380.937	9872.403	1.748	MM	14.9

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			8400.704		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
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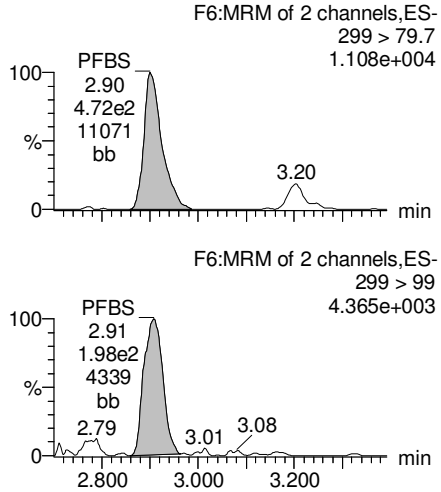
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

Total PFBS



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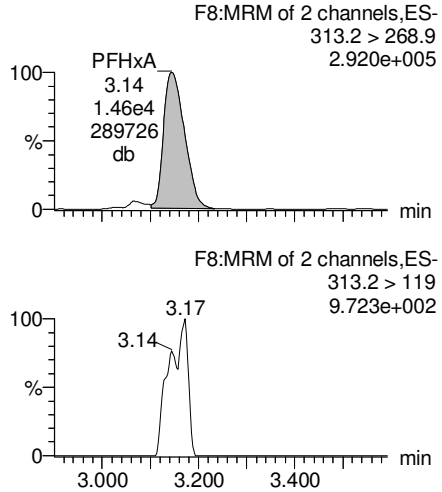

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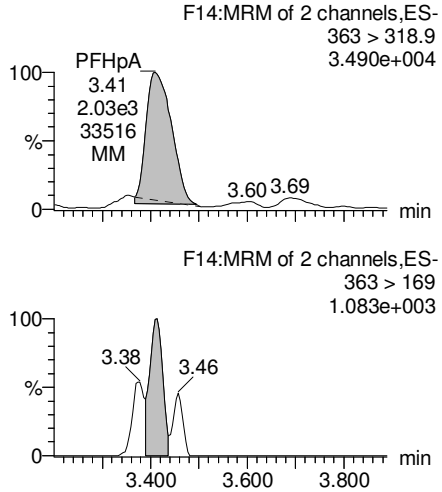
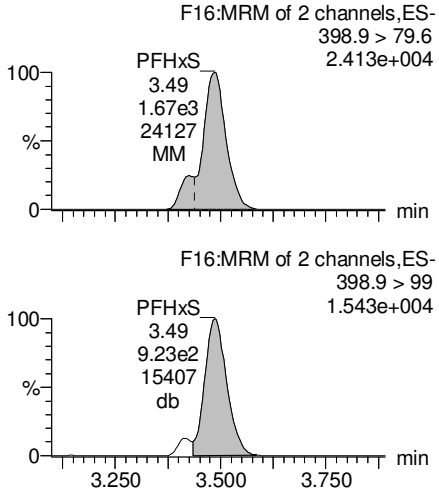


Total PFHxS



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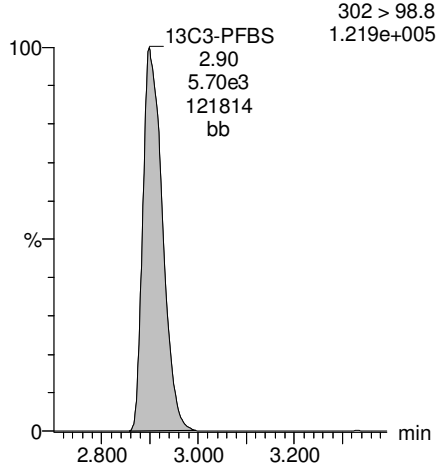

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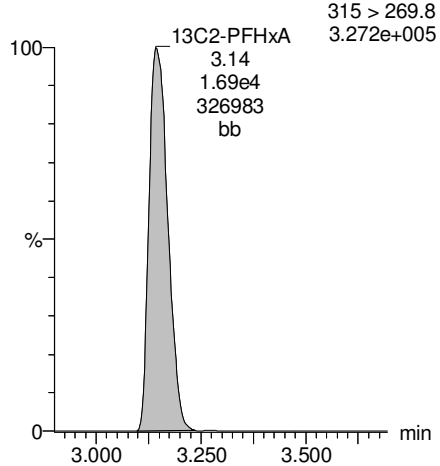

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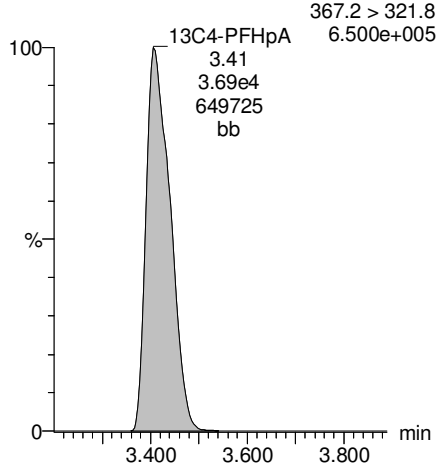

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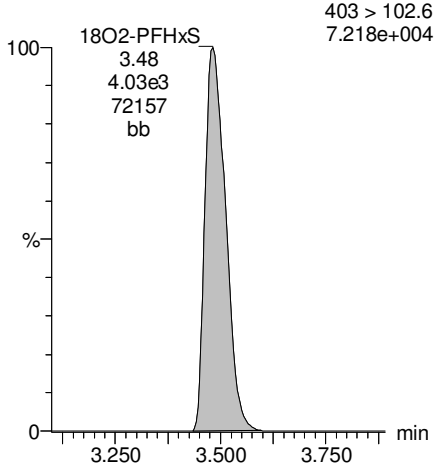

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Vista Analytical Laboratory

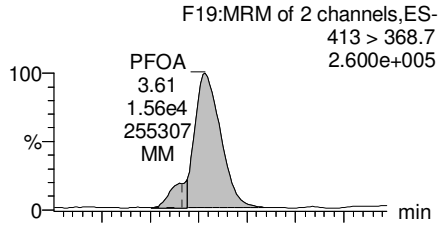
Rev'd: MM 7/31/17

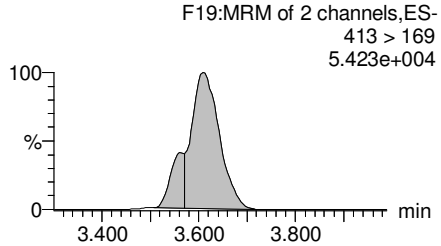
Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

Total PFOA





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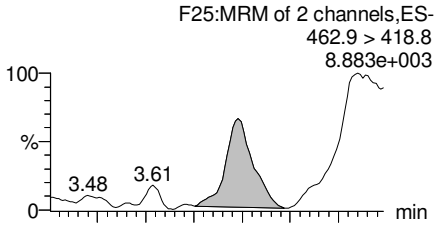
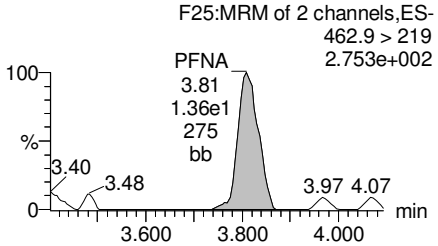
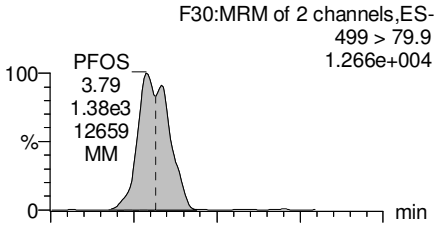
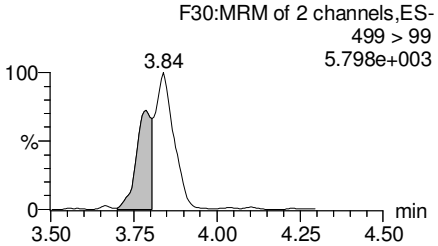




Total PFOS





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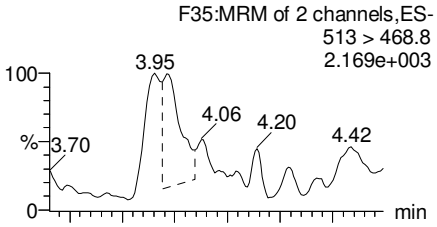

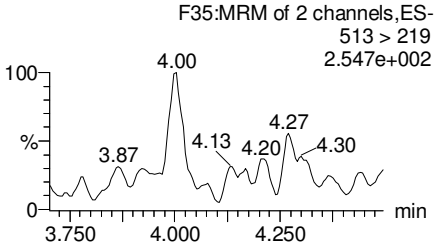

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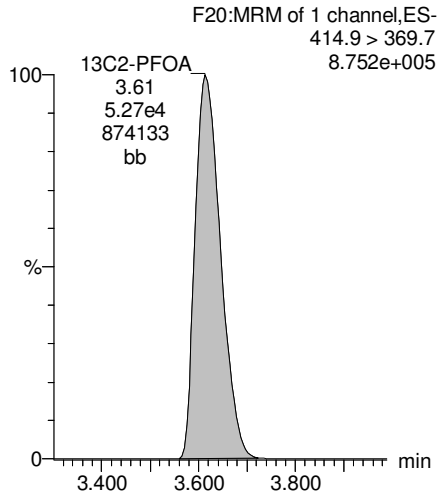

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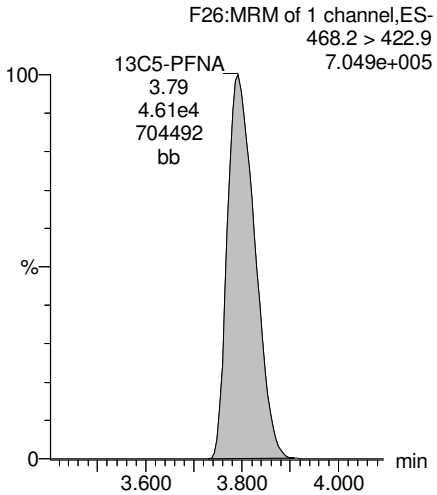
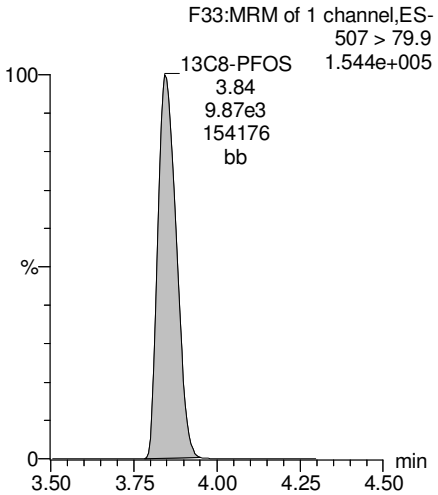


13C8-PFOS



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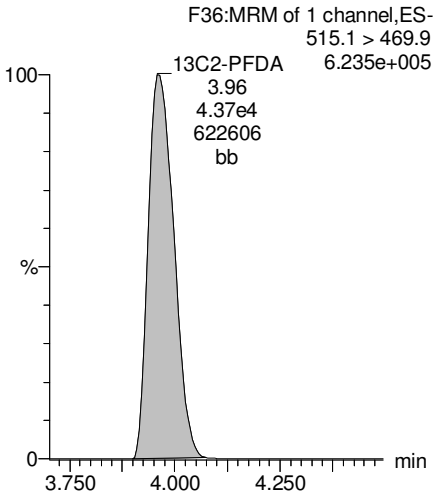

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

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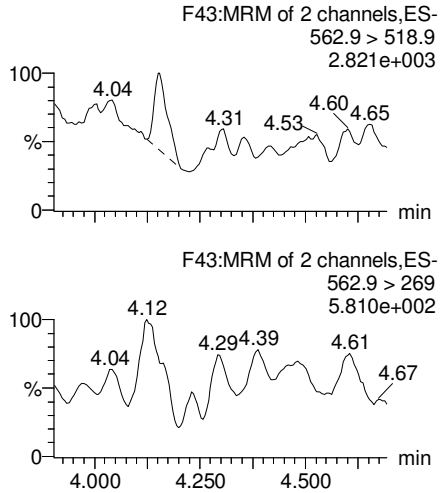

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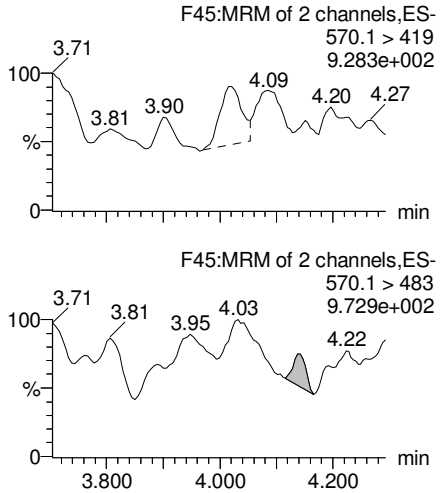

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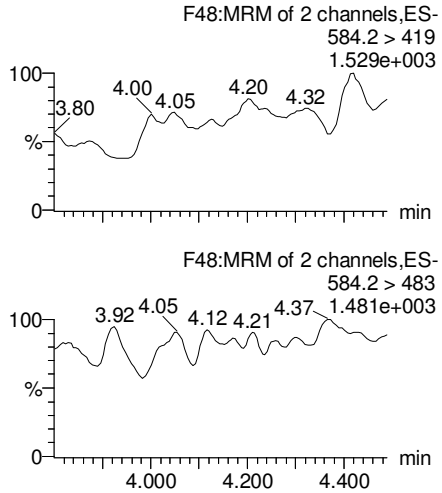
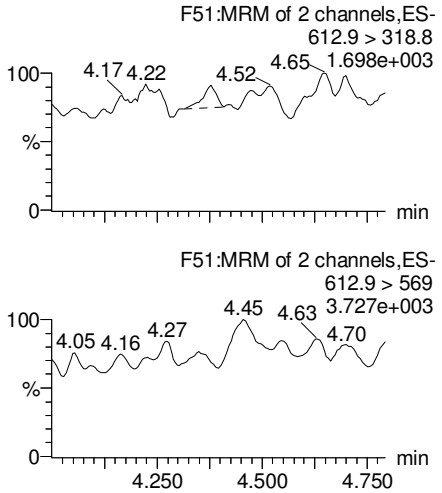
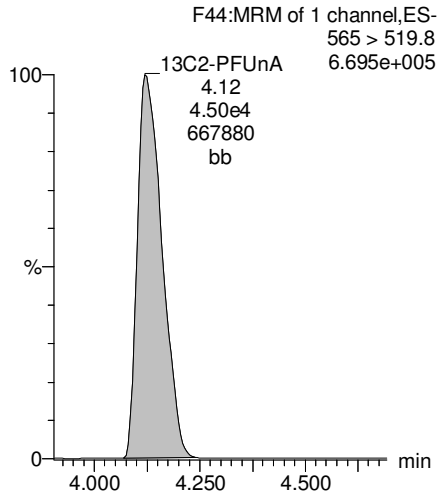


PFDoA



13C2-PFUnA



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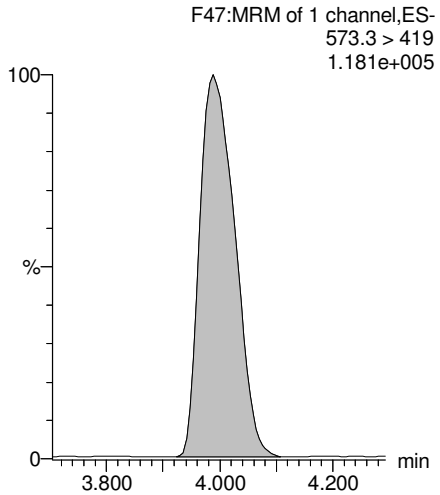

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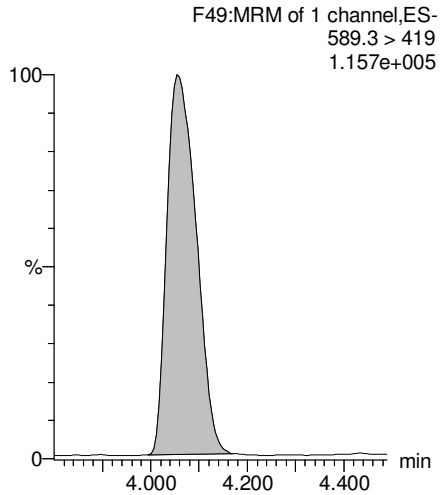

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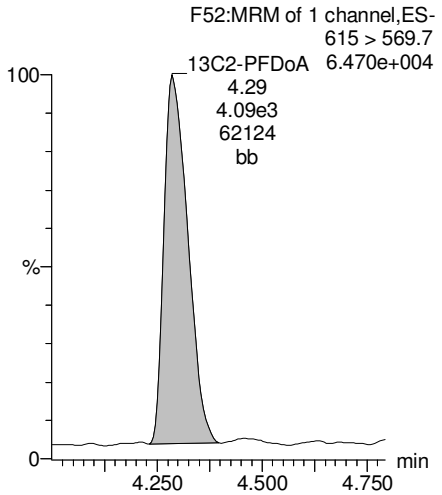

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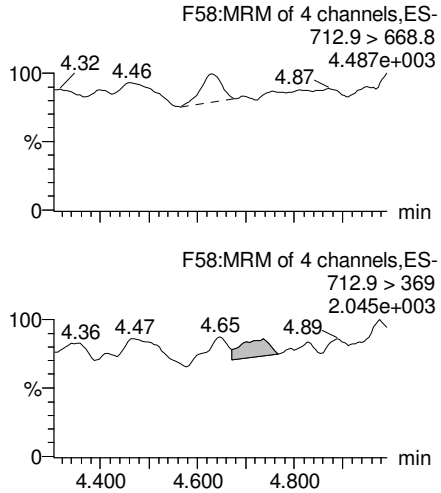
Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

PFTeDA



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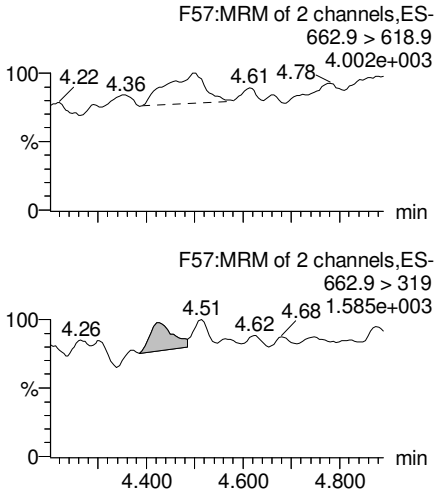

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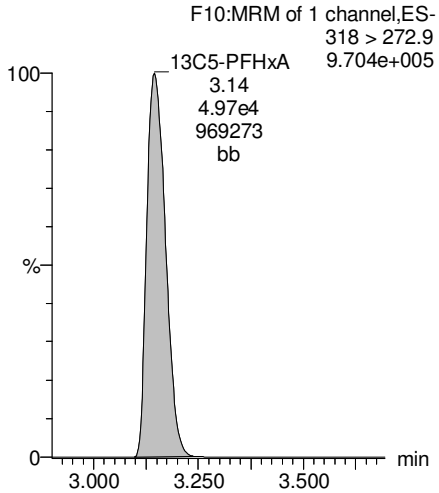
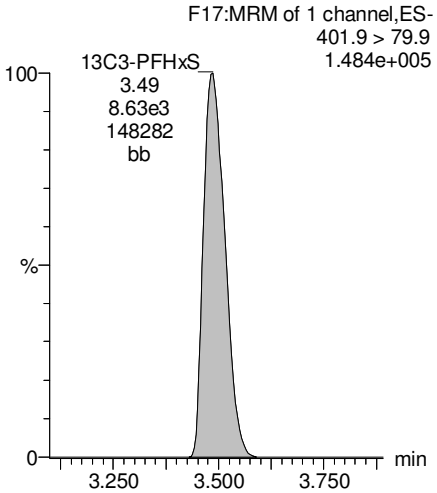


13C3-PFHxS



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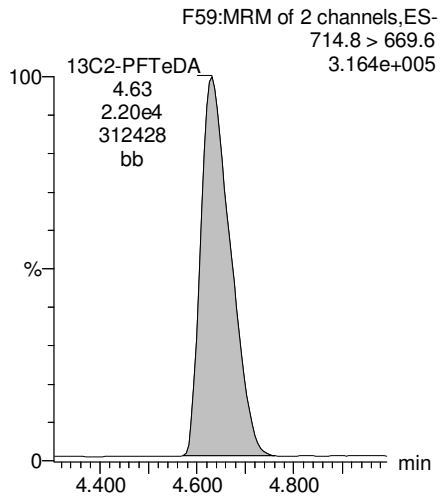

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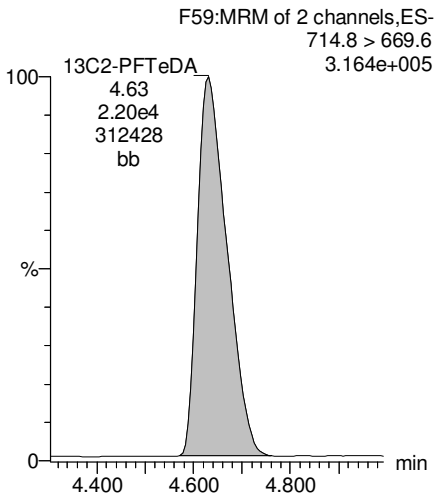
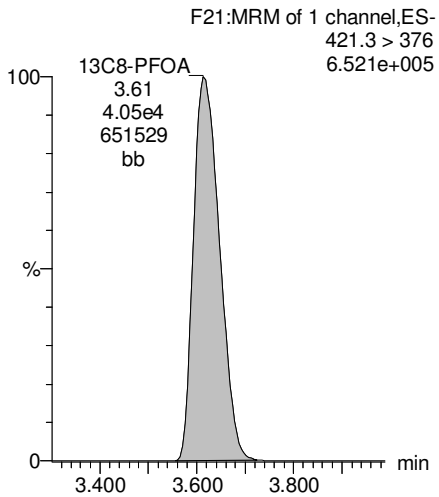
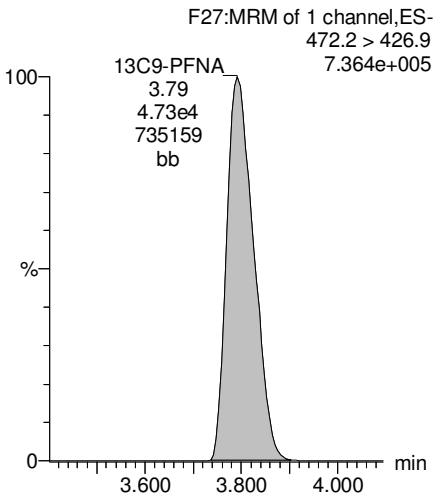


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

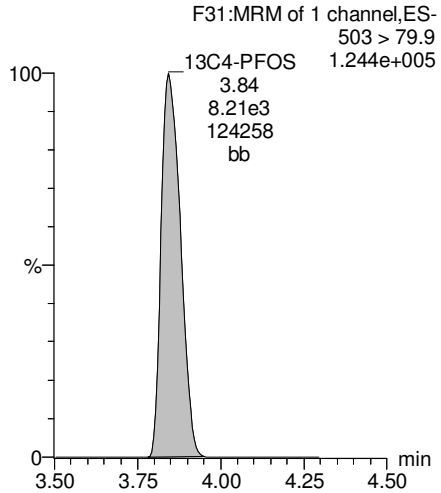
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-20.qld

Last Altered: Monday, July 31, 2017 10:07:24 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:07:49 Pacific Daylight Time

Name: 170728M2_20, Date: 28-Jul-2017, Time: 19:33:38, ID: 1700851-03RE1 18-GW-18MCAS03-5-20170710 0.116, Description: 18-GW-18MCAS03-5-20170710

13C4-PFOS



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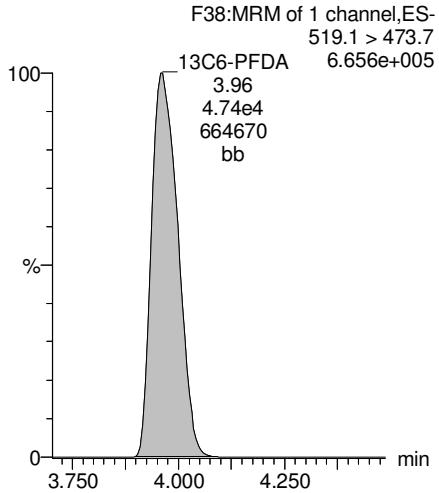
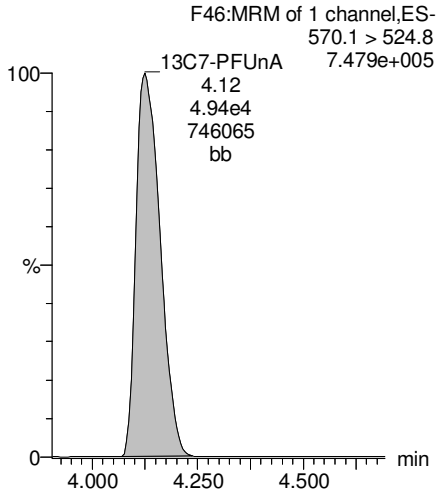


13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7	5.80e3	5.86e3	0.116		2.96	2.90	12.4	57.3		
2	4	PFHxA	313.2 > 268.9	1.83e5	1.70e4	0.116		3.19	3.14	53.8	331		
3	5	PFHpA	363 > 318.9	3.87e4	3.82e4	0.116		3.45	3.41	12.7	92.0		
4	6	PFHxS	398.9 > 79.6	4.66e4	4.03e3	0.116		3.56	3.49	145	747		See Dil
5	7	PFOA	413 > 368.7	1.28e6	4.57e4	0.116		3.65	3.61	349	3080	E	See Dil
6	9	PFNA	462.9 > 418.8	8.92e2	4.28e4	0.116		3.83	3.79	0.261	1.42		
7	11	PFOS	499 > 79.9	9.48e3	9.72e3	0.116		3.89	3.84	12.2	106		
8	12	PFDA	513 > 468.8		4.11e4	0.116		4.01					
9	13	N-MeFOSAA	570.1 > 419		7.85e3	0.116		4.03					
10	14	N-EtFOSAA	584.2 > 419		7.81e3	0.116		4.10					
11	15	PFUnA	562.9 > 518.9		4.35e4	0.116		4.11					
12	17	PFDoA	612.9 > 318.8		3.59e3	0.116		4.34					
13	18	PFTrDA	662.9 > 618.9		3.59e3	0.116		4.50					
14	19	PFTeDA	712.9 > 668.8		1.17e4	0.116		4.68					
15	22	13C3-PFBS	302 > 98.8	5.86e3	4.87e4	0.116	0.033	2.96	2.90	0.602	157	145.6	
16	23	13C2-PFHxA	315 > 269.8	1.70e4	4.87e4	0.116	0.335	3.19	3.14	1.75	44.8	104.2	
17	24	13C4-PFHpA	367.2 > 321.8	3.82e4	4.87e4	0.116	0.369	3.45	3.41	3.93	91.6	85.2	
18	25	18O2-PFHxS	403 > 102.6	4.03e3	7.86e3	0.116	0.460	3.56	3.48	6.40	120	111.3	
19	26	13C2-PFOA	414.9 > 369.7	4.57e4	3.27e4	0.116	1.293	3.65	3.61	17.5	116	108.2	
20	27	13C5-PFNA	468.2 > 422.9	4.28e4	4.67e4	0.116	0.986	3.83	3.79	11.4	99.9	92.8	
21	28	13C8-PFOSA	506.1 > 77.7	3.35e3	3.89e4	0.116	0.132	3.84	3.80	1.08	69.9	65.0	
22	29	13C8-PFOS	507 > 79.9	9.72e3	7.96e3	0.116	1.184	3.89	3.84	15.3	111	103.2	
23	30	13C2-PFDA	515.1 > 469.9	4.11e4	4.34e4	0.116	0.998	4.01	3.96	11.8	102	94.8	
24	31	d3-N-MeFOSAA	573.3 > 419	7.85e3	3.89e4	0.116	0.018	4.03	3.99	2.52	1230	87.7	
25	32	d5-N-EtFOSAA	589.3 > 419	7.81e3	3.89e4	0.116	0.018	4.12	4.05	2.51	1210	86.8	
26	33	13C2-PFUnA	565 > 519.8	4.35e4	3.89e4	0.116	1.129	4.17	4.13	14.0	107	99.1	
27	34	13C2-PFDoA	615 > 569.7	3.59e3	3.89e4	0.116	0.116	4.34	4.29	1.15	85.6	79.6	
28	35	13C2-PFTeDA	714.8 > 669.6	1.17e4	3.89e4	0.116	0.762	4.68	4.63	3.74	42.3	39.3	
29	36	13C4-PFBA	217 > 171.8	2.58e4	2.58e4	0.116	1.000	1.32	1.39	12.5	108	100.0	
30	37	13C5-PFHxA	318 > 272.9	4.87e4	4.87e4	0.116	1.000	3.19	3.14	5.00	43.0	100.0	
31	38	13C3-PFHxS	401.9 > 79.9	7.86e3	7.86e3	0.116	1.000	3.56	3.48	12.5	108	100.0	
32	39	13C8-PFOA	421.3 > 376	3.27e4	3.27e4	0.116	1.000	3.65	3.61	12.5	108	100.0	

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	4.67e4	4.67e4	0.116	1.000	3.83	3.79	12.5	108	100.0
34	41	13C4-PFOS	503 > 79.9	7.96e3	7.96e3	0.116	1.000	3.89	3.84	12.5	108	100.0
35	42	13C6-PFDA	519.1 > 473.7	4.34e4	4.34e4	0.116	1.000	4.01	3.96	12.5	108	100.0
36	43	13C7-PFUnA	570.1 > 524.8	3.89e4	3.89e4	0.116	1.000	4.17	4.13	12.5	108	100.0
37	44	Total PFBS	299 > 79.7	5.80e3	5.86e3	0.116		2.96		12.4	57.3	
38	45	Total PFHxS	398.9 > 79.6	4.66e4	4.03e3	0.116		3.52		145	747	
39	46	Total PFOA	413 > 368.7	1.38e6	4.57e4	0.116		3.65		378	3340	
40	47	Total PFOS	499 > 79.9	9.48e3	9.72e3	0.116		3.89		12.2	106	
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.85e3	0.116		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	7.81e3	0.116		4.17		0.000		

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Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.90	5798.115	5858.428	12.371	bb	57.3

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.49	46592.215	4026.770	144.633	MM	746.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.61	1275438.875	45725.711	348.666	MM	3084.1
2	46	Total PFOA	413 > 368.7	3.57	107818.422	45725.711	29.474	MM	259.7

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.84	9479.243	9722.729	12.187	MM	105.6

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

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Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
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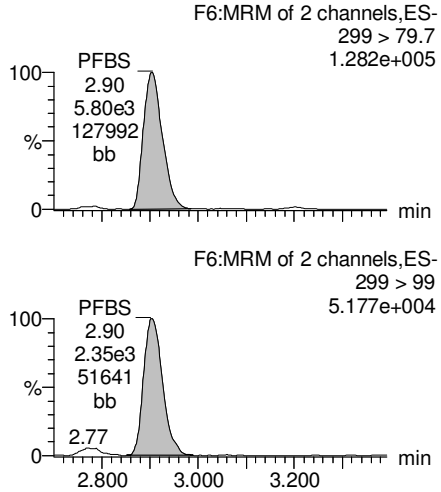
Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

Total PFBS



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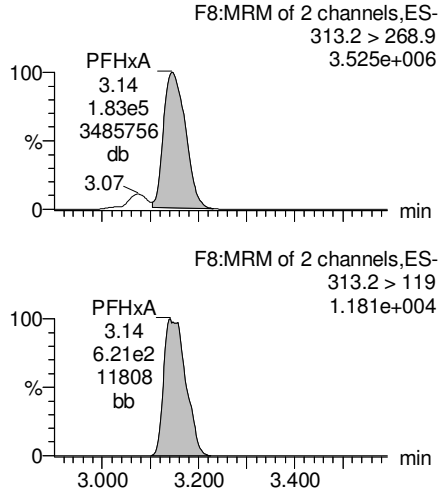

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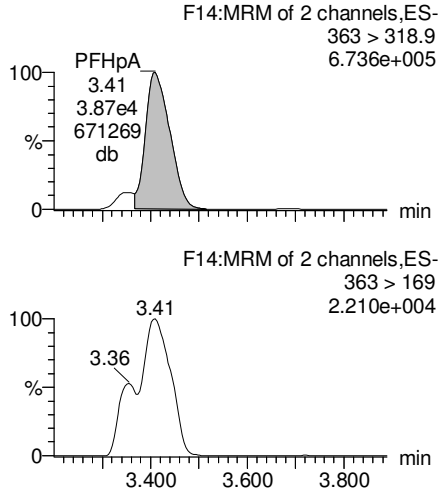
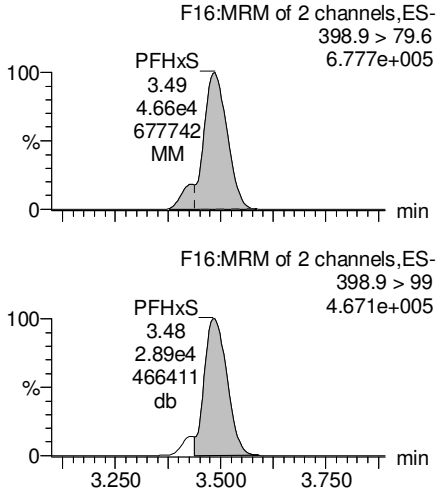
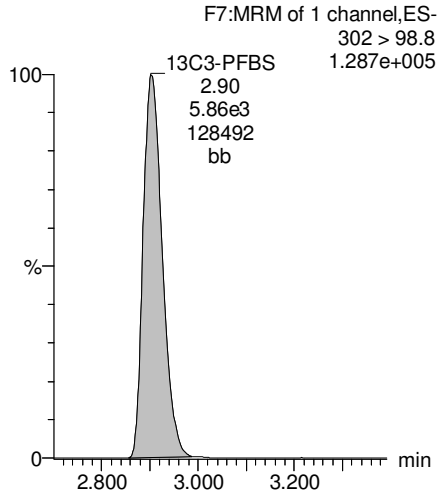


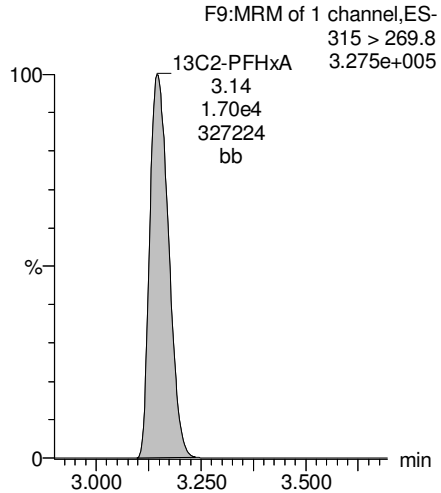
Total PFHxS



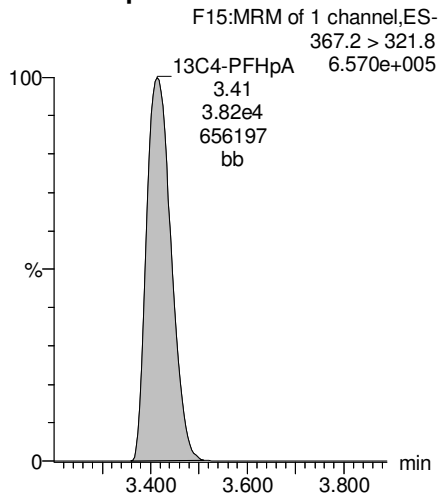
13C3-PFBS



13C2-PFHxA



13C4-PFHpA



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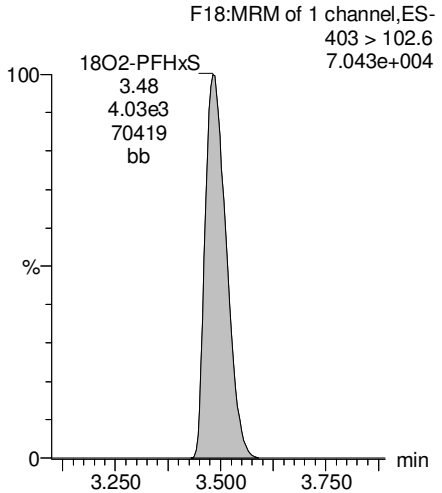

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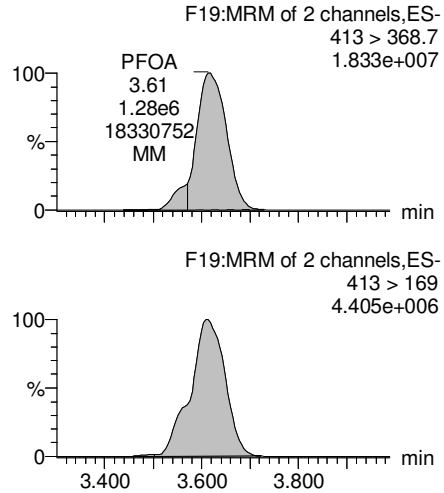
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

Total PFOA



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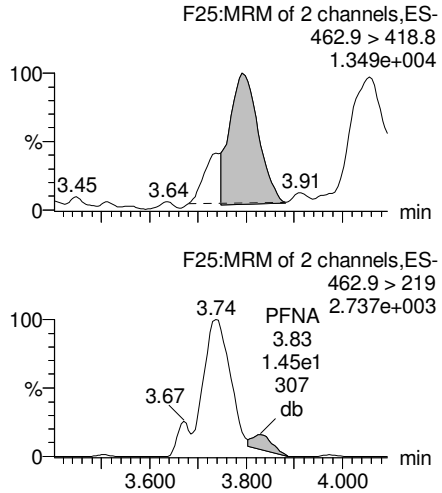
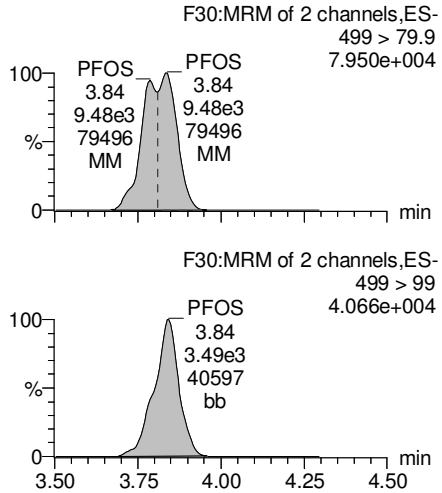
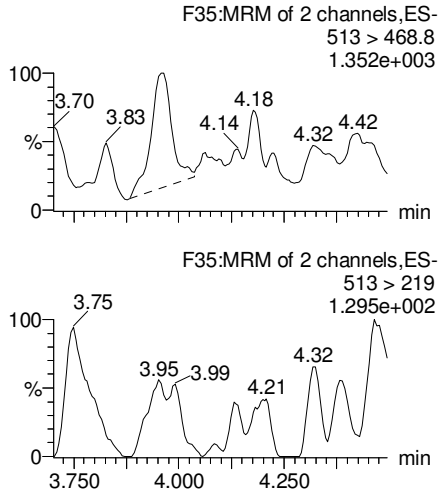


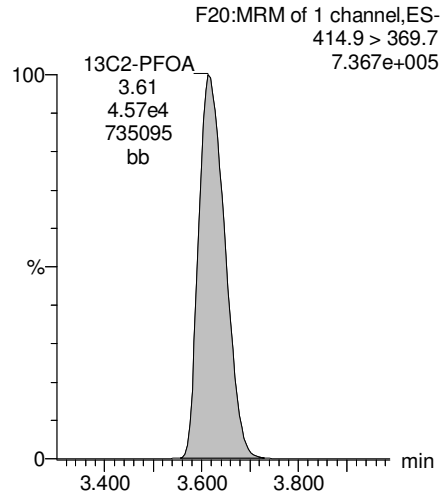
Total PFOS



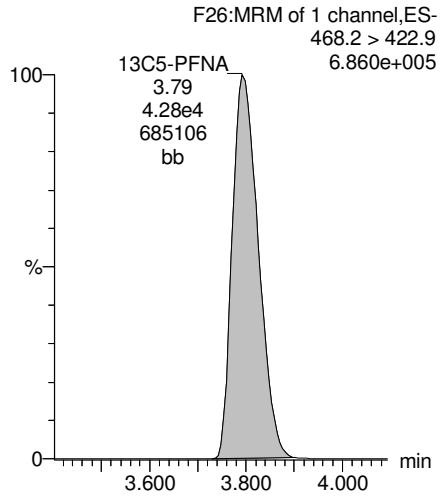
PFDA



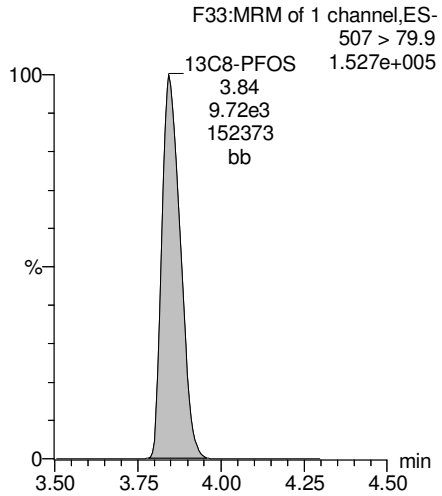
13C2-PFOA



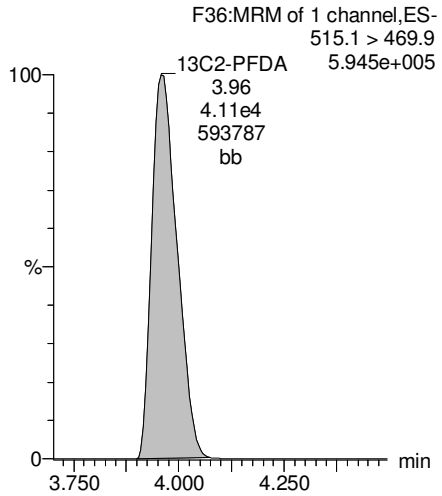
13C5-PFNA



13C8-PFOS



13C2-PFDA



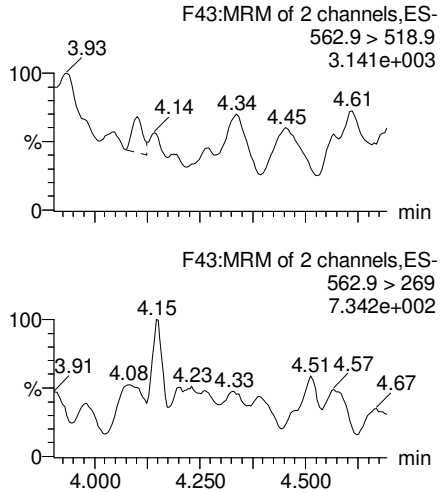
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

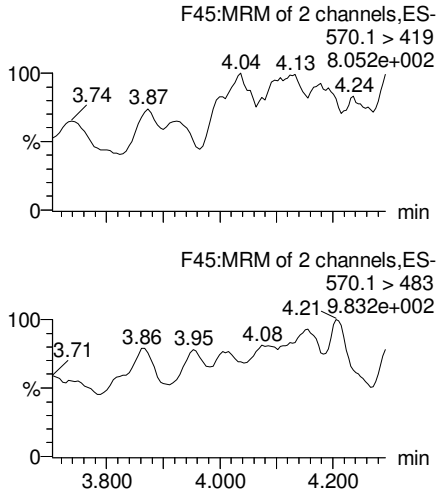
Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

PFUnA



N-MeFOSAA



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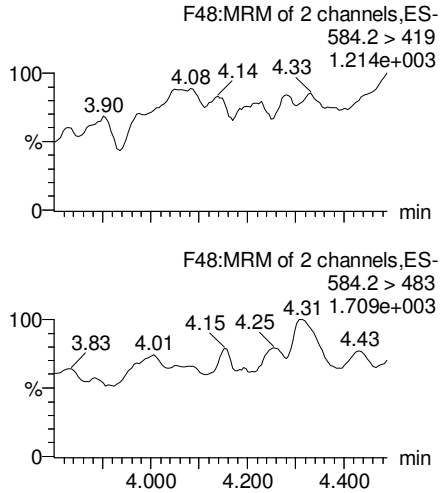
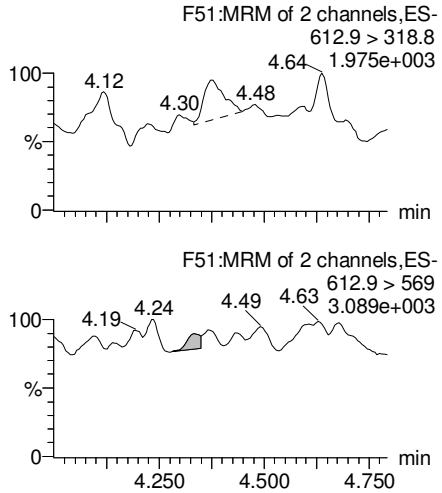
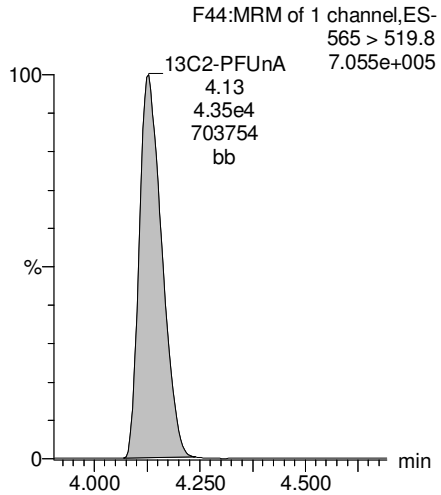


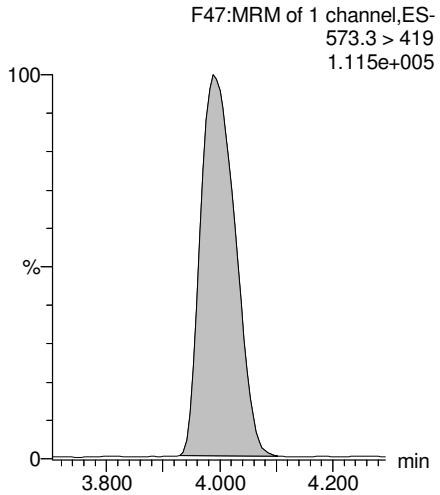
PFDoA



13C2-PFUnA



d3-N-MeFOSAA



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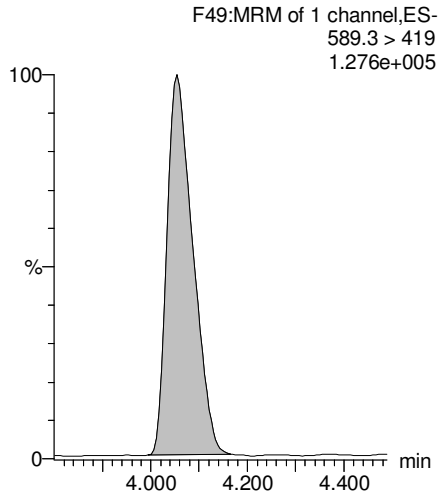

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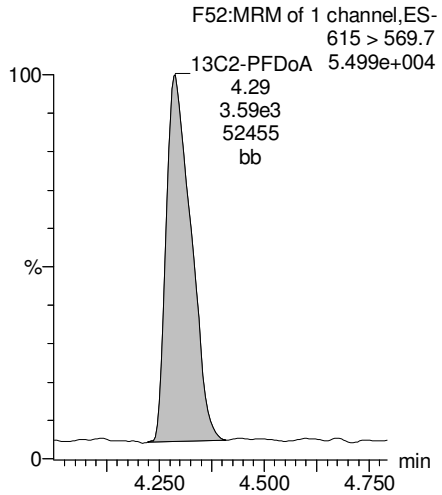


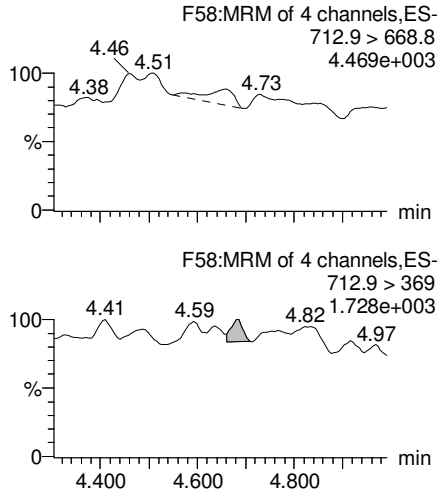
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

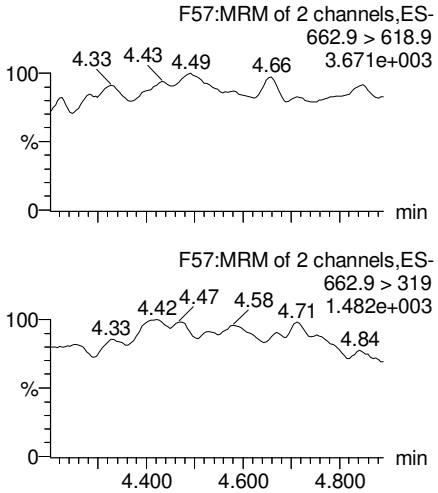
Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

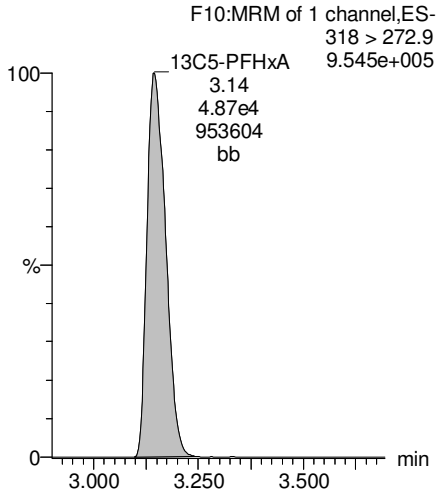
PFTeDA



PFTrDA



13C5-PFHxA



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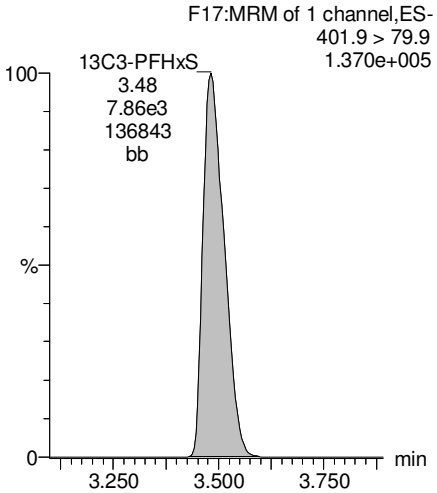

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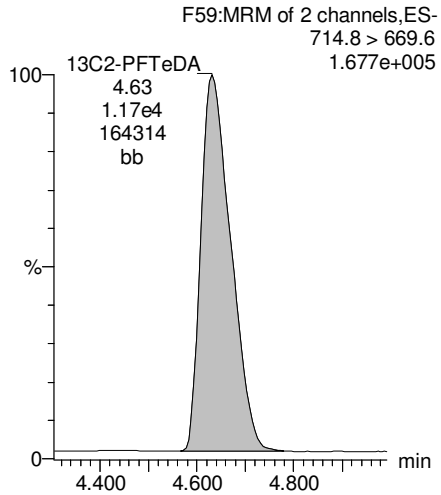

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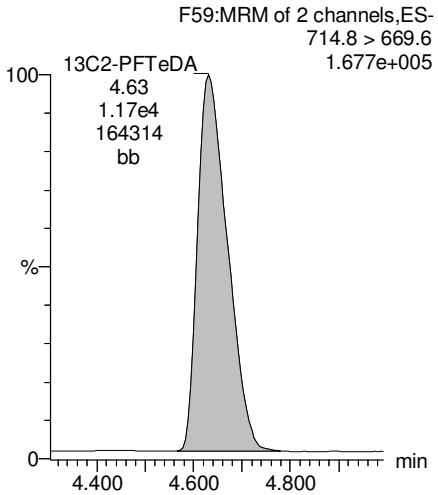
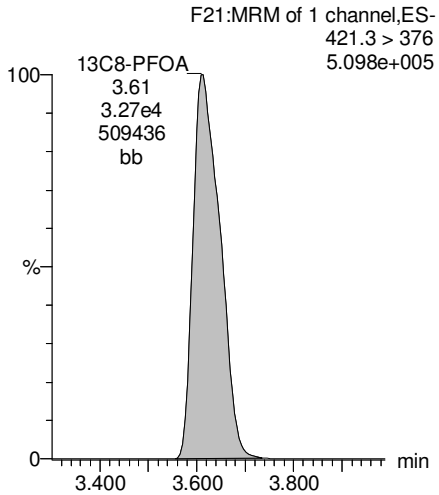
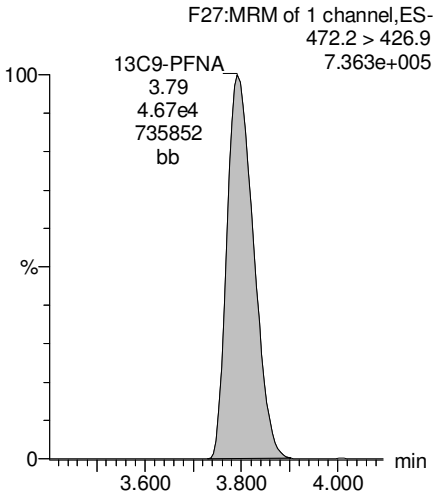


13C8-PFOA



13C9-PFNA



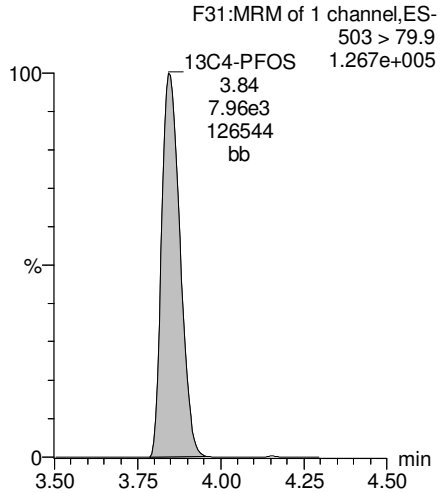
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-21.qld

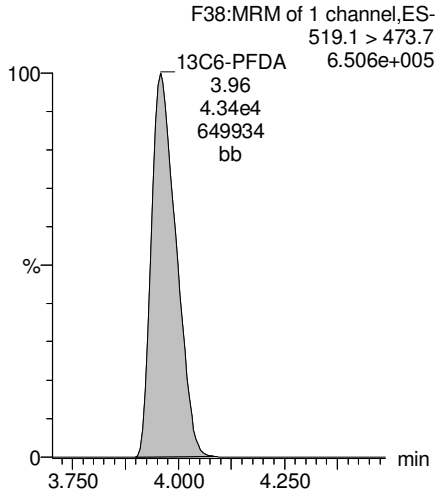
Last Altered: Monday, July 31, 2017 10:12:42 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:12:49 Pacific Daylight Time

Name: 170728M2_21, Date: 28-Jul-2017, Time: 19:44:24, ID: 1700851-04RE1 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

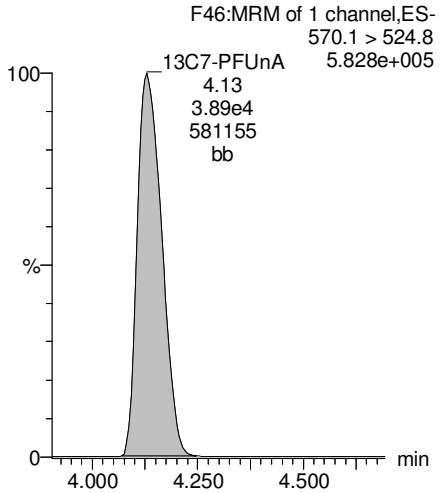
13C4-PFOS



13C6-PFDA



13C7-PFUnA



AC 7/31/17

Vista Analytical Laboratory

Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-4.qld

Last Altered: Wednesday, July 26, 2017 15:25:29 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:31:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_4, Date: 26-Jul-2017, Time: 11:34:55, ID: 1700851-04RE1@10X 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6	PFHxS	398.9 > 79.6	2.99e3	2.84e2	0.1162		3.56	3.57	131	714	
2	8	PFOA	413 > 368.7	9.39e4	2.99e3	0.1162		3.65	3.69	392	3480	
3	33	18O2-PFHxS	403 > 102.6	2.84e2	5.59e2	0.1162	0.393	3.56	3.56	6.36	139	129.5
4	35	13C2-PFOA	414.9 > 369.7	2.99e3	2.68e3	0.1162	1.067	3.65	3.69	13.9	112	104.4
5	53	13C3-PFHxS	401.9 > 79.9	5.59e2	5.59e2	0.1162	1.000	3.56	3.57	12.5	108	100.0
6	54	13C8-PFOA	421.3 > 376	2.68e3	2.68e3	0.1162	1.000	3.65	3.69	12.5	108	100.0
7	60	Total PFHxS	398.9 > 79.6	2.99e3	2.84e2	0.1162		3.52		131	714	
8	61	Total PFOA	413 > 368.7	1.01e5	2.99e3	0.1162		3.65		420	3720	

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Vista Analytical Laboratory

Rev'd: MM 7/26/17

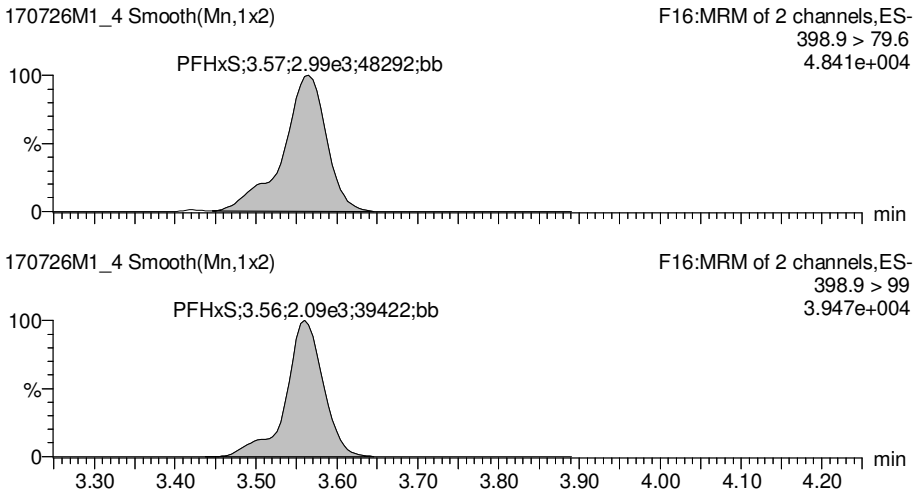
Dataset: U:\Q4.PRO\results\170726M1\170726M1-4.qld

Last Altered: Wednesday, July 26, 2017 15:25:29 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:31:04 Pacific Daylight Time

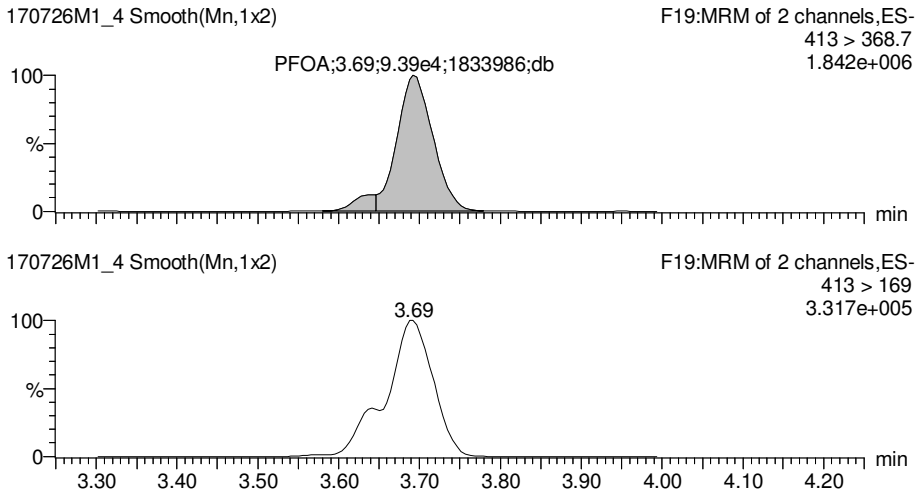
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_4, Date: 26-Jul-2017, Time: 11:34:55, ID: 1700851-04RE1@10X 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

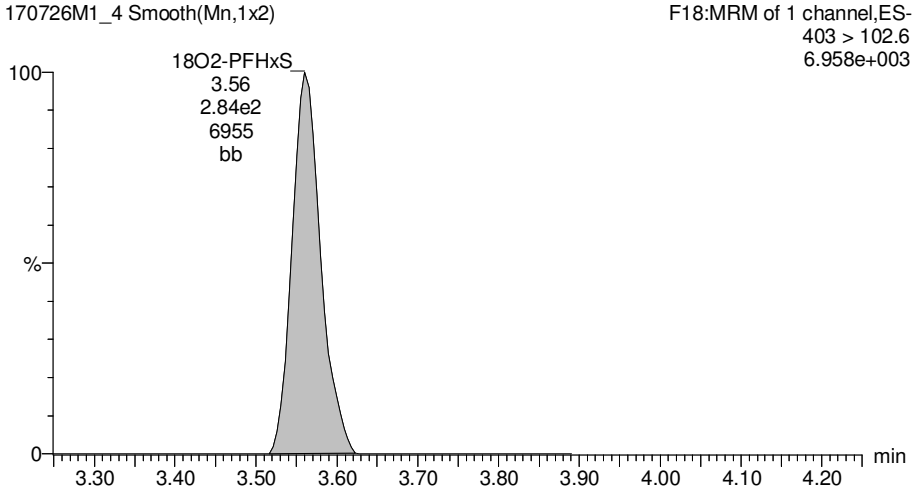
Total PFHxS



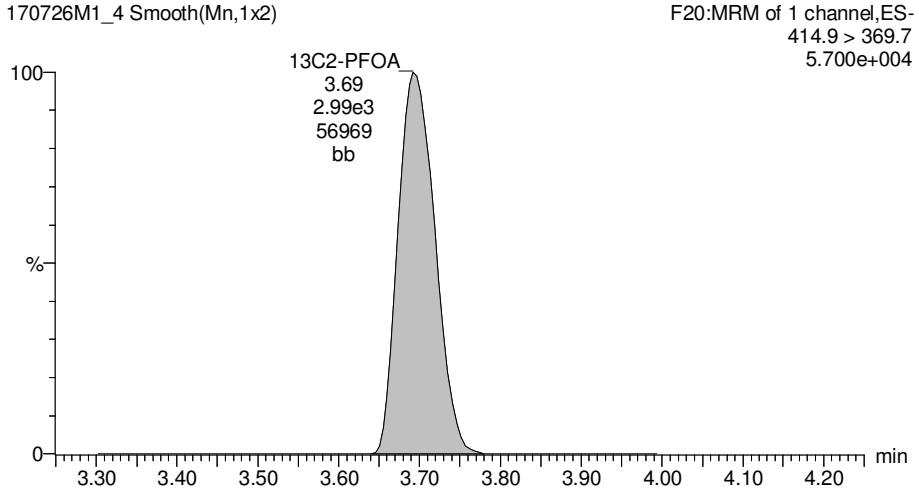
Total PFOA



18O2-PFHxS



13C2-PFOA



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Vista Analytical Laboratory

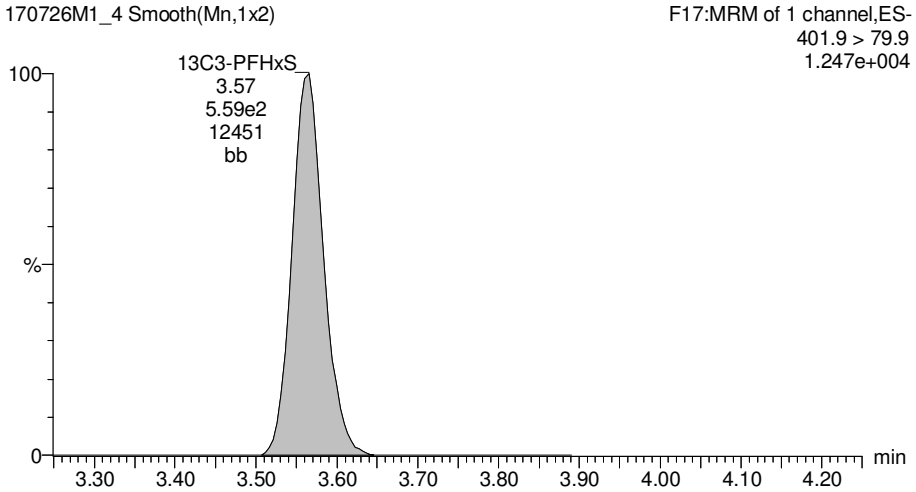
Rev'd: MM 7/26/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-4.qld

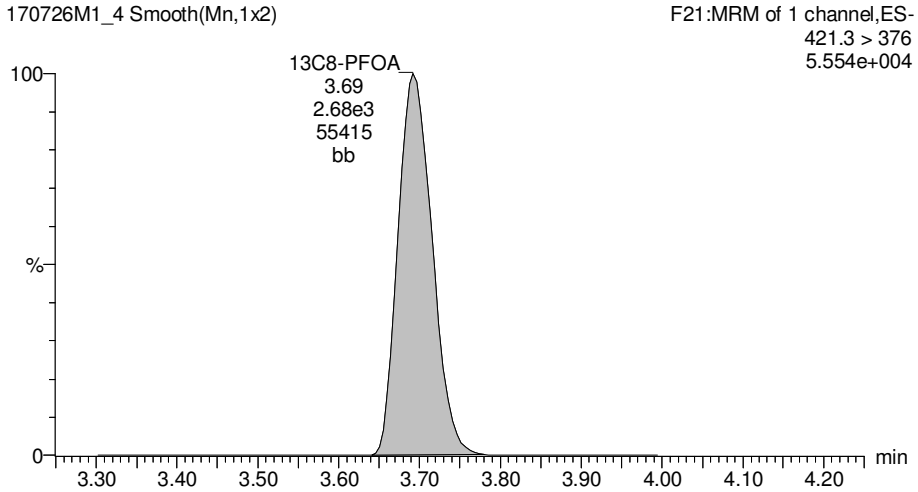
Last Altered: Wednesday, July 26, 2017 15:25:29 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:31:04 Pacific Daylight Time

Name: 170726M1_4, Date: 26-Jul-2017, Time: 11:34:55, ID: 1700851-04RE1@10X 18-GW-18MCAS03-2-20170710 0.1162, Description: 18-GW-18MCAS03-2-20170710

13C3-PFHxS



13C8-PFOA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:28:25 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	1.30e2	5.01e3	0.121		2.96	3.01	0.324	1.11	
2	4	PFHxA	313.2 > 268.9	2.76e3	1.28e4	0.121		3.19	3.24	1.08	5.03	
3	5	PFHpA	363 > 318.9	8.16e2	2.88e4	0.121		3.45	3.50	0.354	1.81	
4	6	PFHxS	398.9 > 79.6	2.74e3	3.46e3	0.121		3.56	3.57	9.93	48.3	
5	8	PFOA	413 > 368.7	5.82e3	3.93e4	0.121		3.65	3.70	1.85	14.1	
6	10	PFNA	462.9 > 418.8	1.45e2	3.19e4	0.121		3.83	3.88	0.0568		
7	12	PFOS	499 > 79.9	6.99e2	7.55e3	0.121		3.89	3.87	1.16	7.91	
8	13	PFDA	513 > 468.8		2.88e4	0.121		4.01				
9	15	N-MeFOSAA	570.1 > 419		5.58e3	0.121		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.70e3	0.121		4.10				
11	17	PFUnA	562.9 > 518.9		2.11e4	0.121		4.17				
12	19	PFDoA	612.9 > 318.8		2.18e3	0.121		4.34				

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:28:47 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		2.18e3	0.121		4.50				
2	22	PFTeDA	712.9 > 668.8		1.04e4	0.121		4.68				
3	28	13C3-PFBA	216.1 > 171.8	2.21e4	2.09e4	0.121	0.820	1.54	1.59	13.3	134	129.3
4	29	13C3-PFPeA	266 > 221.8	3.50e4	3.56e4	0.121	0.248	2.77	2.82	4.91	164	158.4
5	30	13C3-PFBS	302 > 98.8	5.01e3	3.56e4	0.121	0.031	2.96	3.01	0.703	187	180.7
6	31	13C2-PFHxA	315 > 269.8	1.28e4	3.56e4	0.121	0.276	3.19	3.24	1.80	53.7	130.1
7	32	13C4-PFHpA	367.2 > 321.8	2.88e4	3.56e4	0.121	0.306	3.45	3.50	4.05	109	105.9
8	33	18O2-PFHxS	403 > 102.6	3.46e3	6.62e3	0.121	0.393	3.56	3.57	6.53	137	132.9
9	34	13C2-6:2 FTS	429.1 > 408.9	6.26e3	2.76e4	0.121	0.158	3.64	3.69	2.83	148	143.6
10	35	13C2-PFOA	414.9 > 369.7	3.93e4	2.76e4	0.121	1.067	3.65	3.70	17.8	137	133.1
11	36	13C5-PFNA	468.2 > 422.9	3.19e4	2.97e4	0.121	0.852	3.83	3.87	13.4	130	126.1
12	37	13C8-PFOSA	506.1 > 77.7	1.91e3	2.35e4	0.121	0.098	3.84	3.88	1.01	85.1	82.4
13	38	13C8-PFOS	507 > 79.9	7.55e3	6.04e3	0.121	0.936	3.89	3.92	15.6	138	133.5
14	39	13C2-PFDA	515.1 > 469.9	2.88e4	3.03e4	0.121	0.810	4.01	4.04	11.9	121	117.4
15	40	13C2-8:2 FTS	529.1 > 508.7	3.93e3	3.03e4	0.121	0.086	4.00	4.04	1.62	157	151.8
16	41	d3-N-MeFOSAA	573.3 > 419	5.58e3	2.35e4	0.121	0.014	4.03	4.07	2.96	1790	133.1
17	42	d5-N-EtFOSAA	589.3 > 419	5.70e3	2.35e4	0.121	0.014	4.12	4.14	3.03	1790	133.5
18	43	13C2-PFUnA	565 > 519.8	2.11e4	2.35e4	0.121	0.962	4.17	4.20	11.2	96.5	93.4
19	44	13C2-PFDoA	615 > 569.7	2.18e3	2.35e4	0.121	0.094	4.34	4.37	1.16	101	97.9
20	46	13C2-PFTeDA	714.8 > 669.6	1.04e4	2.35e4	0.121	0.694	4.68	4.73	5.52	65.7	63.6
21	48	13C2-PFHxDA	815 > 769.7	2.49e3	2.35e4	0.121	0.843	5.06	5.09	1.32	13.0	31.4
22	51	13C4-PFBA	217 > 171.8	2.09e4	2.09e4	0.121	1.000	1.54	1.59	12.5	103	100.0
23	52	13C5-PFHxA	318 > 272.9	3.56e4	3.56e4	0.121	1.000	3.19	3.24	5.00	41.3	100.0
24	53	13C3-PFHxS	401.9 > 79.9	6.62e3	6.62e3	0.121	1.000	3.56	3.57	12.5	103	100.0
25	54	13C8-PFOA	421.3 > 376	2.76e4	2.76e4	0.121	1.000	3.65	3.70	12.5	103	100.0
26	55	13C9-PFNA	472.2 > 426.9	2.97e4	2.97e4	0.121	1.000	3.83	3.87	12.5	103	100.0
27	56	13C4-PFOS	503 > 79.9	6.04e3	6.04e3	0.121	1.000	3.89	3.93	12.5	103	100.0
28	57	13C6-PFDA	519.1 > 473.7	3.03e4	3.03e4	0.121	1.000	4.01	4.04	12.5	103	100.0
29	58	13C7-PFUnA	570.1 > 524.8	2.35e4	2.35e4	0.121	1.000	4.17	4.21	12.5	103	100.0
30	59	Total PFBS	299 > 79.7	1.30e2	5.01e3	0.121		2.96		0.324	1.11	
31	60	Total PFHxS	398.9 > 79.6	2.74e3	3.46e3	0.121		3.52		9.93	48.3	
32	61	Total PFOA	413 > 368.7	6.84e3	3.93e4	0.121		3.65		2.18	15.1	

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Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:28:47 Pacific Daylight Time

Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	62	Total PFOS	499 > 79.9	6.99e2	7.55e3	0.121		3.89		1.16	7.91	
34	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.58e3	0.121		4.03		0.000		
35	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.70e3	0.121		4.17		0.000		

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Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:28:25 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.01	129.874	5009.475	0.324	bb	1.1

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.57	2743.623	3455.435	9.925	MM	48.3

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.70	5815.774	39255.039	1.852	MM	14.1
2	61	Total PFOA	413 > 368.7	3.66	1025.291	39255.039	0.326	MM	1.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	698.805	7551.707	1.157	MM	7.9

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419			5579.656		MM-I	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419			5696.899		MM-I	

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Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
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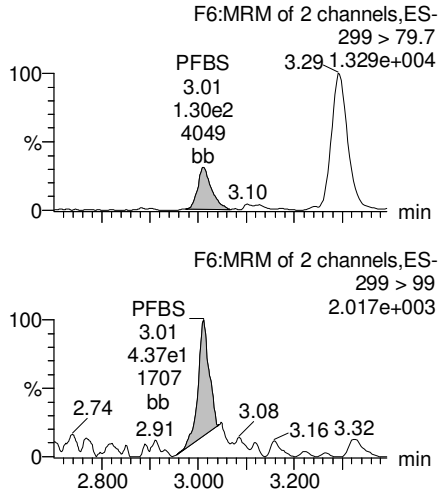
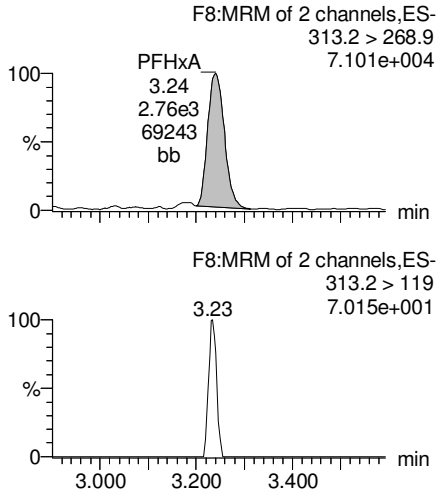
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

Total PFBS



PFHxA



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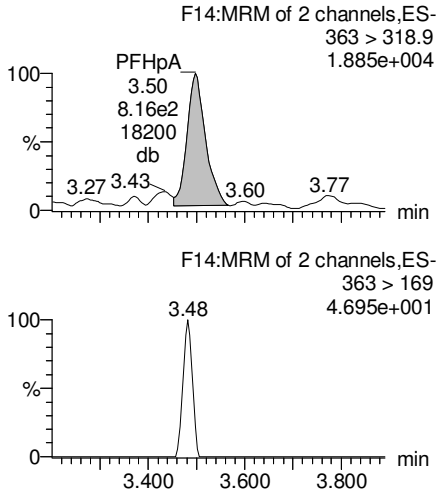

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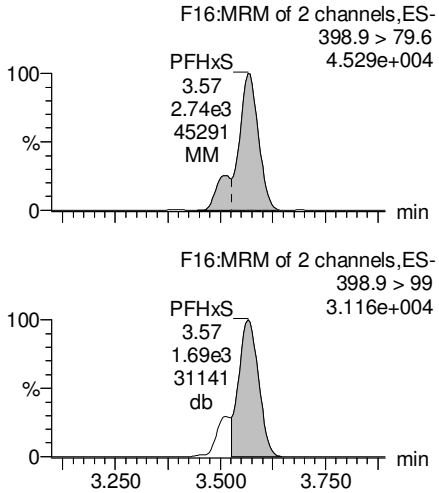
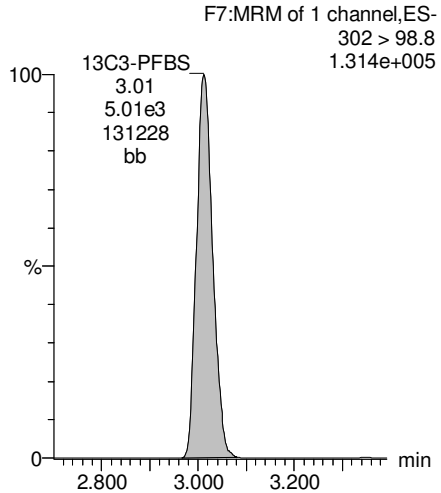


13C3-PFBS



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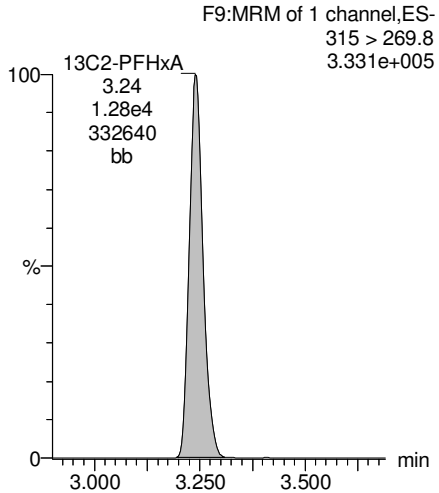

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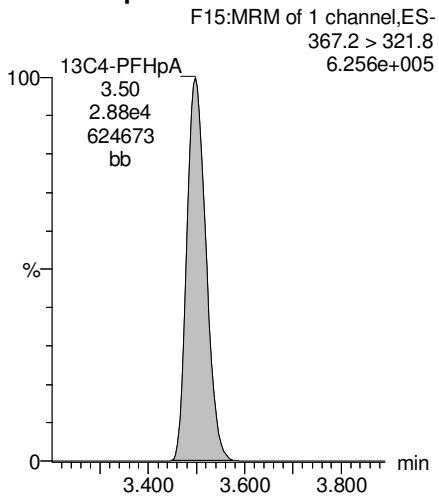

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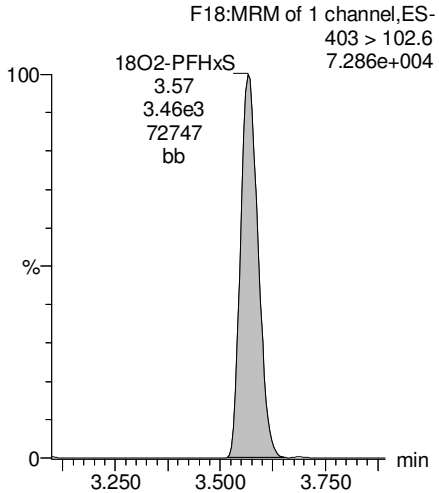

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
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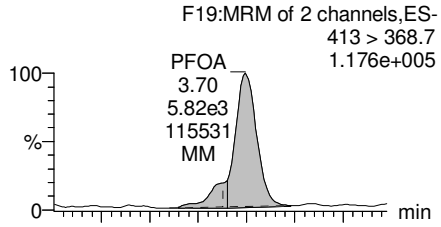
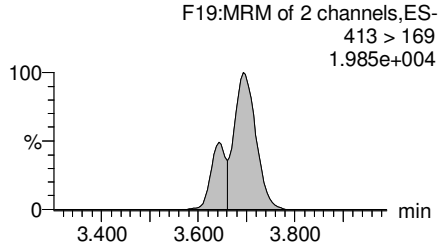
Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

Total PFOA





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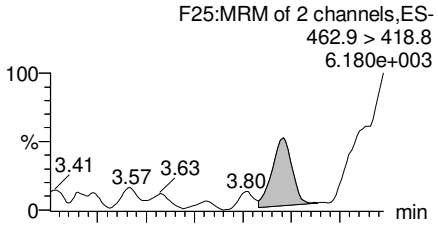
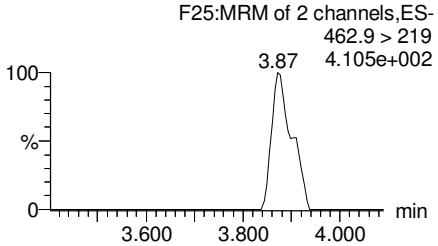
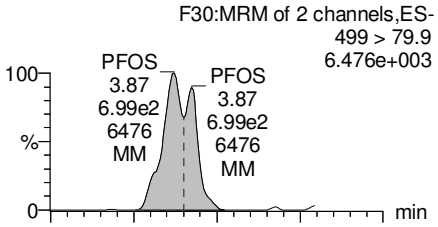
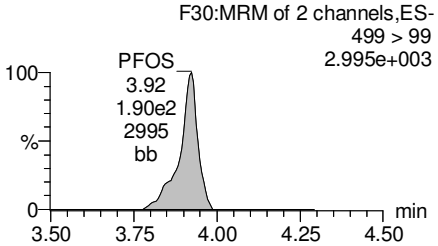




Total PFOS





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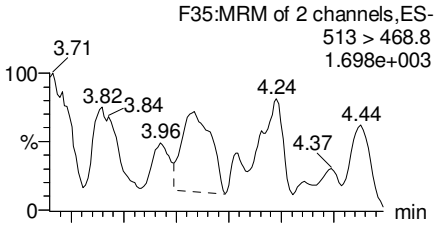

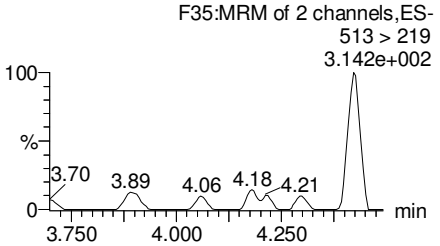

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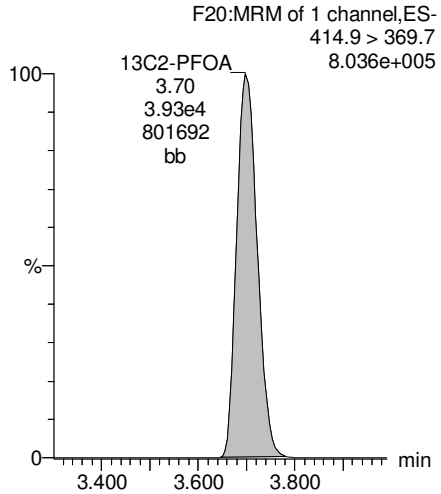

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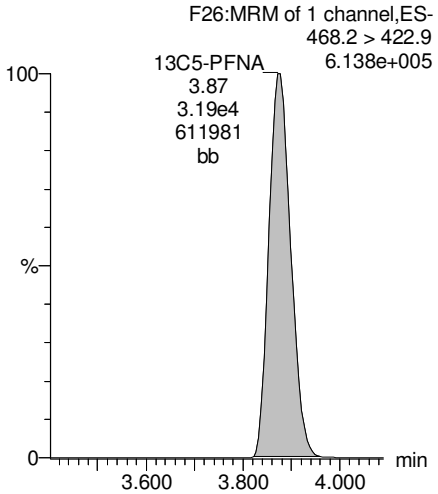

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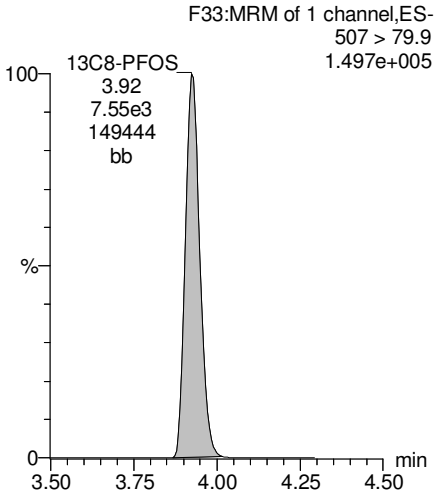

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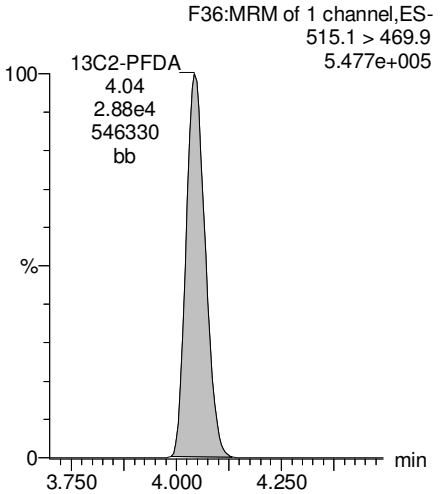

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Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
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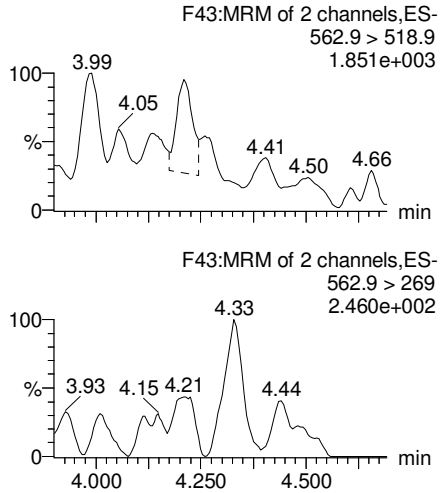
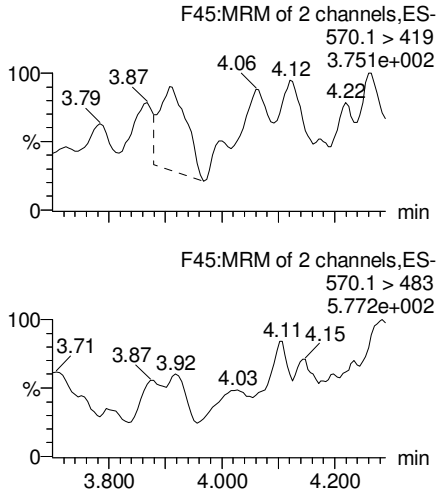
Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

PFUnA



N-MeFOSAA



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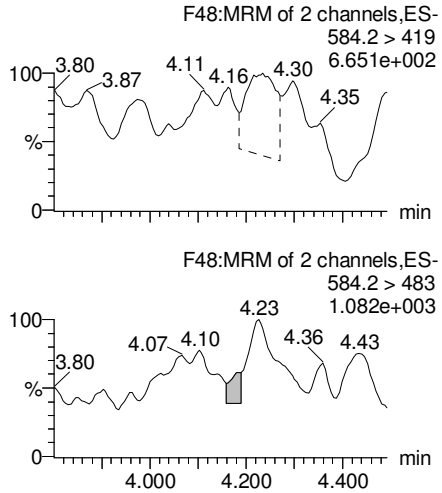

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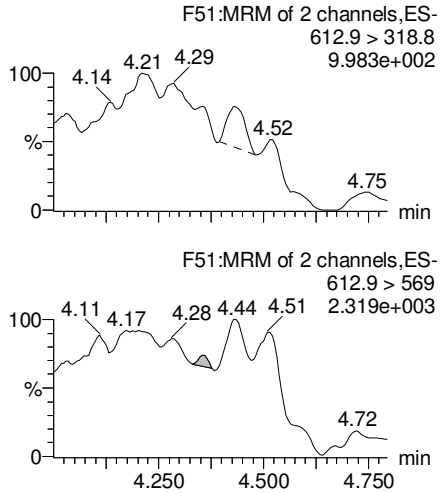

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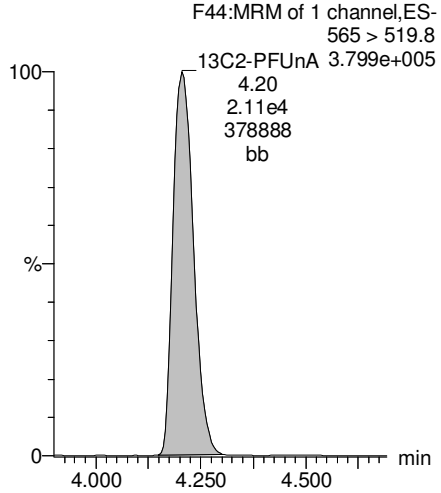

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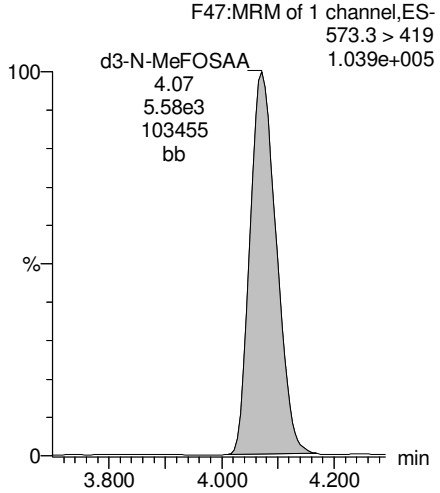

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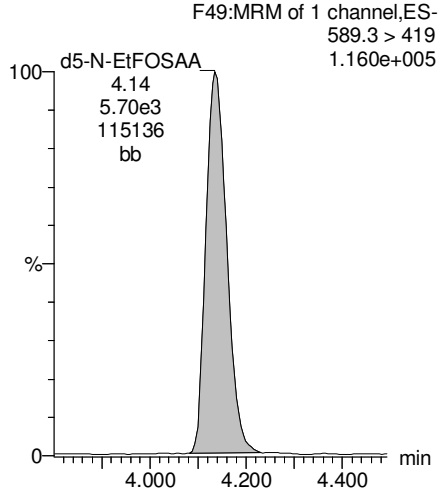

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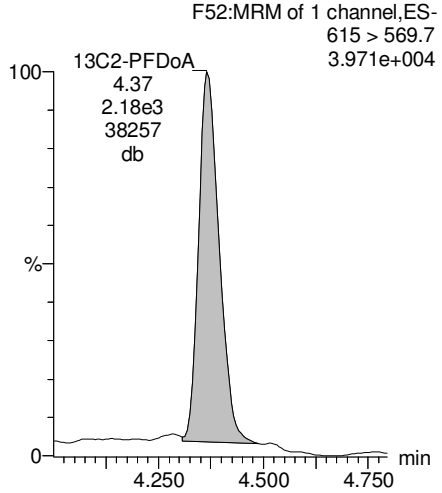

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
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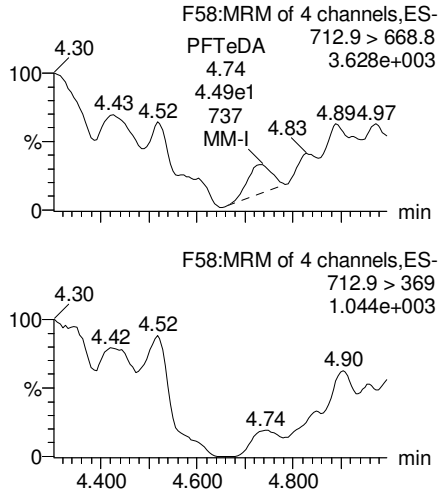
Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

PFTeDA



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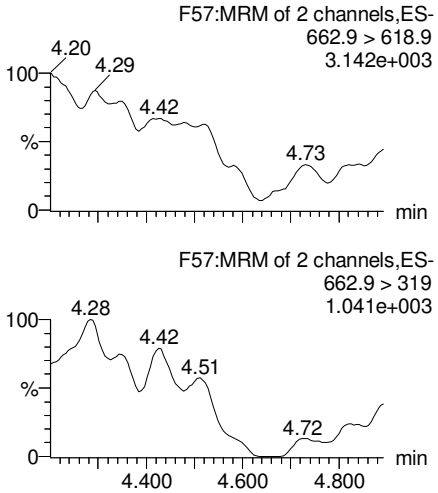

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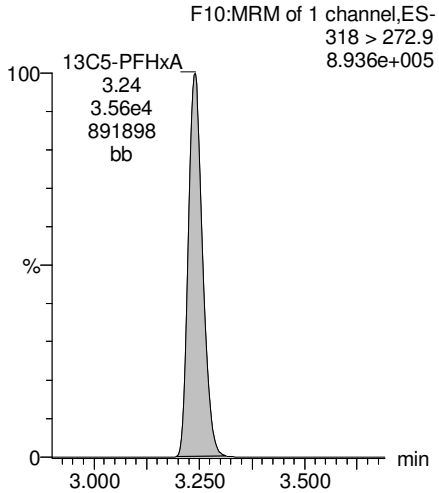

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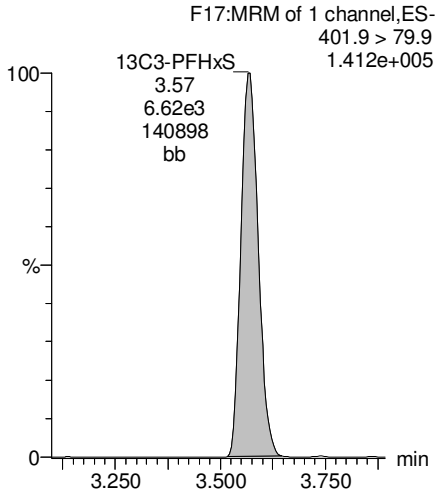

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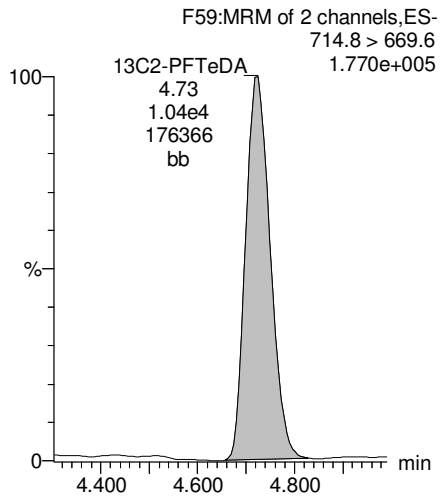

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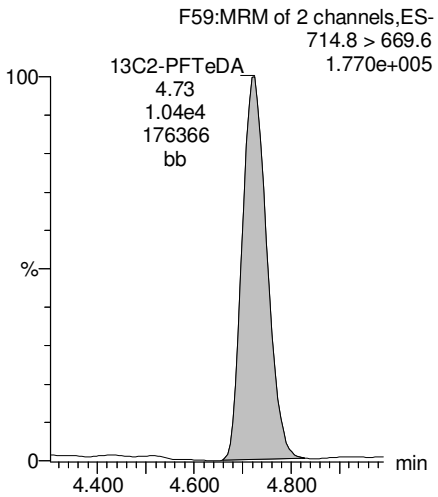
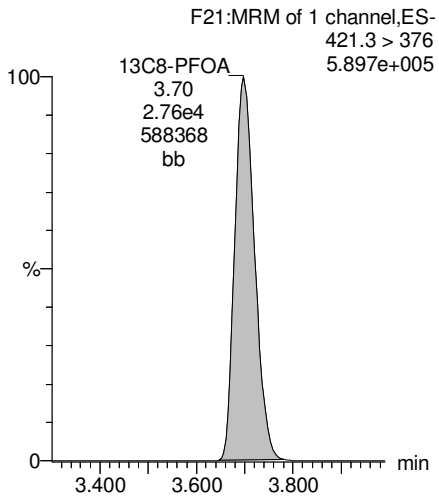
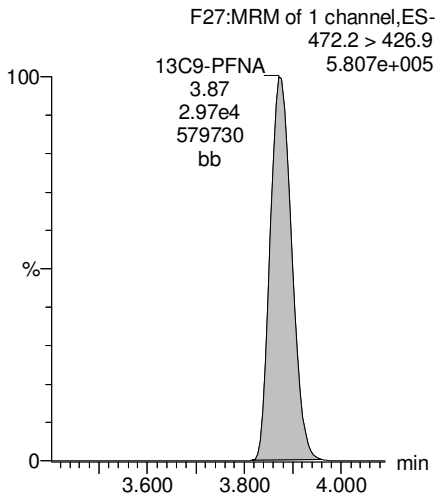


13C8-PFOA



13C9-PFNA



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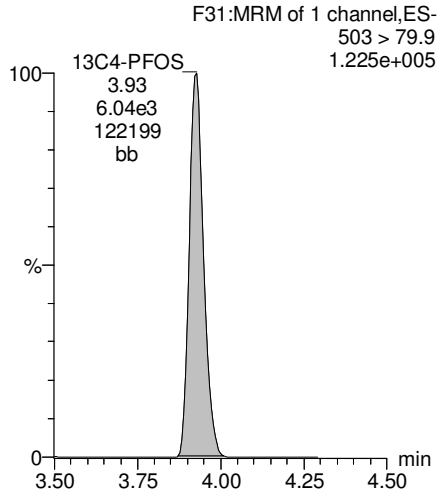
Dataset: U:\Q4.PRO\results\170726M1\170726M1-8.qld

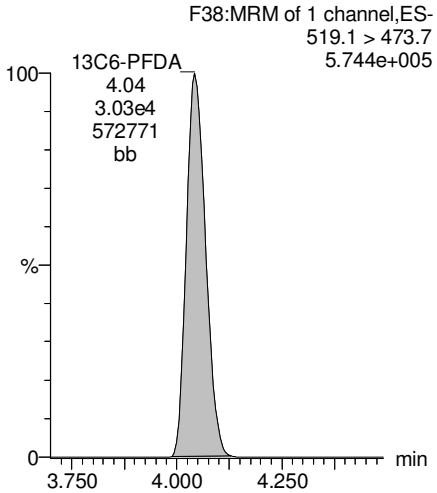
Last Altered: Monday, July 31, 2017 15:26:23 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:28:25 Pacific Daylight Time

Name: 170726M1_8, Date: 26-Jul-2017, Time: 12:18:02, ID: 1700851-05RE1 18-GW-18MCAS02-5-20170710 0.12103, Description: 18-GW-18MCAS02-5-20170710

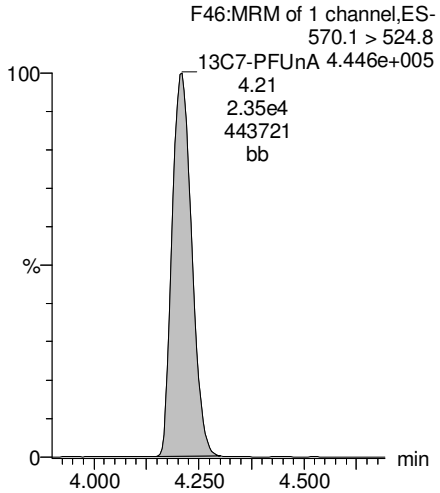
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

Last Altered: Monday, July 31, 2017 10:15:47 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:16:35 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	2.39e2	5.88e3	0.117		2.96	2.91	0.508	2.35	
2	4	PFHxA	313.2 > 268.9	5.83e3	1.69e4	0.117		3.19	3.15	1.73	9.72	
3	5	PFHpA	363 > 318.9	1.40e3	4.24e4	0.117		3.45	3.42	0.414	2.50	
4	6	PFHxS	398.9 > 79.6	2.87e3	4.20e3	0.117		3.56	3.49	8.53	43.4	
5	7	PFOA	413 > 368.7	3.74e4	5.23e4	0.117		3.65	3.61	8.95	77.4	
6	9	PFNA	462.9 > 418.8		4.28e4	0.117		3.83				
7	11	PFOS	499 > 79.9	1.75e3	9.11e3	0.117		3.89	3.83	2.40	20.3	
8	12	PFDA	513 > 468.8		3.75e4	0.117		4.01				
9	13	N-MeFOSAA	570.1 > 419		7.45e3	0.117		4.03				
10	14	N-EtFOSAA	584.2 > 419		6.72e3	0.117		4.10				
11	15	PFUnA	562.9 > 518.9		3.11e4	0.117		4.11				
12	17	PFDoA	612.9 > 318.8		2.04e3	0.117		4.34				
13	18	PFTrDA	662.9 > 618.9		2.04e3	0.117		4.50				
14	19	PFTeDA	712.9 > 668.8		3.23e3	0.117		4.68				
15	22	13C3-PFBS	302 > 98.8	5.88e3	5.18e4	0.117	0.033	2.96	2.90	0.567	146	137.2
16	23	13C2-PFHxA	315 > 269.8	1.69e4	5.18e4	0.117	0.335	3.19	3.15	1.63	41.3	97.0
17	24	13C4-PFHpA	367.2 > 321.8	4.24e4	5.18e4	0.117	0.369	3.45	3.41	4.09	94.4	88.6
18	25	18O2-PFHxS	403 > 102.6	4.20e3	8.93e3	0.117	0.460	3.56	3.48	5.89	109	102.3
19	26	13C2-PFOA	414.9 > 369.7	5.23e4	4.06e4	0.117	1.293	3.65	3.61	16.1	106	99.6
20	27	13C5-PFNA	468.2 > 422.9	4.28e4	4.70e4	0.117	0.986	3.83	3.79	11.4	98.3	92.3
21	28	13C8-PFOSA	506.1 > 77.7	2.34e3	3.34e4	0.117	0.132	3.84	3.80	0.875	56.3	52.8
22	29	13C8-PFOS	507 > 79.9	9.11e3	8.27e3	0.117	1.184	3.89	3.85	13.8	99.2	93.1
23	30	13C2-PFDA	515.1 > 469.9	3.75e4	4.54e4	0.117	0.998	4.01	3.96	10.3	88.1	82.7
24	31	d3-N-MeFOSAA	573.3 > 419	7.45e3	3.34e4	0.117	0.018	4.03	3.99	2.79	1340	97.0
25	32	d5-N-EtFOSAA	589.3 > 419	6.72e3	3.34e4	0.117	0.018	4.12	4.06	2.51	1210	87.0
26	33	13C2-PFUnA	565 > 519.8	3.11e4	3.34e4	0.117	1.129	4.17	4.12	11.6	87.9	82.5
27	34	13C2-PFDoA	615 > 569.7	2.04e3	3.34e4	0.117	0.116	4.34	4.28	0.764	56.1	52.7
28	35	13C2-PFTeDA	714.8 > 669.6	3.23e3	3.34e4	0.117	0.762	4.68	4.63	1.21	13.5	12.7
29	36	13C4-PFBA	217 > 171.8	2.87e4	2.87e4	0.117	1.000	1.32	1.40	12.5	107	100.0
30	37	13C5-PFHxA	318 > 272.9	5.18e4	5.18e4	0.117	1.000	3.19	3.15	5.00	42.6	100.0
31	38	13C3-PFHxS	401.9 > 79.9	8.93e3	8.93e3	0.117	1.000	3.56	3.49	12.5	107	100.0
32	39	13C8-PFOA	421.3 > 376	4.06e4	4.06e4	0.117	1.000	3.65	3.61	12.5	107	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

Last Altered: Monday, July 31, 2017 10:15:47 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:16:35 Pacific Daylight Time

Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	4.70e4	4.70e4	0.117	1.000	3.83	3.79	12.5	107	100.0
34	41	13C4-PFOS	503 > 79.9	8.27e3	8.27e3	0.117	1.000	3.89	3.84	12.5	107	100.0
35	42	13C6-PFDA	519.1 > 473.7	4.54e4	4.54e4	0.117	1.000	4.01	3.96	12.5	107	100.0
36	43	13C7-PFUnA	570.1 > 524.8	3.34e4	3.34e4	0.117	1.000	4.17	4.13	12.5	107	100.0
37	44	Total PFBS	299 > 79.7	2.39e2	5.88e3	0.117		2.96		0.508	2.35	
38	45	Total PFHxS	398.9 > 79.6	2.87e3	4.20e3	0.117		3.52		8.53	43.4	
39	46	Total PFOA	413 > 368.7	3.98e4	5.23e4	0.117		3.65		9.51	81.2	
40	47	Total PFOS	499 > 79.9	1.75e3	9.11e3	0.117		3.89		2.40	20.3	
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.45e3	0.117		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	6.72e3	0.117		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

Last Altered: Monday, July 31, 2017 10:15:47 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:16:35 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.91	238.867	5880.596	0.508	bb	2.3

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.49	2869.505	4204.570	8.531	MM	43.4

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.61	37424.430	52277.949	8.948	MM	77.4
2	46	Total PFOA	413 > 368.7	3.57	2330.095	52277.949	0.557	MM	3.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.83	1747.482	9113.069	2.397	MM	20.3

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			7452.252		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

Last Altered: Monday, July 31, 2017 10:15:47 Pacific Daylight Time
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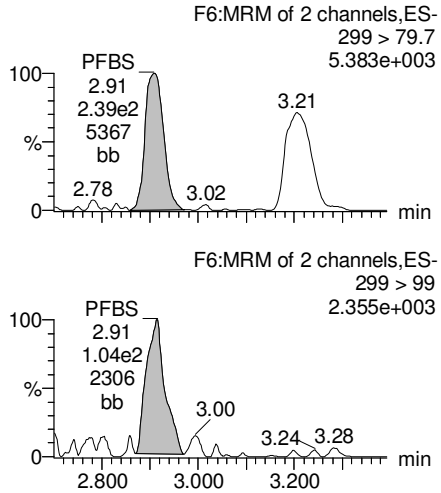
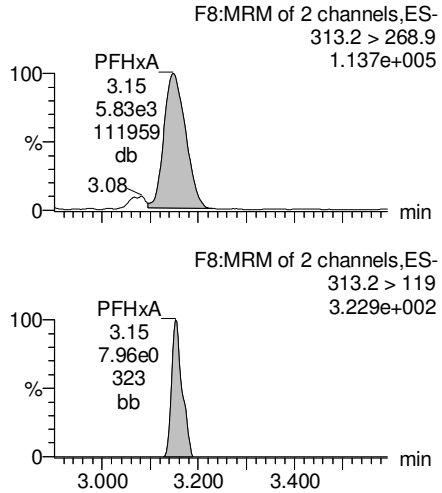
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

Total PFBS



PFHxA



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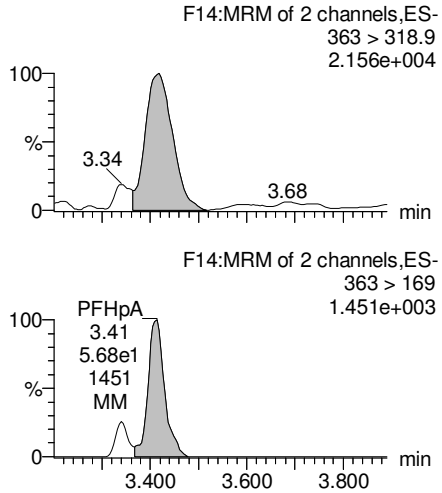
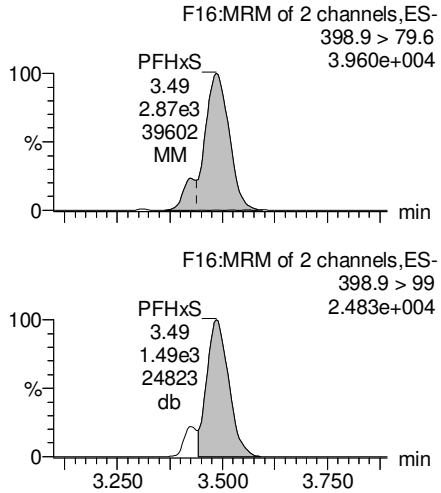


Total PFHxS



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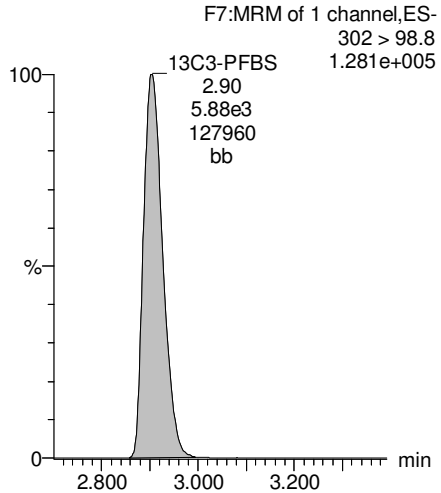
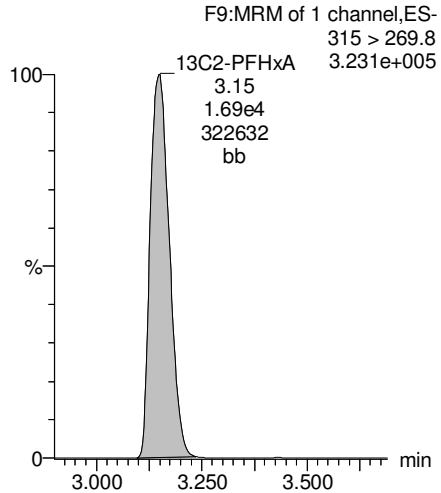


13C2-PFHxA



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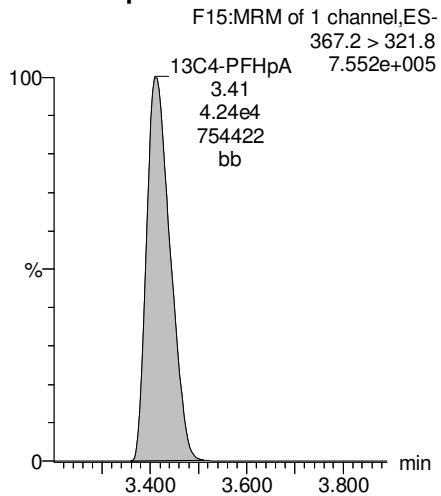

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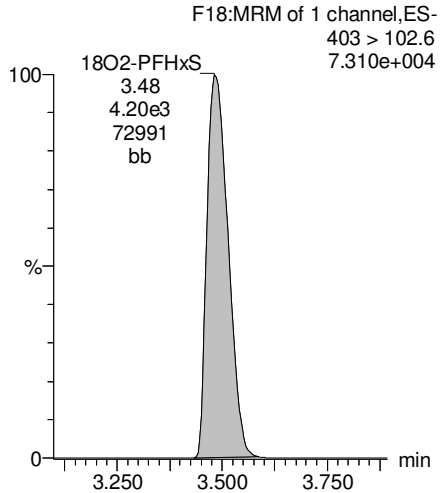

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

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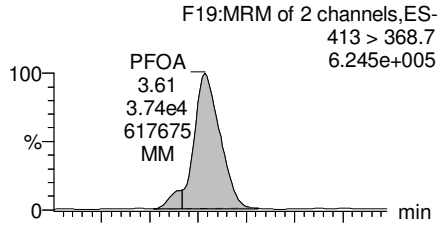
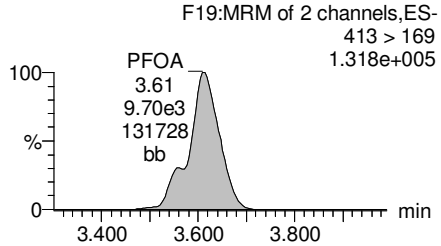
Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

Total PFOA





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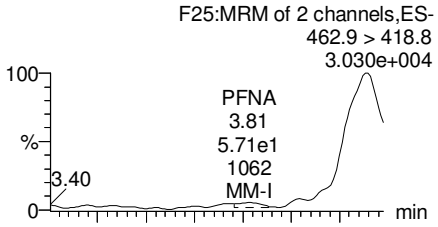
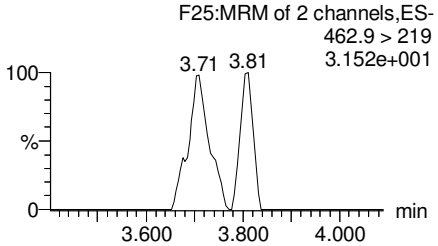
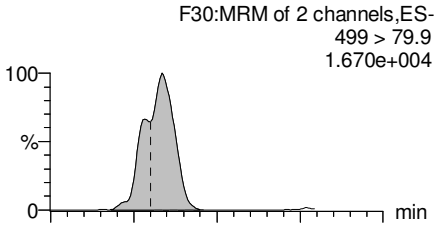
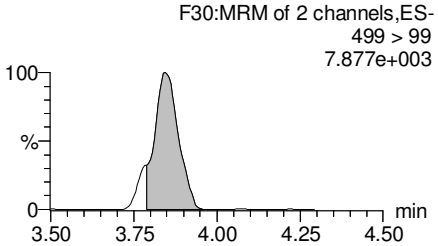




Total PFOS





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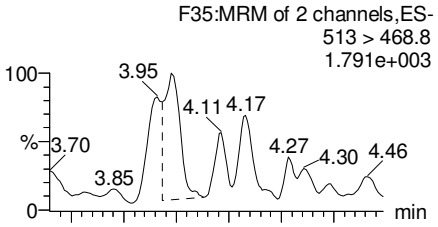

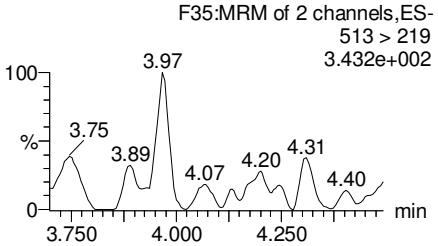

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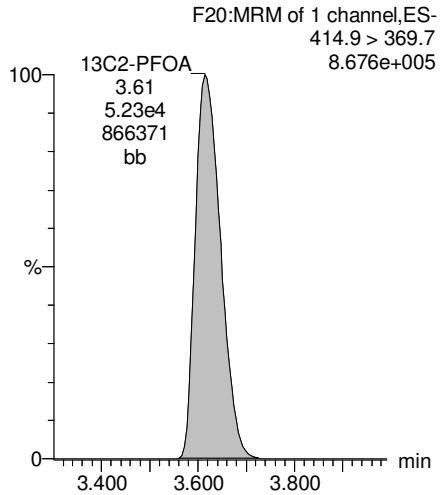

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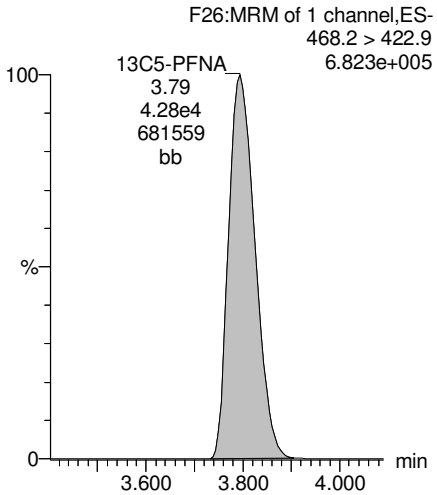
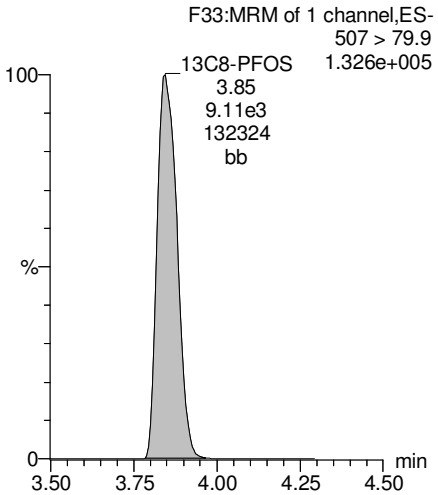


13C8-PFOS



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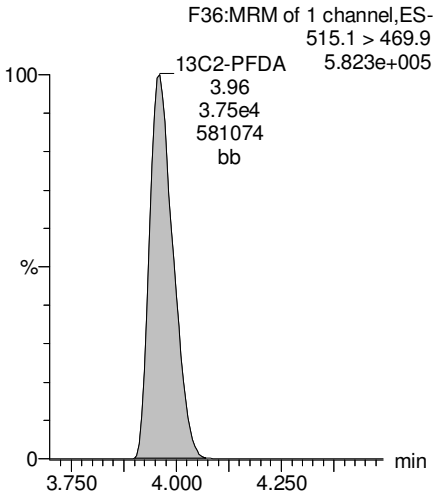

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

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Printed: Monday, July 31, 2017 10:16:35 Pacific Daylight Time

Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

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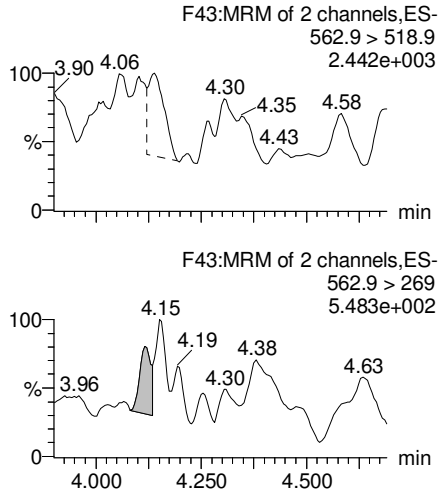

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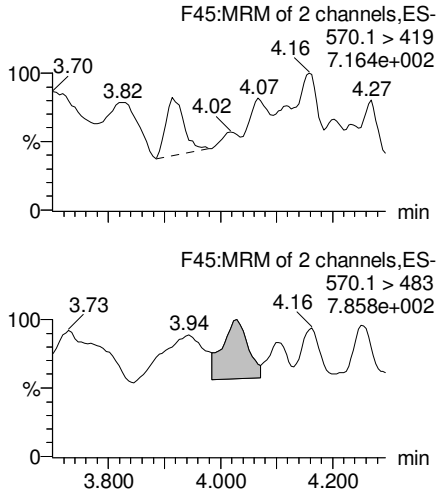
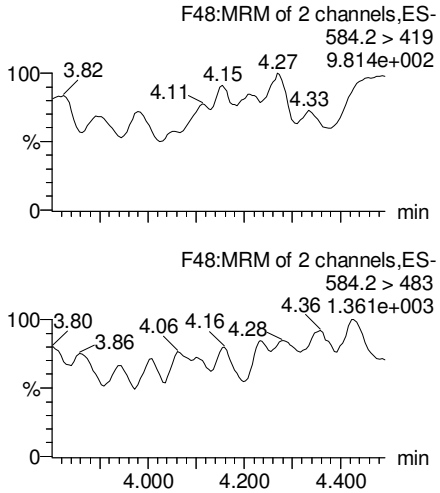
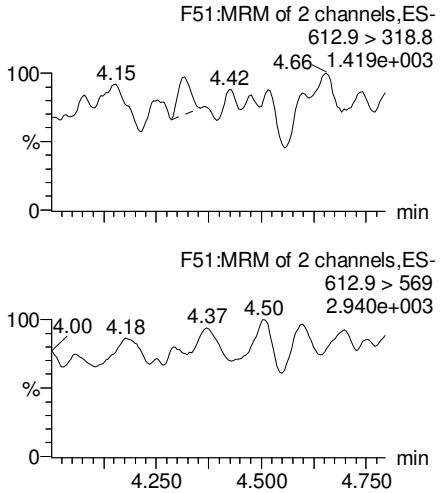


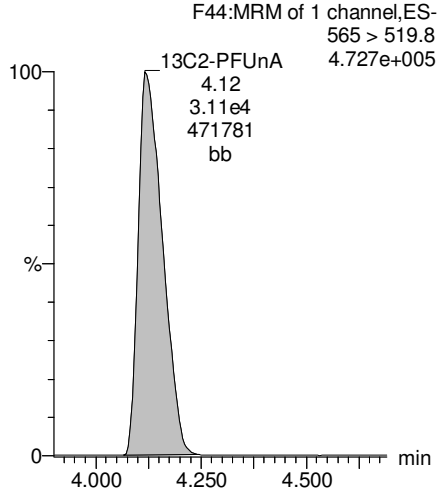
N-EtFOSAA



PFDoA



13C2-PFUnA



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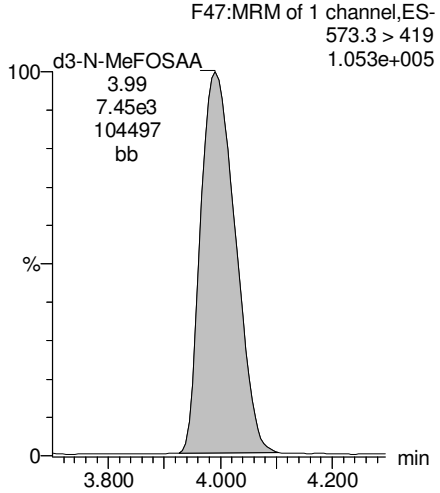

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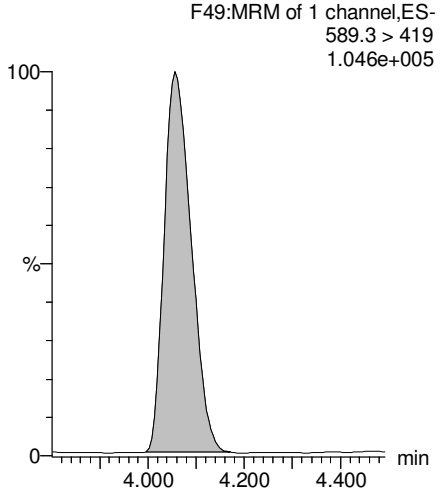

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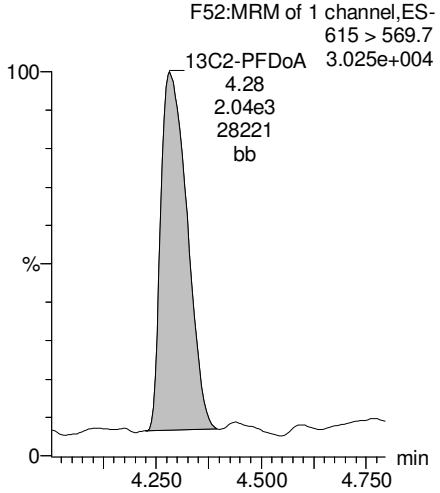

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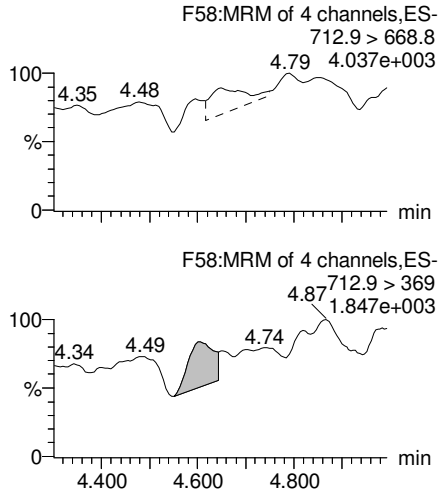
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

Last Altered: Monday, July 31, 2017 10:15:47 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:16:35 Pacific Daylight Time

Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

PFTeDA



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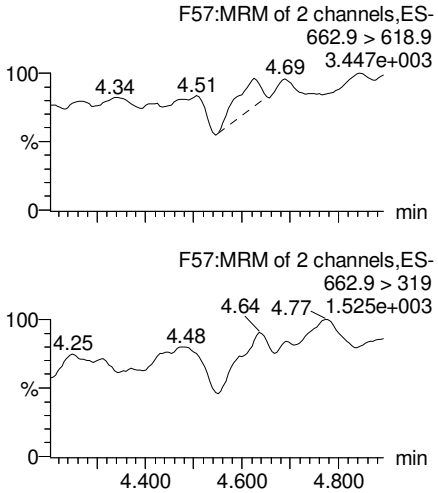
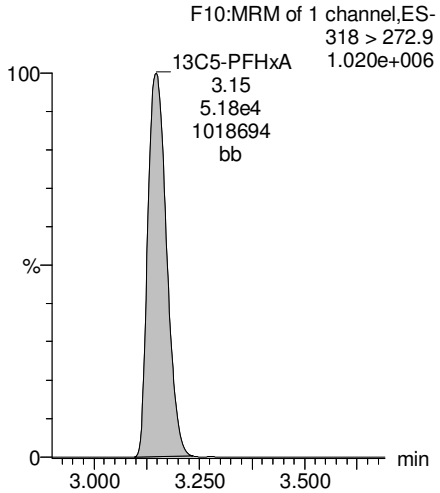


13C5-PFHxA



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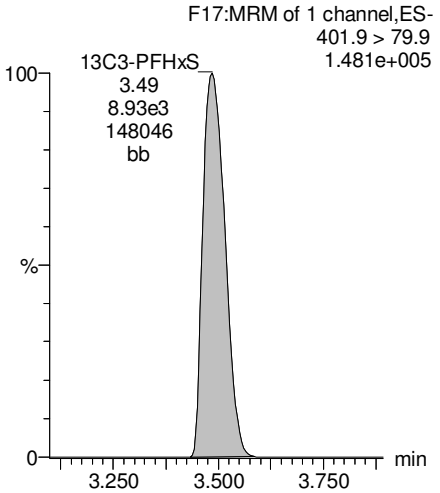
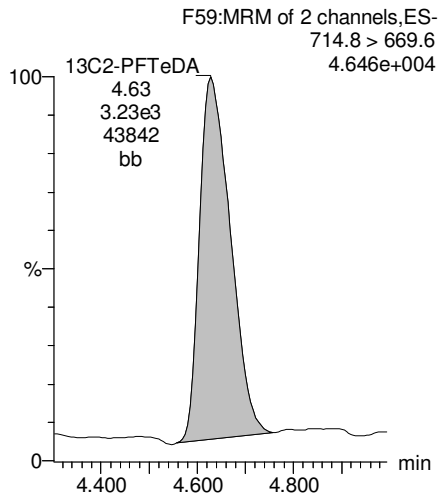


13C2-PFTeDA



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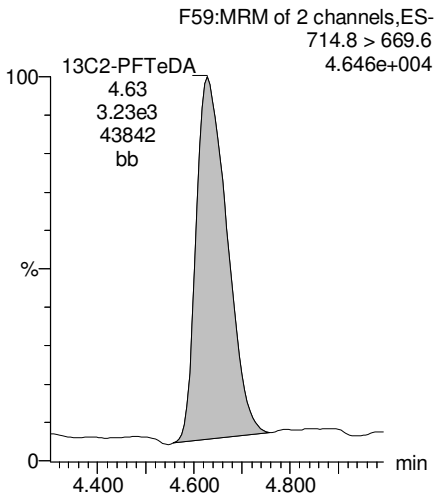
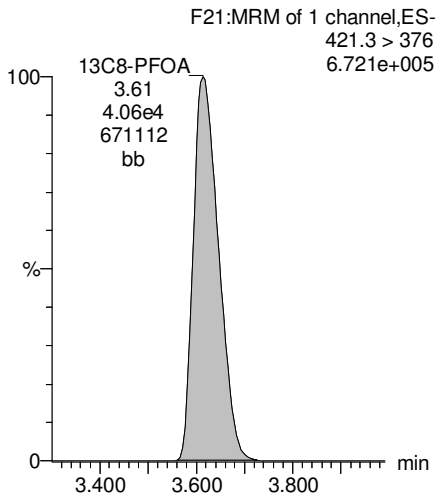
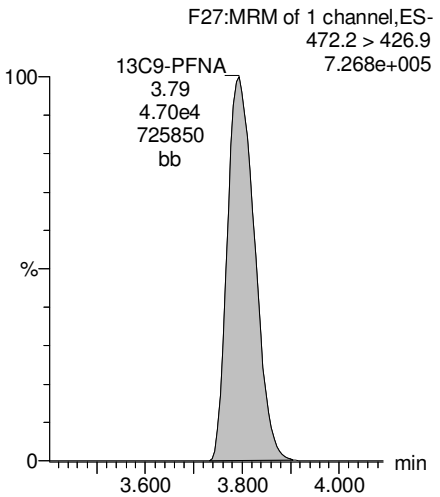


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-22.qld

Last Altered: Monday, July 31, 2017 10:15:47 Pacific Daylight Time
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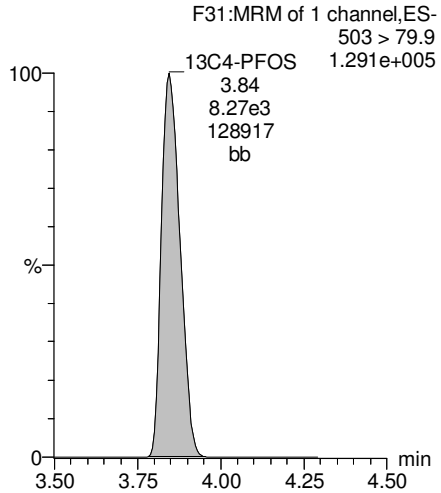
Name: 170728M2_22, Date: 28-Jul-2017, Time: 19:55:11, ID: 1700851-06RE1 18-GW-18MCAS07-3-20170710 0.11733, Description: 18-GW-18MCAS07-3-20170710

13C4-PFOS



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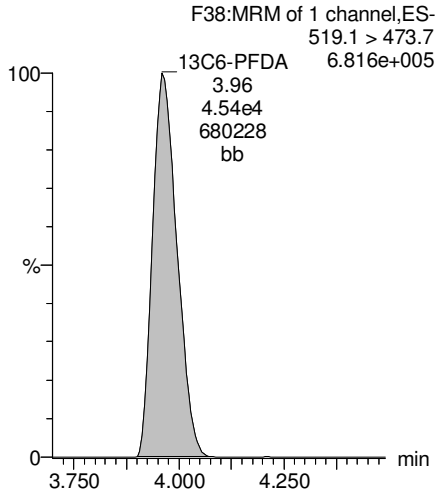

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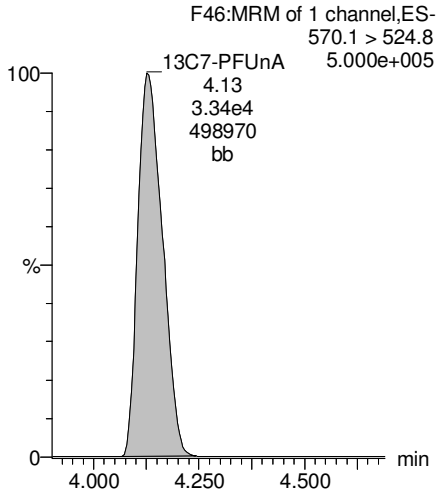

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:23:46 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	1.28e3	6.66e3	0.120		2.96	2.91	2.40	10.8	
2	4	PFHxA	313.2 > 268.9	2.79e4	2.14e4	0.120		3.19	3.14	6.52	38.0	
3	5	PFHpA	363 > 318.9	3.50e3	4.83e4	0.120		3.45	3.41	0.906	5.90	
4	6	PFHxS	398.9 > 79.6	1.36e3	4.49e3	0.120		3.56	3.48	3.78	18.6	
5	7	PFOA	413 > 368.7	1.82e4	6.74e4	0.120		3.65	3.62	3.38	27.8	
6	9	PFNA	462.9 > 418.8		5.03e4	0.120		3.83				
7	11	PFOS	499 > 79.9	1.83e2	1.00e4	0.120		3.89	3.85	0.228	1.58	
8	12	PFDA	513 > 468.8	8.31e1	5.01e4	0.120		4.01	3.96	0.0207		
9	13	N-MeFOSAA	570.1 > 419		7.91e3	0.120		4.03				
10	14	N-EtFOSAA	584.2 > 419		7.03e3	0.120		4.10				
11	15	PFUnA	562.9 > 518.9		3.85e4	0.120		4.11				
12	17	PFDoA	612.9 > 318.8		2.28e3	0.120		4.34				
13	18	PFTrDA	662.9 > 618.9		2.28e3	0.120		4.50				
14	19	PFTeDA	712.9 > 668.8		2.19e3	0.120		4.68				
15	22	13C3-PFBS	302 > 98.8	6.66e3	6.19e4	0.120	0.033	2.96	2.91	0.538	135	130.2
16	23	13C2-PFHxA	315 > 269.8	2.14e4	6.19e4	0.120	0.335	3.19	3.14	1.73	42.8	103.1
17	24	13C4-PFHpA	367.2 > 321.8	4.83e4	6.19e4	0.120	0.369	3.45	3.41	3.91	87.9	84.7
18	25	18O2-PFHxS	403 > 102.6	4.49e3	9.73e3	0.120	0.460	3.56	3.49	5.77	104	100.3
19	26	13C2-PFOA	414.9 > 369.7	6.74e4	5.02e4	0.120	1.293	3.65	3.62	16.8	108	103.7
20	27	13C5-PFNA	468.2 > 422.9	5.03e4	5.00e4	0.120	0.986	3.83	3.79	12.6	106	102.2
21	28	13C8-PFOSA	506.1 > 77.7	2.52e3	3.70e4	0.120	0.132	3.84	3.80	0.853	53.4	51.5
22	29	13C8-PFOS	507 > 79.9	1.00e4	8.57e3	0.120	1.184	3.89	3.85	14.6	103	98.9
23	30	13C2-PFDA	515.1 > 469.9	5.01e4	5.13e4	0.120	0.998	4.01	3.96	12.2	102	97.9
24	31	d3-N-MeFOSAA	573.3 > 419	7.91e3	3.70e4	0.120	0.018	4.03	3.99	2.67	1250	93.0
25	32	d5-N-EtFOSAA	589.3 > 419	7.03e3	3.70e4	0.120	0.018	4.12	4.06	2.38	1110	82.2
26	33	13C2-PFUnA	565 > 519.8	3.85e4	3.70e4	0.120	1.129	4.17	4.12	13.0	95.7	92.2
27	34	13C2-PFDoA	615 > 569.7	2.28e3	3.70e4	0.120	0.116	4.34	4.29	0.770	55.1	53.1
28	35	13C2-PFTeDA	714.8 > 669.6	2.19e3	3.70e4	0.120	0.762	4.68	4.63	0.742	8.08	7.8
29	36	13C4-PFBA	217 > 171.8	2.95e4	2.95e4	0.120	1.000	1.32	1.41	12.5	104	100.0
30	37	13C5-PFHxA	318 > 272.9	6.19e4	6.19e4	0.120	1.000	3.19	3.15	5.00	41.5	100.0
31	38	13C3-PFHxS	401.9 > 79.9	9.73e3	9.73e3	0.120	1.000	3.56	3.49	12.5	104	100.0
32	39	13C8-PFOA	421.3 > 376	5.02e4	5.02e4	0.120	1.000	3.65	3.62	12.5	104	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:23:46 Pacific Daylight Time

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	5.00e4	5.00e4	0.120	1.000	3.83	3.79	12.5	104	100.0
34	41	13C4-PFOS	503 > 79.9	8.57e3	8.57e3	0.120	1.000	3.89	3.85	12.5	104	100.0
35	42	13C6-PFDA	519.1 > 473.7	5.13e4	5.13e4	0.120	1.000	4.01	3.96	12.5	104	100.0
36	43	13C7-PFUnA	570.1 > 524.8	3.70e4	3.70e4	0.120	1.000	4.17	4.12	12.5	104	100.0
37	44	Total PFBS	299 > 79.7	1.28e3	6.66e3	0.120		2.96		2.40	10.8	
38	45	Total PFHxS	398.9 > 79.6	1.36e3	4.49e3	0.120		3.52		3.78	18.6	
39	46	Total PFOA	413 > 368.7	2.05e4	6.74e4	0.120		3.65		3.80	30.4	
40	47	Total PFOS	499 > 79.9	1.83e2	1.00e4	0.120		3.89		0.228	1.58	
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.91e3	0.120		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	7.03e3	0.120		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:23:46 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.91	1281.223	6662.454	2.404	bb	10.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.48	1357.265	4491.166	3.778	MM	18.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.62	18202.480	67370.500	3.377	db	27.8
2	46	Total PFOA	413 > 368.7	3.57	2286.397	67370.500	0.424	bd	2.6

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.85	182.905	10037.938	0.228	MM	1.6

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			7913.155		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

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Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
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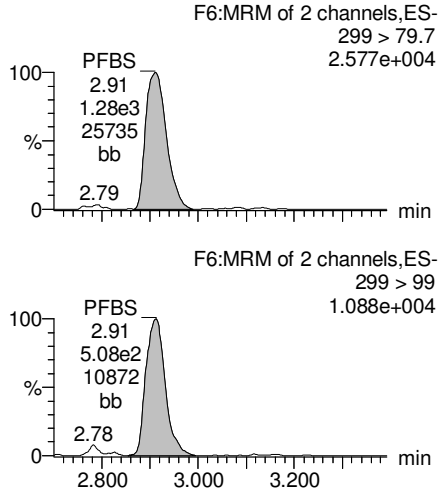
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

Total PFBS



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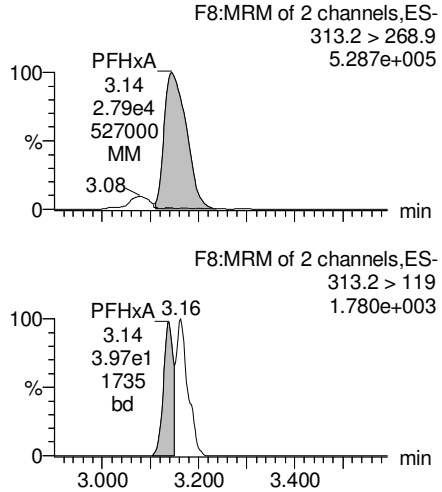
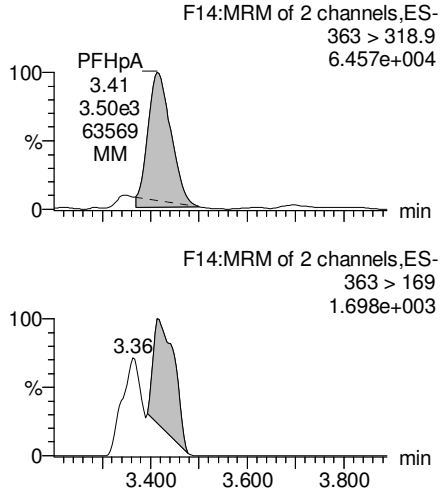
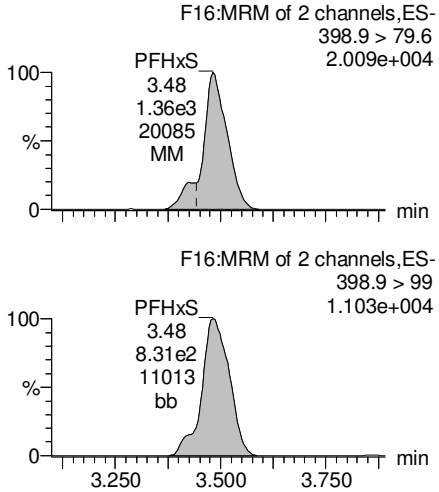


PFHpA



Total PFHxS



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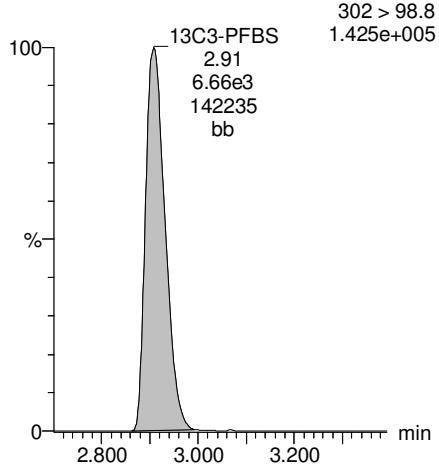
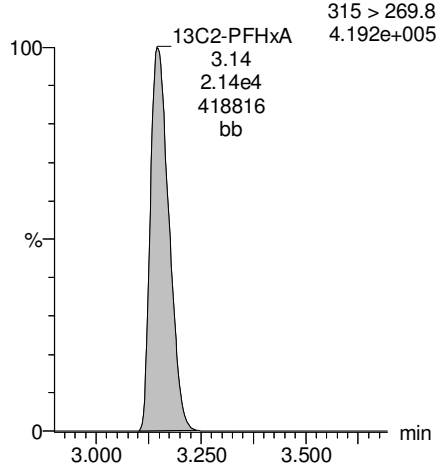


13C2-PFHxA



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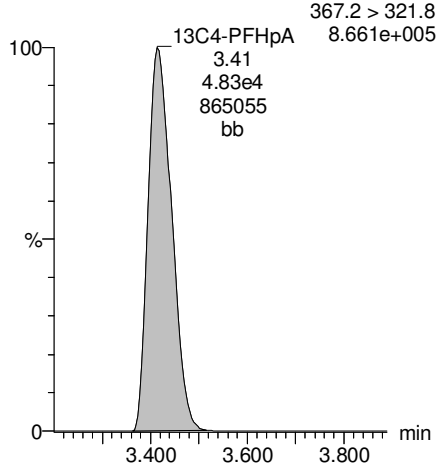
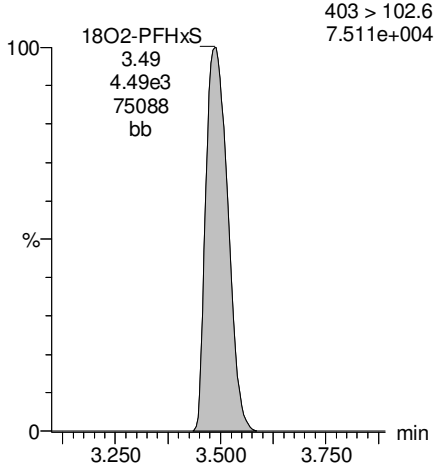


18O2-PFHxS



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Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
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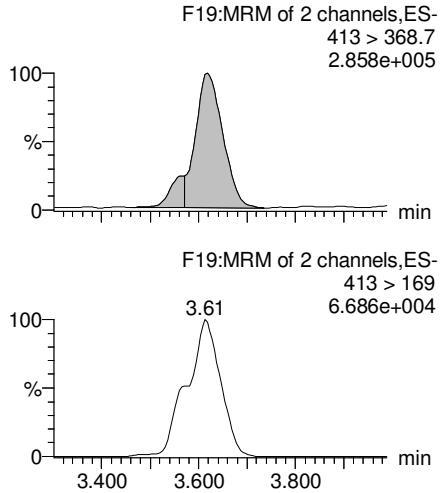
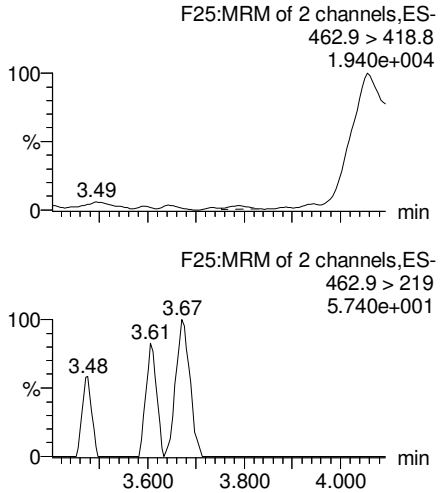
Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

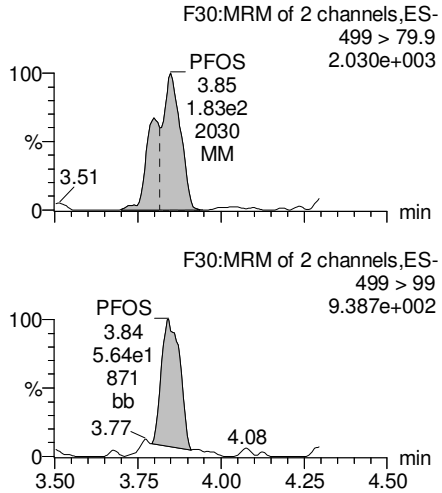
Total PFOA



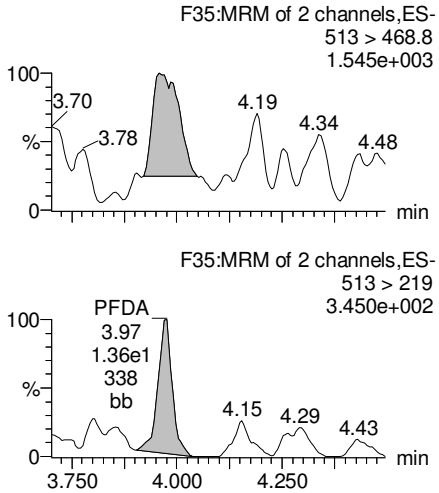
PFNA



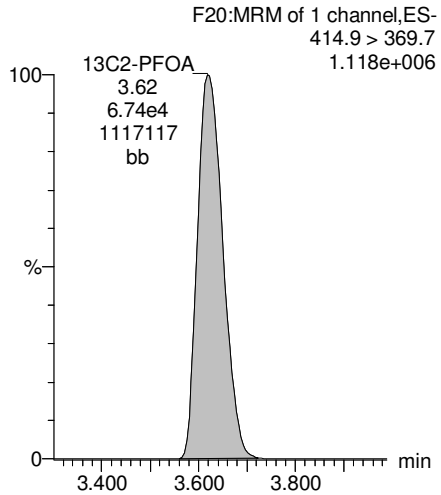
Total PFOS



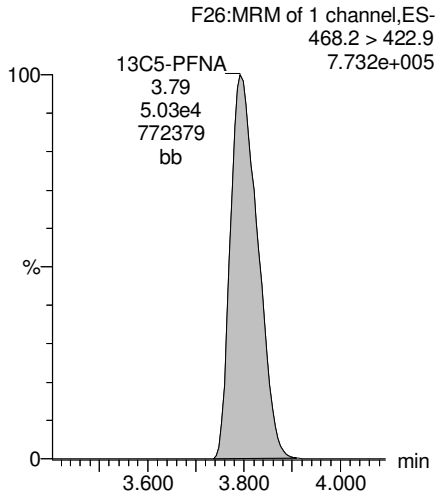
PFDA



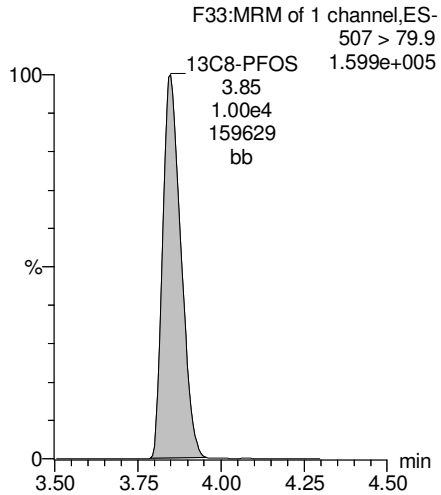
13C2-PFOA



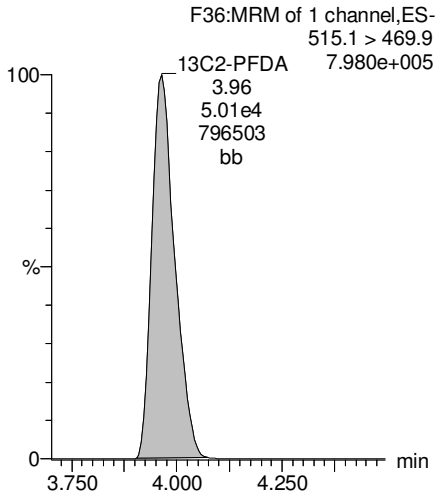
13C5-PFNA



13C8-PFOS



13C2-PFDA



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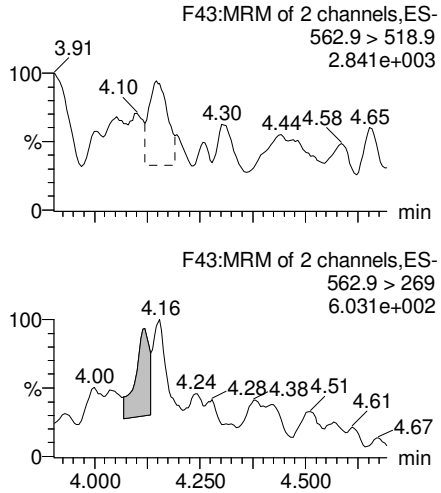
Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

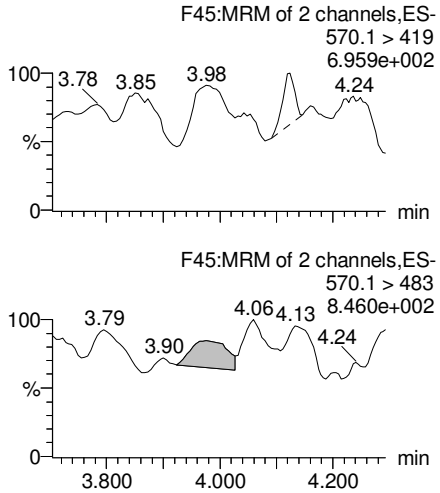
Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:23:46 Pacific Daylight Time

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

PFUnA



N-MeFOSAA



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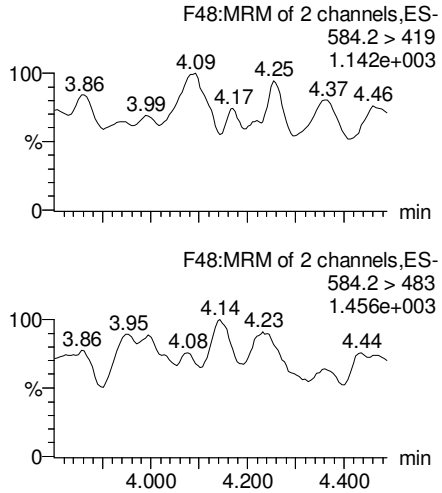
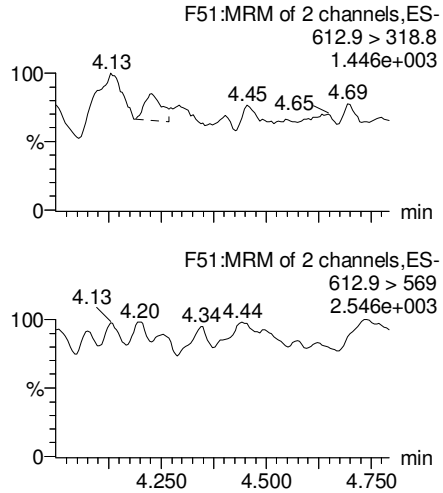
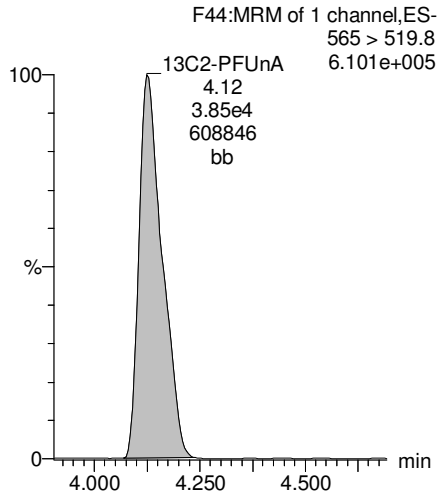


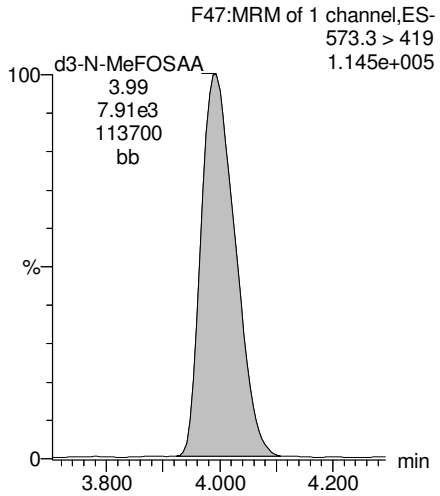
PFDoA



13C2-PFUnA



d3-N-MeFOSAA



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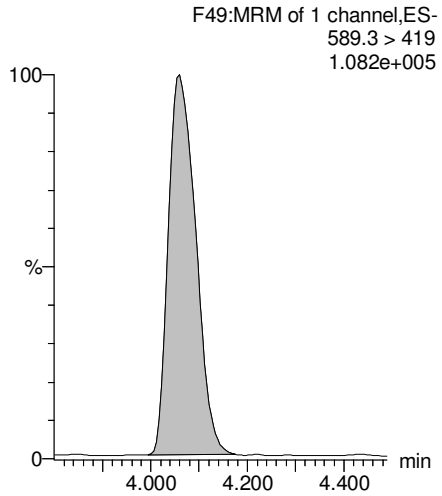
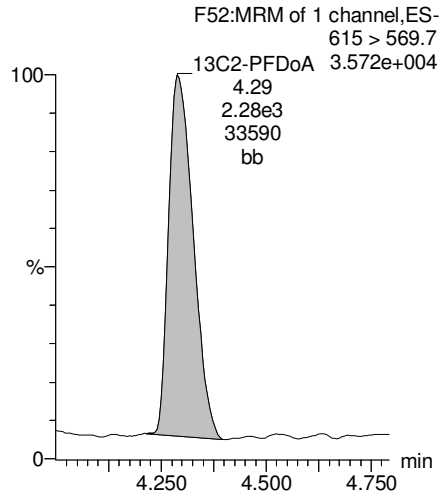


13C2-PFDoA



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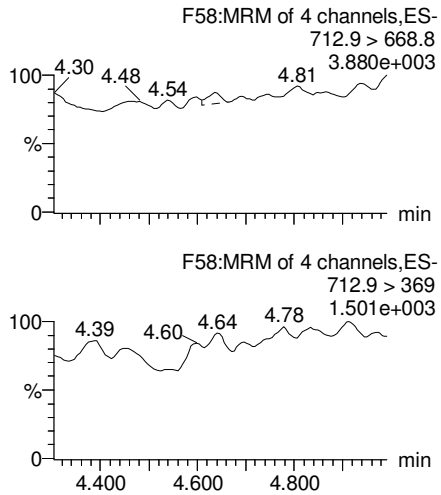
Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

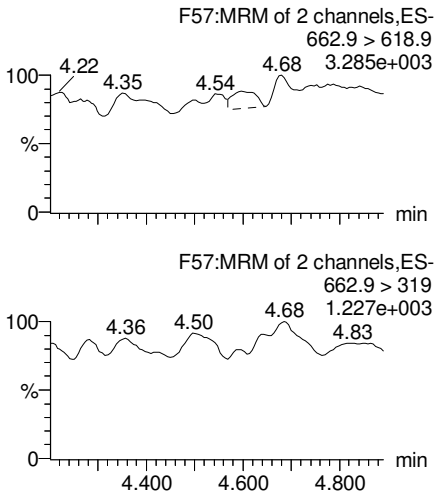
Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:23:46 Pacific Daylight Time

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

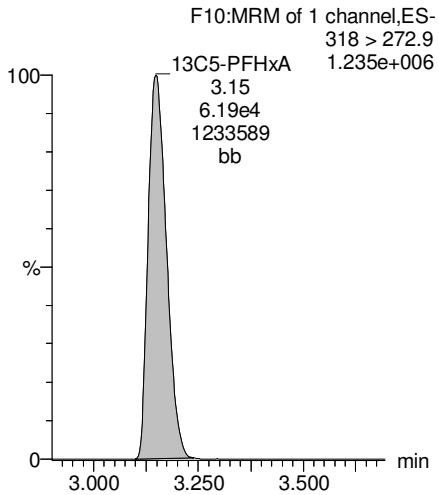
PFTeDA



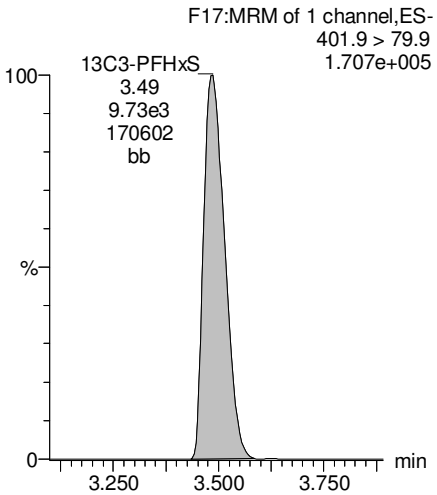
PFTrDA



13C5-PFHxA



13C3-PFHxS



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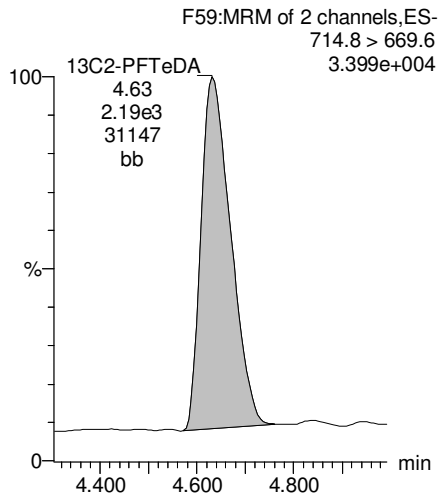
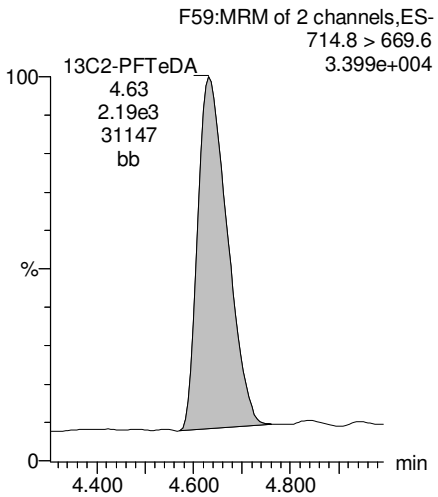
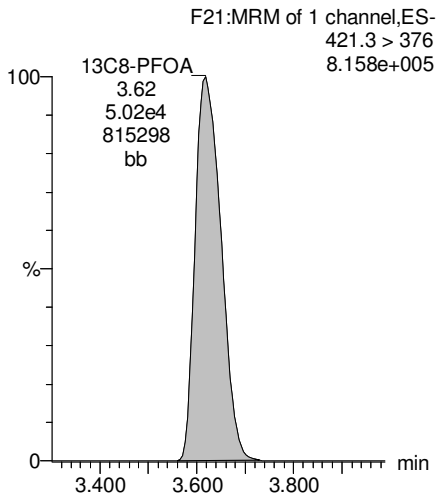


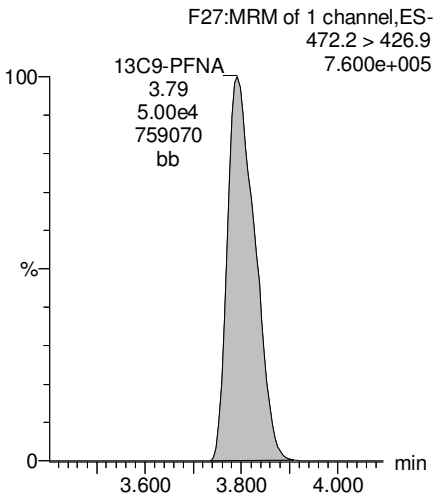
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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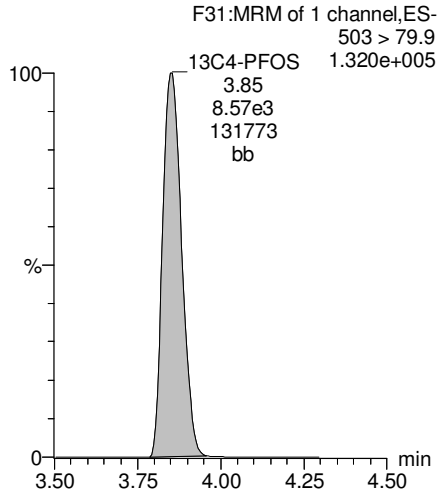
Dataset: U:\Q4.PRO\results\170728M2\170728M2-23.qld

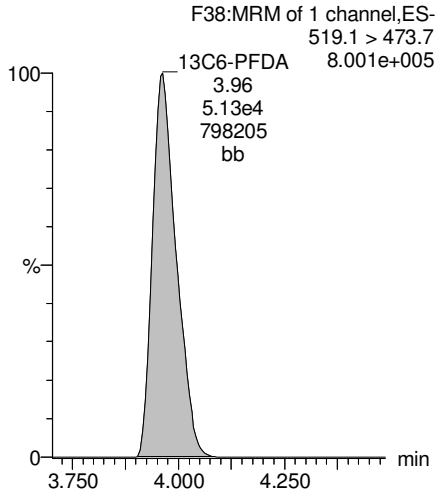
Last Altered: Monday, July 31, 2017 10:23:20 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:23:46 Pacific Daylight Time

Name: 170728M2_23, Date: 28-Jul-2017, Time: 20:05:59, ID: 1700851-07RE1 24-GW-24MW08B-20170710 0.12048, Description: 24-GW-24MW08B-20170710

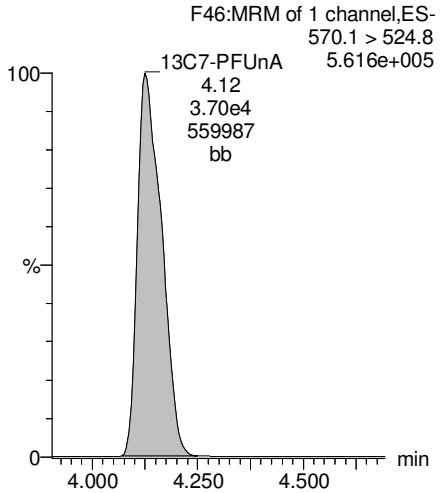
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:29:28 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	9.02e3	6.37e3	0.121		2.96	2.91	17.7	78.9	
2	4	PFHxA	313.2 > 268.9	1.83e5	2.03e4	0.121		3.19	3.15	45.0	267	
3	5	PFHpA	363 > 318.9	2.64e4	4.52e4	0.121		3.45	3.42	7.31	50.9	
4	6	PFHxS	398.9 > 79.6	1.98e4	4.65e3	0.121		3.56	3.49	53.1	264	
5	7	PFOA	413 > 368.7	1.30e5	6.31e4	0.121		3.65	3.62	25.8	218	
6	9	PFNA	462.9 > 418.8	4.96e3	5.45e4	0.121		3.83	3.79	1.14	8.17	
7	11	PFOS	499 > 79.9	4.24e4	1.09e4	0.121		3.89	3.84	48.5	407	
8	12	PFDA	513 > 468.8		5.38e4	0.121		4.01				
9	13	N-MeFOSAA	570.1 > 419		9.70e3	0.121		4.03				
10	14	N-EtFOSAA	584.2 > 419		9.16e3	0.121		4.10				
11	15	PFUnA	562.9 > 518.9		5.26e4	0.121		4.11				
12	17	PFDoA	612.9 > 318.8		4.82e3	0.121		4.34				
13	18	PFTrDA	662.9 > 618.9		4.82e3	0.121		4.50				
14	19	PFTeDA	712.9 > 668.8		1.94e4	0.121		4.68				
15	22	13C3-PFBS	302 > 98.8	6.37e3	5.83e4	0.121	0.033	2.96	2.91	0.547	137	132.3
16	23	13C2-PFHxA	315 > 269.8	2.03e4	5.83e4	0.121	0.335	3.19	3.15	1.74	43.0	103.8
17	24	13C4-PFHpA	367.2 > 321.8	4.52e4	5.83e4	0.121	0.369	3.45	3.42	3.88	87.0	84.1
18	25	18O2-PFHxS	403 > 102.6	4.65e3	9.55e3	0.121	0.460	3.56	3.49	6.09	110	105.8
19	26	13C2-PFOA	414.9 > 369.7	6.31e4	4.72e4	0.121	1.293	3.65	3.62	16.7	107	103.5
20	27	13C5-PFNA	468.2 > 422.9	5.45e4	5.55e4	0.121	0.986	3.83	3.80	12.3	103	99.7
21	28	13C8-PFOSA	506.1 > 77.7	3.59e3	5.03e4	0.121	0.132	3.84	3.80	0.892	55.8	53.8
22	29	13C8-PFOS	507 > 79.9	1.09e4	8.74e3	0.121	1.184	3.89	3.85	15.6	109	105.6
23	30	13C2-PFDA	515.1 > 469.9	5.38e4	5.65e4	0.121	0.998	4.01	3.96	11.9	98.7	95.3
24	31	d3-N-MeFOSAA	573.3 > 419	9.70e3	5.03e4	0.121	0.018	4.03	3.99	2.41	1130	83.9
25	32	d5-N-EtFOSAA	589.3 > 419	9.16e3	5.03e4	0.121	0.018	4.12	4.06	2.28	1060	78.9
26	33	13C2-PFUnA	565 > 519.8	5.26e4	5.03e4	0.121	1.129	4.17	4.13	13.1	96.0	92.7
27	34	13C2-PFDoA	615 > 569.7	4.82e3	5.03e4	0.121	0.116	4.34	4.29	1.20	85.6	82.6
28	35	13C2-PFTeDA	714.8 > 669.6	1.94e4	5.03e4	0.121	0.762	4.68	4.63	4.83	52.5	50.7
29	36	13C4-PFBA	217 > 171.8	3.01e4	3.01e4	0.121	1.000	1.32	1.40	12.5	104	100.0
30	37	13C5-PFHxA	318 > 272.9	5.83e4	5.83e4	0.121	1.000	3.19	3.15	5.00	41.4	100.0
31	38	13C3-PFHxS	401.9 > 79.9	9.55e3	9.55e3	0.121	1.000	3.56	3.49	12.5	104	100.0
32	39	13C8-PFOA	421.3 > 376	4.72e4	4.72e4	0.121	1.000	3.65	3.62	12.5	104	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:29:28 Pacific Daylight Time

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	5.55e4	5.55e4	0.121	1.000	3.83	3.80	12.5	104	100.0
34	41	13C4-PFOS	503 > 79.9	8.74e3	8.74e3	0.121	1.000	3.89	3.85	12.5	104	100.0
35	42	13C6-PFDA	519.1 > 473.7	5.65e4	5.65e4	0.121	1.000	4.01	3.96	12.5	104	100.0
36	43	13C7-PFUnA	570.1 > 524.8	5.03e4	5.03e4	0.121	1.000	4.17	4.13	12.5	104	100.0
37	44	Total PFBS	299 > 79.7	9.20e3	6.37e3	0.121		2.96		18.1	80.5	
38	45	Total PFHxS	398.9 > 79.6	1.98e4	4.65e3	0.121		3.52		53.1	264	
39	46	Total PFOA	413 > 368.7	1.39e5	6.31e4	0.121		3.65		27.5	232	
40	47	Total PFOS	499 > 79.9	4.24e4	1.09e4	0.121		3.89		48.5	407	
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	9.70e3	0.121		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	9.16e3	0.121		4.17		0.000		

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:29:28 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.91	9024.321	6374.161	17.697	bb	78.9
2	44	Total PFBS	299 > 79.7	2.77	180.277	6374.161	0.354	bb	1.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.49	19756.318	4648.603	53.124	MM	263.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.62	130051.141	63118.652	25.755	MM	218.4
2	46	Total PFOA	413 > 368.7	3.57	8797.898	63118.652	1.742	MM	13.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.84	42425.059	10931.109	48.514	MM	406.8

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			9699.652		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1									

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
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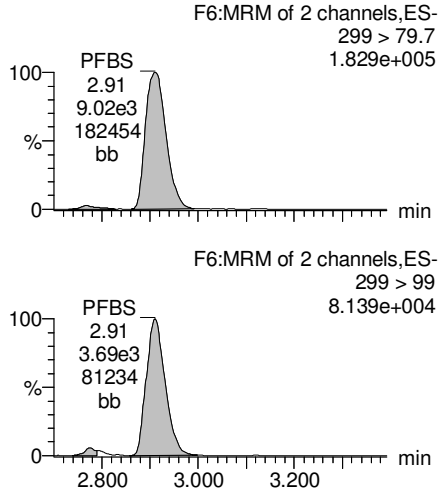
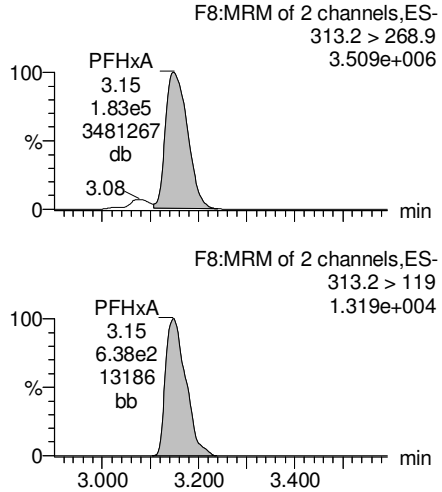
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

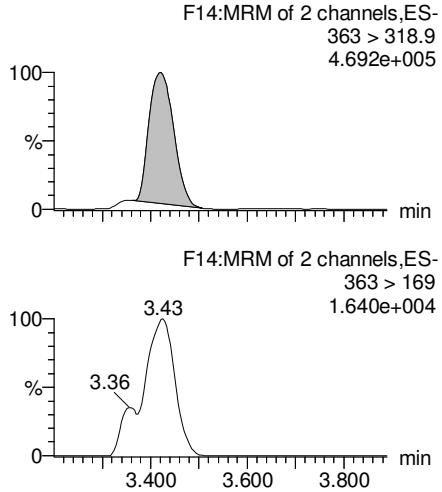
Total PFBS



PFHxA



PFHpA



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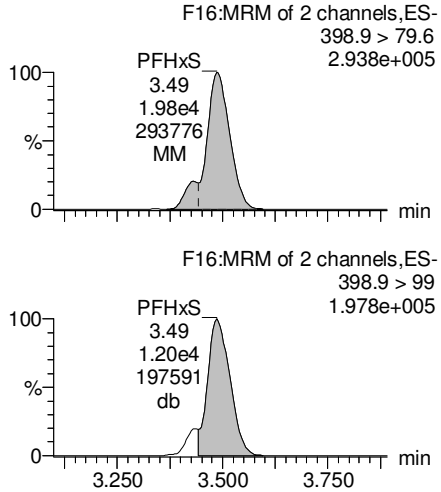
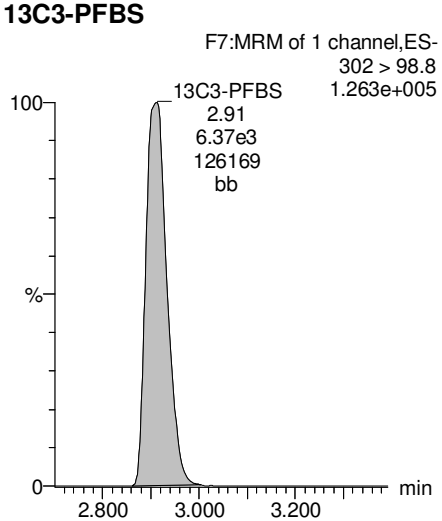
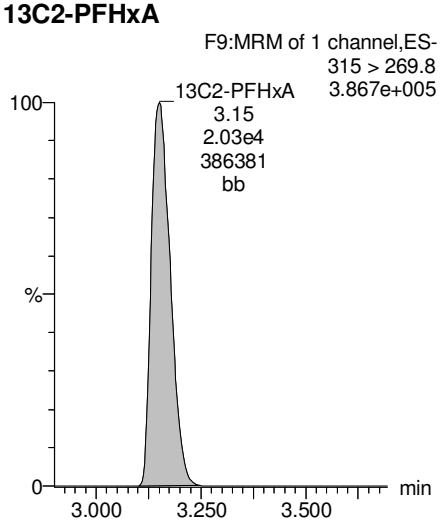


13C3-PFBS



13C2-PFHxA



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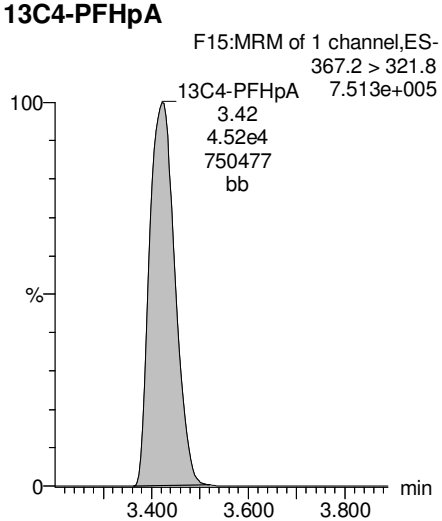
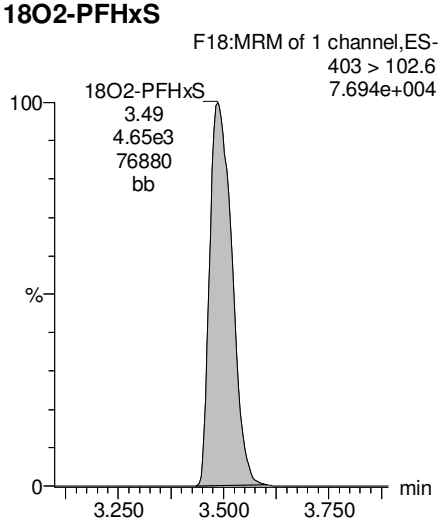


18O2-PFHxS



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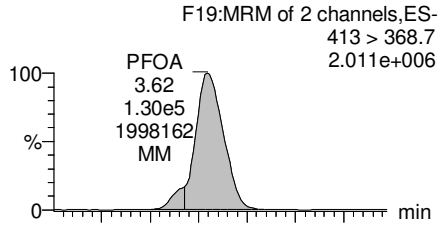
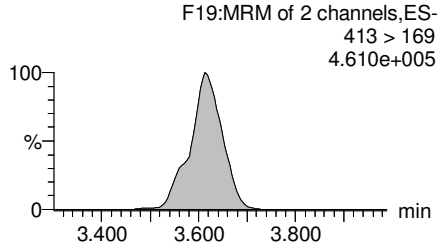
Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:29:28 Pacific Daylight Time

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

Total PFOA





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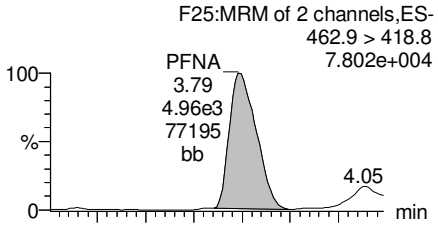
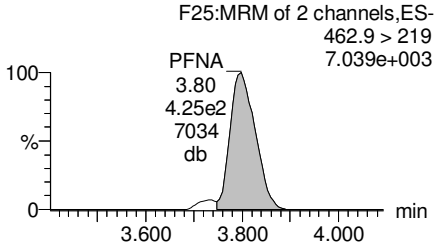
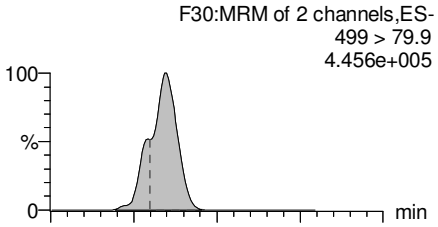
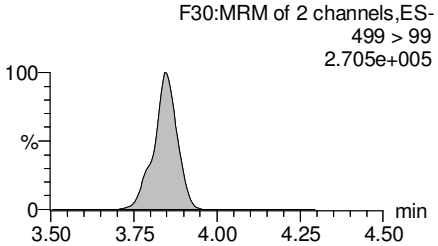




Total PFOS





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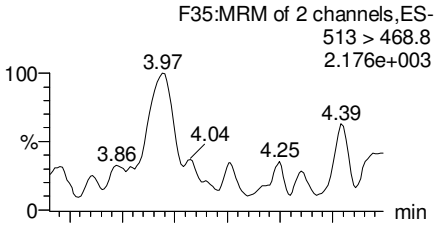
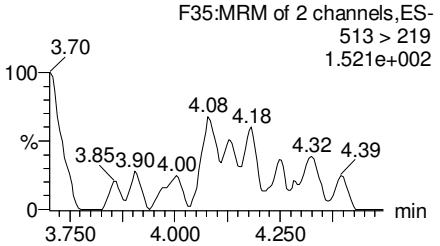
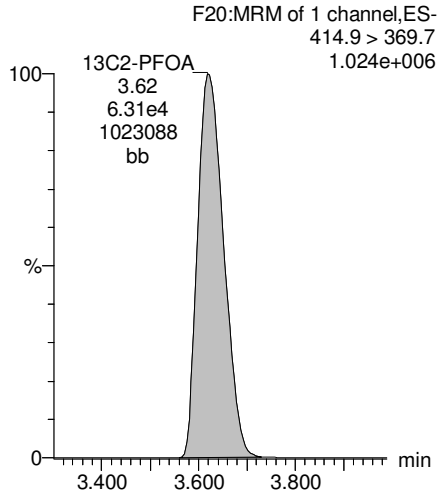
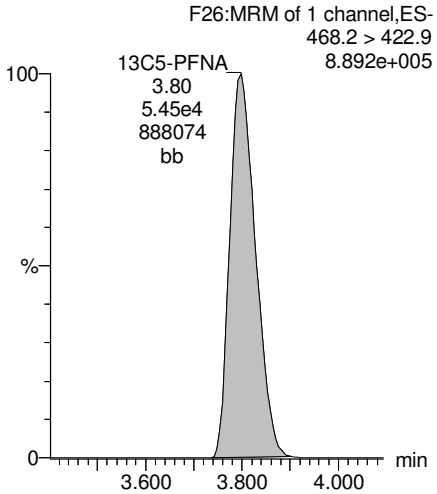




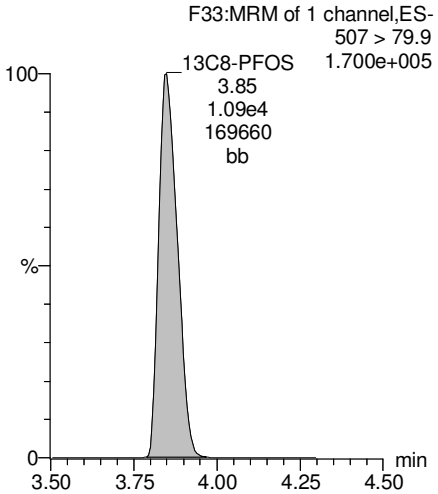
13C2-PFOA



13C5-PFNA



13C8-PFOS



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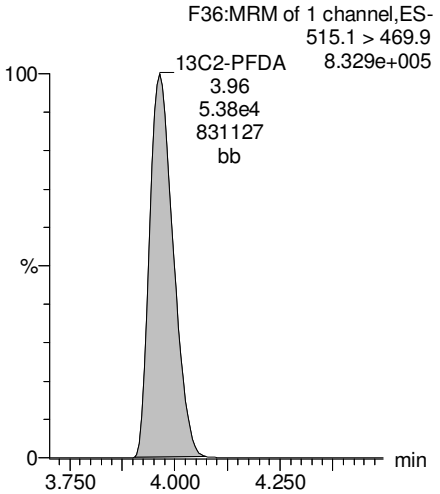

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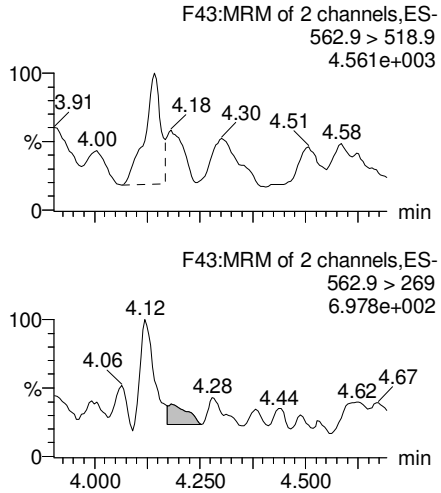
Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:29:28 Pacific Daylight Time

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

PFUnA



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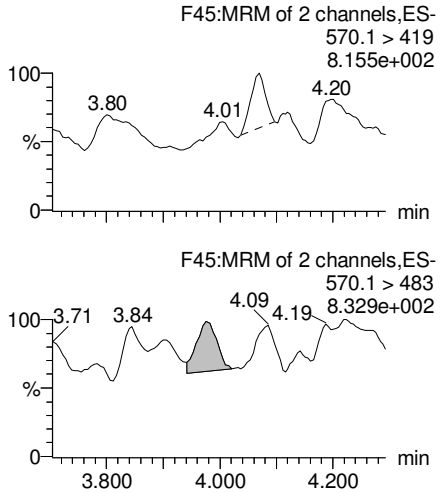

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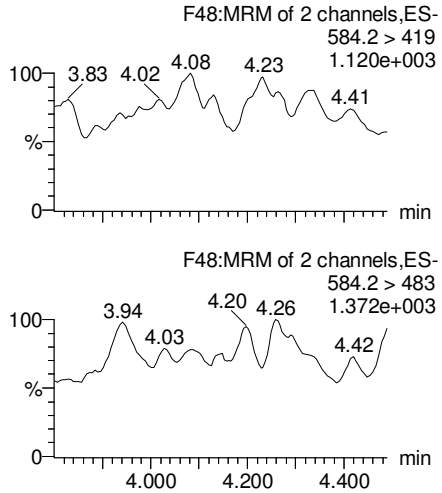
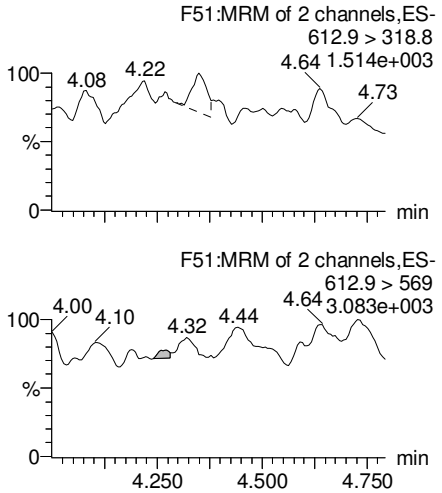
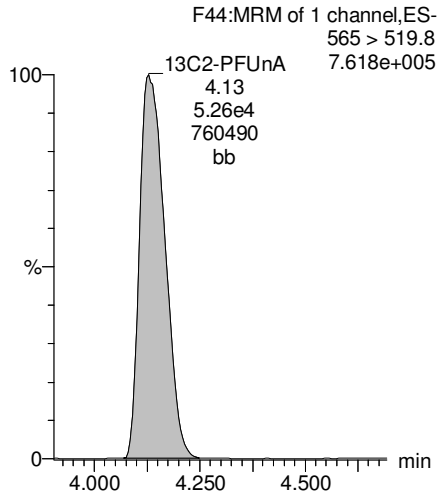


PFDoA



13C2-PFUnA



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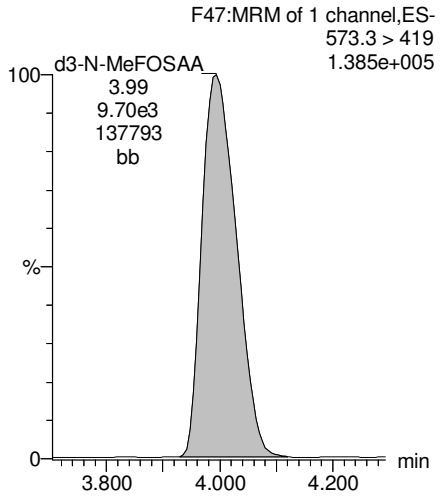
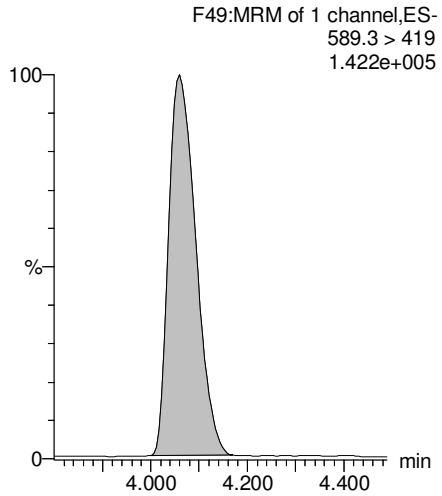


d5-N-EtFOSAA



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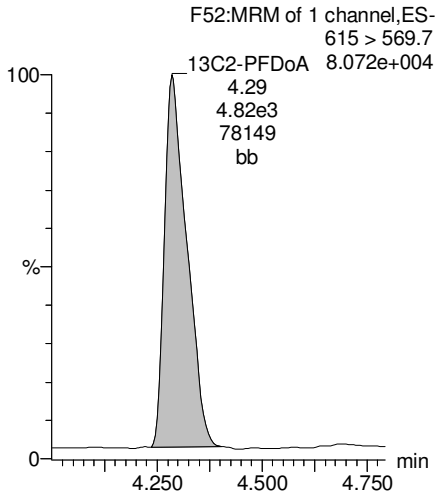

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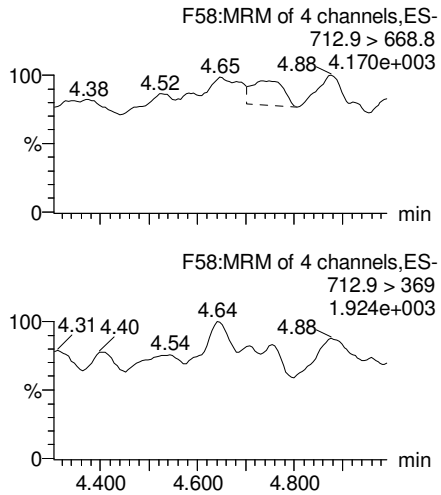
Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:29:28 Pacific Daylight Time

Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

PFTeDA



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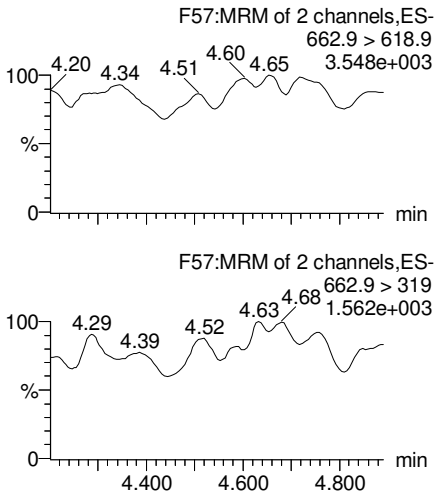

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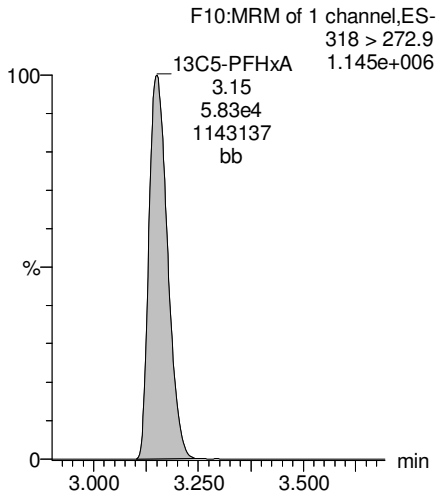

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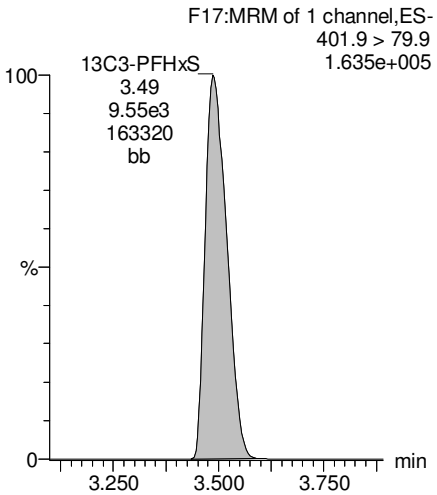
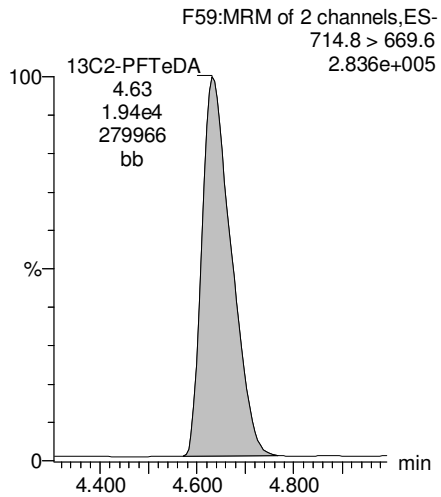


13C2-PFTeDA



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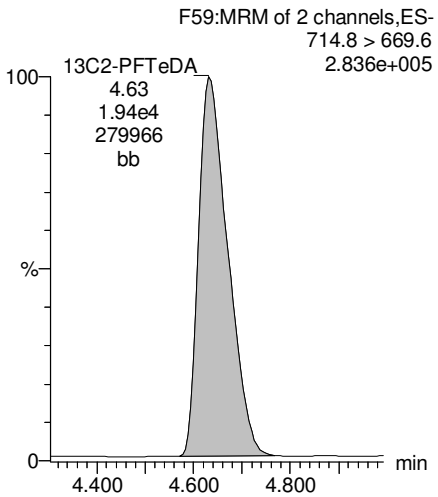
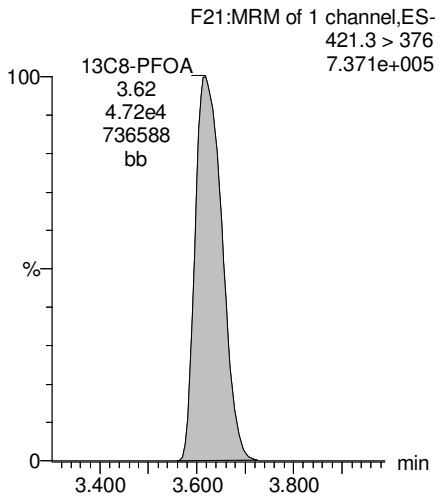
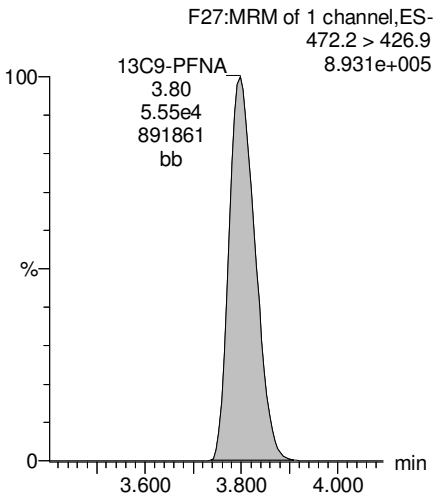


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-24.qld

Last Altered: Monday, July 31, 2017 10:28:41 Pacific Daylight Time
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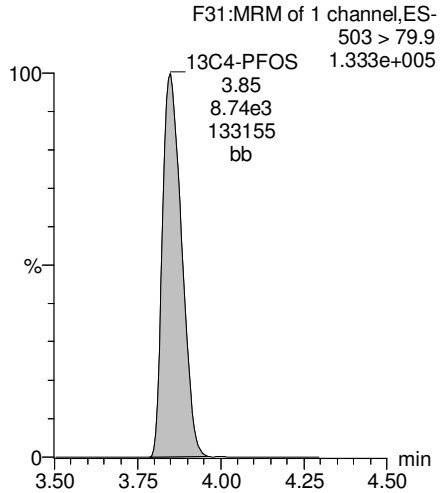
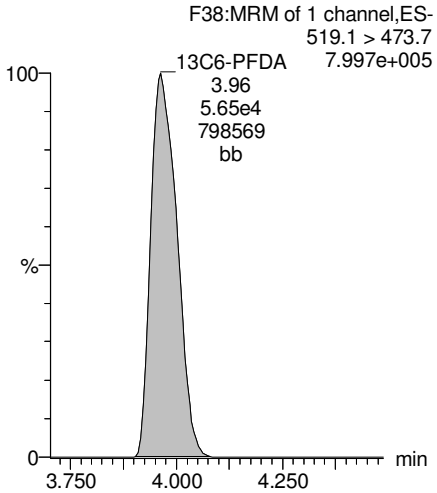
Name: 170728M2_24, Date: 28-Jul-2017, Time: 20:16:58, ID: 1700851-08RE1 DUP03-20170710 0.12071, Description: DUP03-20170710

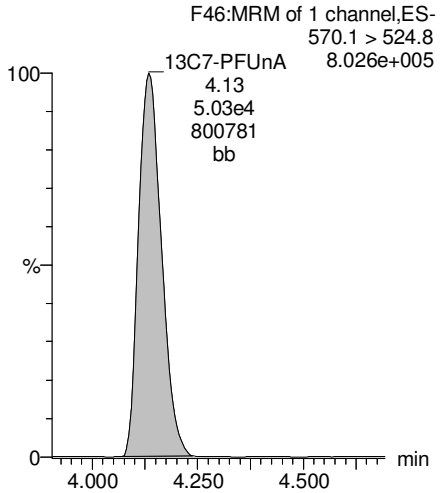
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
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Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.		%Rec
1	3	PFBS	299 > 79.7	4.35e3	4.06e3	0.114		2.96	2.90	13.4	63.4		
2	4	PFHxA	313.2 > 268.9	1.09e5	8.48e3	0.114		3.19	3.14	64.1	403		
3	5	PFHpA	363 > 318.9	2.05e4	2.01e4	0.114		3.45	3.41	12.7	94.2		
4	6	PFHxS	398.9 > 79.6	2.84e4	2.96e3	0.114		3.56	3.48	120	633		
5	7	PFOA	413 > 368.7	5.49e5	2.72e4	0.114		3.65	3.62	252	2280	E	
6	9	PFNA	462.9 > 418.8	6.85e2	2.36e4	0.114		3.83	3.79	0.363	2.30		
7	11	PFOS	499 > 79.9	8.52e3	7.48e3	0.114		3.89	3.83	14.2	126		
8	12	PFDA	513 > 468.8	5.27e1	2.24e4	0.114		4.01	3.93	0.0294			
9	13	N-MeFOSAA	570.1 > 419		6.26e3	0.114		4.03					
10	14	N-EtFOSAA	584.2 > 419		6.19e3	0.114		4.10					
11	15	PFUnA	562.9 > 518.9		2.76e4	0.114		4.11					
12	17	PFDoA	612.9 > 318.8		3.07e3	0.114		4.34					
13	18	PFTrDA	662.9 > 618.9		3.07e3	0.114		4.50					
14	19	PFTeDA	712.9 > 668.8		2.44e4	0.114		4.68					
15	22	13C3-PFBS	302 > 98.8	4.06e3	2.19e4	0.114	0.033	2.96	2.90	0.928	246		224.3
16	23	13C2-PFHxA	315 > 269.8	8.48e3	2.19e4	0.114	0.335	3.19	3.14	1.94	50.8		115.6
17	24	13C4-PFHpA	367.2 > 321.8	2.01e4	2.19e4	0.114	0.369	3.45	3.41	4.60	110		99.8
18	25	18O2-PFHxS	403 > 102.6	2.96e3	5.42e3	0.114	0.460	3.56	3.48	6.81	130		118.4
19	26	13C2-PFOA	414.9 > 369.7	2.72e4	1.83e4	0.114	1.293	3.65	3.62	18.6	126		115.1
20	27	13C5-PFNA	468.2 > 422.9	2.36e4	2.42e4	0.114	0.986	3.83	3.79	12.2	108		98.7
21	28	13C8-PFOSA	506.1 > 77.7	1.80e3	2.51e4	0.114	0.132	3.84	3.80	0.896	59.4		54.1
22	29	13C8-PFOS	507 > 79.9	7.48e3	5.75e3	0.114	1.184	3.89	3.84	16.3	121		109.8
23	30	13C2-PFDA	515.1 > 469.9	2.24e4	2.54e4	0.114	0.998	4.01	3.96	11.0	96.9		88.3
24	31	d3-N-MeFOSAA	573.3 > 419	6.26e3	2.51e4	0.114	0.018	4.03	3.99	3.12	1550		108.5
25	32	d5-N-EtFOSAA	589.3 > 419	6.19e3	2.51e4	0.114	0.018	4.12	4.05	3.09	1520		106.8
26	33	13C2-PFUnA	565 > 519.8	2.76e4	2.51e4	0.114	1.129	4.17	4.13	13.7	107		97.3
27	34	13C2-PFDoA	615 > 569.7	3.07e3	2.51e4	0.114	0.116	4.34	4.29	1.53	116		105.6
28	35	13C2-PFTeDA	714.8 > 669.6	2.44e4	2.51e4	0.114	0.762	4.68	4.63	12.1	140		127.4
29	36	13C4-PFBA	217 > 171.8	1.07e4	1.07e4	0.114	1.000	1.32	1.39	12.5	110		100.0
30	37	13C5-PFHxA	318 > 272.9	2.19e4	2.19e4	0.114	1.000	3.19	3.14	5.00	43.9		100.0
31	38	13C3-PFHxS	401.9 > 79.9	5.42e3	5.42e3	0.114	1.000	3.56	3.48	12.5	110		100.0
32	39	13C8-PFOA	421.3 > 376	1.83e4	1.83e4	0.114	1.000	3.65	3.62	12.5	110		100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	2.42e4	2.42e4	0.114	1.000	3.83	3.79	12.5	110	100.0
34	41	13C4-PFOS	503 > 79.9	5.75e3	5.75e3	0.114	1.000	3.89	3.85	12.5	110	100.0
35	42	13C6-PFDA	519.1 > 473.7	2.54e4	2.54e4	0.114	1.000	4.01	3.96	12.5	110	100.0
36	43	13C7-PFUnA	570.1 > 524.8	2.51e4	2.51e4	0.114	1.000	4.17	4.12	12.5	110	100.0
37	44	Total PFBS	299 > 79.7	4.46e3	4.06e3	0.114		2.96		13.7	64.9	
38	45	Total PFHxS	398.9 > 79.6	2.84e4	2.96e3	0.114		3.52		120	633	
39	46	Total PFOA	413 > 368.7	6.07e5	2.72e4	0.114		3.65		279	2520	
40	47	Total PFOS	499 > 79.9	8.52e3	7.48e3	0.114		3.89		14.2	126	
41	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.26e3	0.114		4.03		0.000		
42	49	Total N-EtFOSAA	584.2 > 419	0.00e0	6.19e3	0.114		4.17		0.000		

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.90	4352.223	4059.826	13.400	bb	63.4
2	44	Total PFBS	299 > 79.7	2.77	106.176	4059.826	0.327	bb	1.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.48	28396.084	2956.235	120.069	MM	632.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.62	548971.000	27215.838	252.138	MM	2276.2
2	46	Total PFOA	413 > 368.7	3.58	57989.594	27215.838	26.634	MM	239.5

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.83	8523.643	7481.076	14.242	MM	126.0

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			6260.655		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			6194.341		MM-I	

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Rev'd: MM 7/31/17

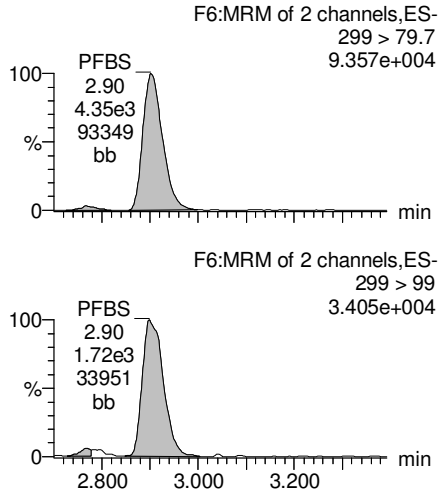
Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

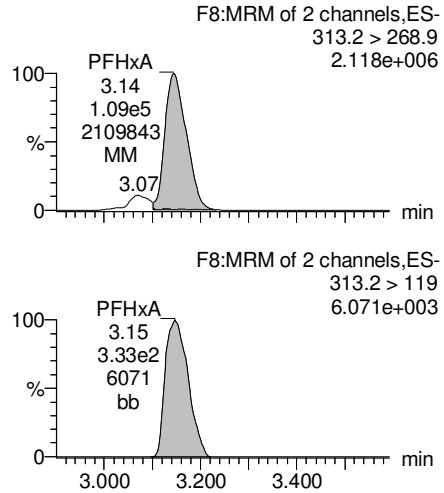
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

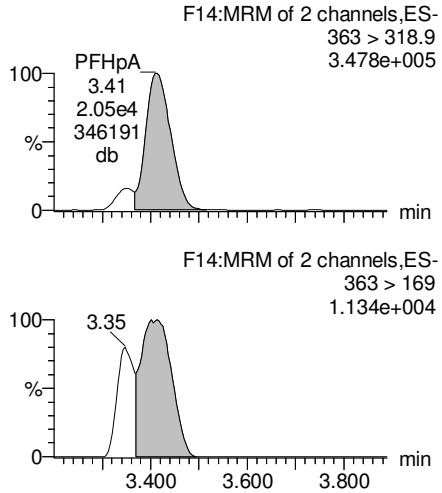
Total PFBS



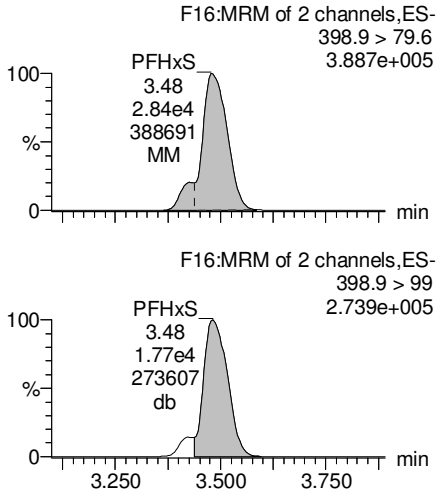
PFHxA



PFHpA



Total PFHxS



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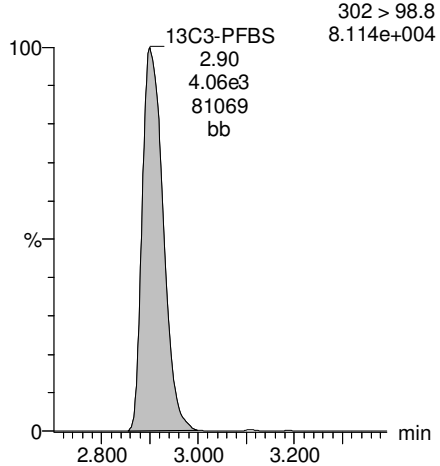
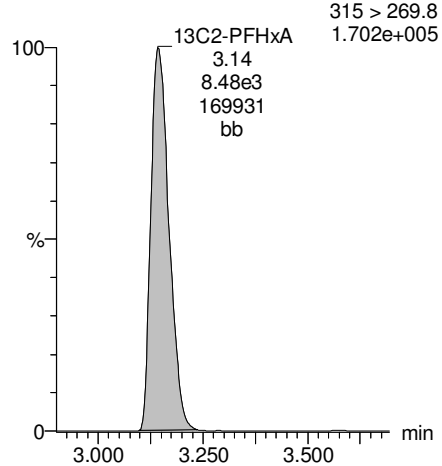


13C2-PFHxA



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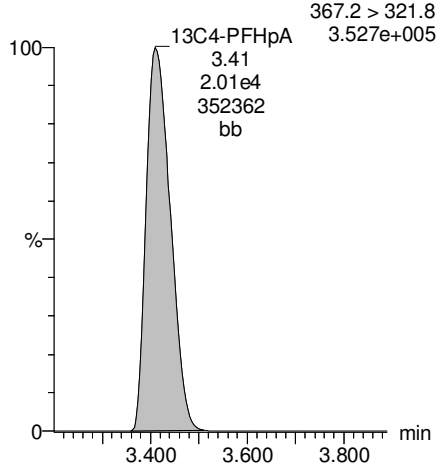
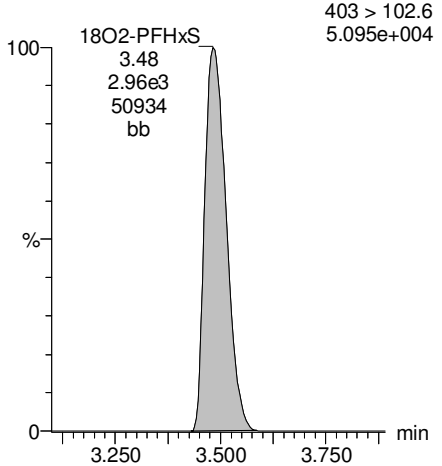


18O2-PFHxS



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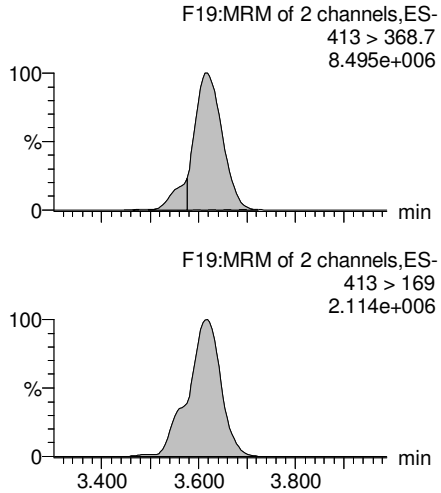
Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

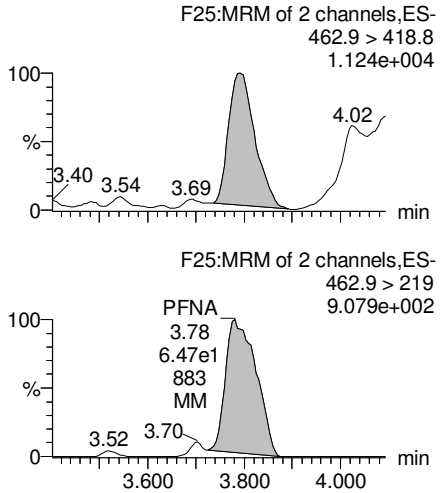
Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

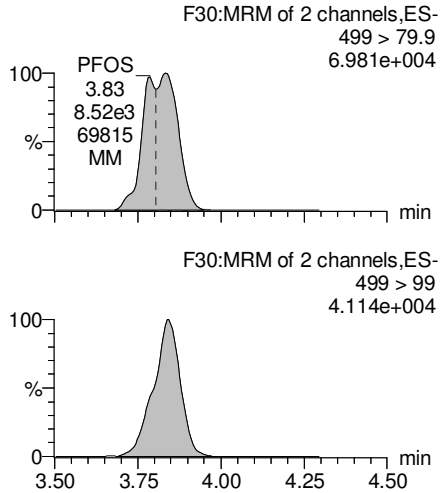
Total PFOA



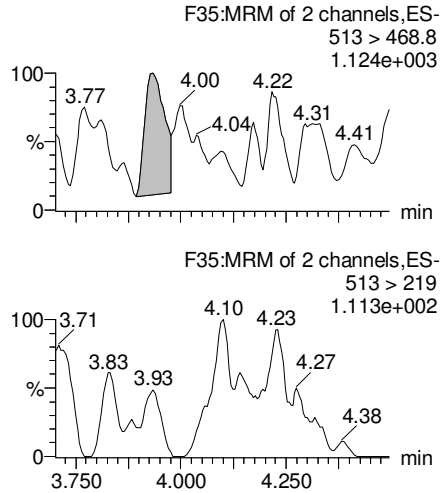
PFNA



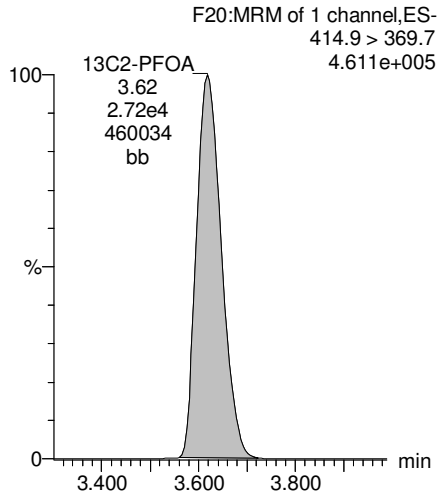
Total PFOS



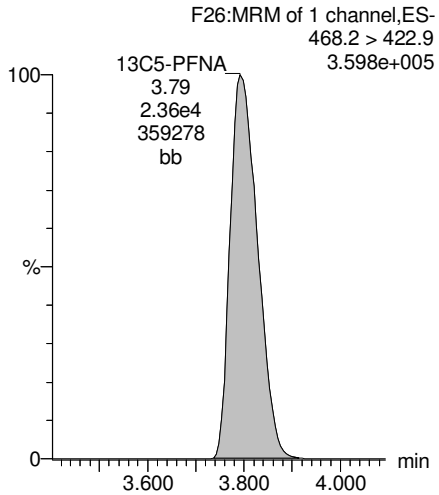
PFDA



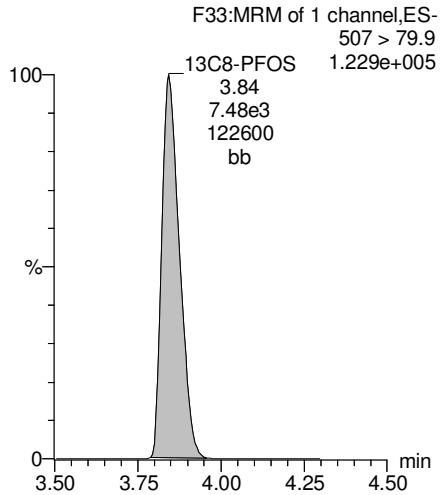
13C2-PFOA



13C5-PFNA



13C8-PFOS



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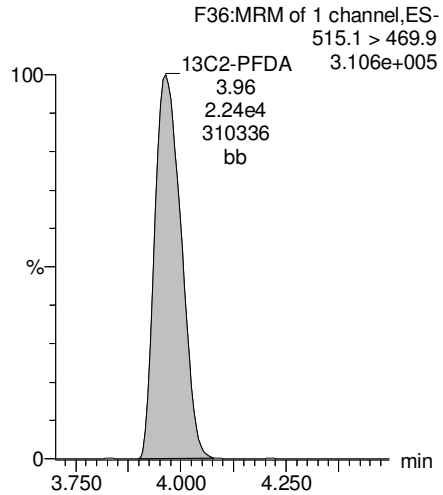


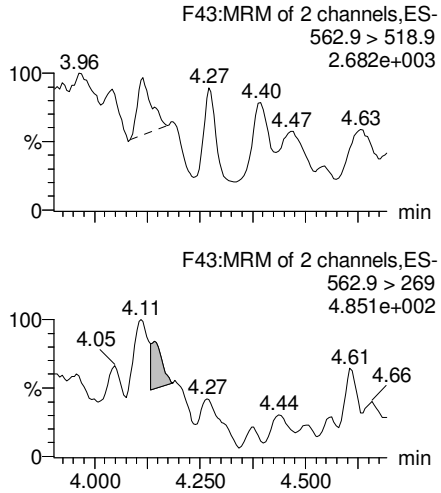
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

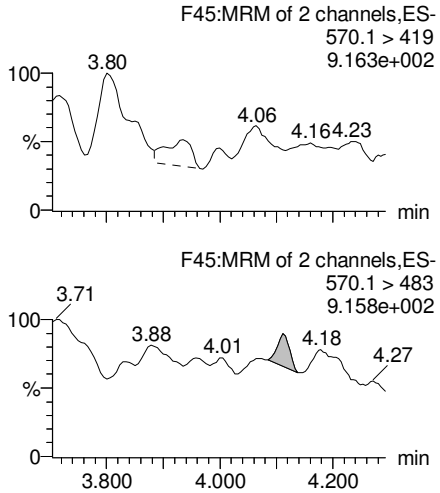
Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

PFUnA



N-MeFOSAA



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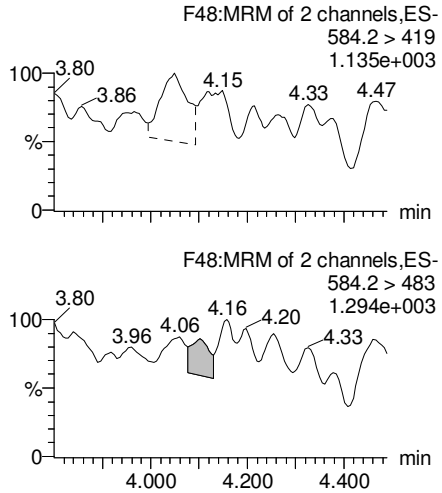

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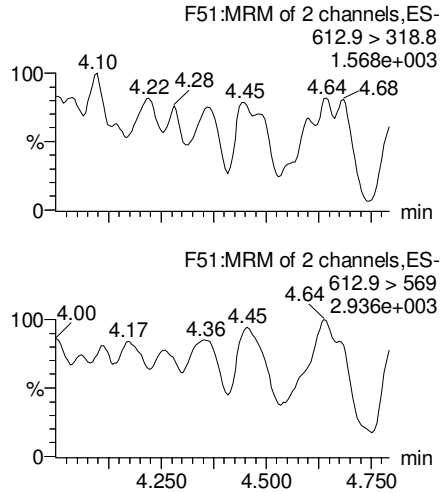
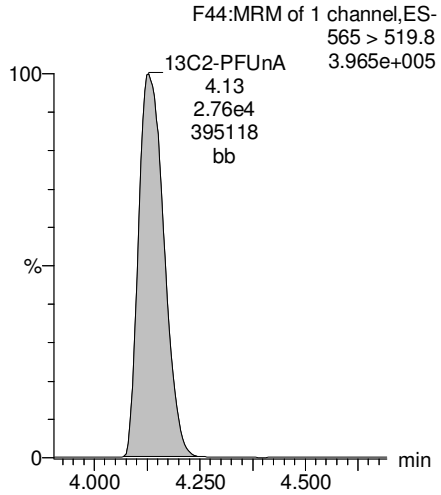
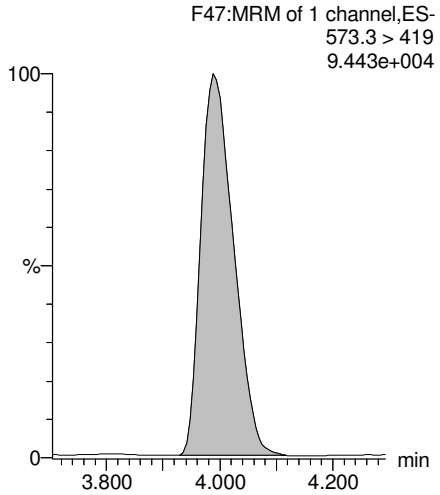


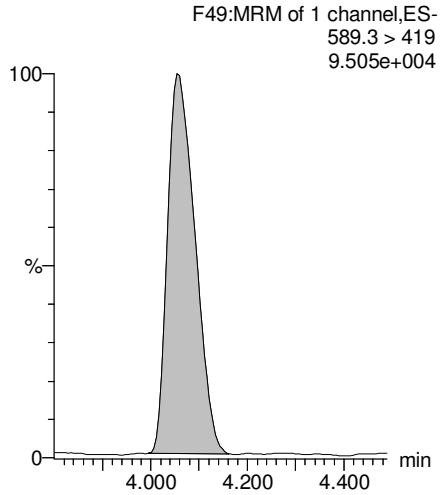
13C2-PFUnA



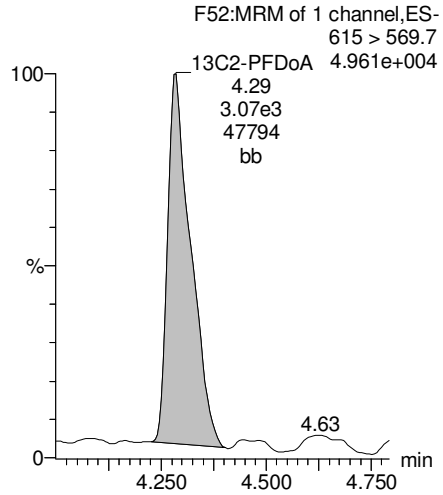
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



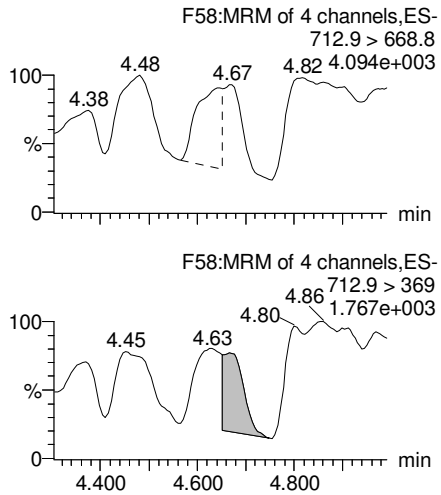
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

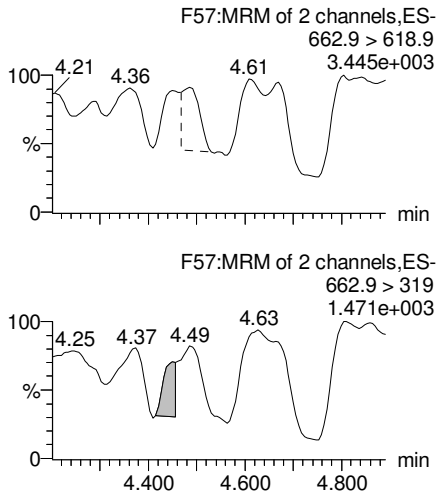
Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

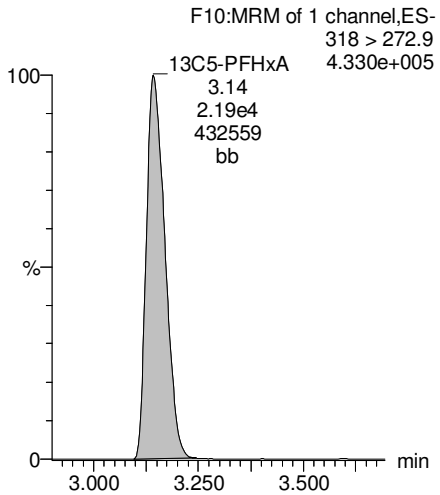
PFTeDA



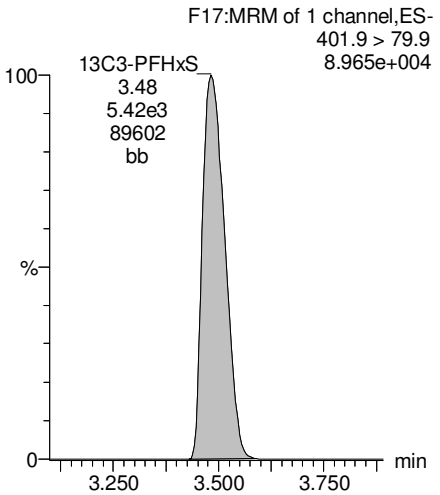
PFTrDA



13C5-PFHxA



13C3-PFHxS



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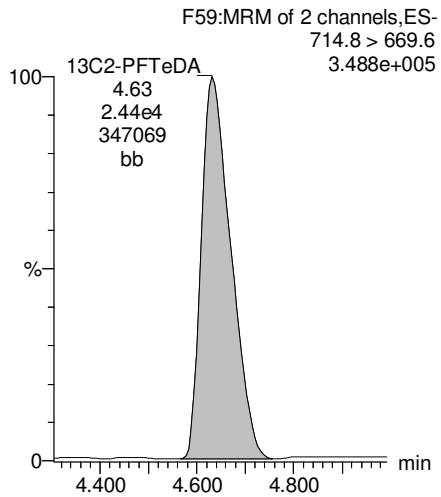

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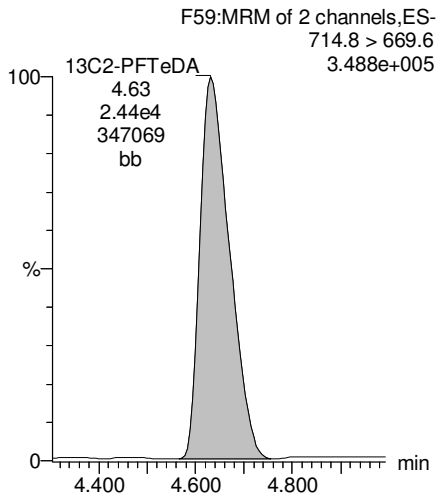
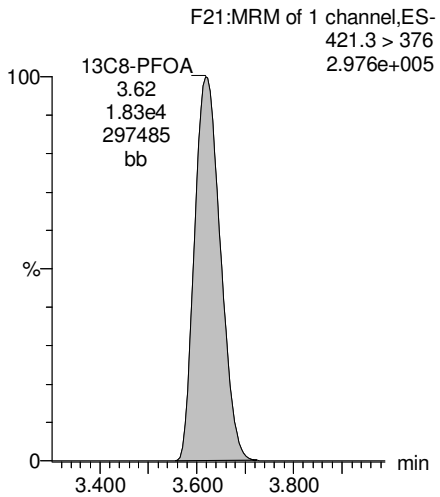
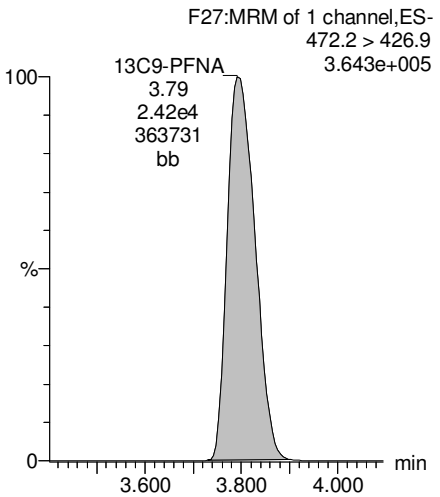


13C8-PFOA



13C9-PFNA



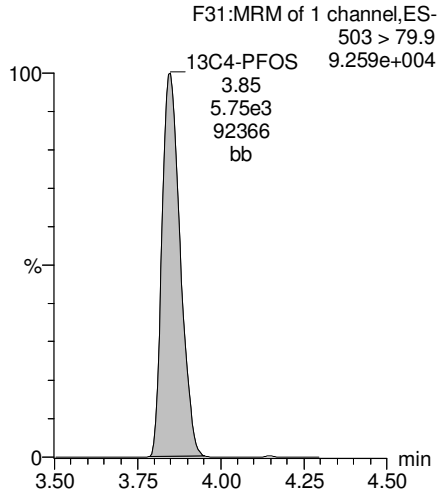
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-25.qld

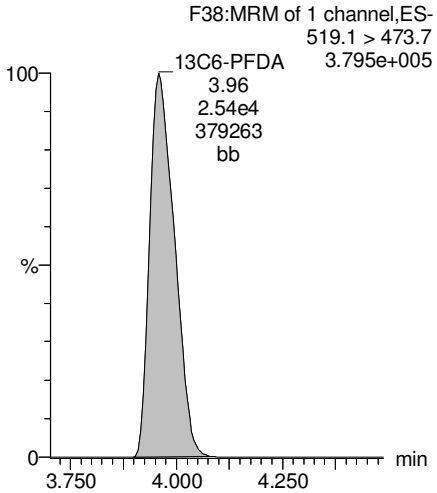
Last Altered: Monday, July 31, 2017 10:47:50 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:48:13 Pacific Daylight Time

Name: 170728M2_25, Date: 28-Jul-2017, Time: 20:27:52, ID: 1700851-09RE1 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

13C4-PFOS



13C6-PFDA



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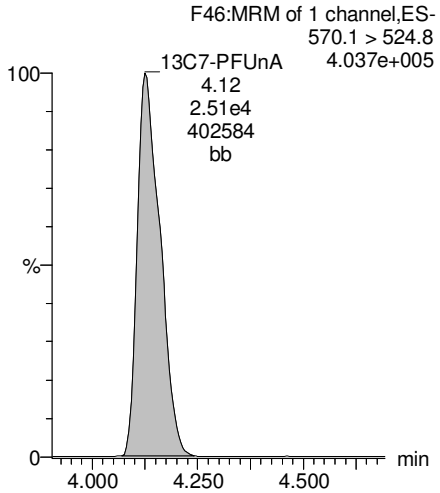

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-5.qld

Last Altered: Wednesday, July 26, 2017 15:34:16 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:35:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_5, Date: 26-Jul-2017, Time: 11:45:44, ID: 1700851-09RE1@10X 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	8	PFOA	413 > 368.7	3.00e4	1.45e3	0.1138		3.65	3.69	259	2340	
2	35	13C2-PFOA	414.9 > 369.7	1.45e3	9.69e2	0.1138	1.067	3.65	3.69	18.7	154	139.9
3	54	13C8-PFOA	421.3 > 376	9.69e2	9.69e2	0.1138	1.000	3.65	3.69	12.5	110	100.0
4	61	Total PFOA	413 > 368.7	3.34e4	1.45e3	0.1138		3.65		288	2600	

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

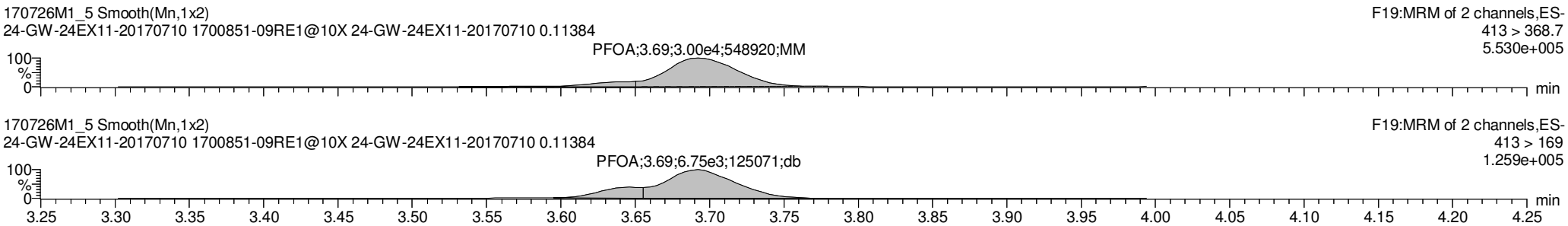
Dataset: U:\Q4.PRO\results\170726M1\170726M1-5.qld

Last Altered: Wednesday, July 26, 2017 15:34:16 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:35:04 Pacific Daylight Time

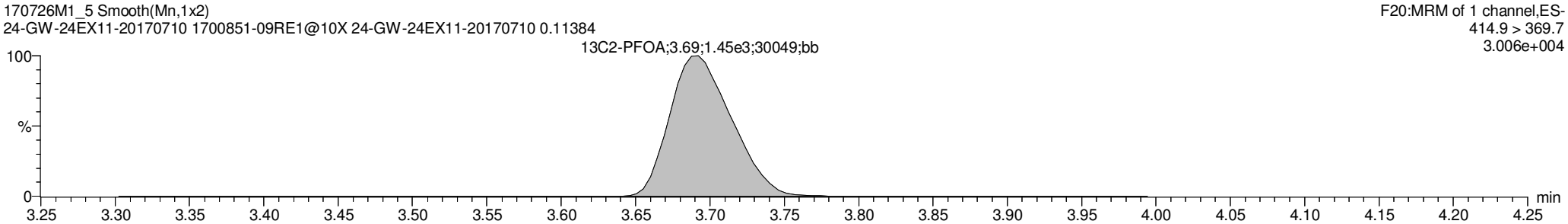
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_5, Date: 26-Jul-2017, Time: 11:45:44, ID: 1700851-09RE1@10X 24-GW-24EX11-20170710 0.11384, Description: 24-GW-24EX11-20170710

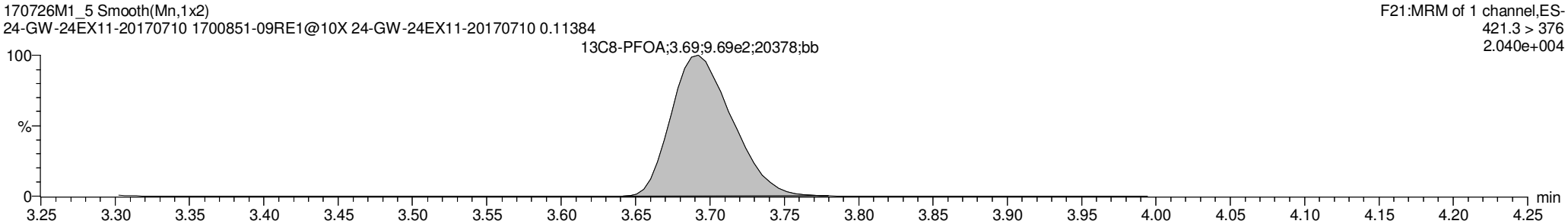
Total PFOA



13C2-PFOA



13C8-PFOA



GM 7/26/17

Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	7.11e3	5.31e3	0.121		2.96	3.02	16.7	74.6	
2	4	PFHxA	313.2 > 268.9	1.19e5	1.22e4	0.121		3.19	3.24	48.9	268	
3	5	PFHpA	363 > 318.9	1.68e4	2.81e4	0.121		3.45	3.50	7.46	48.8	
4	6	PFHxS	398.9 > 79.6	1.48e4	3.14e3	0.121		3.56	3.57	58.9	295	
5	8	PFOA	413 > 368.7	7.10e4	3.56e4	0.121		3.65	3.70	24.9	211	
6	10	PFNA	462.9 > 418.8	2.84e3	2.82e4	0.121		3.83	3.88	1.26	8.39	
7	12	PFOS	499 > 79.9	2.52e4	5.84e3	0.121		3.89	3.93	53.9	395	
8	13	PFDA	513 > 468.8		2.07e4	0.121		4.01				
9	15	N-MeFOSAA	570.1 > 419		3.94e3	0.121		4.03				
10	16	N-EtFOSAA	584.2 > 419		3.16e3	0.121		4.10				
11	17	PFUnA	562.9 > 518.9		1.73e4	0.121		4.17				
12	19	PFDoA	612.9 > 318.8		1.27e3	0.121		4.34				

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:32:59 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		1.27e3	0.121		4.50				
2	22	PFTeDA	712.9 > 668.8		3.20e3	0.121		4.68				
3	28	13C3-PFBA	216.1 > 171.8	2.33e4	2.29e4	0.121	0.820	1.54	1.59	12.7	129	124.3
4	29	13C3-PFPeA	266 > 221.8	3.56e4	3.80e4	0.121	0.248	2.77	2.82	4.69	157	151.2
5	30	13C3-PFBS	302 > 98.8	5.31e3	3.80e4	0.121	0.031	2.96	3.01	0.699	187	179.9
6	31	13C2-PFHxA	315 > 269.8	1.22e4	3.80e4	0.121	0.276	3.19	3.24	1.61	48.2	116.2
7	32	13C4-PFHpA	367.2 > 321.8	2.81e4	3.80e4	0.121	0.306	3.45	3.50	3.71	101	97.0
8	33	18O2-PFHxS	403 > 102.6	3.14e3	6.59e3	0.121	0.393	3.56	3.57	5.95	126	121.2
9	34	13C2-6:2 FTS	429.1 > 408.9	6.42e3	2.70e4	0.121	0.158	3.64	3.69	2.97	156	150.9
10	35	13C2-PFOA	414.9 > 369.7	3.56e4	2.70e4	0.121	1.067	3.65	3.70	16.5	128	123.7
11	36	13C5-PFNA	468.2 > 422.9	2.82e4	2.71e4	0.121	0.852	3.83	3.88	13.0	127	122.1
12	37	13C8-PFOSA	506.1 > 77.7	8.87e2	1.73e4	0.121	0.098	3.84	3.88	0.640	54.0	52.1
13	38	13C8-PFOS	507 > 79.9	5.84e3	5.22e3	0.121	0.936	3.89	3.93	14.0	124	119.6
14	39	13C2-PFDA	515.1 > 469.9	2.07e4	2.02e4	0.121	0.810	4.01	4.05	12.8	131	126.5
15	40	13C2-8:2 FTS	529.1 > 508.7	2.67e3	2.02e4	0.121	0.086	4.00	4.04	1.65	160	153.8
16	41	d3-N-MeFOSAA	573.3 > 419	3.94e3	1.73e4	0.121	0.014	4.03	4.07	2.85	1720	127.8
17	42	d5-N-EtFOSAA	589.3 > 419	3.16e3	1.73e4	0.121	0.014	4.12	4.14	2.28	1360	100.5
18	43	13C2-PFUnA	565 > 519.8	1.73e4	1.73e4	0.121	0.962	4.17	4.21	12.5	107	103.7
19	44	13C2-PFDoA	615 > 569.7	1.27e3	1.73e4	0.121	0.094	4.34	4.37	0.914	80.3	77.4
20	46	13C2-PFTeDA	714.8 > 669.6	3.20e3	1.73e4	0.121	0.694	4.68	4.72	2.31	27.5	26.6
21	48	13C2-PFHxDA	815 > 769.7	6.36e2	1.73e4	0.121	0.843	5.06	5.09	0.459	4.51	10.9
22	51	13C4-PFBA	217 > 171.8	2.29e4	2.29e4	0.121	1.000	1.54	1.59	12.5	104	100.0
23	52	13C5-PFHxA	318 > 272.9	3.80e4	3.80e4	0.121	1.000	3.19	3.24	5.00	41.5	100.0
24	53	13C3-PFHxS	401.9 > 79.9	6.59e3	6.59e3	0.121	1.000	3.56	3.57	12.5	104	100.0
25	54	13C8-PFOA	421.3 > 376	2.70e4	2.70e4	0.121	1.000	3.65	3.70	12.5	104	100.0
26	55	13C9-PFNA	472.2 > 426.9	2.71e4	2.71e4	0.121	1.000	3.83	3.88	12.5	104	100.0
27	56	13C4-PFOS	503 > 79.9	5.22e3	5.22e3	0.121	1.000	3.89	3.93	12.5	104	100.0
28	57	13C6-PFDA	519.1 > 473.7	2.02e4	2.02e4	0.121	1.000	4.01	4.05	12.5	104	100.0
29	58	13C7-PFUnA	570.1 > 524.8	1.73e4	1.73e4	0.121	1.000	4.17	4.21	12.5	104	100.0
30	59	Total PFBS	299 > 79.7	7.28e3	5.31e3	0.121		2.96		17.1	76.0	
31	60	Total PFHxS	398.9 > 79.6	1.48e4	3.14e3	0.121		3.52		58.9	295	
32	61	Total PFOA	413 > 368.7	7.93e4	3.56e4	0.121		3.65		27.8	234	

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Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:32:59 Pacific Daylight Time

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	62	Total PFOS	499 > 79.9	2.52e4	5.84e3	0.121		3.89		53.9	395	
34	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	3.94e3	0.121		4.03		0.000		
35	64	Total N-EtFOSAA	584.2 > 419	0.00e0	3.16e3	0.121		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710, Description: SGV-GW-SGV Transfer Station-20170710

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.02	7110.203	5309.212	16.740	bb	74.6
2	59	Total PFBS	299 > 79.7	2.91	165.526	5309.212	0.390	bb	1.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.57	14793.628	3138.791	58.915	MM	295.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.70	70969.672	35623.383	24.903	db	211.1
2	61	Total PFOA	413 > 368.7	3.65	8320.285	35623.383	2.920	bd	23.2

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.93	25190.152	5839.646	53.921	MM	394.9

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419			3944.369		MM-I	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419			3158.521		MM-I	

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

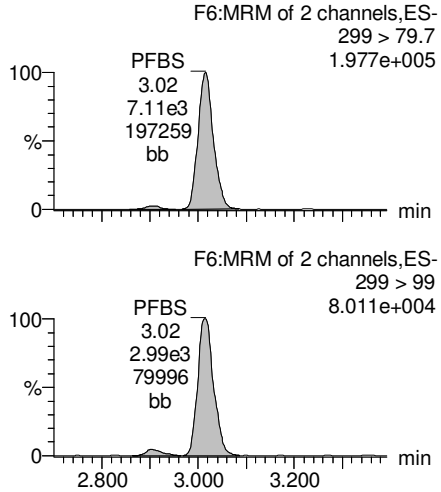
Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

Total PFBS



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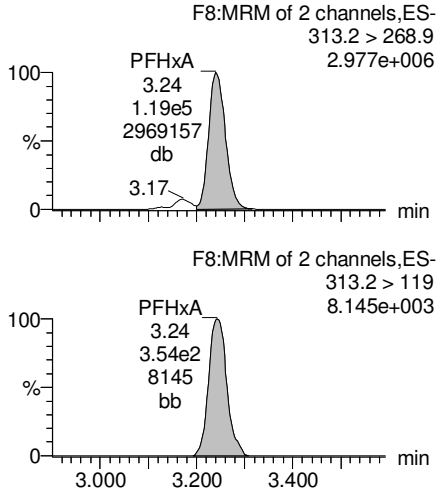

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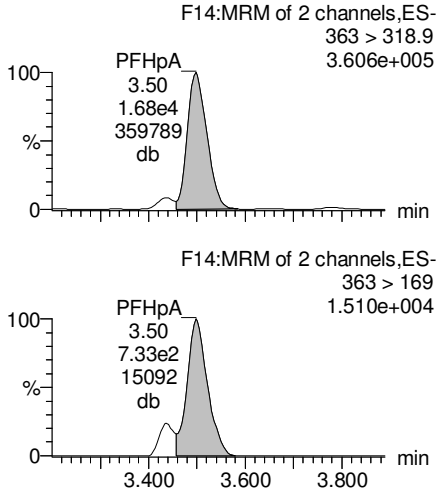
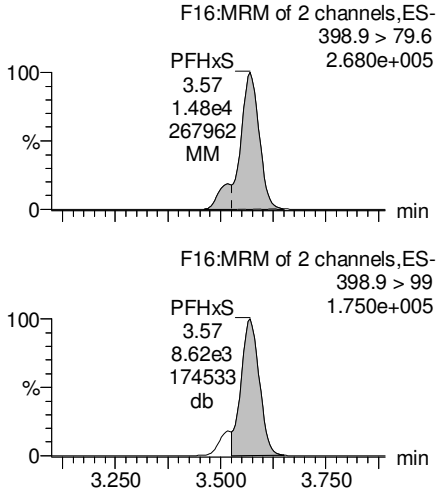


Total PFHxS



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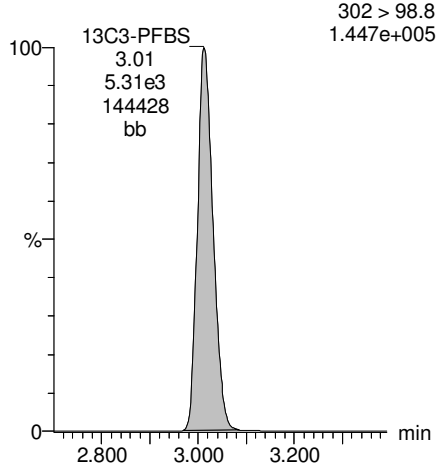

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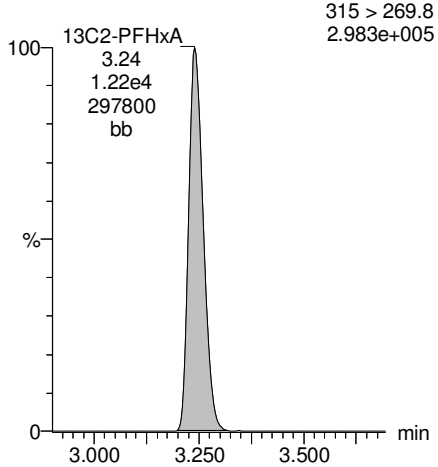

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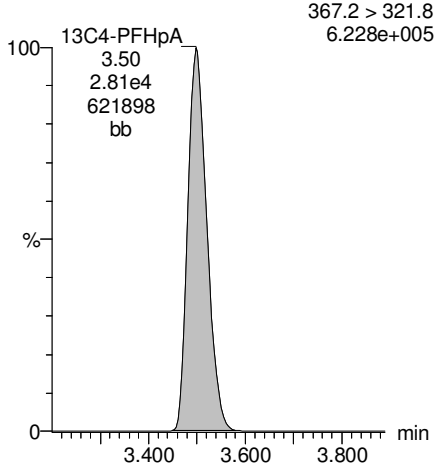

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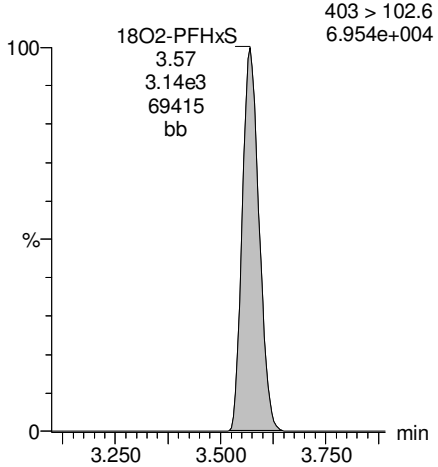


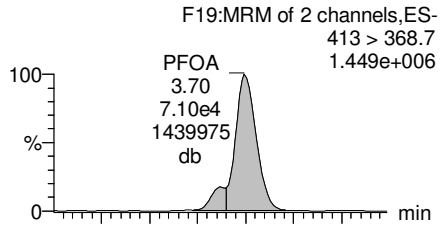
AC 7/31/17

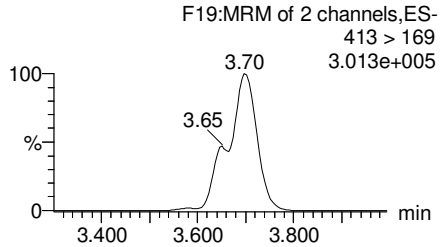
Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

Total PFOA





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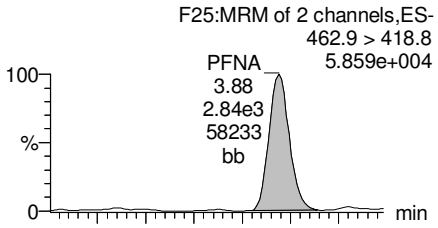
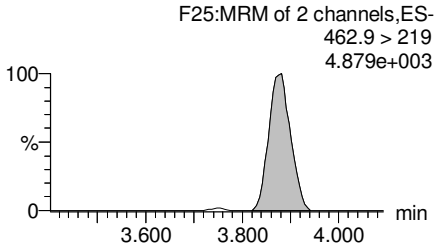
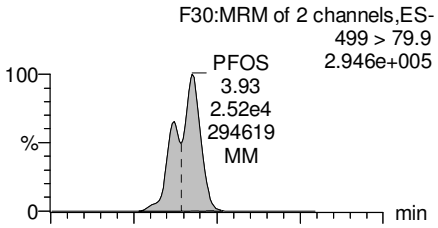
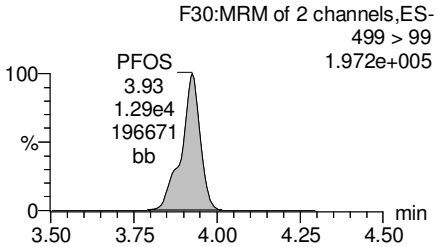




Total PFOS





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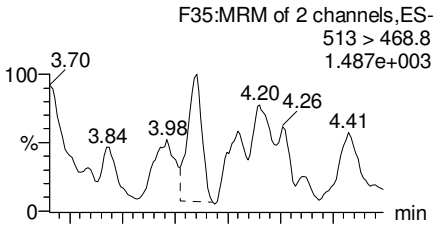

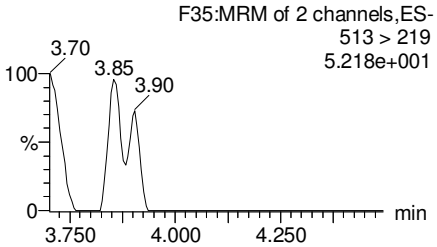

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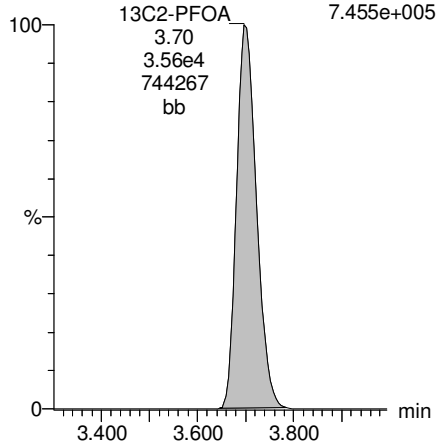

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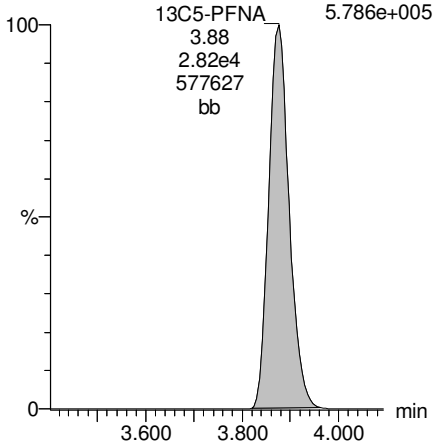

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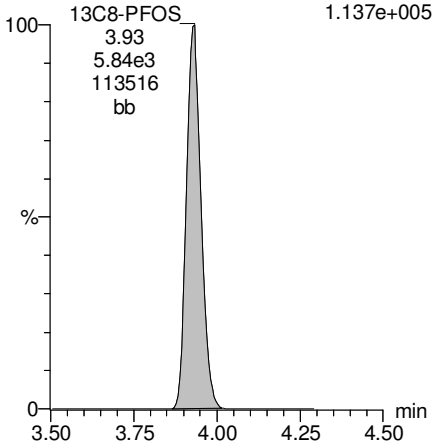

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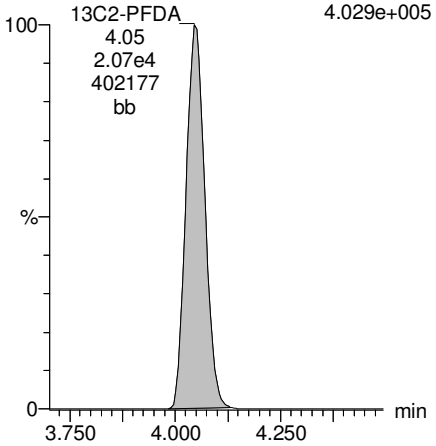

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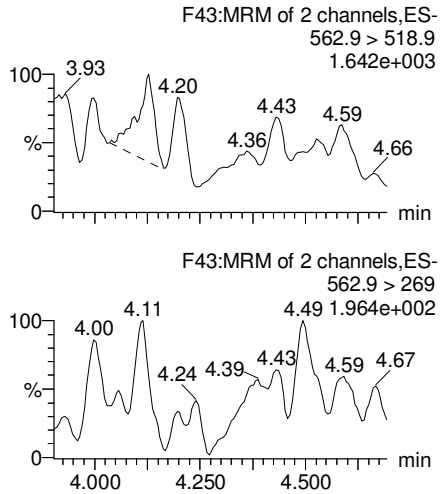
Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

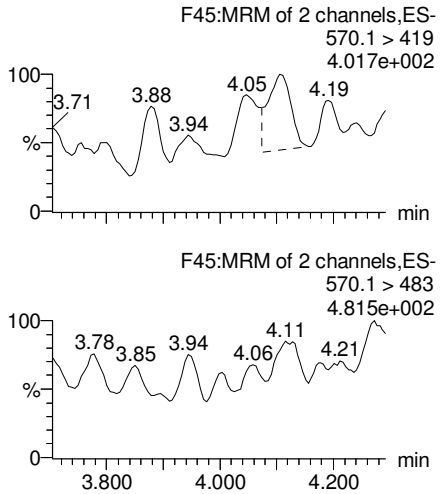
Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

PFUnA



N-MeFOSAA



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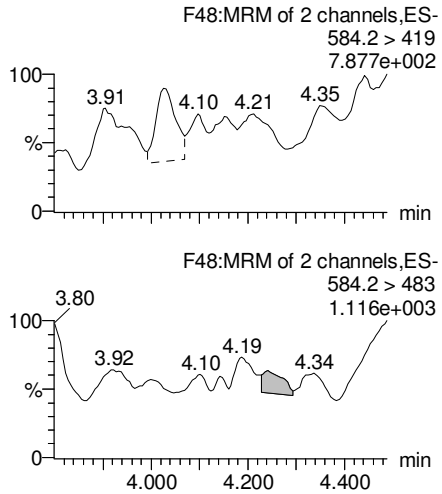
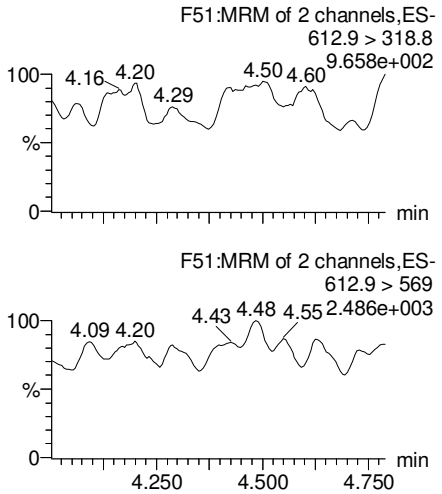
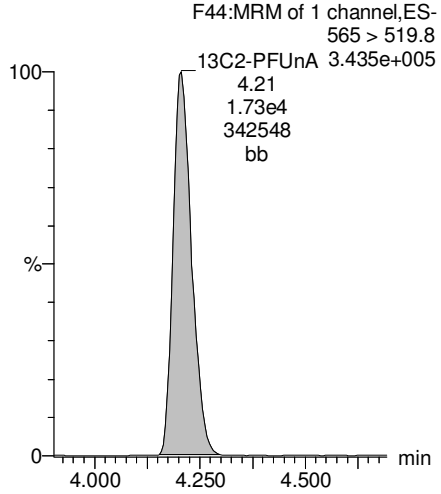


PFDoA



13C2-PFUnA



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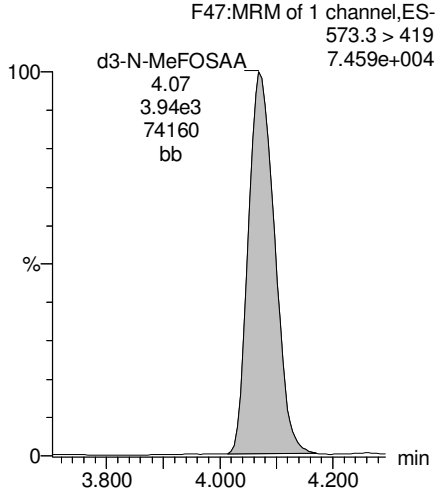

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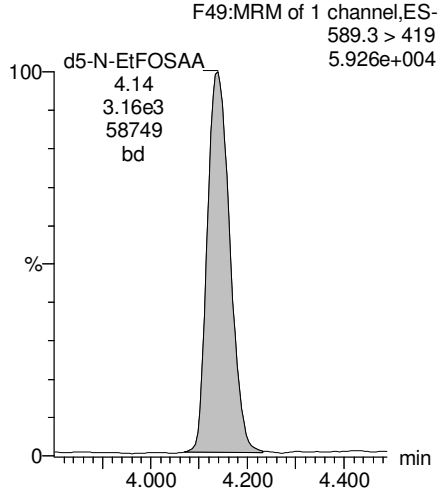
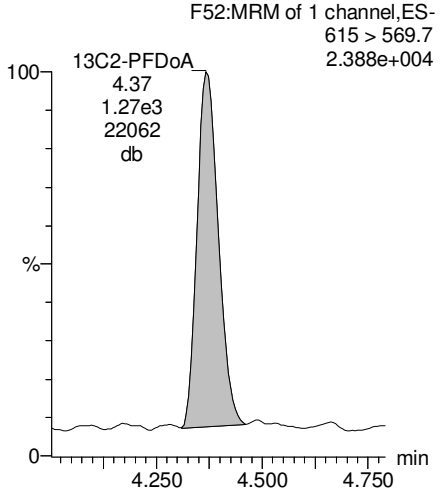


13C2-PFDoA



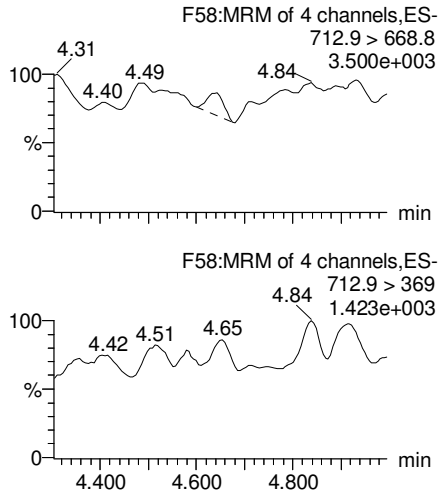
AC 7/31/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710,
Description: SGV-GW-SGV Transfer Station-20170710

PFTeDA



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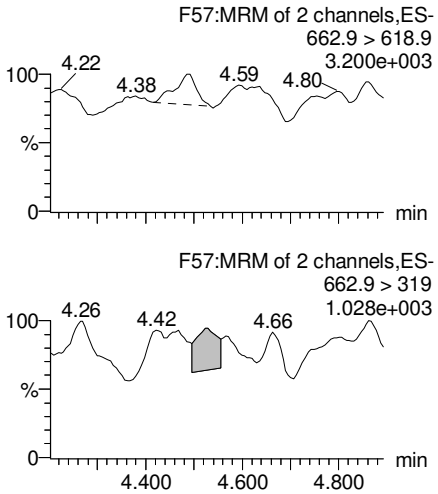
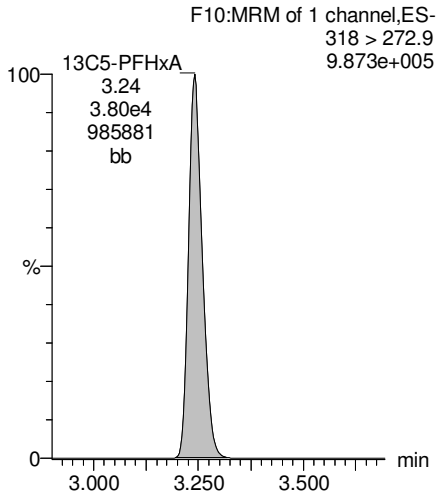
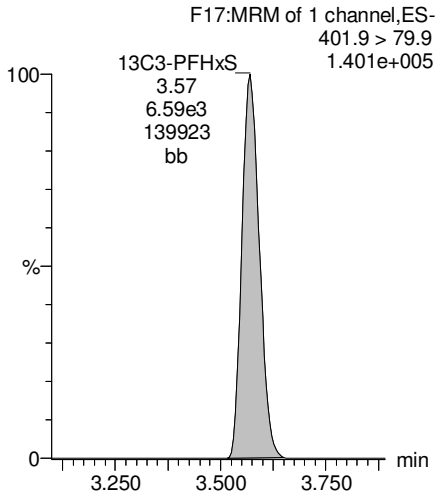


13C5-PFHxA



13C3-PFHxS



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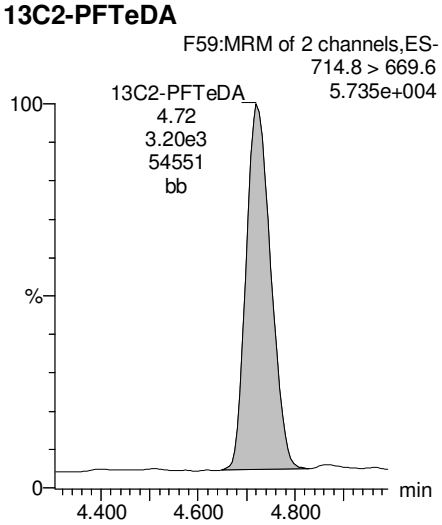
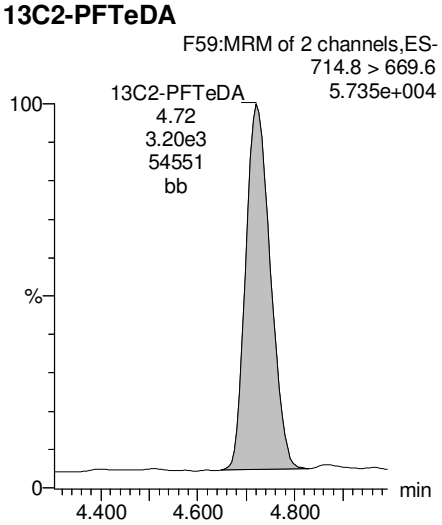
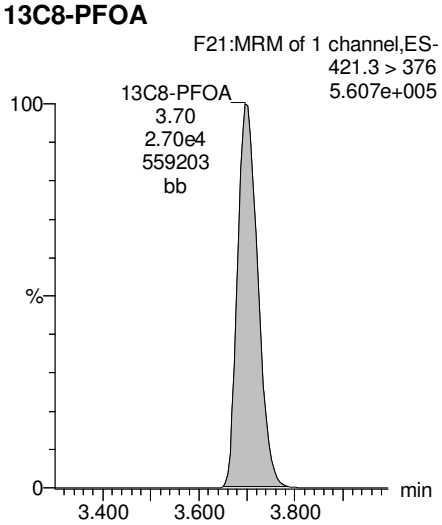


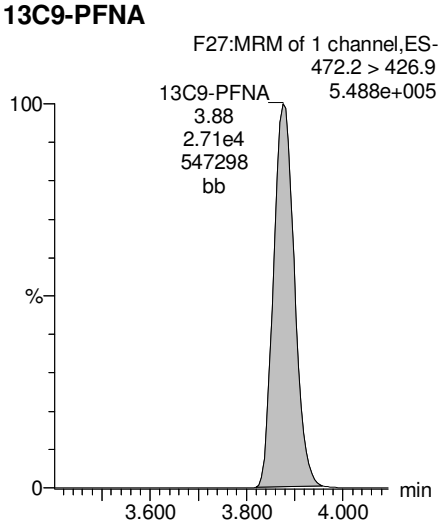
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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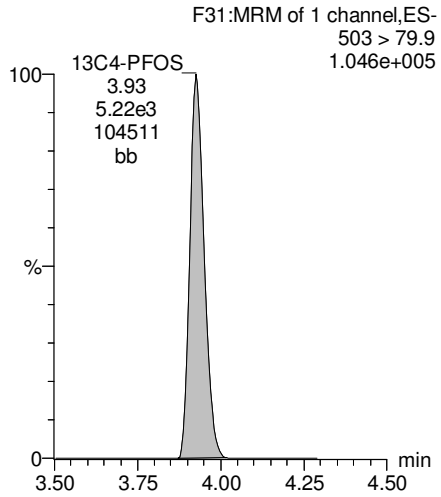
Dataset: U:\Q4.PRO\results\170726M1\170726M1-9.qld

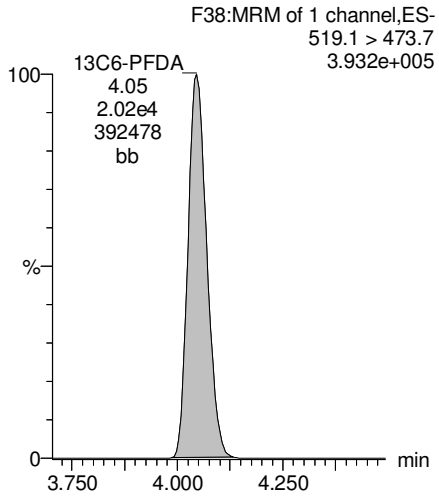
Last Altered: Monday, July 31, 2017 15:31:32 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:31:49 Pacific Daylight Time

Name: 170726M1_9, Date: 26-Jul-2017, Time: 12:28:43, ID: 1700851-10RE1 SGV-GW-SGV Transfer Station-20170710, Description: SGV-GW-SGV Transfer Station-20170710

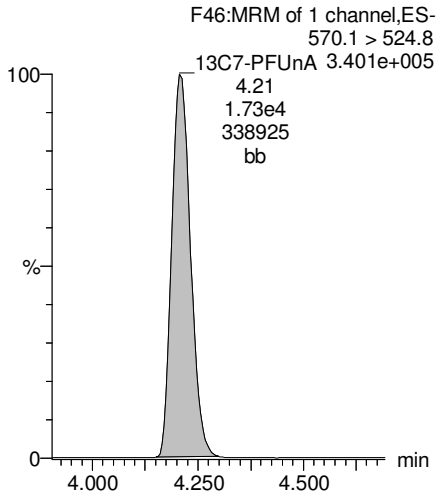
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

Last Altered: Monday, July 31, 2017 10:51:01 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	1.66e4	5.74e3	0.119		2.96	2.90	36.1	163	
2	4	PFHxA	313.2 > 268.9	2.05e5	1.69e4	0.119		3.19	3.14	60.8	364	
3	5	PFHpA	363 > 318.9	6.25e4	4.12e4	0.119		3.45	3.41	19.0	134	
4	6	PFHxS	398.9 > 79.6	2.26e4	4.18e3	0.119		3.56	3.48	67.6	339	
5	7	PFOA	413 > 368.7	1.54e5	5.59e4	0.119		3.65	3.62	34.5	296	
6	9	PFNA	462.9 > 418.8	4.33e4	4.37e4	0.119		3.83	3.79	12.4	96.4	
7	11	PFOS	499 > 79.9	4.34e4	8.99e3	0.119		3.89	3.84	60.3	511	
8	12	PFDA	513 > 468.8	3.92e4	3.99e4	0.119		4.01	3.96	12.3	84.0	
9	13	N-MeFOSAA	570.1 > 419	8.93e3	7.40e3	0.119		4.03	3.99	196	83.2	
10	14	N-EtFOSAA	584.2 > 419	6.28e3	6.79e3	0.119		4.10	4.06	151	82.3	
11	15	PFUnA	562.9 > 518.9	2.23e4	3.65e4	0.119		4.11	4.13	7.63	85.9	
12	17	PFDoA	612.9 > 318.8	1.97e3	3.02e3	0.119		4.34	4.29	8.18	84.7	
13	18	PFTrDA	662.9 > 618.9	2.08e4	3.02e3	0.119		4.50	4.46	86.2	73.0	
14	19	PFTeDA	712.9 > 668.8	9.34e3	1.15e4	0.119		4.68	4.63	10.2	80.8	
15	22	13C3-PFBS	302 > 98.8	5.74e3	4.86e4	0.119	0.033	2.96	2.90	0.591	150	143.0
16	23	13C2-PFHxA	315 > 269.8	1.69e4	4.86e4	0.119	0.335	3.19	3.14	1.74	43.4	103.7
17	24	13C4-PFHpA	367.2 > 321.8	4.12e4	4.86e4	0.119	0.369	3.45	3.41	4.24	96.2	91.9
18	25	18O2-PFHxS	403 > 102.6	4.18e3	8.54e3	0.119	0.460	3.56	3.49	6.11	111	106.3
19	26	13C2-PFOA	414.9 > 369.7	5.59e4	4.16e4	0.119	1.293	3.65	3.62	16.8	109	104.1
20	27	13C5-PFNA	468.2 > 422.9	4.37e4	4.54e4	0.119	0.986	3.83	3.79	12.0	102	97.6
21	28	13C8-PFOSA	506.1 > 77.7	3.16e3	3.86e4	0.119	0.132	3.84	3.80	1.02	64.6	61.7
22	29	13C8-PFOS	507 > 79.9	8.99e3	7.92e3	0.119	1.184	3.89	3.84	14.2	100	95.8
23	30	13C2-PFDA	515.1 > 469.9	3.99e4	4.30e4	0.119	0.998	4.01	3.96	11.6	97.3	93.0
24	31	d3-N-MeFOSAA	573.3 > 419	7.40e3	3.86e4	0.119	0.018	4.03	3.99	2.40	1130	83.4
25	32	d5-N-EtFOSAA	589.3 > 419	6.79e3	3.86e4	0.119	0.018	4.12	4.05	2.20	1030	76.1
26	33	13C2-PFUnA	565 > 519.8	3.65e4	3.86e4	0.119	1.129	4.17	4.14	11.8	87.5	83.6
27	34	13C2-PFDoA	615 > 569.7	3.02e3	3.86e4	0.119	0.116	4.34	4.29	0.977	70.5	67.4
28	35	13C2-PFTeDA	714.8 > 669.6	1.15e4	3.86e4	0.119	0.762	4.68	4.63	3.72	40.9	39.1
29	36	13C4-PFBA	217 > 171.8	2.76e4	2.76e4	0.119	1.000	1.32	1.40	12.5	105	100.0
30	37	13C5-PFHxA	318 > 272.9	4.86e4	4.86e4	0.119	1.000	3.19	3.15	5.00	41.9	100.0
31	38	13C3-PFHxS	401.9 > 79.9	8.54e3	8.54e3	0.119	1.000	3.56	3.48	12.5	105	100.0
32	39	13C8-PFOA	421.3 > 376	4.16e4	4.16e4	0.119	1.000	3.65	3.61	12.5	105	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

Last Altered: Monday, July 31, 2017 10:51:01 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	4.54e4	4.54e4	0.119	1.000	3.83	3.79	12.5	105	100.0
34	41	13C4-PFOS	503 > 79.9	7.92e3	7.92e3	0.119	1.000	3.89	3.85	12.5	105	100.0
35	42	13C6-PFDA	519.1 > 473.7	4.30e4	4.30e4	0.119	1.000	4.01	3.96	12.5	105	100.0
36	43	13C7-PFUnA	570.1 > 524.8	3.86e4	3.86e4	0.119	1.000	4.17	4.12	12.5	105	100.0
37	44	Total PFBS	299 > 79.7	1.67e4	5.74e3	0.119		2.96		36.4	164	
38	45	Total PFHxS	398.9 > 79.6	2.26e4	4.18e3	0.119		3.52		67.6	339	
39	46	Total PFOA	413 > 368.7	1.54e5	5.59e4	0.119		3.65		34.5	296	
40	47	Total PFOS	499 > 79.9	4.34e4	8.99e3	0.119		3.89		60.3	511	
41	48	Total N-Me-FOSAA	570.1 > 419	8.93e3	7.40e3	0.119		4.03		196	83.2	
42	49	Total N-EtFOSAA	584.2 > 419	6.28e3	6.79e3	0.119		4.17		151	82.3	

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Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

Last Altered: Monday, July 31, 2017 10:51:01 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.90	16602.387	5744.570	36.126	bb	162.8
2	44	Total PFBS	299 > 79.7	2.77	144.068	5744.570	0.313	bb	1.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.48	22594.711	4177.730	67.605	MM	339.4

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.62	154443.063	55927.426	34.519	bb	296.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.84	43356.227	8988.848	60.292	bb	511.4

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419	3.99	8930.642	7398.995	196.139	bb	83.2

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419	4.06	6284.824	6785.368	150.513	bb	82.3

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

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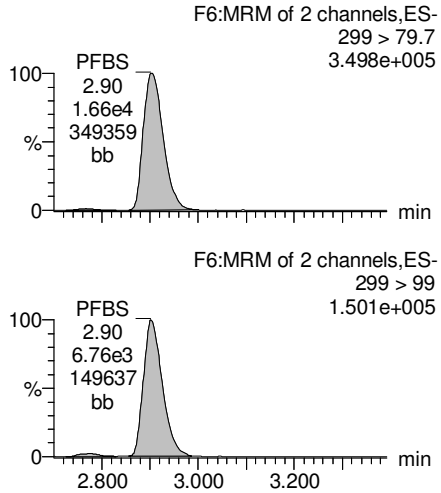
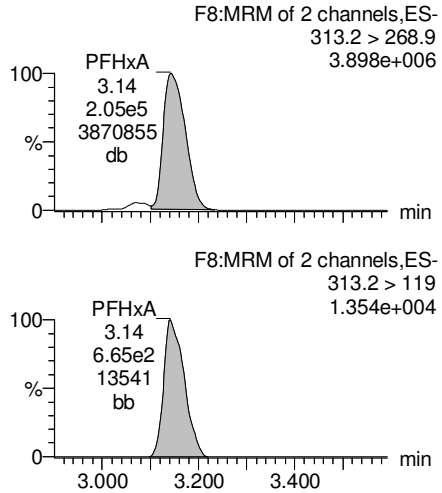
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

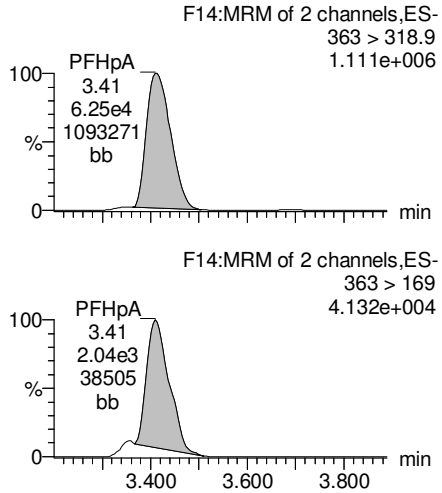
Total PFBS



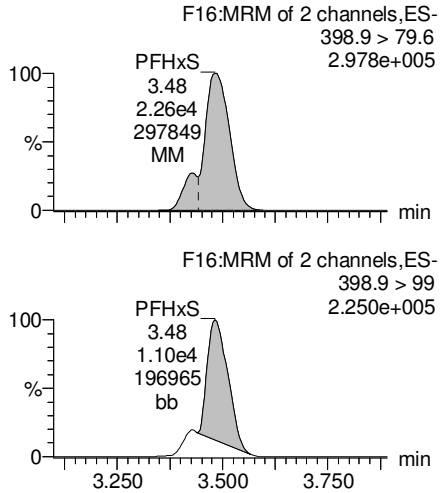
PFHxA



PFHpA



Total PFHxS



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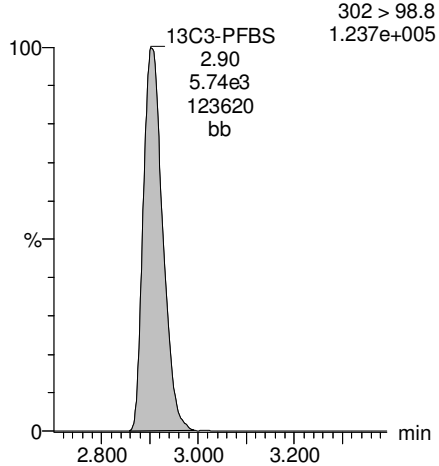
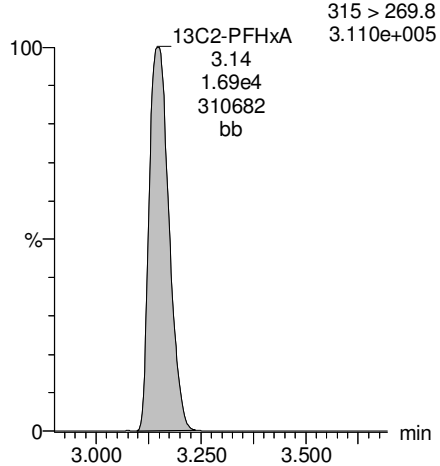
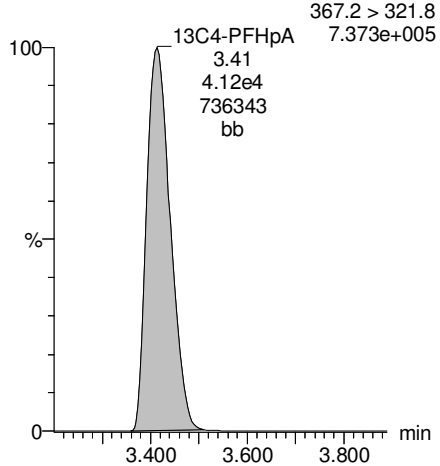


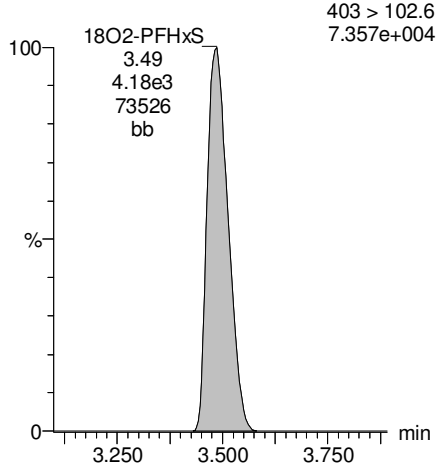
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

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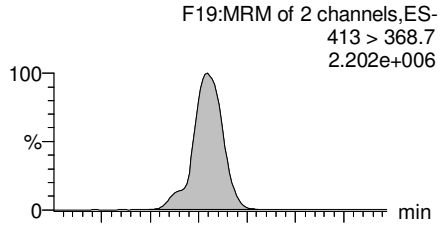
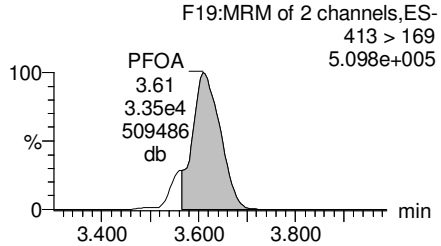
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

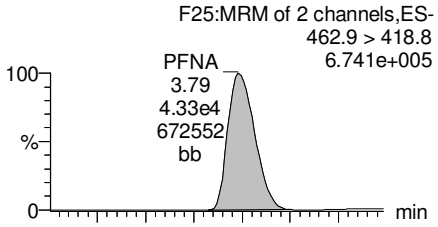
Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

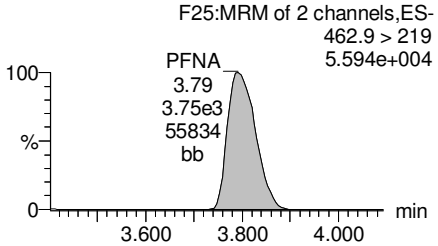
Total PFOA



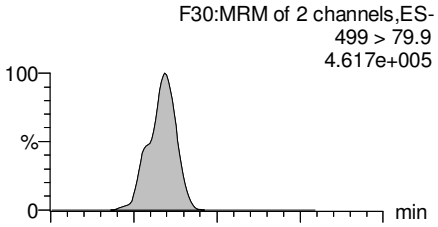


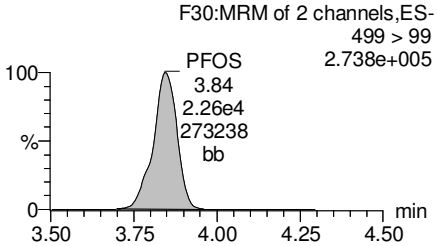
PFNA



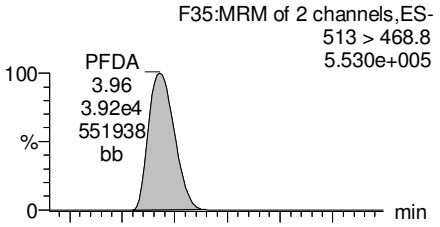


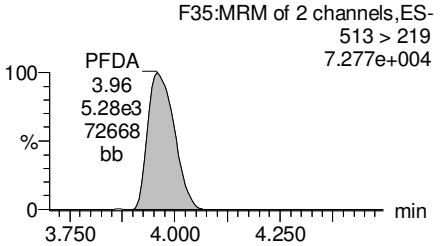
Total PFOS



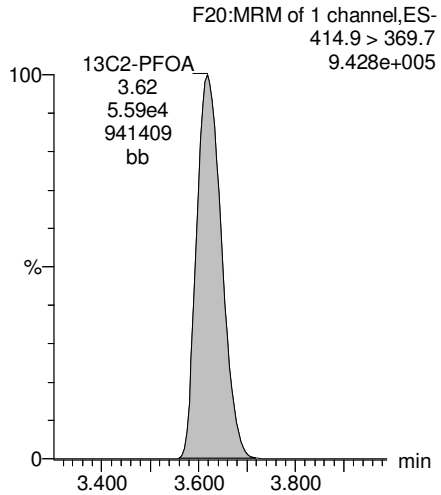


PFDA

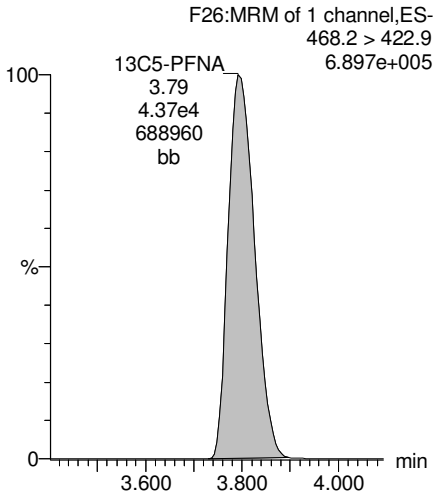




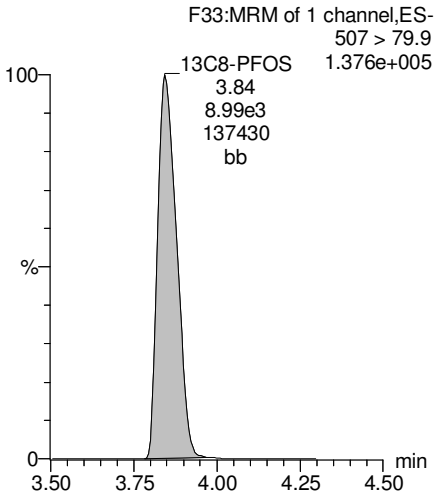
13C2-PFOA



13C5-PFNA



13C8-PFOS



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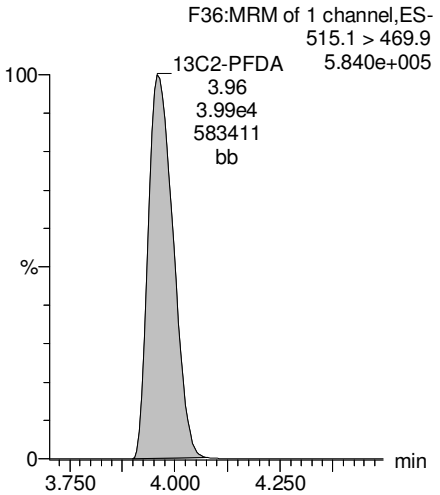

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

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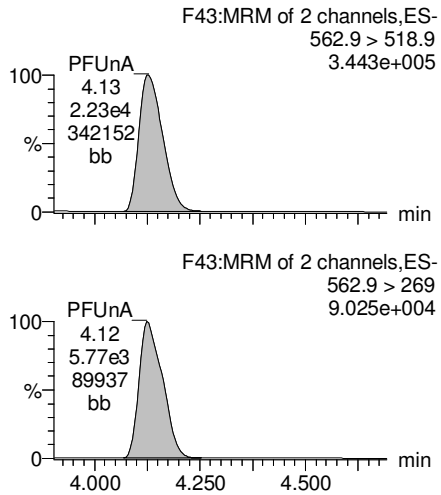
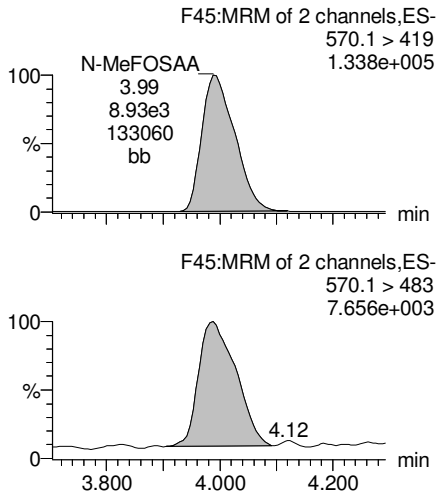
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

PFUnA



N-MeFOSAA



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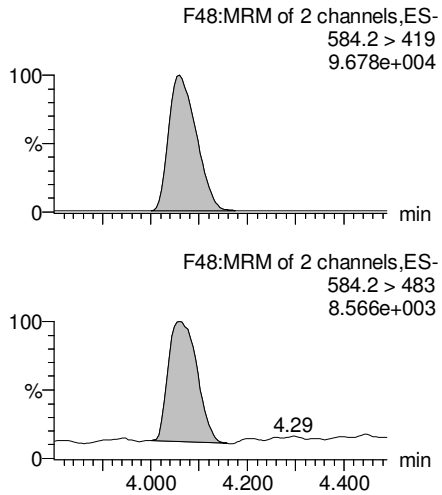
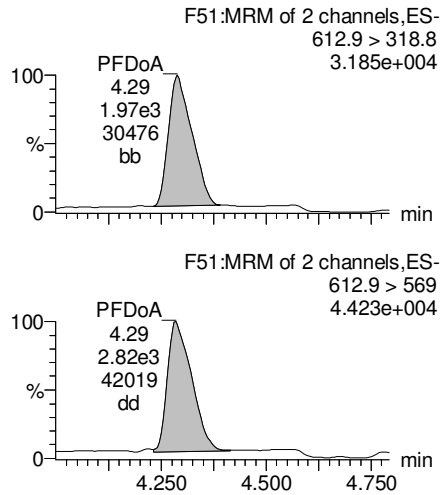


PFDoA



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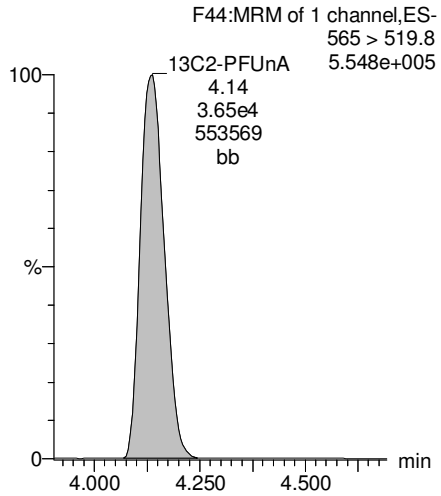

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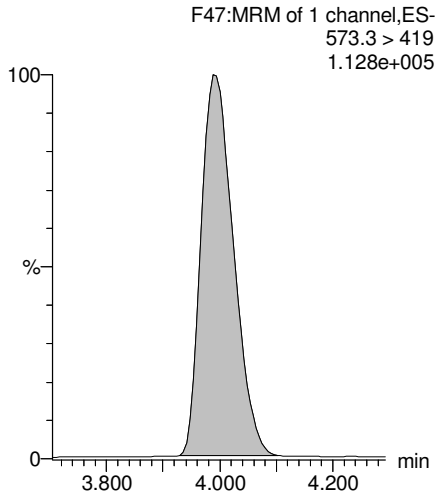

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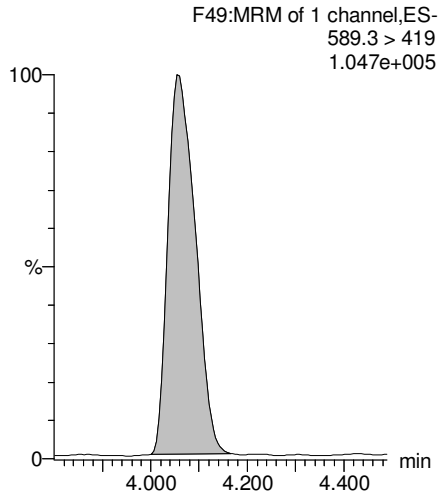
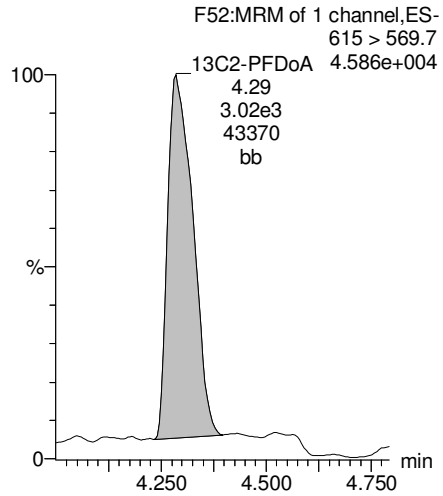


13C2-PFDoA



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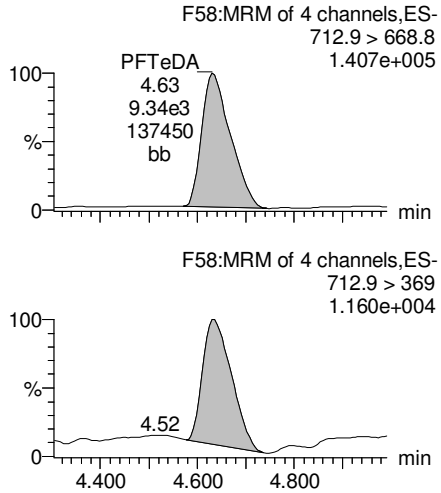
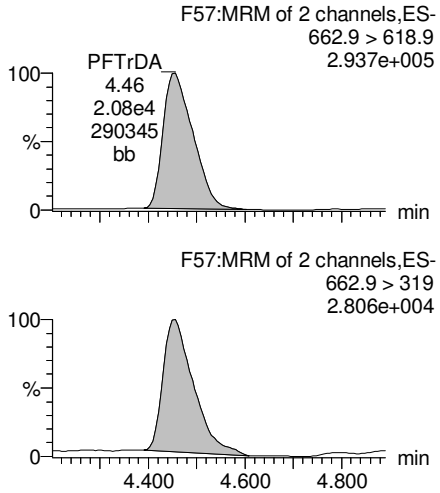
Last Altered: Monday, July 31, 2017 10:51:01 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

PFTeDA



PFTrDA



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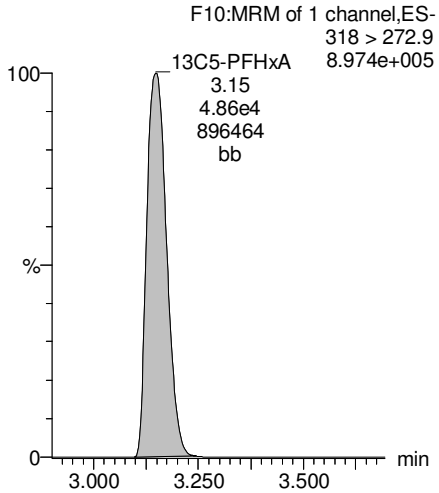

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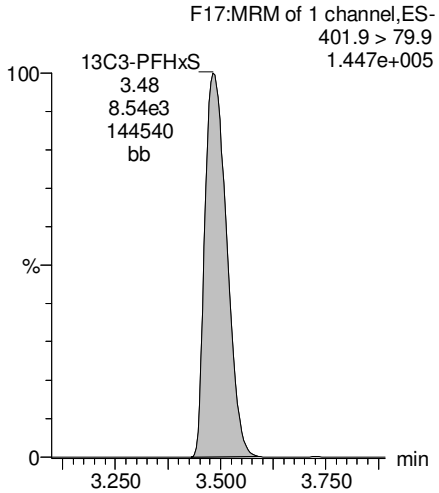

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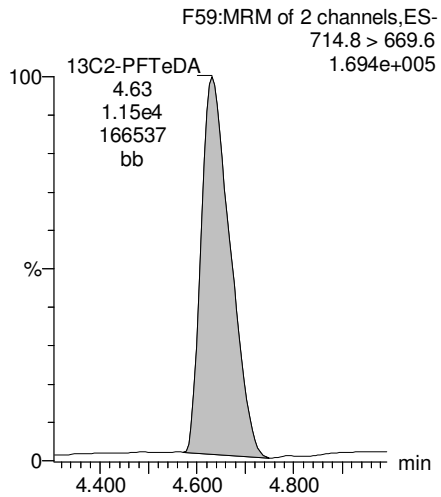

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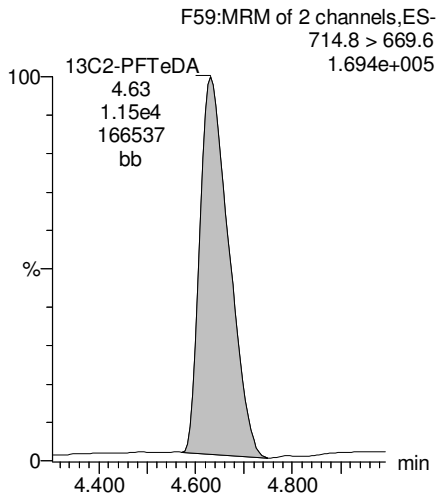
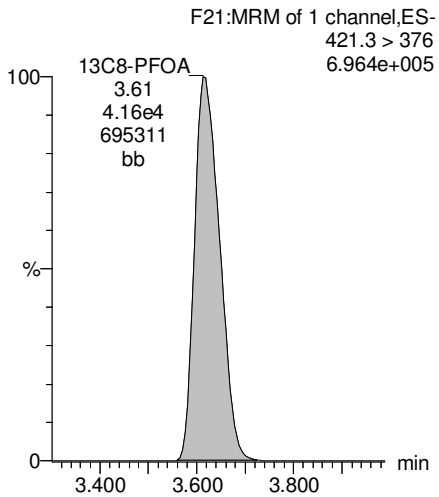
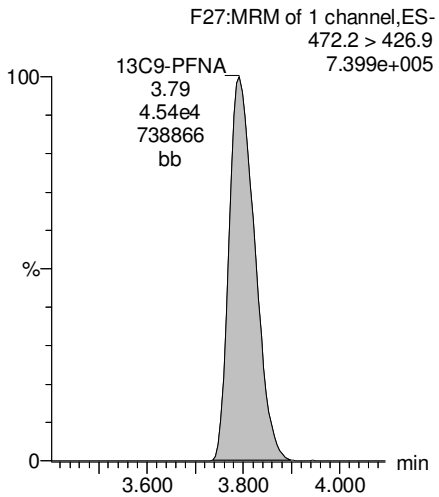


13C8-PFOA



13C9-PFNA



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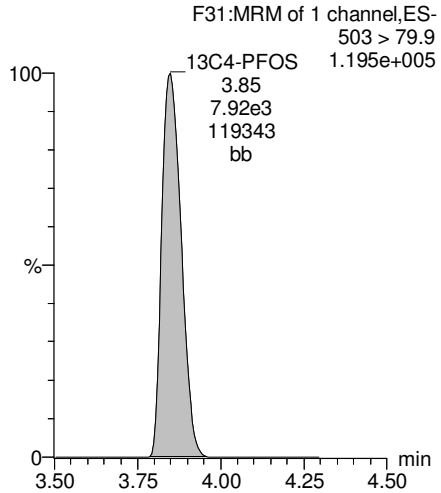
Dataset: U:\Q4.PRO\results\170728M2\170728M2-26.qld

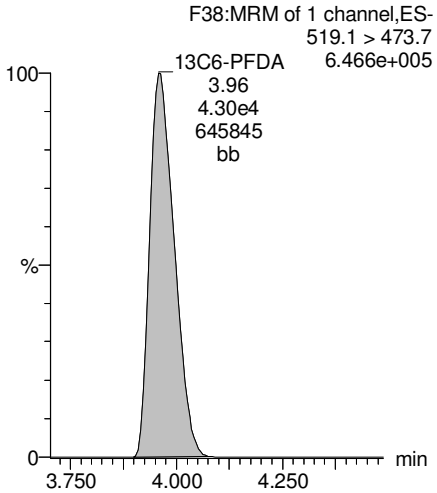
Last Altered: Monday, July 31, 2017 10:51:01 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:52:01 Pacific Daylight Time

Name: 170728M2_26, Date: 28-Jul-2017, Time: 20:38:42, ID: B7G0107-MS2 Matrix Spike 0.11945, Description: Matrix Spike

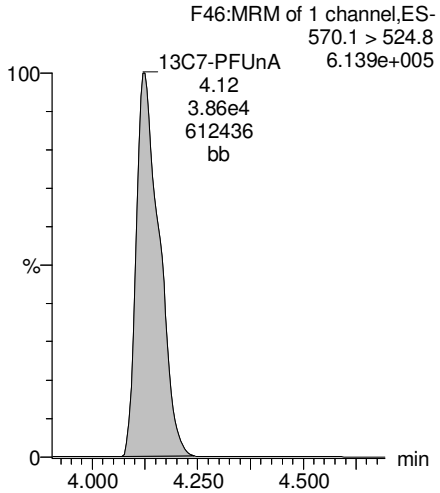
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:55:59 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	9.94e3	3.44e3	0.121		2.96	2.90	36.1	161	
2	4	PFHxA	313.2 > 268.9	1.21e5	1.07e4	0.121		3.19	3.14	56.7	335	
3	5	PFHpA	363 > 318.9	3.65e4	2.46e4	0.121		3.45	3.41	18.5	130	
4	6	PFHxS	398.9 > 79.6	1.38e4	2.28e3	0.121		3.56	3.48	75.6	375	
5	7	PFOA	413 > 368.7	9.27e4	3.27e4	0.121		3.65	3.62	35.4	300	
6	9	PFNA	462.9 > 418.8	2.76e4	2.94e4	0.121		3.83	3.79	11.8	90.3	
7	11	PFOS	499 > 79.9	2.81e4	5.49e3	0.121		3.89	3.84	63.9	535	
8	12	PFDA	513 > 468.8	2.51e4	2.61e4	0.121		4.01	3.96	12.0	81.2	
9	13	N-MeFOSAA	570.1 > 419	6.16e3	4.97e3	0.121		4.03	3.99	201	84.3	
10	14	N-EtFOSAA	584.2 > 419	4.73e3	4.55e3	0.121		4.10	4.06	169	91.2	
11	15	PFUnA	562.9 > 518.9	1.55e4	2.67e4	0.121		4.11	4.12	7.26	80.5	
12	17	PFDoA	612.9 > 318.8	1.67e3	2.48e3	0.121		4.34	4.29	8.41	86.0	
13	18	PFTrDA	662.9 > 618.9	1.72e4	2.48e3	0.121		4.50	4.46	86.5	72.4	
14	19	PFTeDA	712.9 > 668.8	9.85e3	1.17e4	0.121		4.68	4.63	10.6	83.0	
15	22	13C3-PFBS	302 > 98.8	3.44e3	2.98e4	0.121	0.033	2.96	2.90	0.577	144	139.6
16	23	13C2-PFHxA	315 > 269.8	1.07e4	2.98e4	0.121	0.335	3.19	3.14	1.79	44.2	106.9
17	24	13C4-PFHpA	367.2 > 321.8	2.46e4	2.98e4	0.121	0.369	3.45	3.41	4.13	92.6	89.6
18	25	18O2-PFHxS	403 > 102.6	2.28e3	4.68e3	0.121	0.460	3.56	3.48	6.08	109	105.7
19	26	13C2-PFOA	414.9 > 369.7	3.27e4	2.40e4	0.121	1.293	3.65	3.61	17.0	109	105.4
20	27	13C5-PFNA	468.2 > 422.9	2.94e4	2.96e4	0.121	0.986	3.83	3.79	12.4	104	100.8
21	28	13C8-PFOSA	506.1 > 77.7	2.31e3	2.28e4	0.121	0.132	3.84	3.80	1.26	78.8	76.3
22	29	13C8-PFOS	507 > 79.9	5.49e3	4.80e3	0.121	1.184	3.89	3.84	14.3	99.9	96.7
23	30	13C2-PFDA	515.1 > 469.9	2.61e4	2.84e4	0.121	0.998	4.01	3.96	11.5	95.2	92.2
24	31	d3-N-MeFOSAA	573.3 > 419	4.97e3	2.28e4	0.121	0.018	4.03	3.99	2.72	1270	94.7
25	32	d5-N-EtFOSAA	589.3 > 419	4.55e3	2.28e4	0.121	0.018	4.12	4.06	2.49	1160	86.3
26	33	13C2-PFUnA	565 > 519.8	2.67e4	2.28e4	0.121	1.129	4.17	4.12	14.6	107	103.5
27	34	13C2-PFDoA	615 > 569.7	2.48e3	2.28e4	0.121	0.116	4.34	4.29	1.36	96.8	93.6
28	35	13C2-PFTeDA	714.8 > 669.6	1.17e4	2.28e4	0.121	0.762	4.68	4.63	6.38	69.2	67.0
29	36	13C4-PFBA	217 > 171.8	1.65e4	1.65e4	0.121	1.000	1.32	1.39	12.5	103	100.0
30	37	13C5-PFHxA	318 > 272.9	2.98e4	2.98e4	0.121	1.000	3.19	3.15	5.00	41.3	100.0
31	38	13C3-PFHxS	401.9 > 79.9	4.68e3	4.68e3	0.121	1.000	3.56	3.48	12.5	103	100.0
32	39	13C8-PFOA	421.3 > 376	2.40e4	2.40e4	0.121	1.000	3.65	3.62	12.5	103	100.0

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:55:59 Pacific Daylight Time

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	40	13C9-PFNA	472.2 > 426.9	2.96e4	2.96e4	0.121	1.000	3.83	3.79	12.5	103	100.0
34	41	13C4-PFOS	503 > 79.9	4.80e3	4.80e3	0.121	1.000	3.89	3.84	12.5	103	100.0
35	42	13C6-PFDA	519.1 > 473.7	2.84e4	2.84e4	0.121	1.000	4.01	3.96	12.5	103	100.0
36	43	13C7-PFUnA	570.1 > 524.8	2.28e4	2.28e4	0.121	1.000	4.17	4.12	12.5	103	100.0
37	44	Total PFBS	299 > 79.7	9.94e3	3.44e3	0.121		2.96		36.1	161	
38	45	Total PFHxS	398.9 > 79.6	1.38e4	2.28e3	0.121		3.52		75.6	375	
39	46	Total PFOA	413 > 368.7	9.74e4	3.27e4	0.121		3.65		37.2	314	
40	47	Total PFOS	499 > 79.9	2.81e4	5.49e3	0.121		3.89		63.9	535	
41	48	Total N-Me-FOSAA	570.1 > 419	6.16e3	4.97e3	0.121		4.03		201	84.3	
42	49	Total N-EtFOSAA	584.2 > 419	4.73e3	4.55e3	0.121		4.17		169	91.2	

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Vista Analytical Laboratory

Rev'd: MM 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:55:59 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.90	9941.799	3441.013	36.115	bb	160.7

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.48	13769.158	2276.004	75.621	MM	374.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.62	92732.430	32714.578	35.432	MM	300.1
2	46	Total PFOA	413 > 368.7	3.57	4654.688	32714.578	1.779	MM	14.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.84	28059.594	5492.645	63.857	bb	535.0

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419	3.99	6158.180	4971.965	201.269	bb	84.3

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419	4.06	4731.211	4552.276	168.887	bb	91.2

AC 7/31/17

Vista Analytical Laboratory

Rev'd: MM 7/31/17

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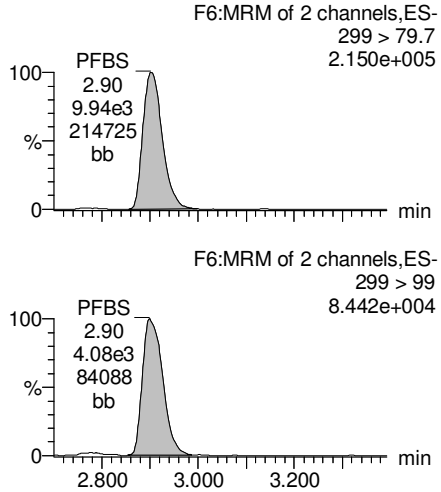
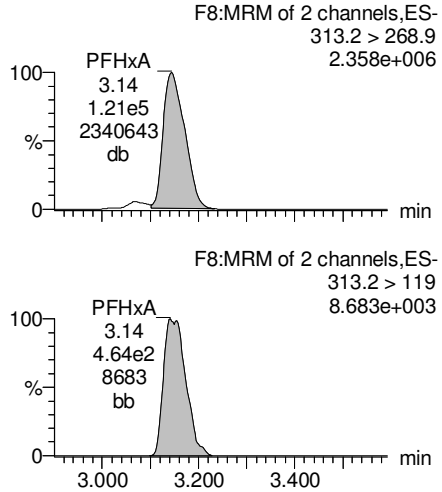
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

Total PFBS



PFHxA



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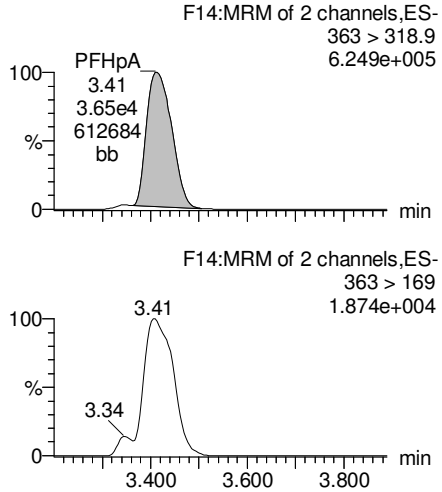
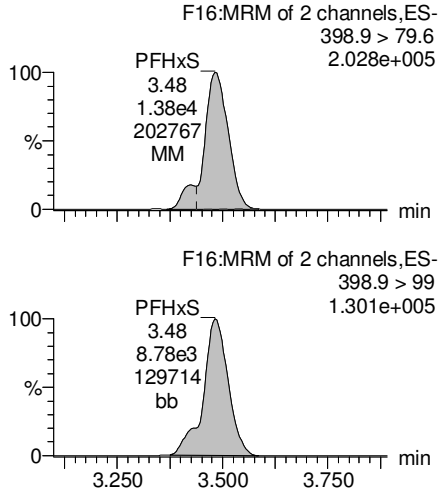
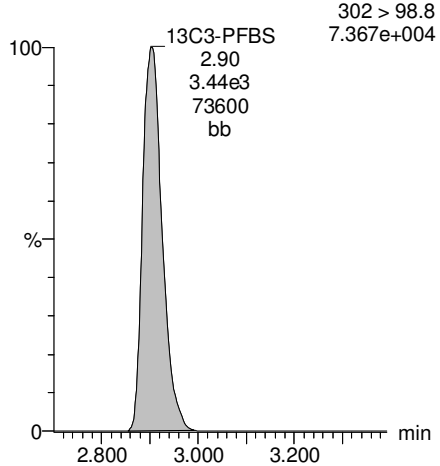


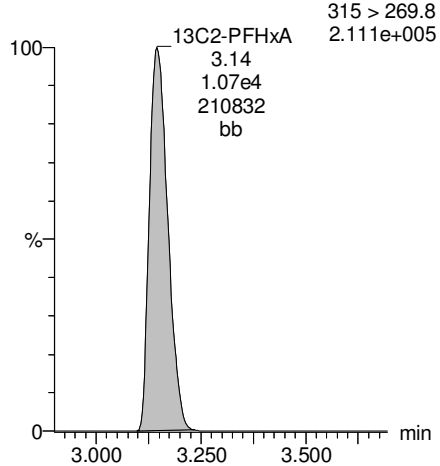
Total PFHxS



13C3-PFBS



13C2-PFHxA



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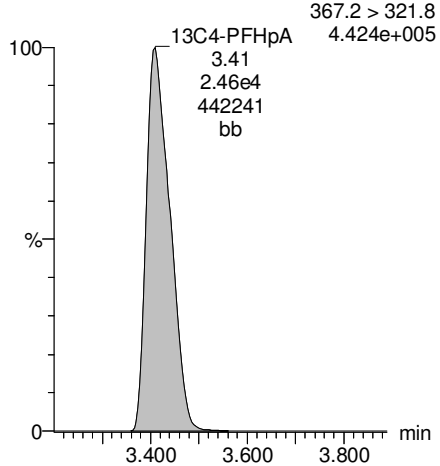
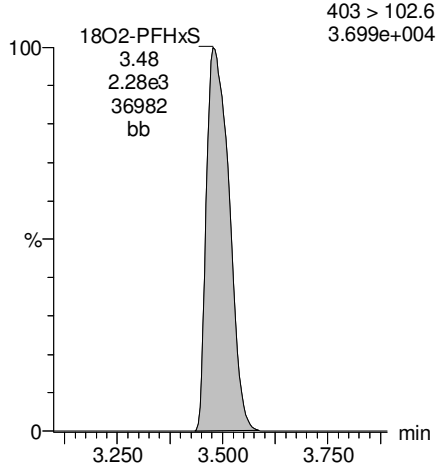


18O2-PFHxS



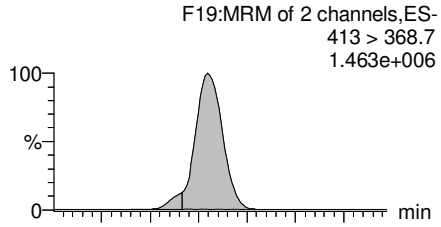
AC 7/31/17

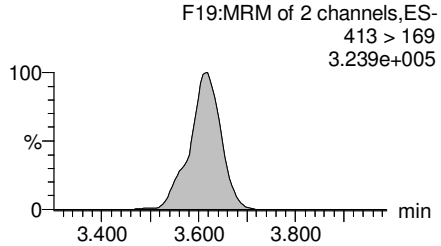
Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:55:59 Pacific Daylight Time

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

Total PFOA





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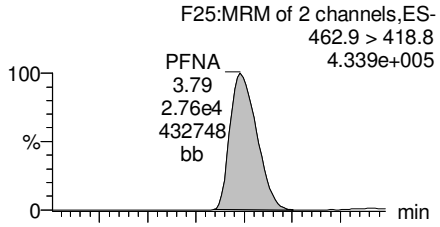
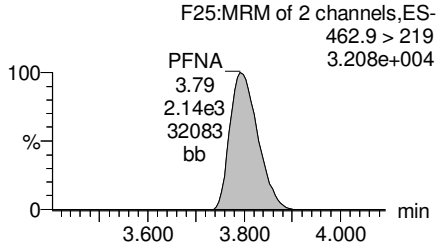
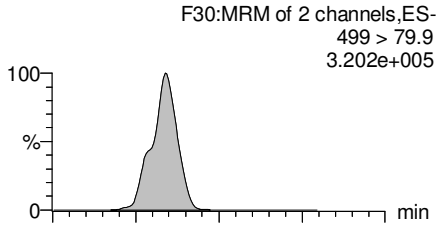
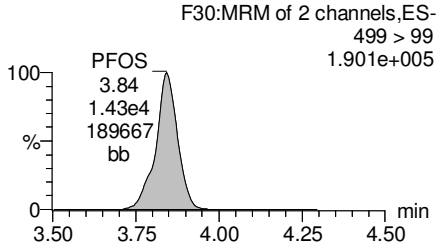




Total PFOS





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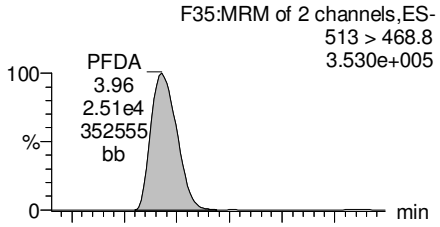
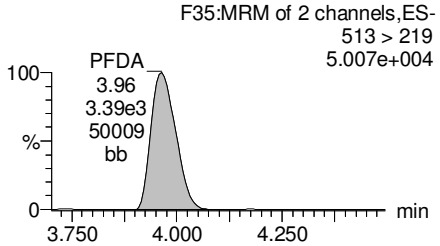
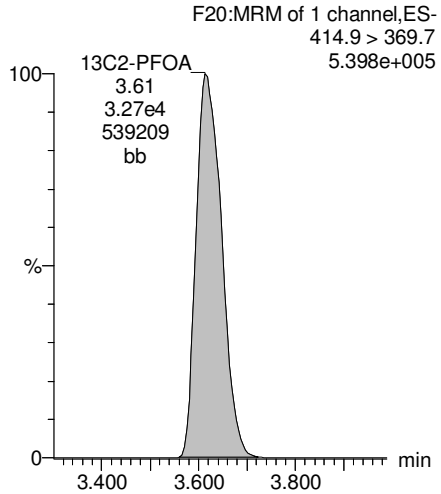
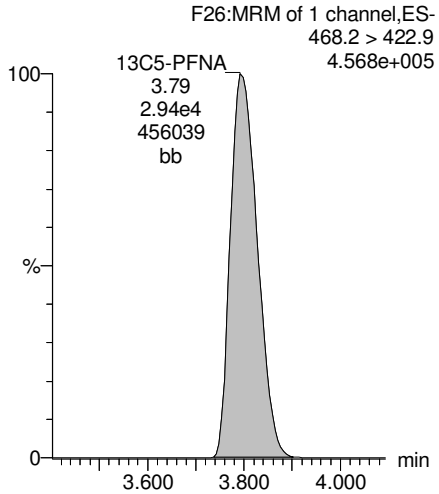




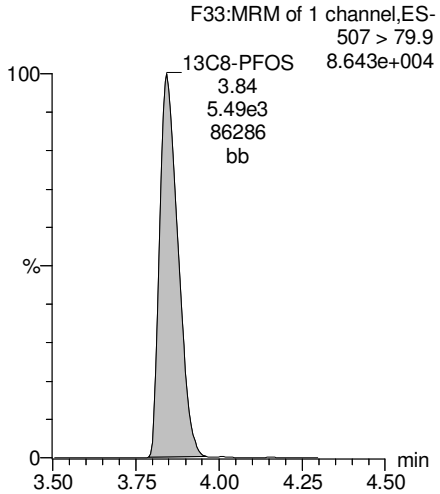
13C2-PFOA



13C5-PFNA



13C8-PFOS



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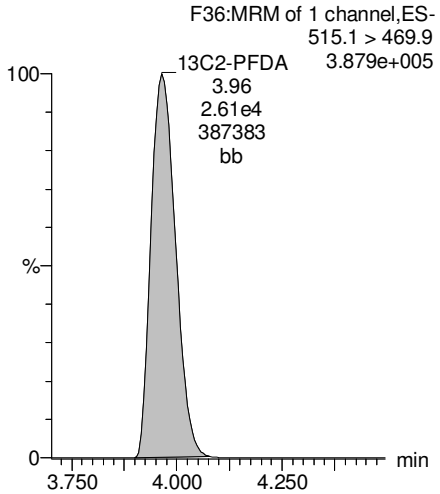


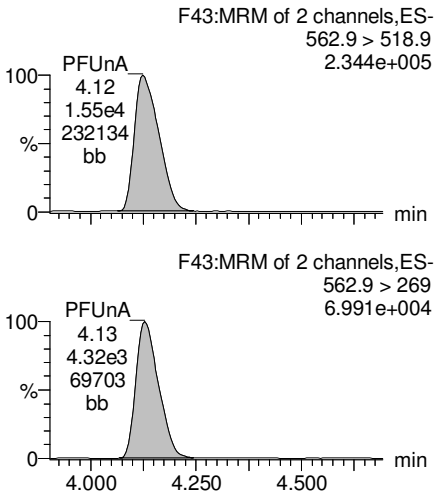
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

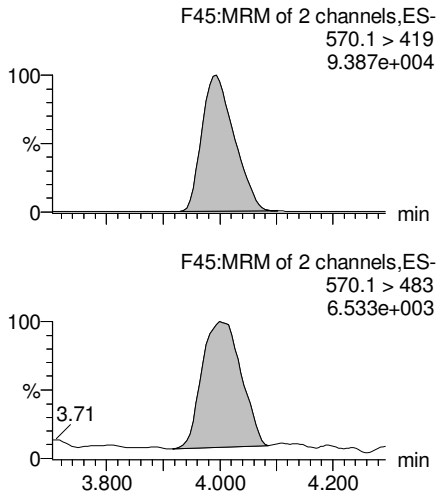
Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:55:59 Pacific Daylight Time

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

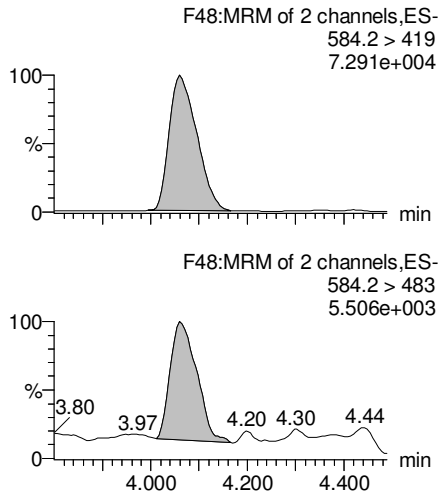
PFUnA



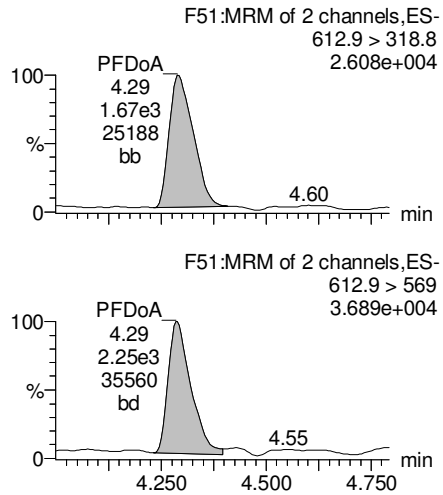
N-MeFOSAA



N-EtFOSAA



PFDoA



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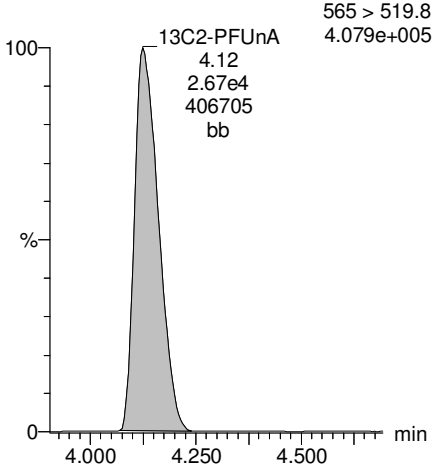
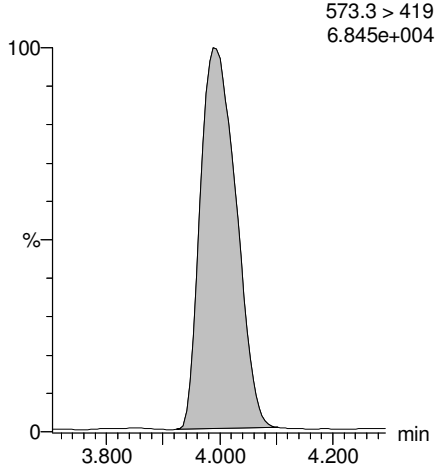


d3-N-MeFOSAA



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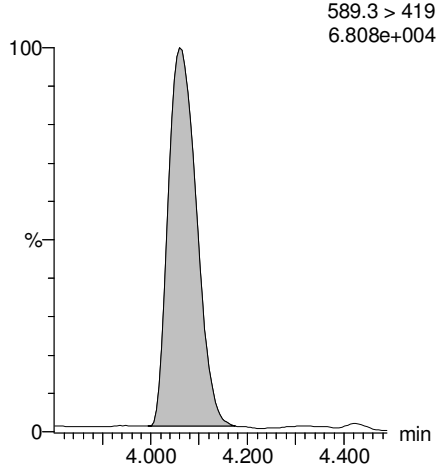

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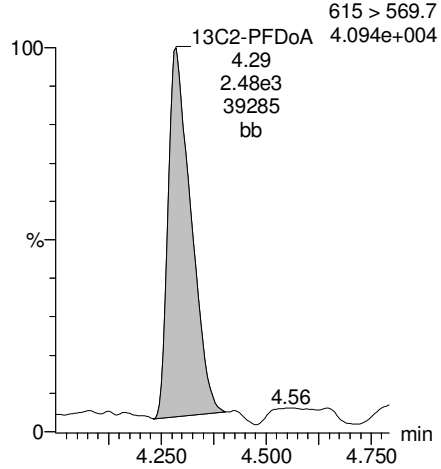


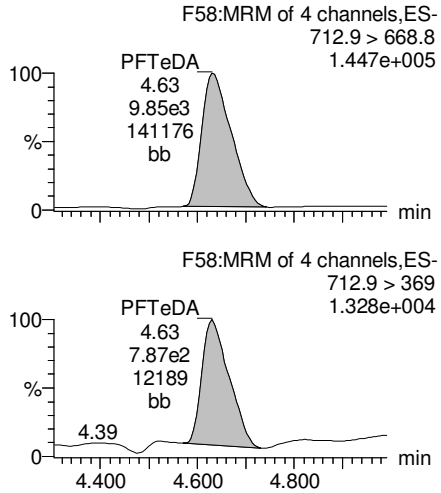
AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 10:55:59 Pacific Daylight Time

Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

PFTeDA



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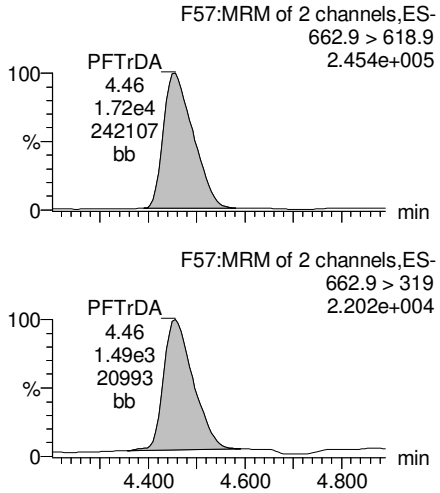
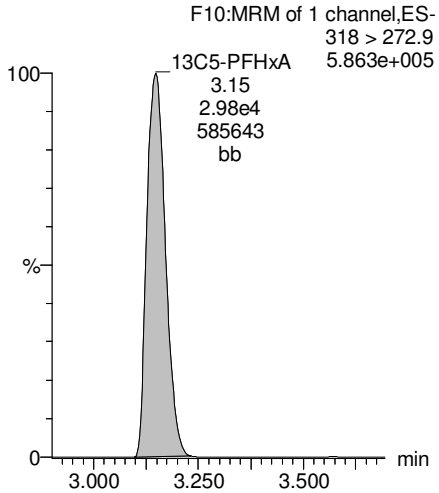


13C5-PFHxA



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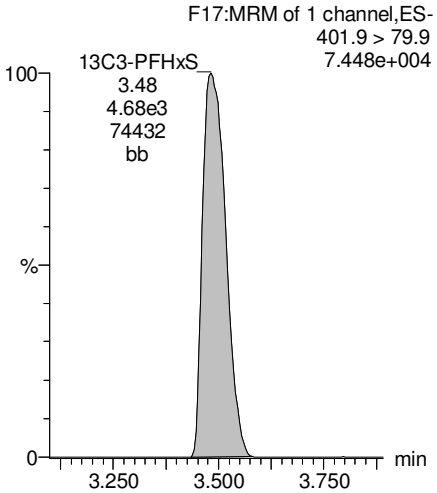

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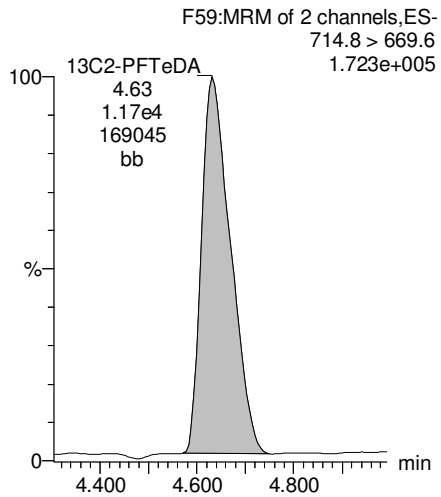

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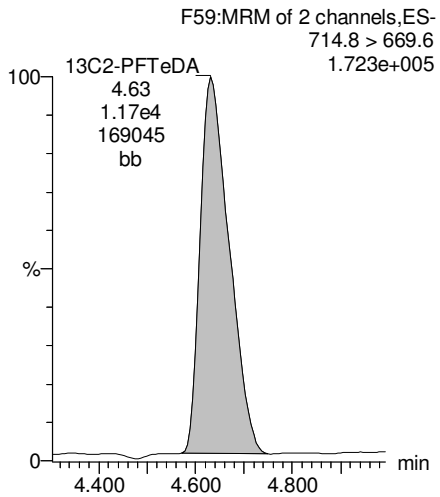
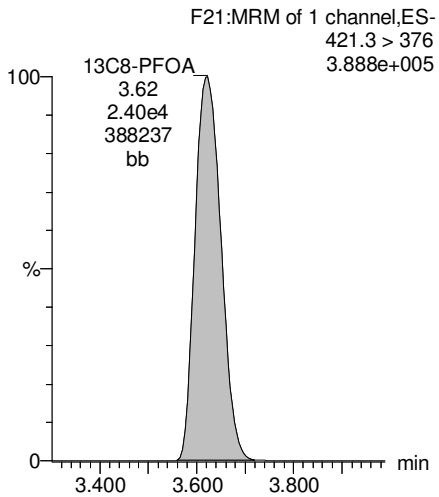
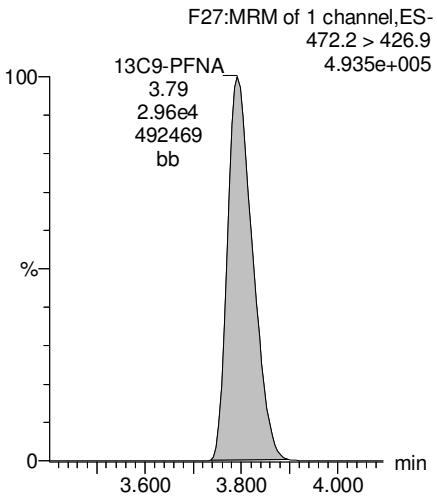


13C8-PFOA



13C9-PFNA



AC 7/31/17

Dataset: U:\Q4.PRO\results\170728M2\170728M2-27.qld

Last Altered: Monday, July 31, 2017 10:55:44 Pacific Daylight Time
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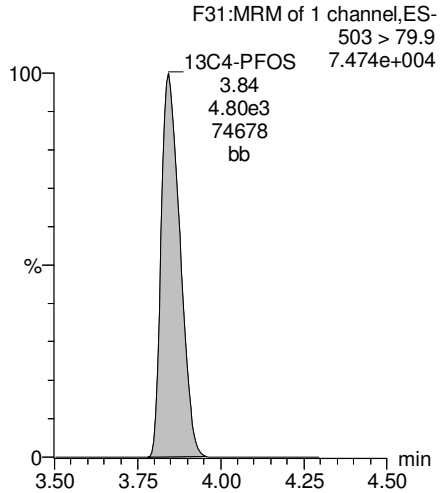
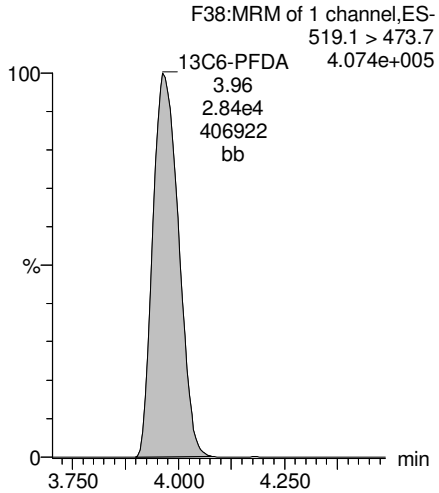
Name: 170728M2_27, Date: 28-Jul-2017, Time: 20:49:29, ID: B7G0107-MSD2 Matrix Spike Dup 0.12098, Description: Matrix Spike Dup

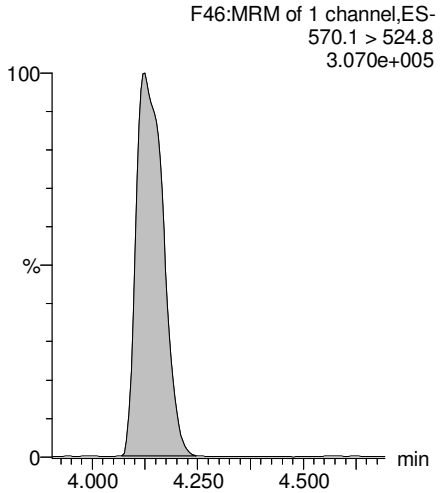
13C4-PFOS



13C6-PFDA



13C7-PFUnA



AC 7/31/17

CONTINUING CALIBRATION

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170725M1\170725M1-2.qld

Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

(A) outside method limits. Not used.

AC 7/26/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	8.74e2	1.63e4		1.54	1.55	0.672	0.451	90.3	70-130
2	2	PFPeA	263.1 > 218.9	1.44e3	3.13e4		2.77	2.80	0.576	0.475	95.0	
3	3	PFBS	299 > 79.7	3.14e2	3.82e3		2.96	3.00	1.03	0.515	103.0	
4	4	PFHxA	313.2 > 268.9	2.50e3	1.36e4		3.19	3.22	0.916	0.503	100.6	
5	5	PFHpA	363 > 318.9	2.49e3	4.10e4		3.45	3.48	0.758	0.541	108.3	
6	6	PFHxS	398.9 > 79.6	2.49e2	3.60e3		3.56	3.55	0.864	0.513	102.5	
7	7	6:2 FTS	427.1 > 407	3.88e2	1.02e4		3.64	3.66	0.476	0.318	(A) 63.6	
8	8	PFOA	413 > 368.7	3.77e3	6.91e4		3.65	3.67	0.682	0.497	99.3	
9	9	PFHpS	448.9 > 98.8	2.66e2	6.91e4		3.71	3.74	0.0481	0.377	75.4	
10	10	PFNA	462.9 > 418.8	3.65e3	6.65e4		3.83	3.85	0.687	0.492	98.3	
11	11	PFOSA	498.1 > 77.8	3.12e2	6.66e3		3.84	3.86	0.585	0.511	102.2	
12	12	PFOS	499 > 79.9	7.02e2	1.32e4		3.89	3.90	0.665	0.544	108.8	
13	13	PFDA	513 > 468.8	3.67e3	6.47e4		4.01	4.02	0.709	0.448	89.5	
14	14	8:2 FTS	527 > 506.9	4.86e2	7.34e3		4.00	4.02	0.828	0.464	92.8	
15	15	N-MeFOSAA	570.1 > 419	9.33e2	1.43e4		4.03	4.05	10.6	0.504	100.8	
16	16	N-EtFOSAA	584.2 > 419	7.07e2	1.46e4		4.10	4.12	7.85	0.482	96.4	
17	17	PFUnA	562.9 > 518.9	2.94e3	6.70e4		4.17	4.18	0.548	0.601	120.1	
18	18	PFDS	598.9 > 98.7	2.63e2	6.70e4		4.22	4.24	0.0491	0.563	112.6	
19	19	PFDoA	612.9 > 318.8	3.55e2	7.88e3		4.34	4.34	0.562	0.387	77.5	
20	20	N-MeFOSA	512.1 > 168.9	6.05e2	3.02e4		4.29	4.41	3.01	2.69	107.7	
21	21	PFTrDA	662.9 > 618.9	3.99e3	7.88e3		4.50	4.51	6.32	0.415	83.0	
22	22	PFTeDA	712.9 > 668.8	2.74e3	5.13e4		4.68	4.69	0.666	0.483	96.6	
23	23	N-EtFOSA	526.1 > 168.9	7.51e2	4.18e4		4.87	4.99	2.70	2.62	104.9	
24	24	PFHxDA	812.8 > 768.9	4.47e3	2.53e4		5.06	5.06	0.883	0.459	91.8	
25	25	PFODA	912.8 > 868.8	3.89e3	2.53e4		5.43	5.42	0.770	0.524	104.9	
26	26	N-MeFOSE	616.1 > 58.9	8.63e2	4.44e4		5.42	5.44	2.91	2.41	96.6	
27	27	N-EtFOSE	630.1 > 58.9	1.01e3	4.46e4		5.59	5.61	3.39	2.48	99.2	
28	28	13C3-PFBA	216.1 > 171.8	1.63e4	1.97e4	0.820	1.54	1.55	10.3	12.6	100.5	50-150
29	29	13C3-PFPeA	266 > 221.8	3.13e4	4.84e4	0.248	2.77	2.80	3.23	13.0	104.2	
30	30	13C3-PFBS	302 > 98.8	3.82e3	4.84e4	0.031	2.96	3.00	0.394	12.7	101.5	
31	31	13C2-PFHxA	315 > 269.8	1.36e4	4.84e4	0.276	3.19	3.22	1.41	5.09	101.8	

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Dataset: U:\Q4.PRO\results\170725M1\170725M1-2.qld

Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

	# Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32 13C4-PFHpA	367.2 > 321.8	4.10e4	4.84e4	0.306	3.45	3.48	4.23	13.8	110.8
33	33 18O2-PFHxS	403 > 102.6	3.60e3	9.64e3	0.393	3.56	3.55	4.67	11.9	95.1
34	34 13C2-6:2 FTS	429.1 > 408.9	1.02e4	6.13e4	0.158	3.64	3.66	2.08	13.2	105.3
35	35 13C2-PFOA	414.9 > 369.7	6.91e4	6.13e4	1.067	3.65	3.67	14.1	13.2	105.6
36	36 13C5-PFNA	468.2 > 422.9	6.65e4	8.91e4	0.852	3.83	3.85	9.32	10.9	87.5
37	37 13C8-PFOSA	506.1 > 77.7	6.66e3	8.97e4	0.098	3.84	3.86	0.929	9.46	75.7
38	38 13C8-PFOS	507 > 79.9	1.32e4	1.34e4	0.936	3.89	3.90	12.3	13.1	104.7
39	39 13C2-PFDA	515.1 > 469.9	6.47e4	8.24e4	0.810	4.01	4.02	9.82	12.1	97.0
40	40 13C2-8:2 FTS	529.1 > 508.7	7.34e3	8.24e4	0.086	4.00	4.01	1.11	13.0	104.1
41	41 d3-N-MeFOSAA	573.3 > 419	1.43e4	8.97e4	0.014	4.03	4.05	2.00	146	89.7
42	42 d5-N-EtFOSAA	589.3 > 419	1.46e4	8.97e4	0.014	4.12	4.12	2.04	146	90.0
43	43 13C2-PFUnA	565 > 519.8	6.70e4	8.97e4	0.962	4.17	4.19	9.34	9.71	77.7
44	44 13C2-PFDoA	615 > 569.7	7.88e3	8.97e4	0.094	4.34	4.34	1.10	11.6	93.1
45	45 d3-N-MeFOSA	515.2 > 168.9	3.02e4	8.97e4	0.034	4.29	4.45	4.21	122	81.5
46	46 13C2-PFTeDA	714.8 > 669.6	5.13e4	8.97e4	0.694	4.68	4.69	7.15	10.3	82.4
47	47 d5-N-ETFOSA	531.1 > 168.9	4.18e4	8.97e4	0.049	5.01	5.03	5.83	120	79.8
48	48 13C2-PFHxDA	815 > 769.7	2.53e4	8.97e4	0.843	5.06	5.06	3.53	4.18	83.6
49	49 d7-N-MeFOSE	623.1 > 58.9	4.44e4	8.97e4	0.055	5.42	5.43	6.19	113	75.5
50	50 d9-N-EtFOSE	639.2 > 58.8	4.46e4	8.97e4	0.053	5.59	5.60	6.22	116	77.6
51	51 13C4-PFBA	217 > 171.8	1.97e4	1.97e4	1.000	1.54	1.55	12.5	12.5	100.0
52	52 13C5-PFHxA	318 > 272.9	4.84e4	4.84e4	1.000	3.19	3.22	5.00	5.00	100.0
53	53 13C3-PFHxS	401.9 > 79.9	9.64e3	9.64e3	1.000	3.56	3.55	12.5	12.5	100.0
54	54 13C8-PFOA	421.3 > 376	6.13e4	6.13e4	1.000	3.65	3.67	12.5	12.5	100.0
55	55 13C9-PFNA	472.2 > 426.9	8.91e4	8.91e4	1.000	3.83	3.85	12.5	12.5	100.0
56	56 13C4-PFOS	503 > 79.9	1.34e4	1.34e4	1.000	3.89	3.90	12.5	12.5	100.0
57	57 13C6-PFDA	519.1 > 473.7	8.24e4	8.24e4	1.000	4.01	4.02	12.5	12.5	100.0
58	58 13C7-PFUnA	570.1 > 524.8	8.97e4	8.97e4	1.000	4.17	4.18	12.5	12.5	100.0

50-150

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Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 10:28:43 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:29:07 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170725M1_1	IPA	25-Jul-17	14:15:31
2	170725M1_2	ST170725M1-1 PFC CS-1 17G2502	25-Jul-17	14:26:15
3	170725M1_3	B7G0107-BS1 OPR 0.125	25-Jul-17	14:36:53
4	170725M1_4	IPA	25-Jul-17	14:47:39
5	170725M1_5	B7G0107-BLK1 Method Blank 0.125	25-Jul-17	14:58:18
6	170725M1_6	1700851-01RE1 SB 01_20170710 0.12032	25-Jul-17	15:08:56
7	170725M1_7	1700851-02RE1 EB 01_20170710 0.11963	25-Jul-17	15:19:35
8	170725M1_8	1700851-03RE1 18-GW-18MCAS03-5-20170...	25-Jul-17	15:30:13
9	170725M1_9	1700851-04RE1 18-GW-18MCAS03-2-20170...	25-Jul-17	15:40:51
10	170725M1_10	1700851-05RE1 18-GW-18MCAS02-5-20170...	25-Jul-17	15:51:30
11	170725M1_11	1700851-06RE1 18-GW-18MCAS07-3-20170...	25-Jul-17	16:02:08
12	170725M1_12	1700851-07RE1 24-GW-24MW08B-20170710...	25-Jul-17	16:12:47
13	170725M1_13	1700851-08RE1 DUP03-20170710 0.12071	25-Jul-17	16:23:25
14	170725M1_14	1700851-09RE1 24-GW-24EX11-20170710 0....	25-Jul-17	16:34:03
15	170725M1_15	1700851-10RE1 SGV-GW-SGV Transfer Stati...	25-Jul-17	16:44:46
16	170725M1_16	B7G0107-MS2 Matrix Spike 0.11945	25-Jul-17	16:55:33
17	170725M1_17	B7G0107-MSD2 Matrix Spike Dup 0.12098	25-Jul-17	17:06:33
18	170725M1_18	IPA	25-Jul-17	17:17:45
19	170725M1_19	ST170725M1-2 PFC CS3 17G2503	25-Jul-17	17:28:43
20	170725M1_20	IPA	25-Jul-17	17:39:41
21	170725M1_21	1700852-01RE1 EB 02_20170711 0.12122	25-Jul-17	17:50:30
22	170725M1_22	1700852-02RE1 DUP01-20170711 0.11996	25-Jul-17	18:01:17
23	170725M1_23	1700852-03RE1 1-GW-01-MW204-20170711 ...	25-Jul-17	18:12:03
24	170725M1_24	B7G0107-MS1 Matrix Spike 0.12078	25-Jul-17	18:22:49
25	170725M1_25	B7G0107-MSD1 Matrix Spike Dup 0.11599	25-Jul-17	18:33:36
26	170725M1_26	1700852-04RE1 1-GW-01-MW206-20170711 ...	25-Jul-17	18:44:23
27	170725M1_27	1700852-05RE1 2-GW-02DGMW59-2017071...	25-Jul-17	18:55:10
28	170725M1_28	1700852-06RE1 2-GW-02NEW16-20170711 ...	25-Jul-17	19:05:57
29	170725M1_29	1700852-07RE1 5-GW-05-DGMW68A-20170...	25-Jul-17	19:16:44
30	170725M1_30	1700852-08RE1 1-GW-01-PZ20-20170711 0....	25-Jul-17	19:27:29
31	170725M1_31	1700852-09RE1 1-GW-02-MW209-20170711 ...	25-Jul-17	19:38:30

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Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 10:28:43 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:29:07 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170725M1_32	IPA	25-Jul-17	19:49:44
33	170725M1_33	ST170725M1-3 PFC CS3 17G2503	25-Jul-17	20:00:29
34	170725M1_34	IPA	25-Jul-17	20:11:07
35	170725M1_35	B7G0108-BS1 OPR 0.125	25-Jul-17	20:21:46
36	170725M1_36	IPA	25-Jul-17	20:32:24
37	170725M1_37	B7G0108-BLK1 Method Blank 0.125	25-Jul-17	20:43:03
38	170725M1_38	1700856-01RE1 INFLUENT-20170710 0.121	25-Jul-17	20:53:41
39	170725M1_39	1700856-02RE1 DUP05-20170710 0.11647	25-Jul-17	21:04:19
40	170725M1_40	1700856-03RE1 MID-POINT-20170710 0.11731	25-Jul-17	21:14:58
41	170725M1_41	1700856-04RE1 EFFLUENT-20170710 0.12084	25-Jul-17	21:25:36
42	170725M1_42	B7G0108-MS1 Matrix Spike 0.12162	25-Jul-17	21:36:14
43	170725M1_43	B7G0108-MSD1 Matrix Spike Dup 0.11849	25-Jul-17	21:47:01
44	170725M1_44	1700856-05RE1 MW-37S-20170711 0.11696	25-Jul-17	21:57:39
45	170725M1_45	1700856-06RE1 ERB-01-20170711 0.12043	25-Jul-17	22:08:34
46	170725M1_46	1700856-07RE1 11-MW-1-20170710 0.11482	25-Jul-17	22:19:33
47	170725M1_47	1700856-08RE1 LF-MW-54BR-20170710 0.11...	25-Jul-17	22:30:16
48	170725M1_48	1700856-09RE1 MW-48BR-20170711 0.12084	25-Jul-17	22:40:54
49	170725M1_49	1700856-10RE1 MW-34S-20170711 0.11812	25-Jul-17	22:51:33
50	170725M1_50	IPA	25-Jul-17	23:02:11
51	170725M1_51	ST170725M1-4 PFC CS3 17G2503	25-Jul-17	23:12:50
52	170725M1_52	IPA	25-Jul-17	23:23:36
53	170725M1_53	1700856-11RE1 MW-31BR-20170711 0.11774	25-Jul-17	23:34:14
54	170725M1_54	1700856-12RE1 MW-31S-20170711 0.11732	25-Jul-17	23:45:01
55	170725M1_55	1700732-04RE1@5X MW PFC 03 0.11929	25-Jul-17	23:55:47
56	170725M1_56	1700906-05@5X MW-02BR-20170718 0.125	26-Jul-17	00:06:56
57	170725M1_57	1700907-04@5X AT028-MW17-06-071717-13...	26-Jul-17	00:18:17
58	170725M1_58	1700907-09@5X AT028-MW17-01-071817-09...	26-Jul-17	00:29:47
59	170725M1_59	IPA	26-Jul-17	00:40:33
60	170725M1_60	ST170725M1-5 PFC CS3 17G2503	26-Jul-17	00:51:21
61	170725M1_61	IPA	26-Jul-17	01:02:08
62	170725M1_62	1700845-01@5X MW-29S-20170707 0.12034	26-Jul-17	01:12:49
63	170725M1_63	1700845-02@5X DUP04-20170707 0.12279	26-Jul-17	01:23:33
64	170725M1_64	1700845-03@20X MW-27S-20170707 0.11824	26-Jul-17	01:34:11
65	170725M1_65	B7G0033-MS1@20X Matrix Spike 0.12283	26-Jul-17	01:44:49

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 10:28:43 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:29:07 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
66	170725M1_66	B7G0033-MSD1@20X Matrix Spike Dup 0.124	26-Jul-17	01:55:28
67	170725M1_67	1700845-04@5X MW-30S-20170707 0.11933	26-Jul-17	02:06:06
68	170725M1_68	1700894-02@5X POND 1 at PD 0.125	26-Jul-17	02:16:53
69	170725M1_69	1700894-03@5X POND 1 -STAFF 0.125	26-Jul-17	02:27:50
70	170725M1_70	1700894-04@10X SEED-POND 1 0.125	26-Jul-17	02:38:34
71	170725M1_71	1700732-05RE1 SD-46 3.2	26-Jul-17	02:49:12
72	170725M1_72	IPA	26-Jul-17	02:59:50
73	170725M1_73	ST170725M1-6 PFC CS3 17G2503	26-Jul-17	03:10:29
74	170725M1_74	IPA	26-Jul-17	03:21:15

LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	ST170725M1-1	L M H	N/A	(A) ☑	☑	☑	☑	☑	☐
Calibration ID:	-2	L M H	☐	☑	☑	☑	☑	☑	☐
Calibration ID:	-3	L M H	☐	☑	☑	☑	☑	☑	☐
Calibration ID:	-4	L M H	☐	☑	☑	☑	☑	☑	☐
Calibration ID:	-5	L M H	☐	☑	☑	☑	☑	☑	☐
Calibration ID:	-6	L M H	☑	☑	☑	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 6/21/17

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: 7/26/17
Initials/Date

Comments:
Full List.
(A) 6:2 FTS outside method limits. Not used.
AC 7/26/17.

Quantify Sample Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

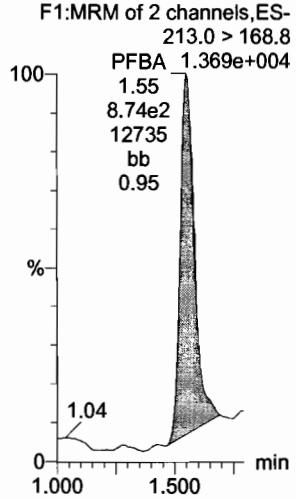
Dataset: U:\Q4.PRO\results\170725M1\170725M1-2.qld

Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

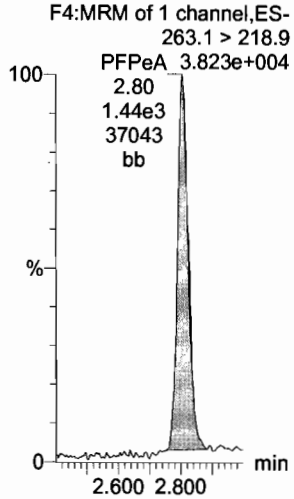
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

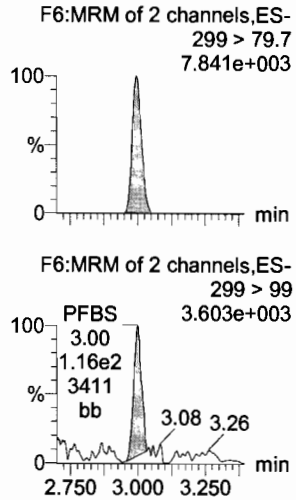
PFBA



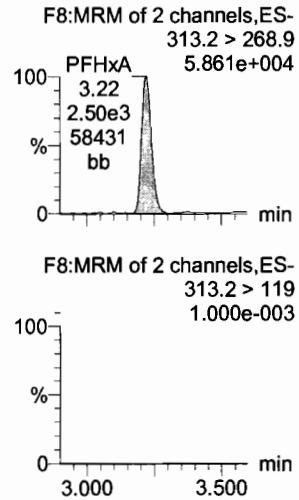
PFPeA



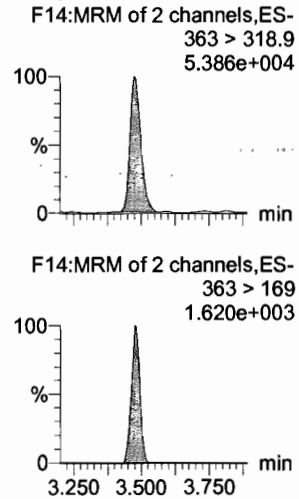
PFBS



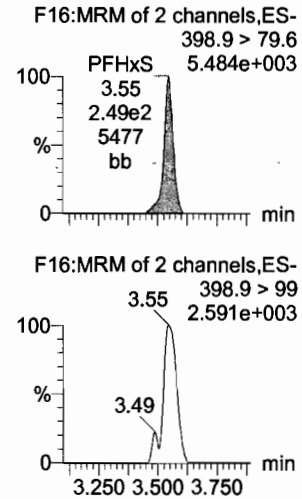
PFHxA



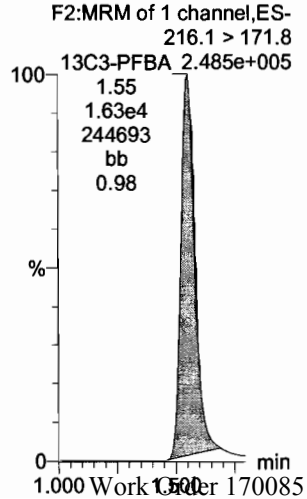
PFHpA



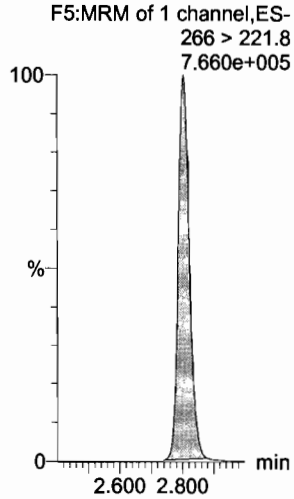
PFHxS



13C3-PFBA



13C3-PFPeA



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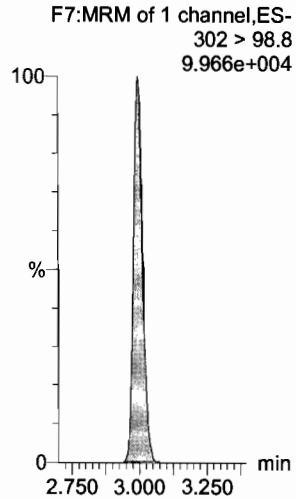
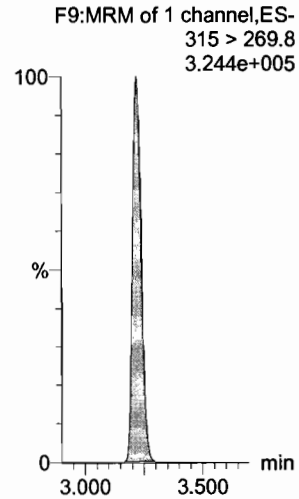


13C2-PFHxA



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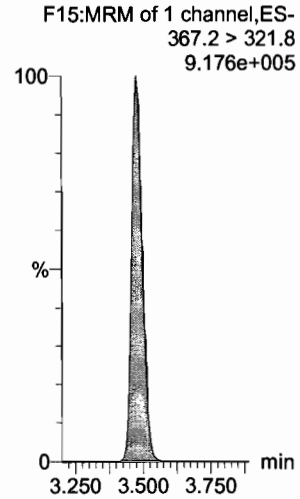
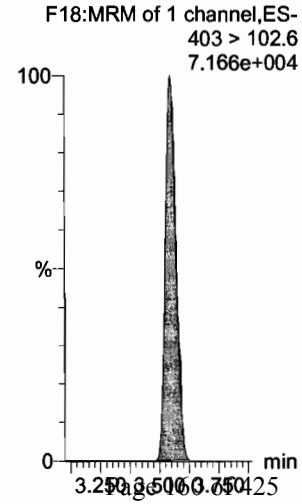


18O2-PFHxS



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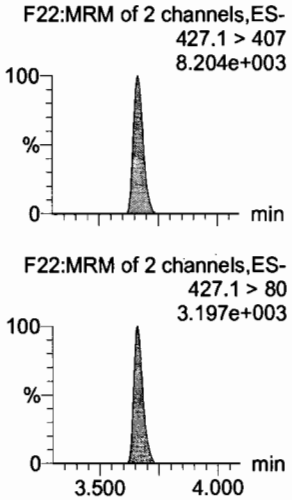
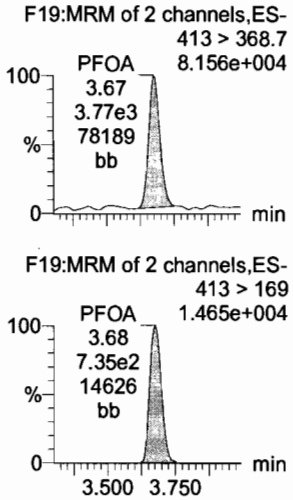
Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

6:2 FTS



PFOA



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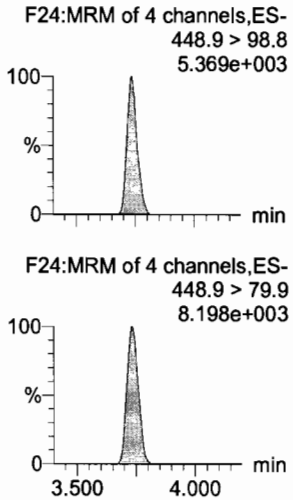

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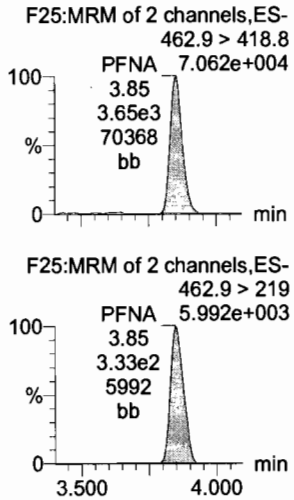

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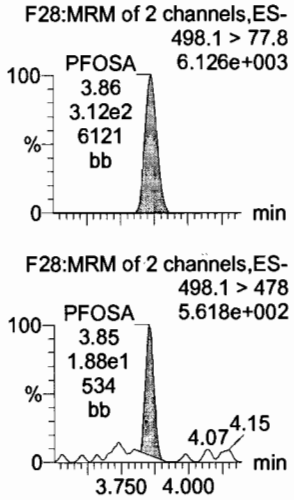

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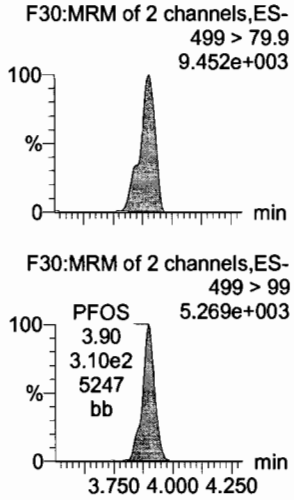
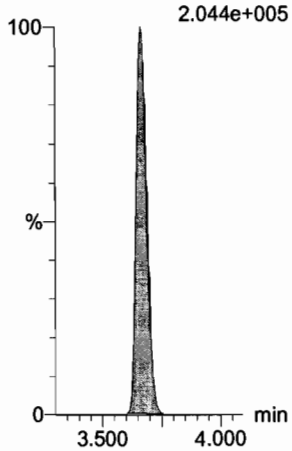


13C2-6:2 FTS



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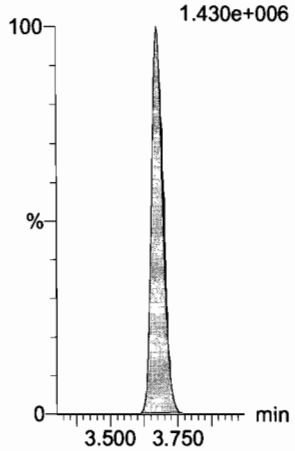
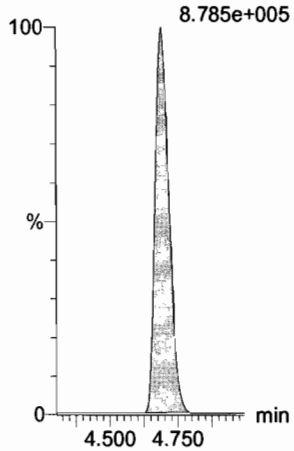
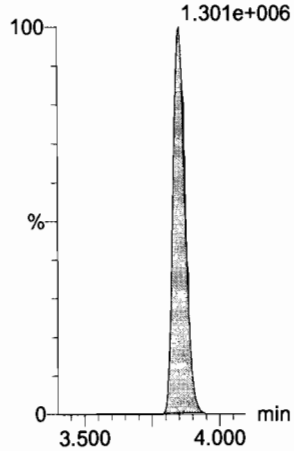


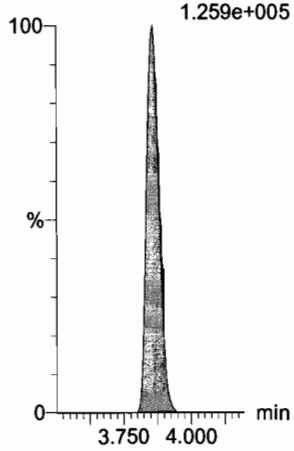
13C2-PFTeDA



13C5-PFNA



13C8-PFOSA



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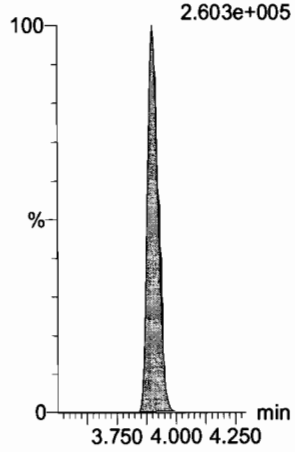


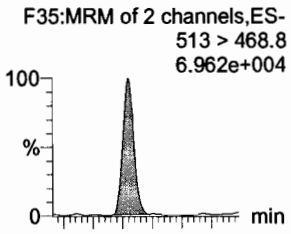
Vista Analytical Laboratory

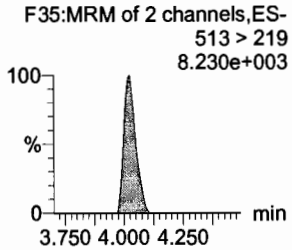
Dataset: U:\Q4.PRO\results\170725M1\170725M1-2.qld

Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

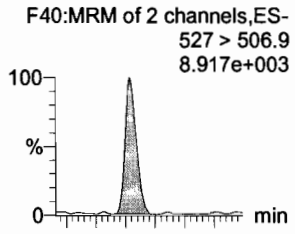
Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

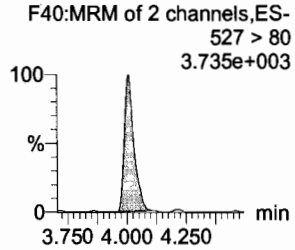
PFDA



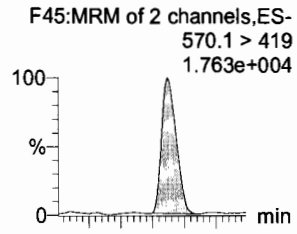


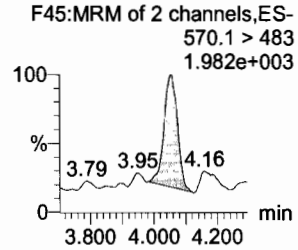
8:2 FTS



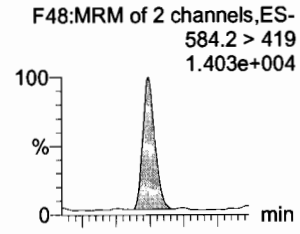


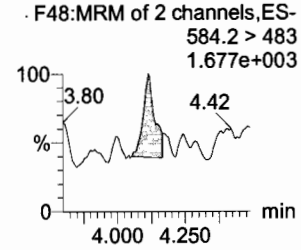
N-MeFOSAA



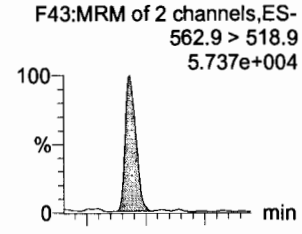


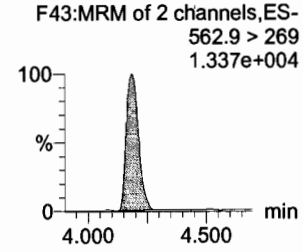
N-EtFOSAA





PFUnA





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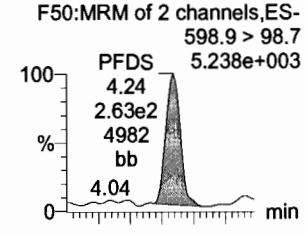

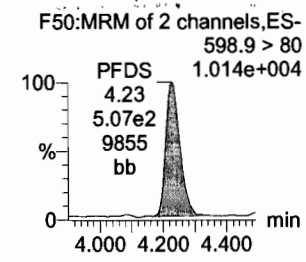

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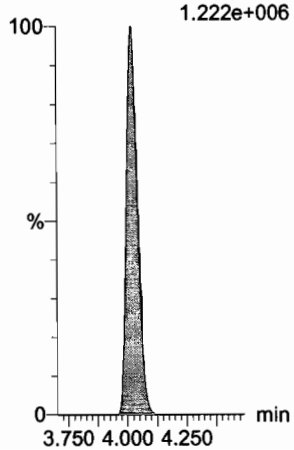
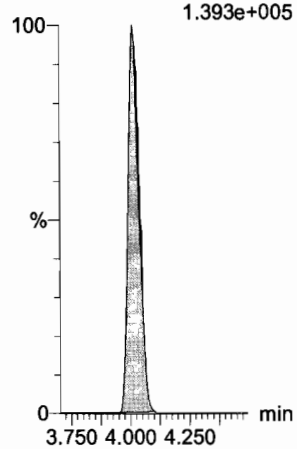
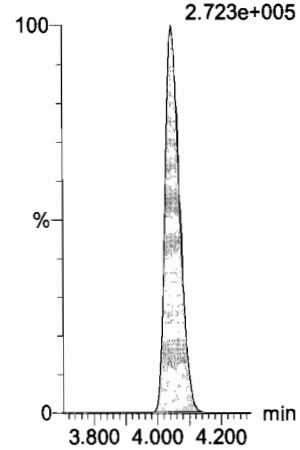


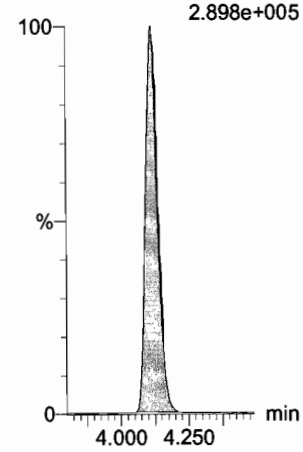
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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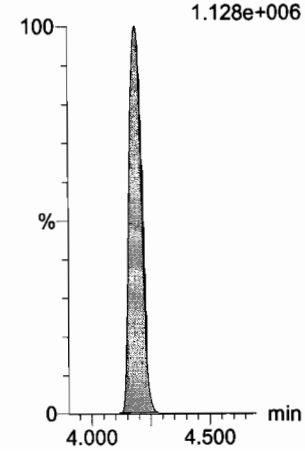

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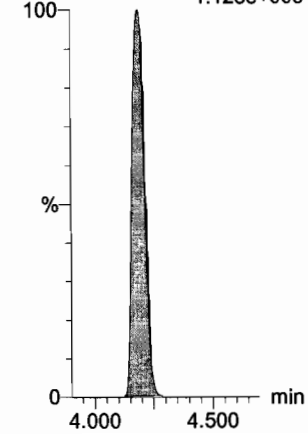

Vista Analytical Laboratory

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Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

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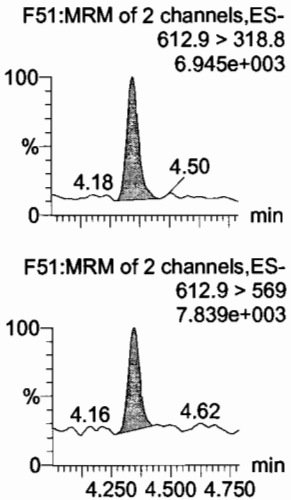

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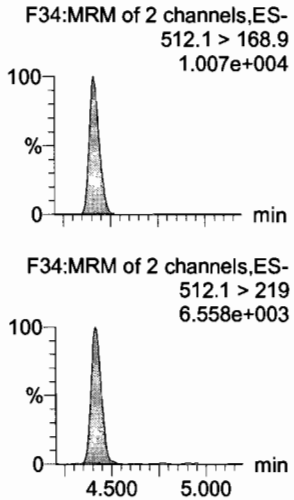

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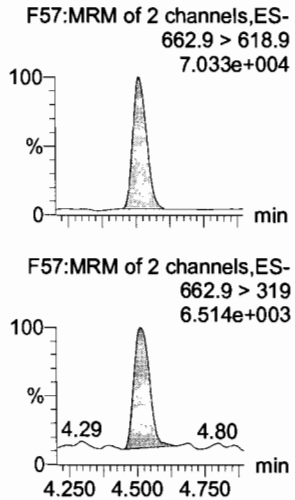

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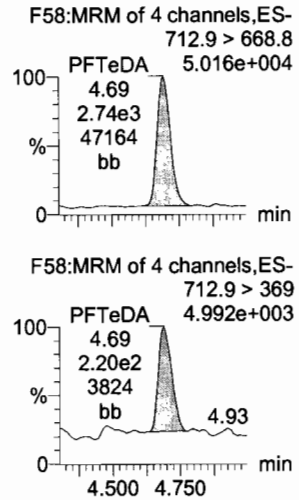

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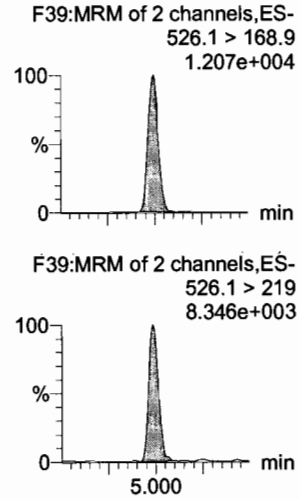

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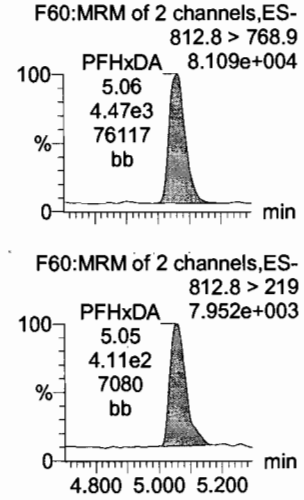

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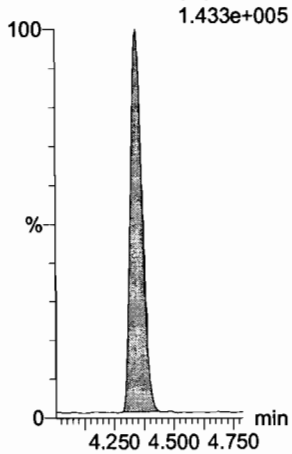
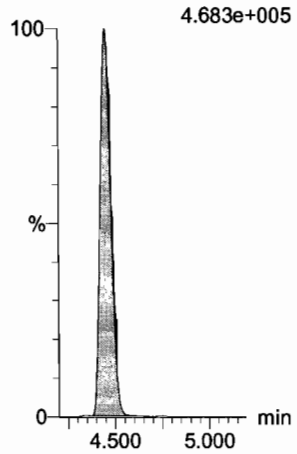


d3-N-MeFOSA



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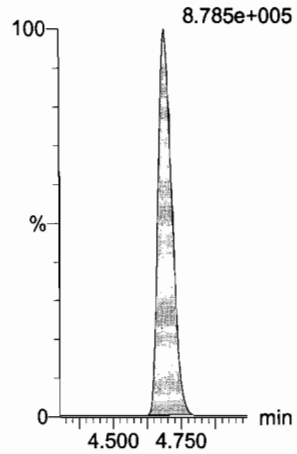

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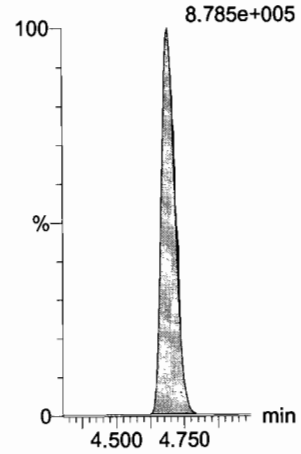

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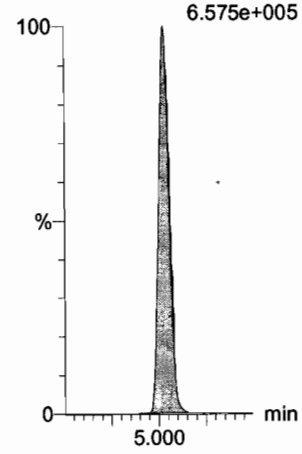

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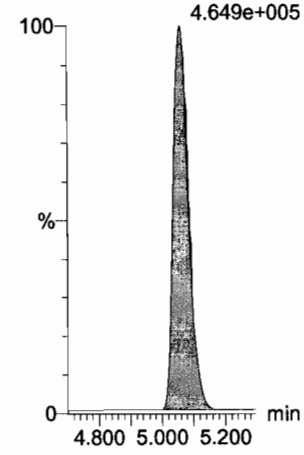

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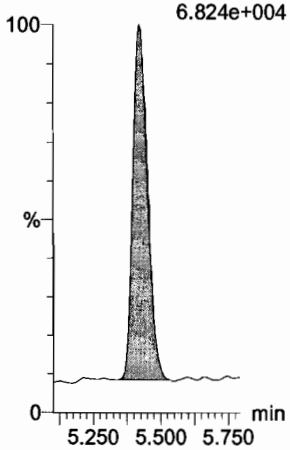
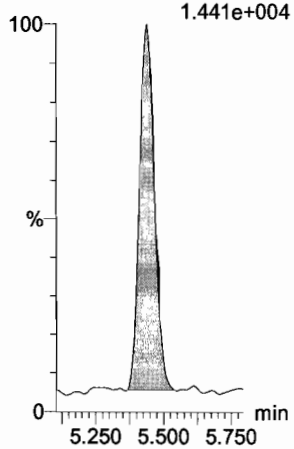
Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

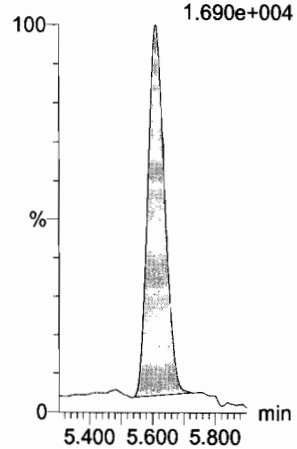
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
6.824e+004



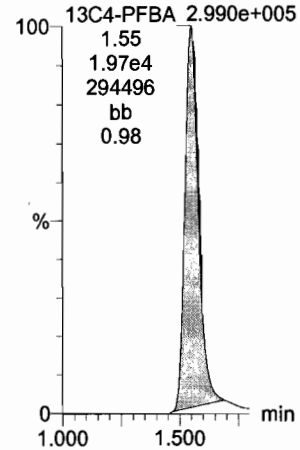
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.441e+004



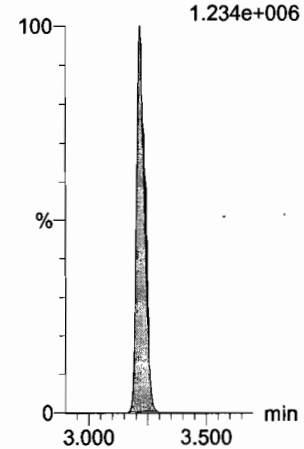
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.690e+004



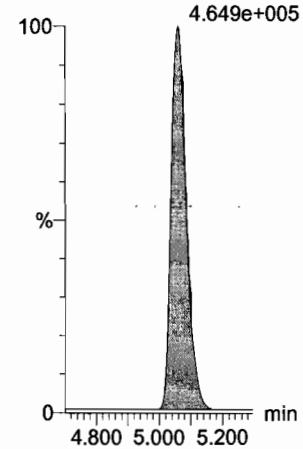
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.990e+005



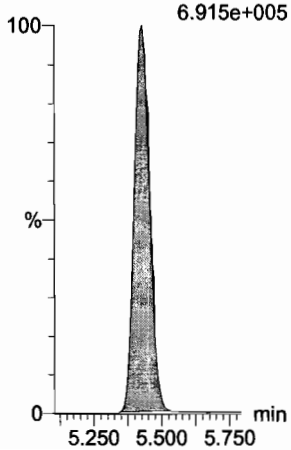
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.234e+006



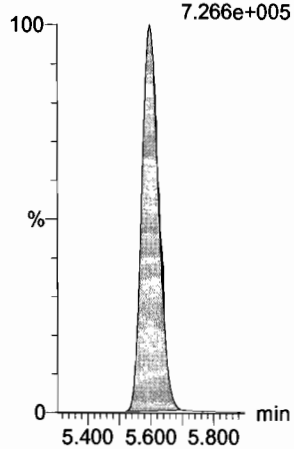
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.649e+005



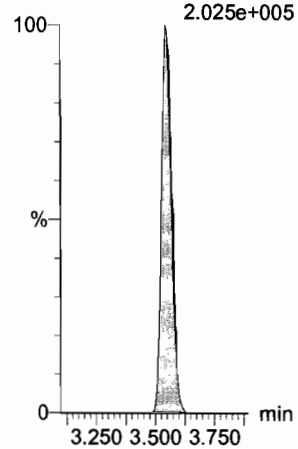
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
6.915e+005



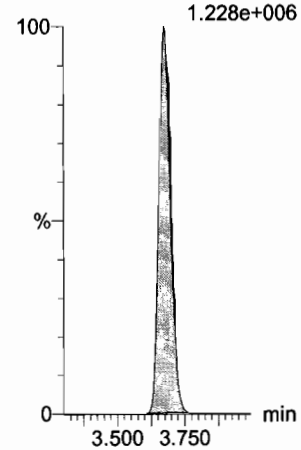
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.266e+005



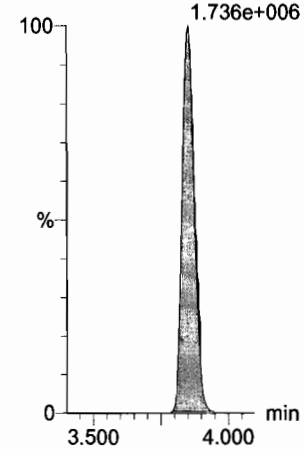
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.025e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.228e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.736e+006



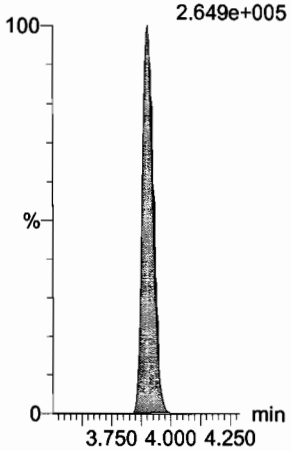
Dataset: U:\Q4.PRO\results\170725M1\170725M1-2.qld

Last Altered: Wednesday, July 26, 2017 09:49:35 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:50:51 Pacific Daylight Time

Name: 170725M1_2, Date: 25-Jul-2017, Time: 14:26:15, ID: ST170725M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

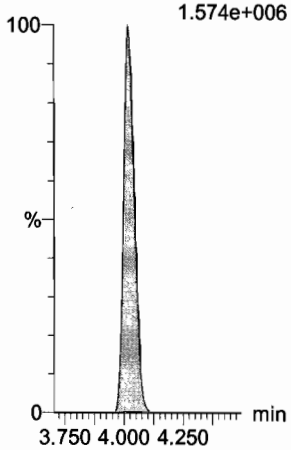
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
2.649e+005



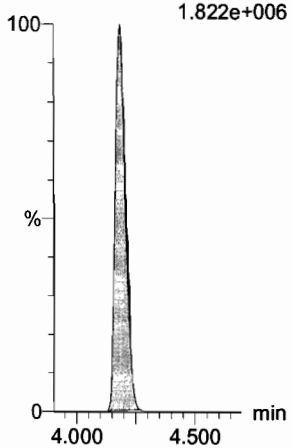
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
1.574e+006



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
1.822e+006



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170725M1\170725M1-19.qld

Last Altered: Wednesday, July 26, 2017 09:53:34 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

AC 7/26/17

Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.47e4	1.66e4		1.54	1.58	11.1	9.67	96.7
2	2	PFPeA	263.1 > 218.9	2.63e4	3.34e4		2.77	2.81	9.86	9.83	98.3
3	3	PFBS	299 > 79.7	6.25e3	4.30e3		2.96	3.00	18.2	9.77	97.7
4	4	PFHxA	313.2 > 268.9	4.19e4	1.49e4		3.19	3.22	14.1	9.24	92.4
5	5	PFHpA	363 > 318.9	3.88e4	4.12e4		3.45	3.48	11.8	9.34	93.4
6	6	PFHxS	398.9 > 79.6	5.40e3	4.14e3		3.56	3.56	16.3	9.63	96.3
7	7	6:2 FTS	427.1 > 407	8.69e3	9.47e3		3.64	3.67	11.5	10.9	108.8
8	8	PFOA	413 > 368.7	5.65e4	6.99e4		3.65	3.68	10.1	10.2	102.0
9	9	PFHpS	448.9 > 98.8	5.95e3	6.99e4		3.71	3.74	1.07	11.8	118.4
10	10	PFNA	462.9 > 418.8	6.16e4	7.03e4		3.83	3.86	10.9	9.83	98.3
11	11	PFOSA	498.1 > 77.8	6.15e3	7.52e3		3.84	3.86	10.2	9.70	97.0
12	12	PFOS	499 > 79.9	1.08e4	1.37e4		3.89	3.91	9.84	8.33	83.3
13	13	PFDA	513 > 468.8	6.86e4	6.92e4		4.01	4.03	12.4	9.45	94.5
14	14	8:2 FTS	527 > 506.9	7.82e3	7.08e3		4.00	4.02	13.8	9.38	93.8
15	15	N-MeFOSAA	570.1 > 419	1.80e4	1.49e4		4.03	4.06	195	9.83	98.3
16	16	N-EtFOSAA	584.2 > 419	1.40e4	1.48e4		4.10	4.12	154	9.55	95.5
17	17	PFUnA	562.9 > 518.9	4.63e4	7.48e4		4.17	4.19	7.73	8.74	87.4
18	18	PFDS	598.9 > 98.7	4.83e3	7.48e4		4.22	4.24	0.806	9.04	90.4
19	19	PFDoA	612.9 > 318.8	5.56e3	8.12e3		4.34	4.36	8.56	9.06	90.6
20	20	N-MeFOSA	512.1 > 168.9	1.03e4	3.01e4		4.29	4.43	51.4	49.3	98.6
21	21	PFTrDA	662.9 > 618.9	6.83e4	8.12e3		4.50	4.52	105	9.46	94.6
22	22	PFTeDA	712.9 > 668.8	4.83e4	5.36e4		4.68	4.70	11.3	9.76	97.6
23	23	N-EtFOSA	526.1 > 168.9	1.29e4	4.28e4		4.87	5.00	45.4	49.8	99.6
24	24	PFHxDA	812.8 > 768.9	6.77e4	2.50e4		5.06	5.07	13.5	9.91	99.1
25	25	PFODA	912.8 > 868.8	6.56e4	2.50e4		5.43	5.44	13.1	10.2	102.2
26	26	N-MeFOSE	616.1 > 58.9	1.55e4	4.61e4		5.42	5.44	50.5	49.3	98.6
27	27	N-EtFOSE	630.1 > 58.9	1.76e4	4.55e4		5.59	5.61	58.0	49.3	98.6
28	28	13C3-PFBA	216.1 > 171.8	1.66e4	1.99e4	0.820	1.54	1.57	10.5	12.8	102.0
29	29	13C3-PFPeA	266 > 221.8	3.34e4	5.22e4	0.248	2.77	2.82	3.19	12.9	102.9
30	30	13C3-PFBS	302 > 98.8	4.30e3	5.22e4	0.031	2.96	3.00	0.412	13.2	105.9
31	31	13C2-PFHxA	315 > 269.8	1.49e4	5.22e4	0.276	3.19	3.22	1.42	5.15	102.9

70-130

50-150

Dataset: U:\Q4.PRO\results\170725M1\170725M1-19.qld

Last Altered: Wednesday, July 26, 2017 09:53:34 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.12e4	5.22e4	0.306	3.45	3.48	3.94	12.9	103.2
33	33	18O2-PFHxS	403 > 102.6	4.14e3	9.76e3	0.393	3.56	3.55	5.31	13.5	108.1
34	34	13C2-6:2 FTS	429.1 > 408.9	9.47e3	6.73e4	0.158	3.64	3.67	1.76	11.2	89.3
35	35	13C2-PFOA	414.9 > 369.7	6.99e4	6.73e4	1.067	3.65	3.68	13.0	12.2	97.3
36	36	13C5-PFNA	468.2 > 422.9	7.03e4	8.23e4	0.852	3.83	3.86	10.7	12.5	100.2
37	37	13C8-PFOSA	506.1 > 77.7	7.52e3	7.61e4	0.098	3.84	3.87	1.24	12.6	100.6
38	38	13C8-PFOS	507 > 79.9	1.37e4	1.35e4	0.936	3.89	3.91	12.7	13.5	108.3
39	39	13C2-PFDA	515.1 > 469.9	6.92e4	8.07e4	0.810	4.01	4.03	10.7	13.2	105.8
40	40	13C2-8:2 FTS	529.1 > 508.7	7.08e3	8.07e4	0.086	4.00	4.02	1.10	12.8	102.4
41	41	d3-N-MeFOSAA	573.3 > 419	1.49e4	7.61e4	0.014	4.03	4.06	2.46	179	110.3
42	42	d5-N-EtFOSAA	589.3 > 419	1.48e4	7.61e4	0.014	4.12	4.12	2.43	174	107.3
43	43	13C2-PFUnA	565 > 519.8	7.48e4	7.61e4	0.962	4.17	4.19	12.3	12.8	102.2
44	44	13C2-PFDoA	615 > 569.7	8.12e3	7.61e4	0.094	4.34	4.36	1.33	14.1	113.0
45	45	d3-N-MeFOSA	515.2 > 168.9	3.01e4	7.61e4	0.034	4.29	4.46	4.95	144	95.9
46	46	13C2-PFTeDA	714.8 > 669.6	5.36e4	7.61e4	0.694	4.68	4.70	8.81	12.7	101.5
47	47	d5-N-ETFOSA	531.1 > 168.9	4.28e4	7.61e4	0.049	5.01	5.04	7.02	144	96.2
48	48	13C2-PFHxDA	815 > 769.7	2.50e4	7.61e4	0.843	5.06	5.07	4.10	4.87	97.4
49	49	d7-N-MeFOSE	623.1 > 58.9	4.61e4	7.61e4	0.055	5.42	5.43	7.57	139	92.4
50	50	d9-N-EtFOSE	639.2 > 58.8	4.55e4	7.61e4	0.053	5.59	5.60	7.47	140	93.2
51	51	13C4-PFBA	217 > 171.8	1.99e4	1.99e4	1.000	1.54	1.58	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	5.22e4	5.22e4	1.000	3.19	3.22	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	9.76e3	9.76e3	1.000	3.56	3.55	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.73e4	6.73e4	1.000	3.65	3.68	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	8.23e4	8.23e4	1.000	3.83	3.86	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.35e4	1.35e4	1.000	3.89	3.91	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	8.07e4	8.07e4	1.000	4.01	4.03	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	7.61e4	7.61e4	1.000	4.17	4.19	12.5	12.5	100.0

50 ↓ 150

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 10:28:43 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:29:07 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170725M1_1	IPA	25-Jul-17	14:15:31
2	170725M1_2	ST170725M1-1 PFC CS-1 17G2502	25-Jul-17	14:26:15
3	170725M1_3	B7G0107-BS1 OPR 0.125	25-Jul-17	14:36:53
4	170725M1_4	IPA	25-Jul-17	14:47:39
5	170725M1_5	B7G0107-BLK1 Method Blank 0.125	25-Jul-17	14:58:18
6	170725M1_6	1700851-01RE1 SB 01_20170710 0.12032	25-Jul-17	15:08:56
7	170725M1_7	1700851-02RE1 EB 01_20170710 0.11963	25-Jul-17	15:19:35
8	170725M1_8	1700851-03RE1 18-GW-18MCAS03-5-20170...	25-Jul-17	15:30:13
9	170725M1_9	1700851-04RE1 18-GW-18MCAS03-2-20170...	25-Jul-17	15:40:51
10	170725M1_10	1700851-05RE1 18-GW-18MCAS02-5-20170...	25-Jul-17	15:51:30
11	170725M1_11	1700851-06RE1 18-GW-18MCAS07-3-20170...	25-Jul-17	16:02:08
12	170725M1_12	1700851-07RE1 24-GW-24MW08B-20170710...	25-Jul-17	16:12:47
13	170725M1_13	1700851-08RE1 DUP03-20170710 0.12071	25-Jul-17	16:23:25
14	170725M1_14	1700851-09RE1 24-GW-24EX11-20170710 0....	25-Jul-17	16:34:03
15	170725M1_15	1700851-10RE1 SGV-GW-SGV Transfer Stati...	25-Jul-17	16:44:46
16	170725M1_16	B7G0107-MS2 Matrix Spike 0.11945	25-Jul-17	16:55:33
17	170725M1_17	B7G0107-MSD2 Matrix Spike Dup 0.12098	25-Jul-17	17:06:33
18	170725M1_18	IPA	25-Jul-17	17:17:45
19	170725M1_19	ST170725M1-2 PFC CS3 17G2503	25-Jul-17	17:28:43
20	170725M1_20	IPA	25-Jul-17	17:39:41
21	170725M1_21	1700852-01RE1 EB 02_20170711 0.12122	25-Jul-17	17:50:30
22	170725M1_22	1700852-02RE1 DUP01-20170711 0.11996	25-Jul-17	18:01:17
23	170725M1_23	1700852-03RE1 1-GW-01-MW204-20170711 ...	25-Jul-17	18:12:03
24	170725M1_24	B7G0107-MS1 Matrix Spike 0.12078	25-Jul-17	18:22:49
25	170725M1_25	B7G0107-MSD1 Matrix Spike Dup 0.11599	25-Jul-17	18:33:36
26	170725M1_26	1700852-04RE1 1-GW-01-MW206-20170711 ...	25-Jul-17	18:44:23
27	170725M1_27	1700852-05RE1 2-GW-02DGMW59-2017071...	25-Jul-17	18:55:10
28	170725M1_28	1700852-06RE1 2-GW-02NEW16-20170711 ...	25-Jul-17	19:05:57
29	170725M1_29	1700852-07RE1 5-GW-05-DGMW68A-20170...	25-Jul-17	19:16:44
30	170725M1_30	1700852-08RE1 1-GW-01-PZ20-20170711 0....	25-Jul-17	19:27:29
31	170725M1_31	1700852-09RE1 1-GW-02-MW209-20170711 ...	25-Jul-17	19:38:30

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 10:28:43 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:29:07 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170725M1_32	IPA	25-Jul-17	19:49:44
33	170725M1_33	ST170725M1-3 PFC CS3 17G2503	25-Jul-17	20:00:29
34	170725M1_34	IPA	25-Jul-17	20:11:07
35	170725M1_35	B7G0108-BS1 OPR 0.125	25-Jul-17	20:21:46
36	170725M1_36	IPA	25-Jul-17	20:32:24
37	170725M1_37	B7G0108-BLK1 Method Blank 0.125	25-Jul-17	20:43:03
38	170725M1_38	1700856-01RE1 INFLUENT-20170710 0.121	25-Jul-17	20:53:41
39	170725M1_39	1700856-02RE1 DUP05-20170710 0.11647	25-Jul-17	21:04:19
40	170725M1_40	1700856-03RE1 MID-POINT-20170710 0.11731	25-Jul-17	21:14:58
41	170725M1_41	1700856-04RE1 EFFLUENT-20170710 0.12084	25-Jul-17	21:25:36
42	170725M1_42	B7G0108-MS1 Matrix Spike 0.12162	25-Jul-17	21:36:14
43	170725M1_43	B7G0108-MSD1 Matrix Spike Dup 0.11849	25-Jul-17	21:47:01
44	170725M1_44	1700856-05RE1 MW-37S-20170711 0.11696	25-Jul-17	21:57:39
45	170725M1_45	1700856-06RE1 ERB-01-20170711 0.12043	25-Jul-17	22:08:34
46	170725M1_46	1700856-07RE1 11-MW-1-20170710 0.11482	25-Jul-17	22:19:33
47	170725M1_47	1700856-08RE1 LF-MW-54BR-20170710 0.11...	25-Jul-17	22:30:16
48	170725M1_48	1700856-09RE1 MW-48BR-20170711 0.12084	25-Jul-17	22:40:54
49	170725M1_49	1700856-10RE1 MW-34S-20170711 0.11812	25-Jul-17	22:51:33
50	170725M1_50	IPA	25-Jul-17	23:02:11
51	170725M1_51	ST170725M1-4 PFC CS3 17G2503	25-Jul-17	23:12:50
52	170725M1_52	IPA	25-Jul-17	23:23:36
53	170725M1_53	1700856-11RE1 MW-31BR-20170711 0.11774	25-Jul-17	23:34:14
54	170725M1_54	1700856-12RE1 MW-31S-20170711 0.11732	25-Jul-17	23:45:01
55	170725M1_55	1700732-04RE1@5X MW PFC 03 0.11929	25-Jul-17	23:55:47
56	170725M1_56	1700906-05@5X MW-02BR-20170718 0.125	26-Jul-17	00:06:56
57	170725M1_57	1700907-04@5X AT028-MW17-06-071717-13...	26-Jul-17	00:18:17
58	170725M1_58	1700907-09@5X AT028-MW17-01-071817-09...	26-Jul-17	00:29:47
59	170725M1_59	IPA	26-Jul-17	00:40:33
60	170725M1_60	ST170725M1-5 PFC CS3 17G2503	26-Jul-17	00:51:21
61	170725M1_61	IPA	26-Jul-17	01:02:08
62	170725M1_62	1700845-01@5X MW-29S-20170707 0.12034	26-Jul-17	01:12:49
63	170725M1_63	1700845-02@5X DUP04-20170707 0.12279	26-Jul-17	01:23:33
64	170725M1_64	1700845-03@20X MW-27S-20170707 0.11824	26-Jul-17	01:34:11
65	170725M1_65	B7G0033-MS1@20X Matrix Spike 0.12283	26-Jul-17	01:44:49

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 10:28:43 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 10:29:07 Pacific Daylight Time

Compound name: PFBA

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66	170725M1_66	B7G0033-MSD1@20X Matrix Spike Dup 0.124	26-Jul-17	01:55:28
67	170725M1_67	1700845-04@5X MW-30S-20170707 0.11933	26-Jul-17	02:06:06
68	170725M1_68	1700894-02@5X POND 1 at PD 0.125	26-Jul-17	02:16:53
69	170725M1_69	1700894-03@5X POND 1 -STAFF 0.125	26-Jul-17	02:27:50
70	170725M1_70	1700894-04@10X SEED-POND 1 0.125	26-Jul-17	02:38:34
71	170725M1_71	1700732-05RE1 SD-46 3.2	26-Jul-17	02:49:12
72	170725M1_72	IPA	26-Jul-17	02:59:50
73	170725M1_73	ST170725M1-6 PFC CS3 17G2503	26-Jul-17	03:10:29
74	170725M1_74	IPA	26-Jul-17	03:21:15

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170725M1\170725M1-19.qld

Last Altered: Wednesday, July 26, 2017 09:53:34 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

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Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

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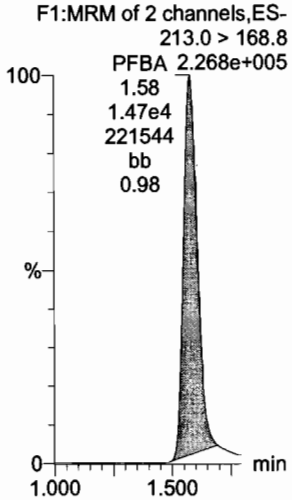

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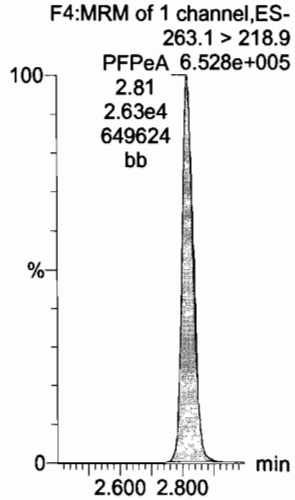

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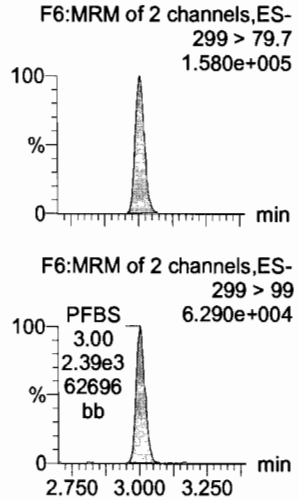

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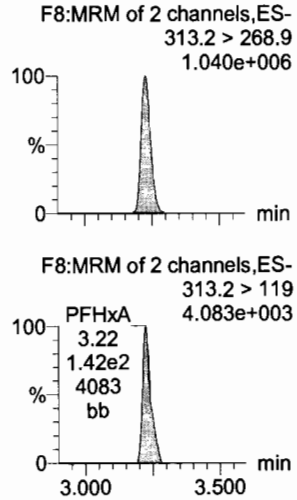

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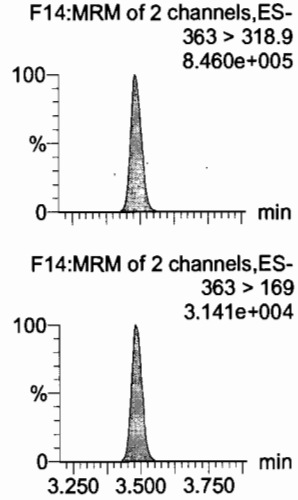

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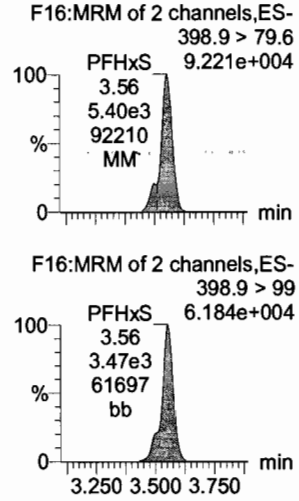

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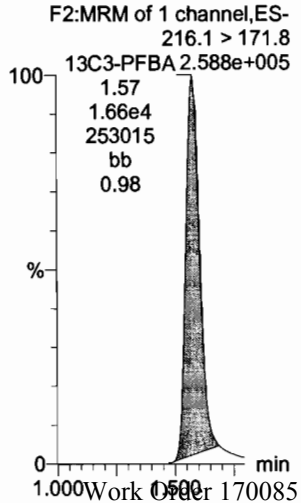

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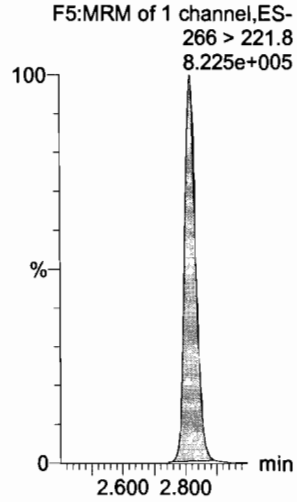

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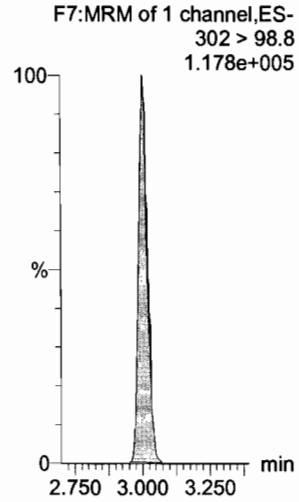

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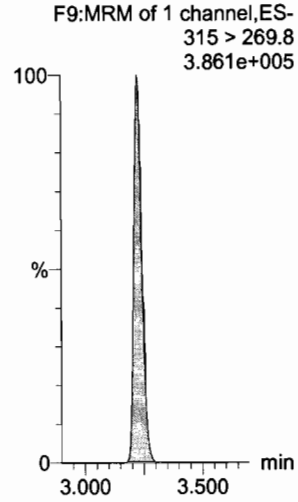

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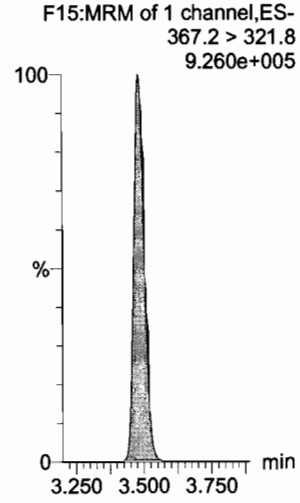
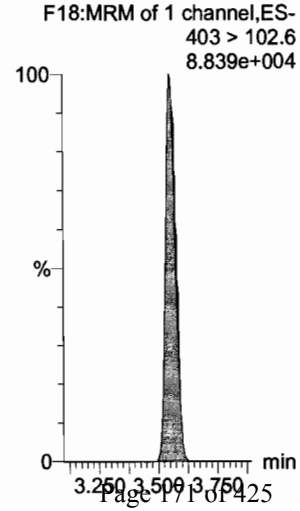


18O2-PFHxS



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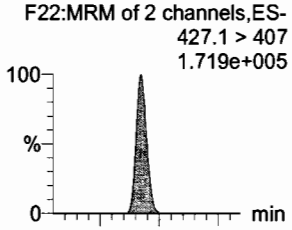
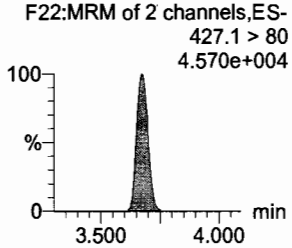
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

6:2 FTS





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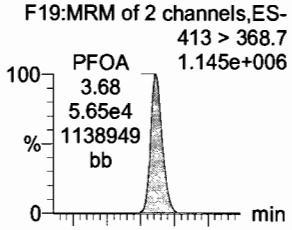

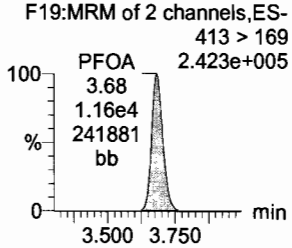

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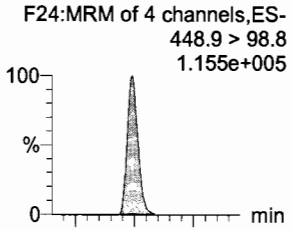

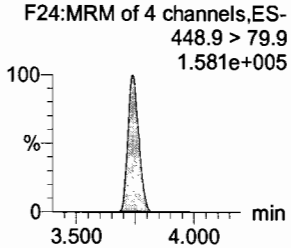

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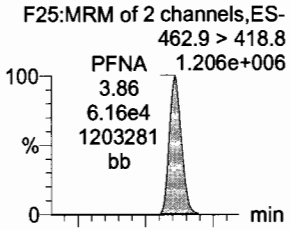

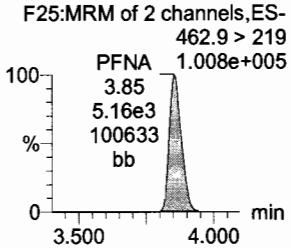

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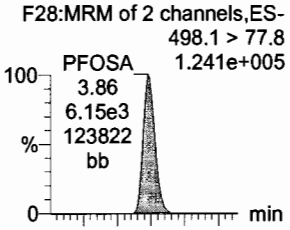

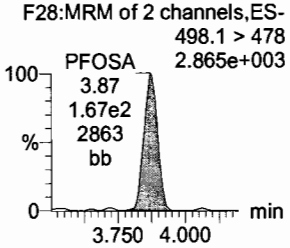

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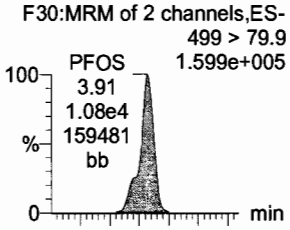

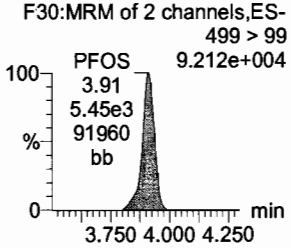

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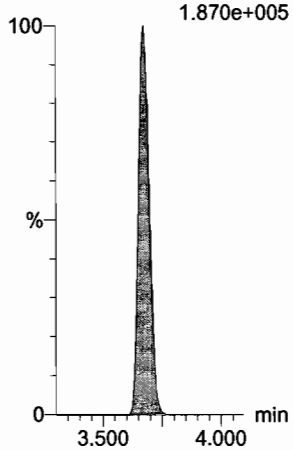
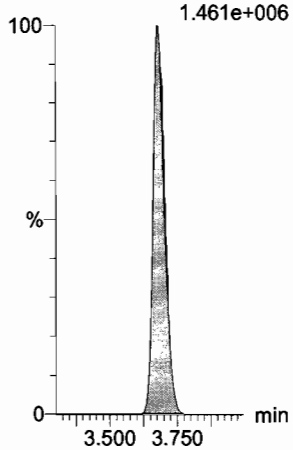


13C2-PFOA



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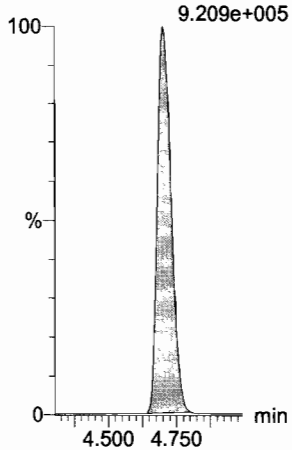

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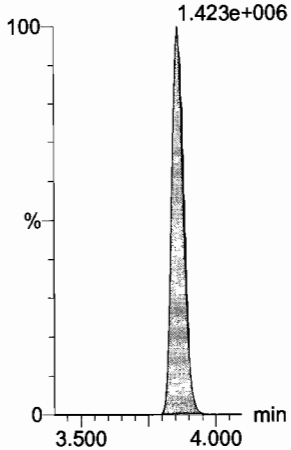

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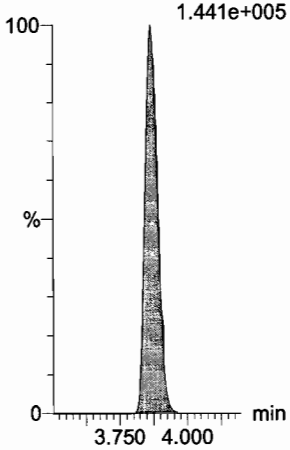

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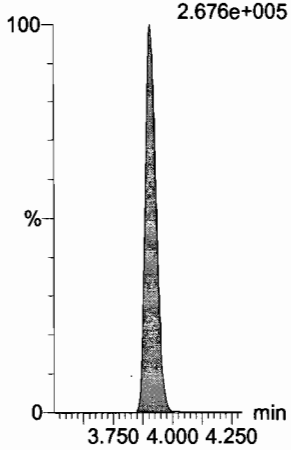

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Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

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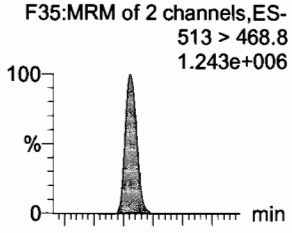

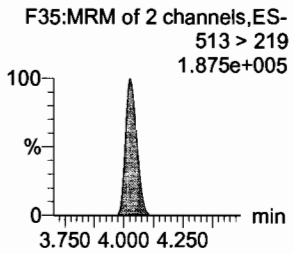

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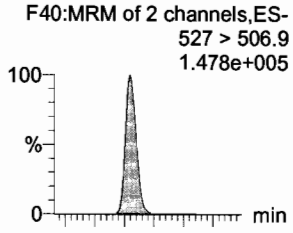

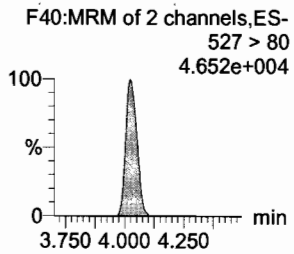

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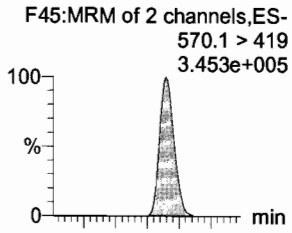

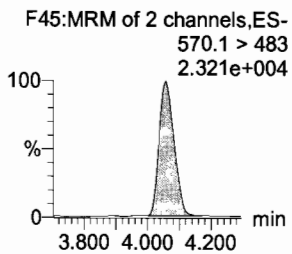

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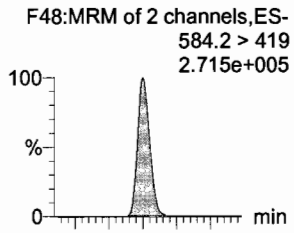

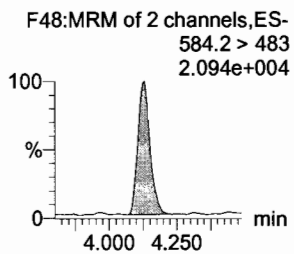

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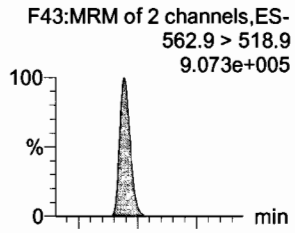

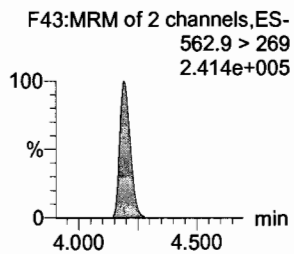

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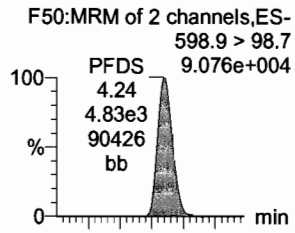

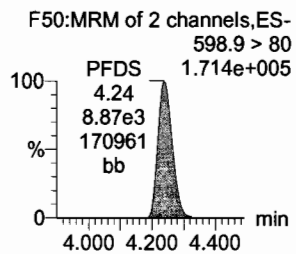

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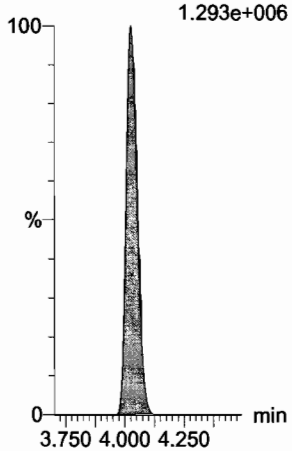

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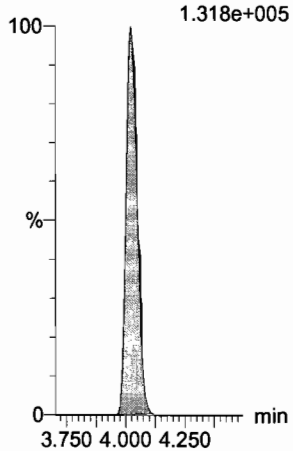

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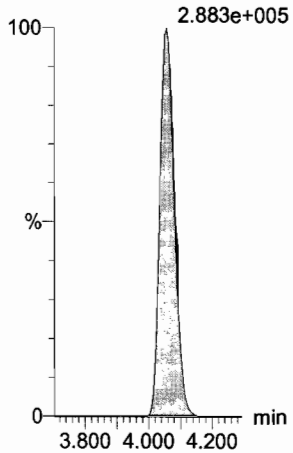

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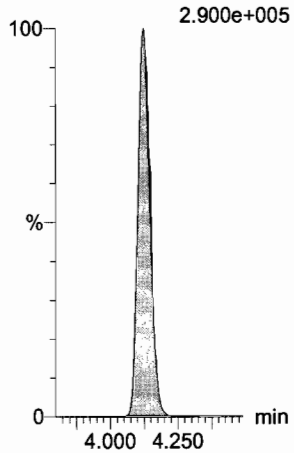

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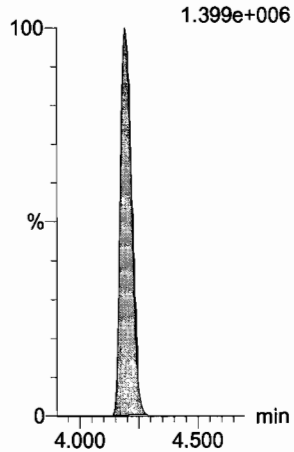
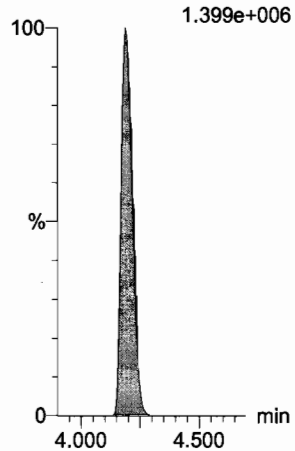


13C2-PFUnA

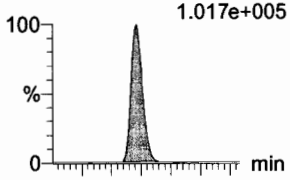


Dataset: U:\Q4.PRO\results\170725M1\170725M1-19.qld

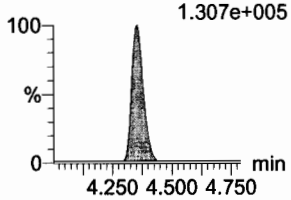
Last Altered: Wednesday, July 26, 2017 09:53:34 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

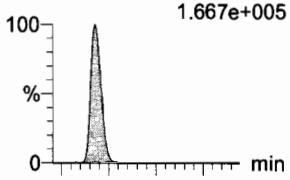
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
1.017e+005



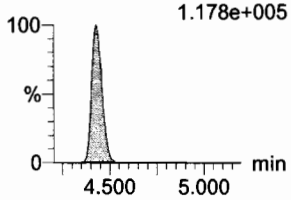
F51:MRM of 2 channels,ES-
612.9 > 569
1.307e+005



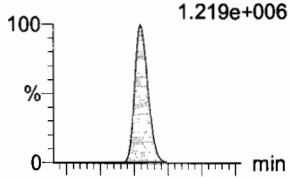
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
1.667e+005



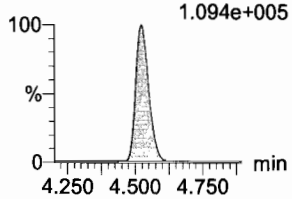
F34:MRM of 2 channels,ES-
512.1 > 219
1.178e+005



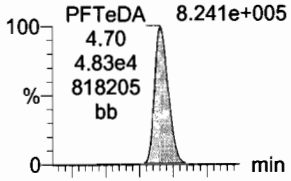
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
1.219e+006



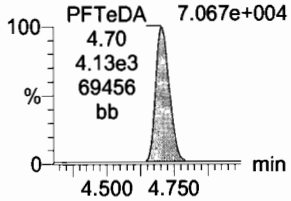
F57:MRM of 2 channels,ES-
662.9 > 319
1.094e+005



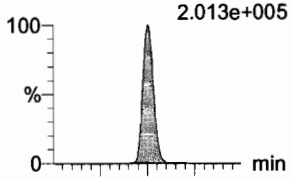
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
8.241e+005



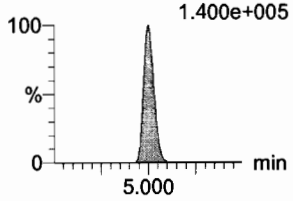
F58:MRM of 4 channels,ES-
712.9 > 369
7.067e+004



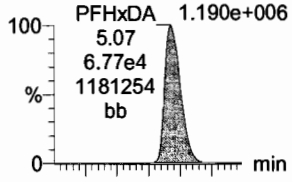
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
2.013e+005



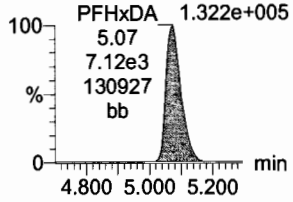
F39:MRM of 2 channels,ES-
526.1 > 219
1.400e+005



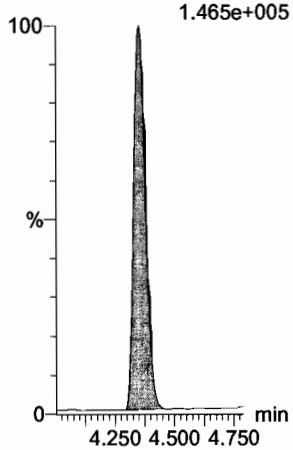
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
1.190e+006



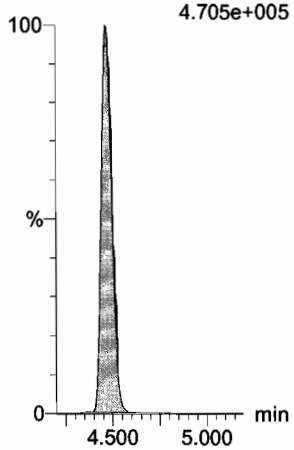
F60:MRM of 2 channels,ES-
812.8 > 219
1.322e+005



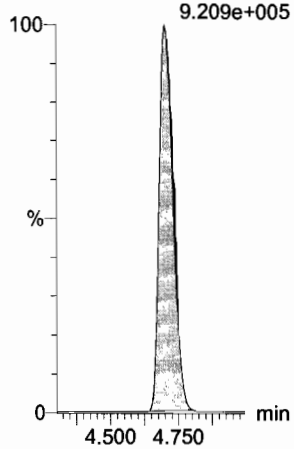
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.465e+005



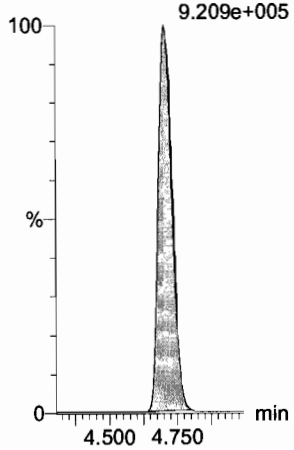
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
4.705e+005



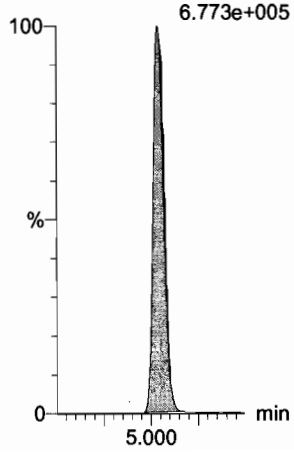
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
9.209e+005



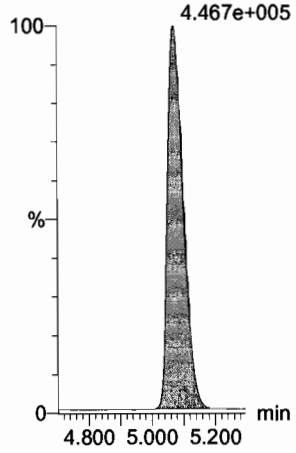
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
9.209e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
6.773e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.467e+005

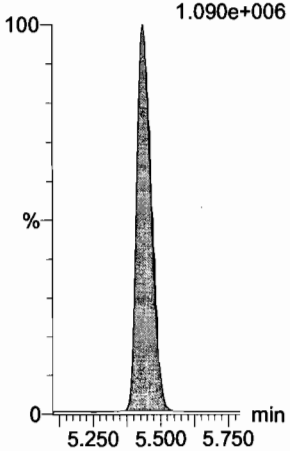


Dataset: U:\Q4.PRO\results\170725M1\170725M1-19.qld

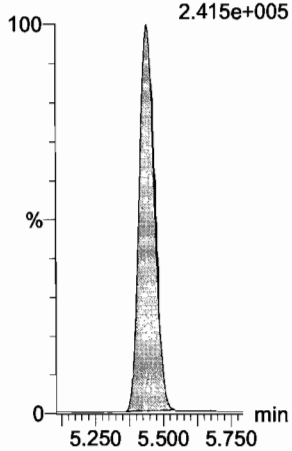
Last Altered: Wednesday, July 26, 2017 09:53:34 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

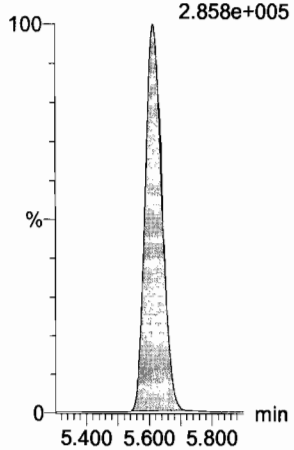
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.090e+006



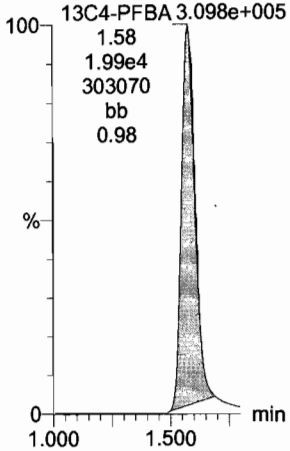
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.415e+005



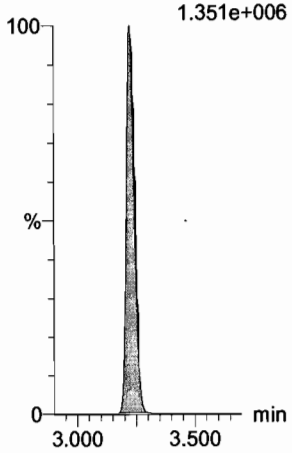
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.858e+005



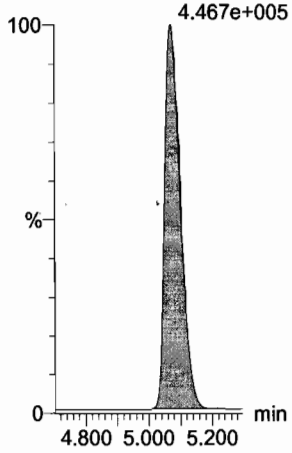
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
13C4-PFBA 3.098e+005
1.58
1.99e4
303070
bb
0.98



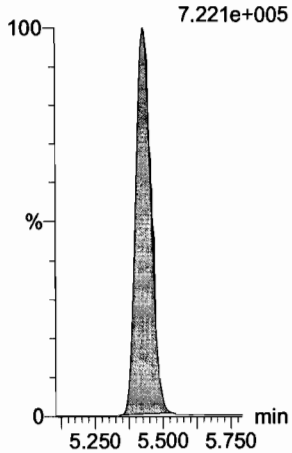
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.351e+006



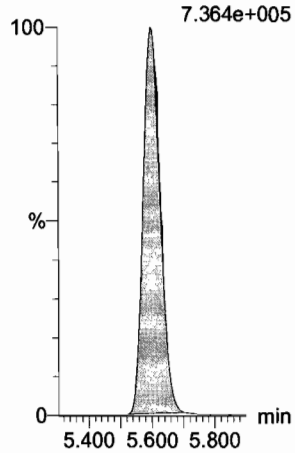
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.467e+005



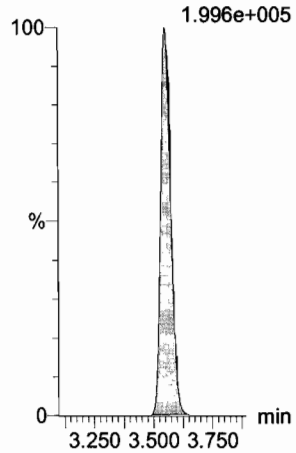
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.221e+005



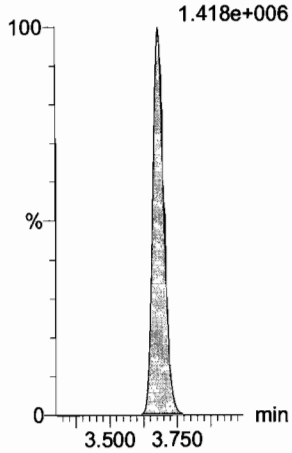
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.364e+005



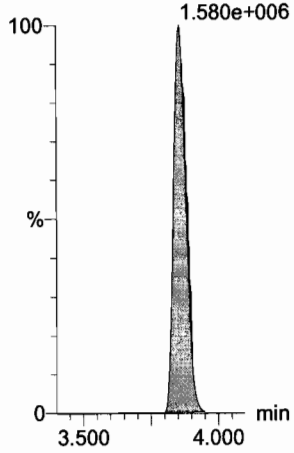
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.996e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.418e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.580e+006

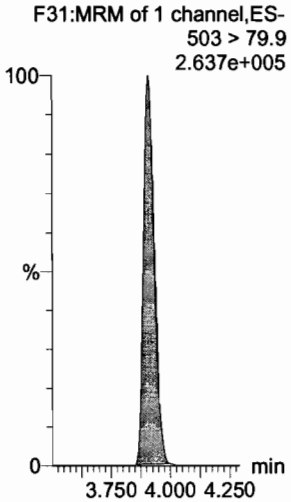


Dataset: U:\Q4.PRO\results\170725M1\170725M1-19.qld

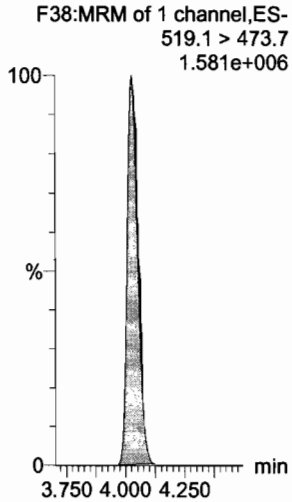
Last Altered: Wednesday, July 26, 2017 09:53:34 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 09:54:02 Pacific Daylight Time

Name: 170725M1_19, Date: 25-Jul-2017, Time: 17:28:43, ID: ST170725M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

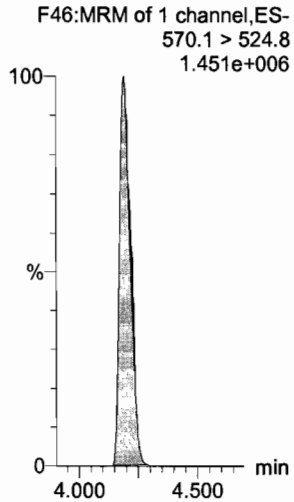
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
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(A) outside method limits. Not used.

AC 7/26/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	8.99e2	1.75e4		1.54	1.57	0.644	0.426	85.2	70-130
2	2	PFPeA	263.1 > 218.9	1.67e3	3.51e4		2.77	2.81	0.596	0.496	99.1	
3	3	PFBS	299 > 79.7	3.91e2	4.36e3		2.96	3.01	1.12	0.564	112.8	
4	4	PFHxA	313.2 > 268.9	2.75e3	1.55e4		3.19	3.23	0.887	0.484	96.7	
5	5	PFHpA	363 > 318.9	2.74e3	4.48e4		3.45	3.49	0.766	0.547	109.5	
6	6	PFHxS	398.9 > 79.6	3.50e2	4.59e3		3.56	3.56	0.953	0.565	113.0	
7	7	6:2 FTS	427.1 > 407	5.46e2	1.26e4		3.64	3.68	0.543	0.380	76.1	
8	8	PFOA	413 > 368.7	4.00e3	7.18e4		3.65	3.69	0.696	0.511	102.3	
9	9	PFHpS	448.9 > 98.8	4.13e2	7.18e4		3.71	3.75	0.0719	0.645	129.0	
10	10	PFNA	462.9 > 418.8	4.12e3	7.76e4		3.83	3.86	0.664	0.470	94.1	
11	11	PFOSA	498.1 > 77.8	2.94e2	7.19e3		3.84	3.87	0.510	0.440	87.9	
12	12	PFOS	499 > 79.9	8.29e2	1.41e4		3.89	3.91	0.737	0.604	120.9	
13	13	PFDA	513 > 468.8	3.70e3	6.77e4		4.01	4.03	0.684	0.428	85.6	
14	14	8:2 FTS	527 > 506.9	5.62e2	7.80e3		4.00	4.03	0.902	0.514	102.8	
15	15	N-MeFOSAA	570.1 > 419	9.07e2	1.76e4		4.03	4.06	8.37	0.393	78.6	
16	16	N-EtFOSAA	584.2 > 419	9.83e2	1.78e4		4.10	4.13	8.98	0.552	110.4	
17	17	PFUnA	562.9 > 518.9	2.99e3	6.33e4		4.17	4.20	0.591	0.648	129.5	
18	18	PFDS	598.9 > 98.7	3.30e2	6.33e4		4.22	4.24	0.0651	0.739	(A) 147.8	
19	19	PFDoA	612.9 > 318.8	3.62e2	8.21e3		4.34	4.36	0.551	0.375	75.1	
20	20	N-MeFOSA	512.1 > 168.9	6.19e2	3.15e4		4.29	4.46	2.95	2.63	105.3	
21	21	PFTrDA	662.9 > 618.9	4.22e3	8.21e3		4.50	4.52	6.43	0.425	85.0	
22	22	PFTeDA	712.9 > 668.8	3.14e3	5.29e4		4.68	4.70	0.743	0.550	109.9	
23	23	N-EtFOSA	526.1 > 168.9	7.86e2	4.28e4		4.87	5.03	2.75	2.68	107.4	
24	24	PFHxDA	812.8 > 768.9	4.82e3	2.52e4		5.06	5.07	0.958	0.515	103.0	
25	25	PFODA	912.8 > 868.8	3.54e3	2.52e4		5.43	5.44	0.704	0.473	94.5	
26	26	N-MeFOSE	616.1 > 58.9	8.83e2	4.51e4		5.42	5.46	2.94	2.44	97.4	
27	27	N-EtFOSE	630.1 > 58.9	1.01e3	4.64e4		5.59	5.64	3.27	2.37	95.0	
28	28	13C3-PFBA	216.1 > 171.8	1.75e4	2.16e4	0.820	1.54	1.57	10.1	12.3	98.3	50-150
29	29	13C3-PFPeA	266 > 221.8	3.51e4	5.63e4	0.248	2.77	2.81	3.11	12.5	100.4	
30	30	13C3-PFBS	302 > 98.8	4.36e3	5.63e4	0.031	2.96	3.00	0.387	12.4	99.6	
31	31	13C2-PFHxA	315 > 269.8	1.55e4	5.63e4	0.276	3.19	3.23	1.38	4.98	99.6	

Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.48e4	5.63e4	0.306	3.45	3.49	3.98	13.0	104.1
33	33	18O2-PFHxS	403 > 102.6	4.59e3	1.11e4	0.393	3.56	3.56	5.18	13.2	105.6
34	34	13C2-6:2 FTS	429.1 > 408.9	1.26e4	6.93e4	0.158	3.64	3.68	2.27	14.4	114.9
35	35	13C2-PFOA	414.9 > 369.7	7.18e4	6.93e4	1.067	3.65	3.69	13.0	12.1	97.1
36	36	13C5-PFNA	468.2 > 422.9	7.76e4	9.02e4	0.852	3.83	3.86	10.8	12.6	101.0
37	37	13C8-PFOSA	506.1 > 77.7	7.19e3	7.85e4	0.098	3.84	3.87	1.15	11.7	93.3
38	38	13C8-PFOS	507 > 79.9	1.41e4	1.49e4	0.936	3.89	3.91	11.8	12.6	100.6
39	39	13C2-PFDA	515.1 > 469.9	6.77e4	7.65e4	0.810	4.01	4.04	11.1	13.7	109.3
40	40	13C2-8:2 FTS	529.1 > 508.7	7.80e3	7.65e4	0.086	4.00	4.03	1.27	14.9	119.1
41	41	d3-N-MeFOSAA	573.3 > 419	1.76e4	7.85e4	0.014	4.03	4.06	2.80	205	125.9
42	42	d5-N-EtFOSAA	589.3 > 419	1.78e4	7.85e4	0.014	4.12	4.12	2.83	203	125.0
43	43	13C2-PFUnA	565 > 519.8	6.33e4	7.85e4	0.962	4.17	4.19	10.1	10.5	83.8
44	44	13C2-PFDoA	615 > 569.7	8.21e3	7.85e4	0.094	4.34	4.36	1.31	13.8	110.8
45	45	d3-N-MeFOSA	515.2 > 168.9	3.15e4	7.85e4	0.034	4.29	4.50	5.02	146	97.3
46	46	13C2-PFTeDA	714.8 > 669.6	5.29e4	7.85e4	0.694	4.68	4.70	8.43	12.1	97.1
47	47	d5-N-ETFOSA	531.1 > 168.9	4.28e4	7.85e4	0.049	5.01	5.07	6.82	140	93.4
48	48	13C2-PFHxDA	815 > 769.7	2.52e4	7.85e4	0.843	5.06	5.07	4.01	4.75	95.1
49	49	d7-N-MeFOSE	623.1 > 58.9	4.51e4	7.85e4	0.055	5.42	5.45	7.19	132	87.7
50	50	d9-N-EtFOSE	639.2 > 58.8	4.64e4	7.85e4	0.053	5.59	5.62	7.38	138	92.1
51	51	13C4-PFBA	217 > 171.8	2.16e4	2.16e4	1.000	1.54	1.57	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	5.63e4	5.63e4	1.000	3.19	3.23	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	1.11e4	1.11e4	1.000	3.56	3.56	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.93e4	6.93e4	1.000	3.65	3.69	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	9.02e4	9.02e4	1.000	3.83	3.86	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.49e4	1.49e4	1.000	3.89	3.91	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	7.65e4	7.65e4	1.000	4.01	4.04	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	7.85e4	7.85e4	1.000	4.17	4.20	12.5	12.5	100.0

50-150

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 31, 2017 15:38:39 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:39:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170726M1_1	IPA	26-Jul-17	11:02:28
2	170726M1_2	ST170726M1-1 PFC CS-1 17G2502	26-Jul-17	11:13:27
3	170726M1_3	IPA	26-Jul-17	11:24:08
4	170726M1_4	1700851-04RE1@10X 18-GW-18MCAS03-2-...	26-Jul-17	11:34:55
5	170726M1_5	1700851-09RE1@10X 24-GW-24EX11-20170...	26-Jul-17	11:45:44
6	170726M1_6	IPA	26-Jul-17	11:56:28
7	170726M1_7	IPA	26-Jul-17	12:07:14
8	170726M1_8	1700851-05RE1 18-GW-18MCAS02-5-20170...	26-Jul-17	12:18:02
9	170726M1_9	1700851-10RE1 SGV-GW-SGV Transfer Stati...	26-Jul-17	12:28:43
10	170726M1_10	ST170726M1-2 PFC CS3 17G2503	26-Jul-17	12:39:26
11	170726M1_11	IPA	26-Jul-17	12:50:13

LC Calibration Standards Review Checklist

M Q4 7/26/17

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	NA
Calibration ID:	ST170726M1-1	(L) M H	NA	☐	☐	☐	☐	☐	☐
Calibration ID:	↓ -2	L (M) H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 6/21/17

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: 7/27/17
Initials/Date

Comments:
Full List

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

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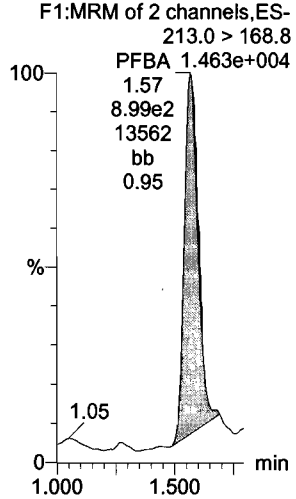

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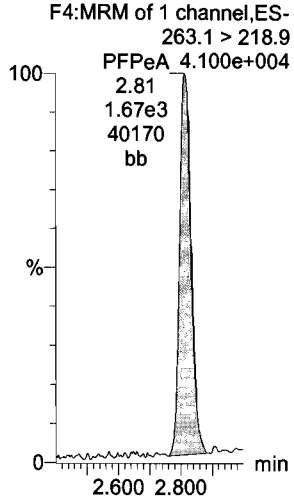

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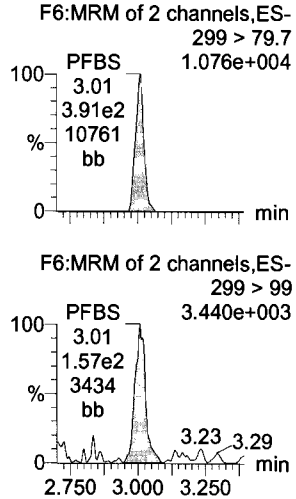

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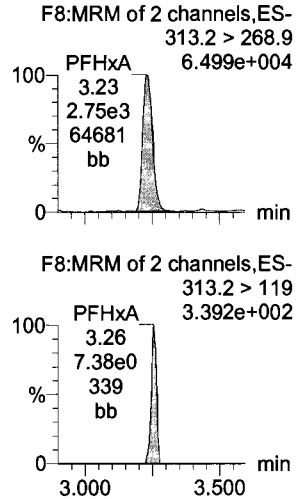

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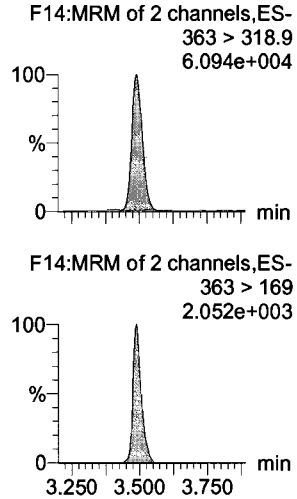

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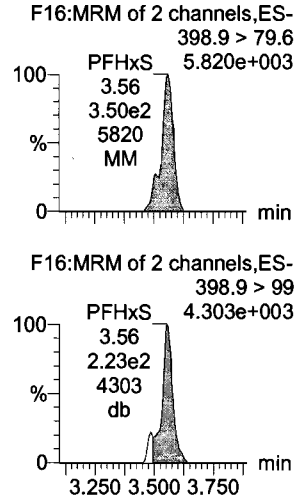

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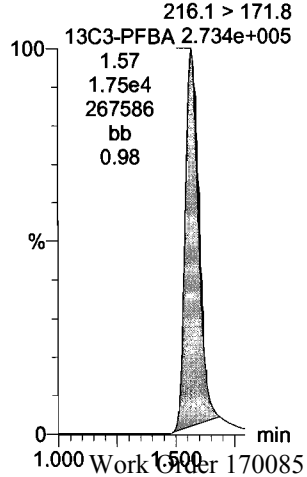

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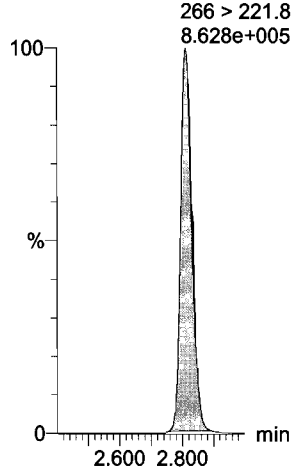

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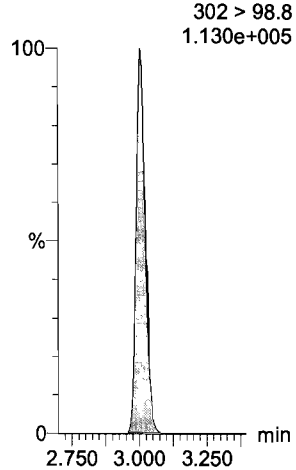

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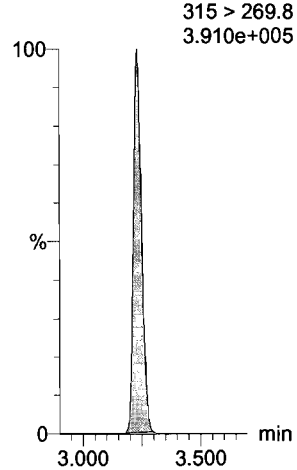

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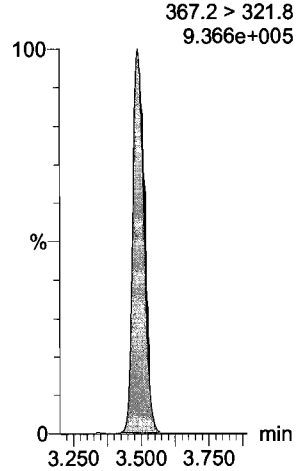

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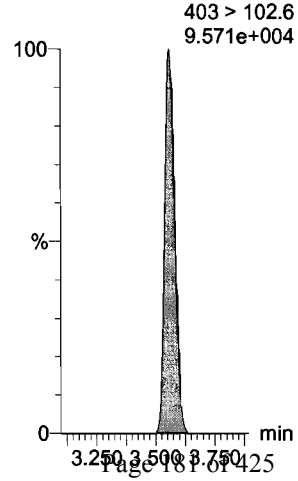


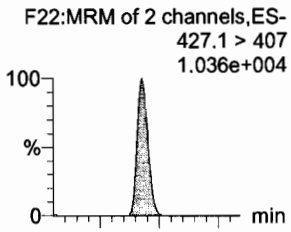
Vista Analytical Laboratory

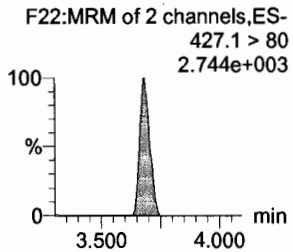
Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

6:2 FTS





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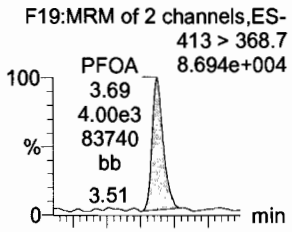

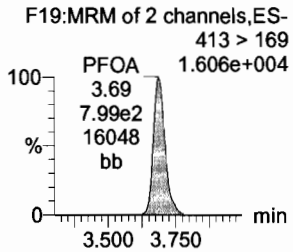

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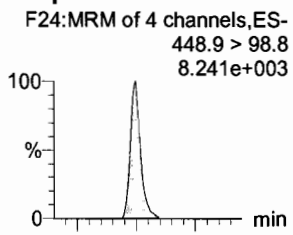

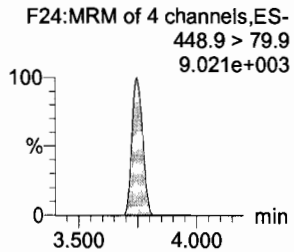

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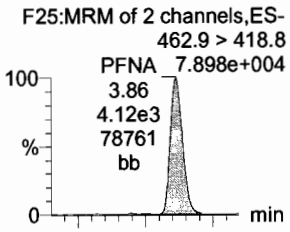

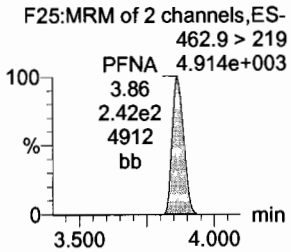

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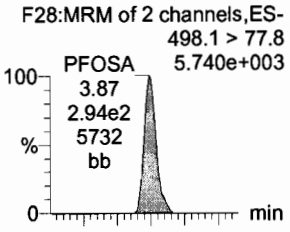

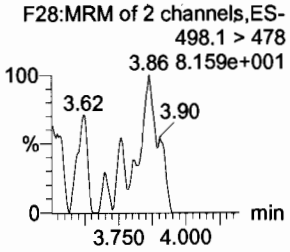

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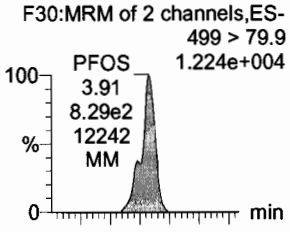

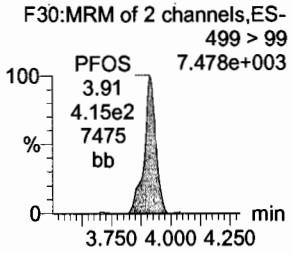

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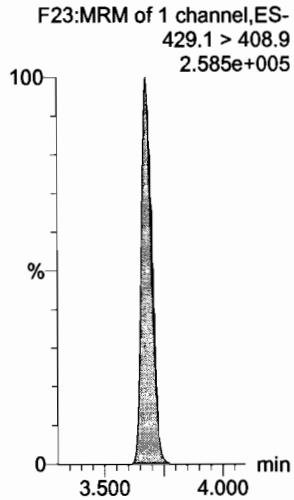

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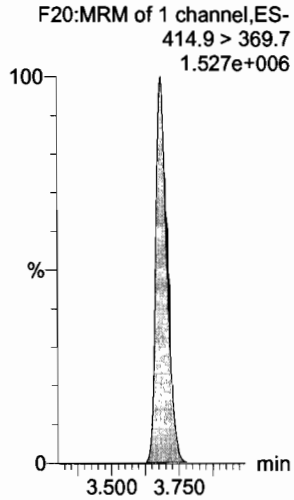

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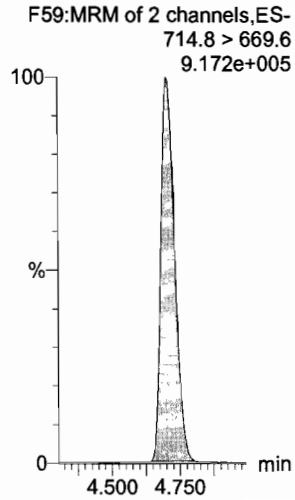

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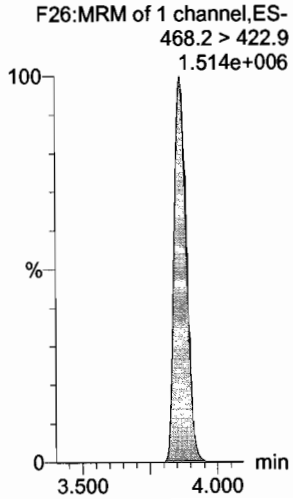

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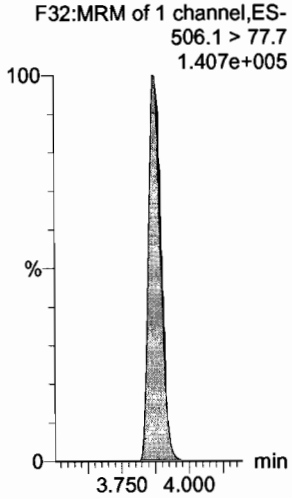

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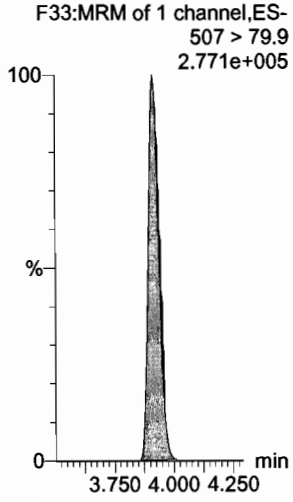

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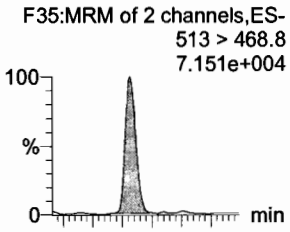
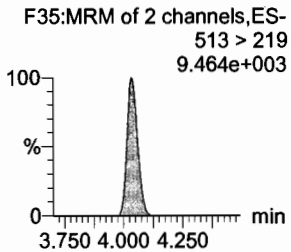
Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

PFDA





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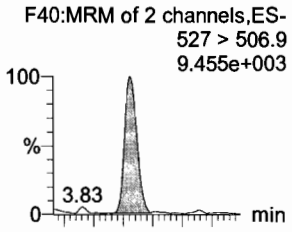
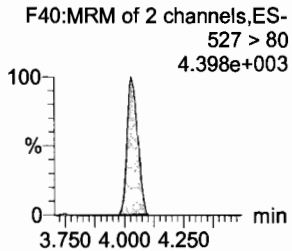
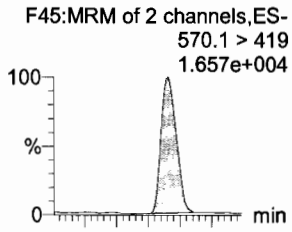
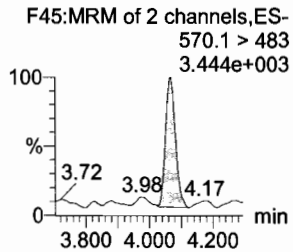




N-MeFOSAA





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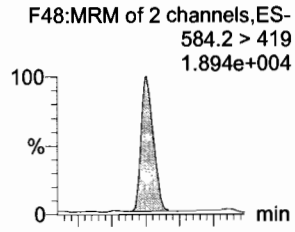
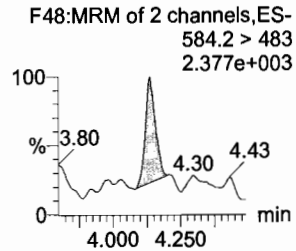
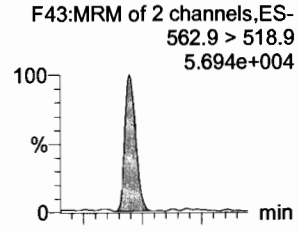
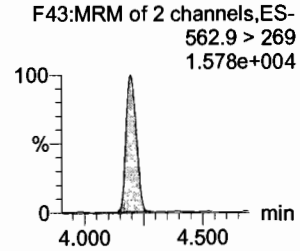


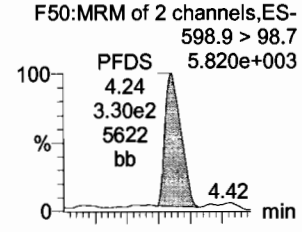


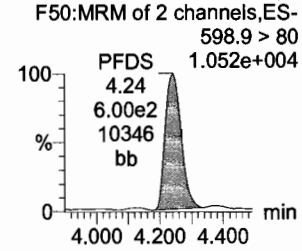
PFUnA



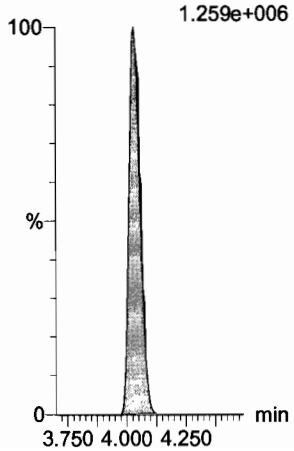


PFDS

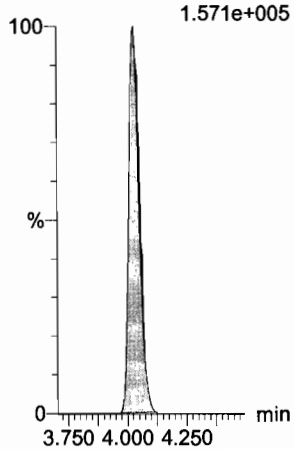




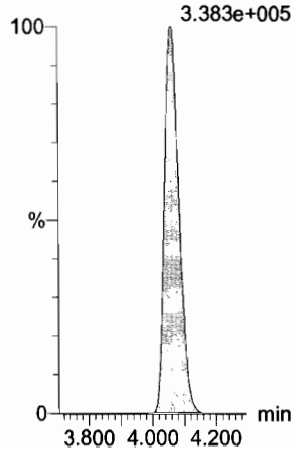
13C2-PFDA



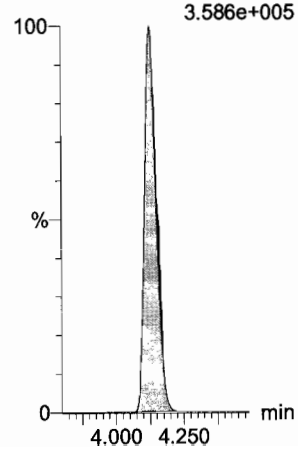
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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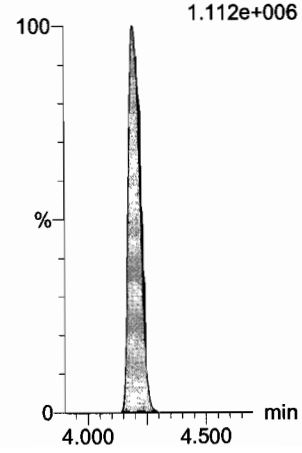

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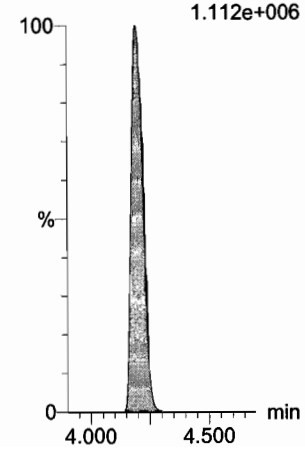
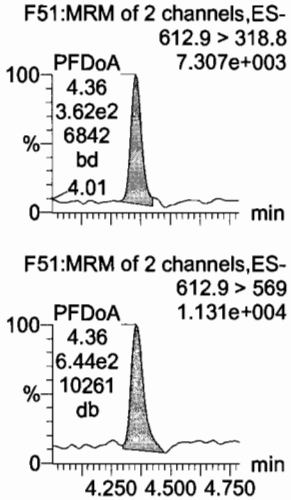


Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

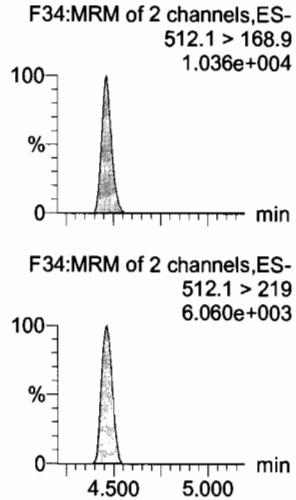
Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

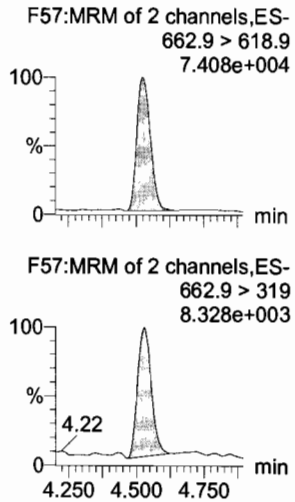
PFDoA



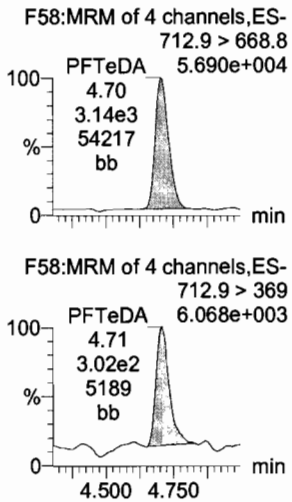
N-MeFOSA



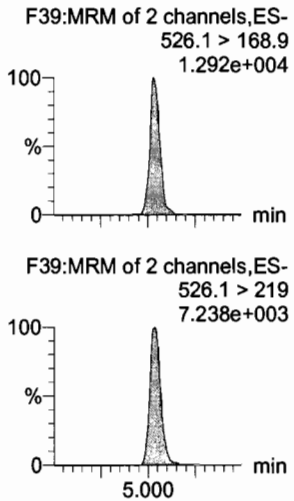
PFTrDA



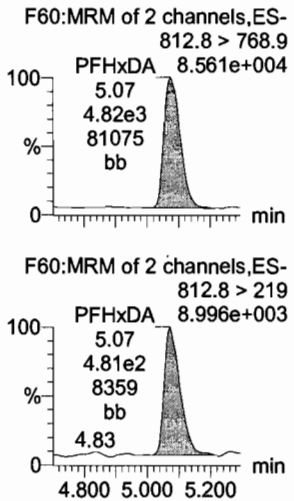
PFTeDA



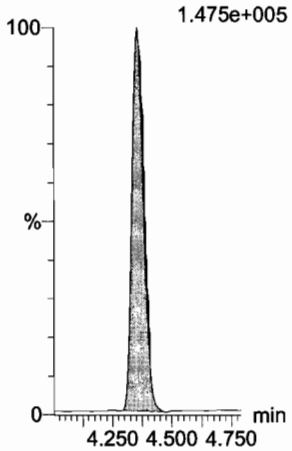
N-EtFOSA



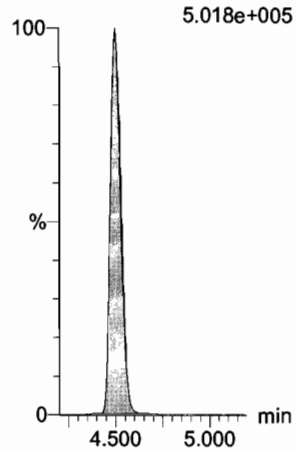
PFHxDA



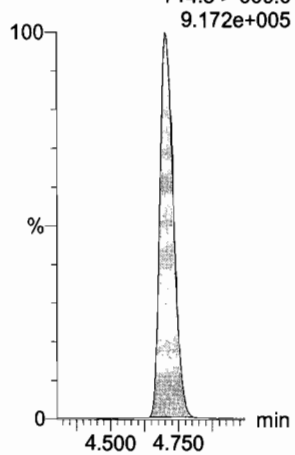
13C2-PFDoA



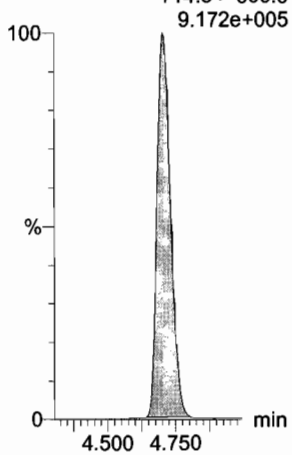
d3-N-MeFOSA



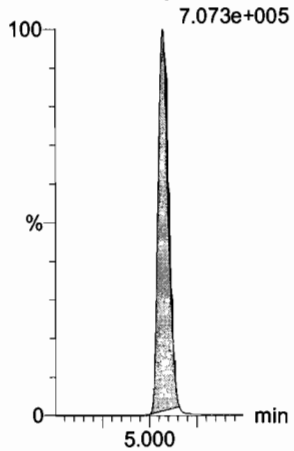
13C2-PFTeDA



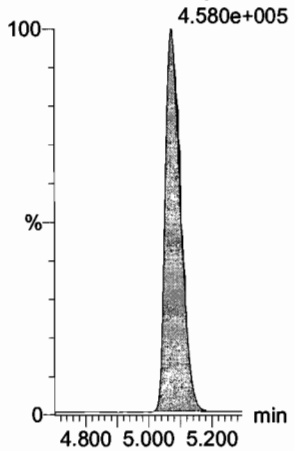
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



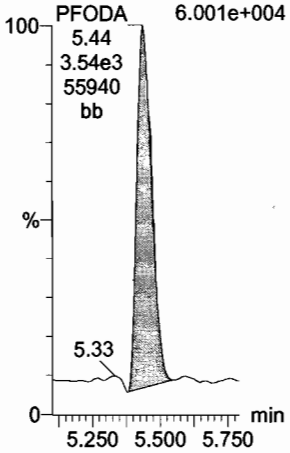
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

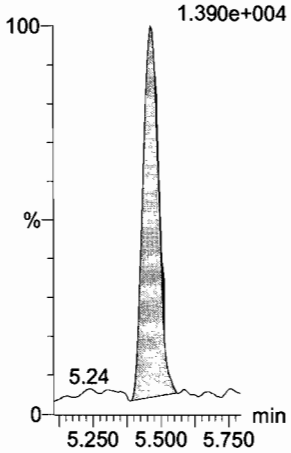
Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

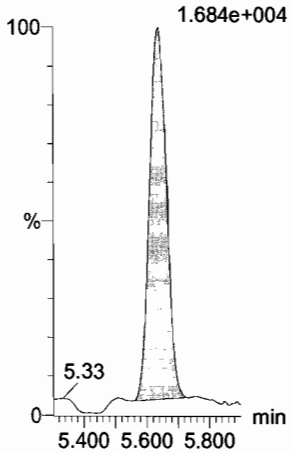
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
6.001e+004



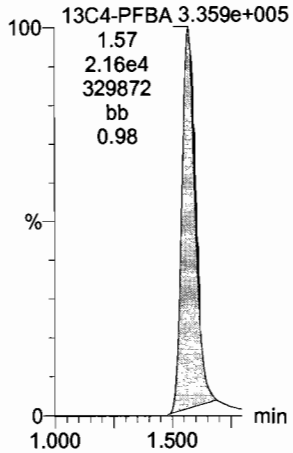
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.390e+004



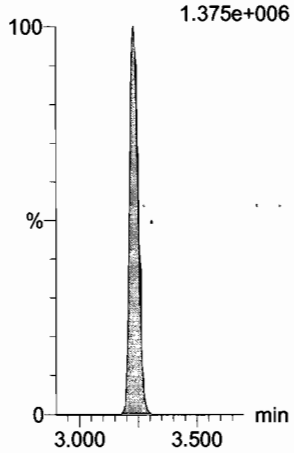
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.684e+004



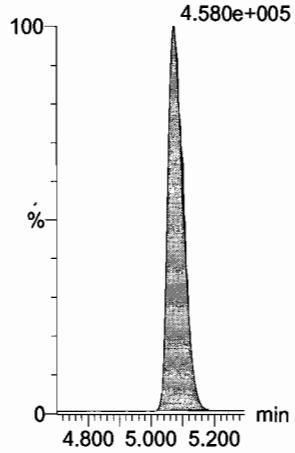
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
3.359e+005



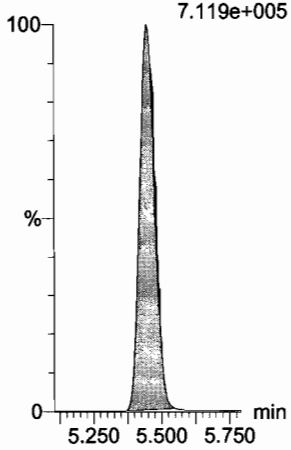
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.375e+006



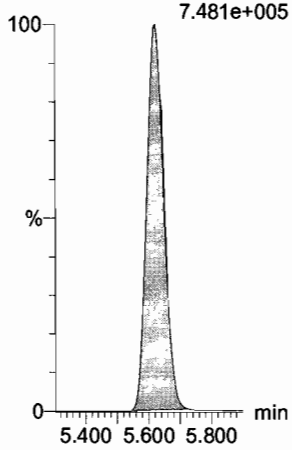
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.580e+005



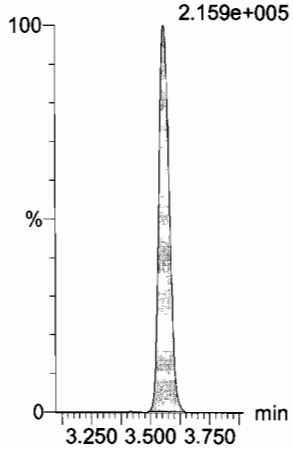
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.119e+005



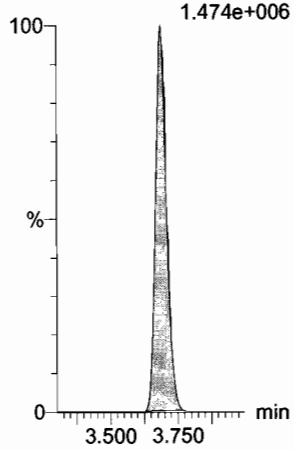
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.481e+005



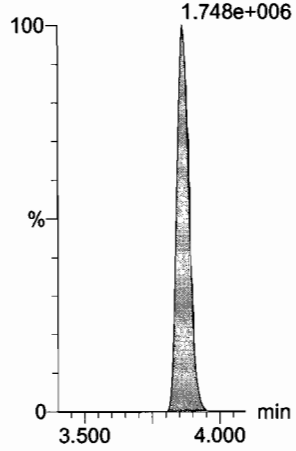
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.159e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.474e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.748e+006

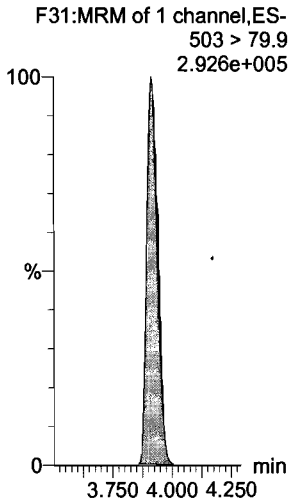


Dataset: U:\Q4.PRO\results\170726M1\170726M1-2.qld

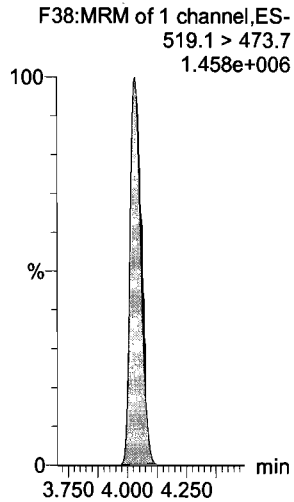
Last Altered: Wednesday, July 26, 2017 11:38:56 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 11:40:17 Pacific Daylight Time

Name: 170726M1_2, Date: 26-Jul-2017, Time: 11:13:27, ID: ST170726M1-1 PFC CS-1 17G2502, Description: PFC CS-1 17G2502

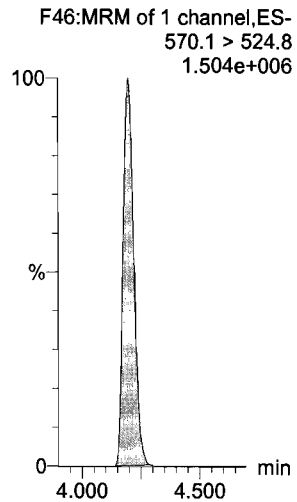
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170726M1\170726M1-10.qld

Last Altered: Wednesday, July 26, 2017 15:17:29 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:19:06 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 25 Jul 2017 12:44:55
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.65e4	1.88e4		1.54	1.59	11.0	9.59	95.9
2	2	PFPeA	263.1 > 218.9	3.04e4	3.90e4		2.77	2.82	9.74	9.71	97.1
3	3	PFBS	299 > 79.7	7.09e3	4.92e3		2.96	3.02	18.0	9.69	96.9
4	4	PFHxA	313.2 > 268.9	5.15e4	1.79e4		3.19	3.24	14.4	9.40	94.0
5	5	PFHpA	363 > 318.9	5.35e4	5.67e4		3.45	3.49	11.8	9.35	93.5
6	6	PFHxS	398.9 > 79.6	7.54e3	5.73e3		3.56	3.57	16.5	9.72	97.2
7	7	6:2 FTS	427.1 > 407	1.03e4	1.22e4		3.64	3.69	10.5	9.98	99.8
8	8	PFOA	413 > 368.7	7.24e4	9.86e4		3.65	3.70	9.17	9.25	92.5
9	9	PFHpS	448.9 > 98.8	6.82e3	9.86e4		3.71	3.76	0.864	9.57	95.7
10	10	PFNA	462.9 > 418.8	6.75e4	7.97e4		3.83	3.88	10.6	9.50	95.0
11	11	PFOSA	498.1 > 77.8	6.72e3	8.10e3		3.84	3.88	10.4	9.84	98.4
12	12	PFOS	499 > 79.9	1.24e4	1.53e4		3.89	3.93	10.1	8.54	85.4
13	13	PFDA	513 > 468.8	8.13e4	7.60e4		4.01	4.05	13.4	10.2	102.1
14	14	8:2 FTS	527 > 506.9	8.44e3	7.59e3		4.00	4.04	13.9	9.45	94.5
15	15	N-MeFOSAA	570.1 > 419	2.03e4	1.71e4		4.03	4.07	193	9.72	97.2
16	16	N-EtFOSAA	584.2 > 419	1.63e4	1.67e4		4.10	4.14	159	9.83	98.3
17	17	PFUnA	562.9 > 518.9	5.67e4	8.23e4		4.17	4.21	8.62	9.76	97.6
18	18	PFDS	598.9 > 98.7	5.60e3	8.23e4		4.22	4.25	0.850	9.55	95.5
19	19	PFDoA	612.9 > 318.8	6.75e3	8.64e3		4.34	4.37	9.76	10.4	103.6
20	20	N-MeFOSA	512.1 > 168.9	1.15e4	3.29e4		4.29	4.48	52.3	50.2	100.4
21	21	PFTrDA	662.9 > 618.9	8.06e4	8.64e3		4.50	4.54	117	10.5	105.1
22	22	PFTeDA	712.9 > 668.8	5.62e4	6.08e4		4.68	4.72	11.6	10.0	100.4
23	23	N-EtFOSA	526.1 > 168.9	1.38e4	4.09e4		4.87	5.05	50.4	55.4	110.8
24	24	PFHxDA	812.8 > 768.9	7.91e4	2.91e4		5.06	5.09	13.6	9.92	99.2
25	25	PFODA	912.8 > 868.8	7.52e4	2.91e4		5.43	5.46	12.9	10.0	100.3
26	26	N-MeFOSE	616.1 > 58.9	1.66e4	4.80e4		5.42	5.46	51.9	50.6	101.2
27	27	N-EtFOSE	630.1 > 58.9	1.83e4	4.80e4		5.59	5.64	57.3	48.7	97.4
28	28	13C3-PFBA	216.1 > 171.8	1.88e4	2.27e4	0.820	1.54	1.59	10.3	12.6	100.8
29	29	13C3-PFPeA	266 > 221.8	3.90e4	6.34e4	0.248	2.77	2.82	3.08	12.4	99.2
30	30	13C3-PFBS	302 > 98.8	4.92e3	6.34e4	0.031	2.96	3.02	0.388	12.5	99.8
31	31	13C2-PFHxA	315 > 269.8	1.79e4	6.34e4	0.276	3.19	3.24	1.41	5.12	102.4

70-130

50-100

OM
7/26/17

Dataset: U:\Q4.PRO\results\170726M1\170726M1-10.qld

Last Altered: Wednesday, July 26, 2017 15:17:29 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:19:06 Pacific Daylight Time

Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	5.67e4	6.34e4	0.306	3.45	3.50	4.47	14.6	117.1
33	33	18O2-PFHxS	403 > 102.6	5.73e3	1.30e4	0.393	3.56	3.57	5.49	14.0	111.9
34	34	13C2-6:2 FTS	429.1 > 408.9	1.22e4	8.75e4	0.158	3.64	3.69	1.74	11.0	88.2
35	35	13C2-PFOA	414.9 > 369.7	9.86e4	8.75e4	1.067	3.65	3.70	14.1	13.2	105.6
36	36	13C5-PFNA	468.2 > 422.9	7.97e4	9.15e4	0.852	3.83	3.88	10.9	12.8	102.1
37	37	13C8-PFOSA	506.1 > 77.7	8.10e3	7.49e4	0.098	3.84	3.88	1.35	13.8	110.1
38	38	13C8-PFOS	507 > 79.9	1.53e4	1.55e4	0.936	3.89	3.93	12.3	13.2	105.4
39	39	13C2-PFDA	515.1 > 469.9	7.60e4	9.36e4	0.810	4.01	4.05	10.2	12.5	100.3
40	40	13C2-8:2 FTS	529.1 > 508.7	7.59e3	9.36e4	0.086	4.00	4.04	1.01	11.8	94.7
41	41	d3-N-MeFOSAA	573.3 > 419	1.71e4	7.49e4	0.014	4.03	4.07	2.85	208	128.1
42	42	d5-N-EtFOSAA	589.3 > 419	1.67e4	7.49e4	0.014	4.12	4.14	2.79	200	123.1
43	43	13C2-PFUnA	565 > 519.8	8.23e4	7.49e4	0.962	4.17	4.21	13.7	14.3	114.2
44	44	13C2-PFDoA	615 > 569.7	8.64e3	7.49e4	0.094	4.34	4.37	1.44	15.3	122.2
45	45	d3-N-MeFOSA	515.2 > 168.9	3.29e4	7.49e4	0.034	4.29	4.52	5.50	160	106.5
46	46	13C2-PFTeDA	714.8 > 669.6	6.08e4	7.49e4	0.694	4.68	4.72	10.1	14.6	116.9
47	47	d5-N-ETFOSA	531.1 > 168.9	4.09e4	7.49e4	0.049	5.01	5.09	6.83	140	93.6
48	48	13C2-PFHxDA	815 > 769.7	2.91e4	7.49e4	0.843	5.06	5.09	4.86	5.77	115.4
49	49	d7-N-MeFOSE	623.1 > 58.9	4.80e4	7.49e4	0.055	5.42	5.46	8.01	147	97.8
50	50	d9-N-EtFOSE	639.2 > 58.8	4.80e4	7.49e4	0.053	5.59	5.63	8.01	150	99.9
51	51	13C4-PFBA	217 > 171.8	2.27e4	2.27e4	1.000	1.54	1.59	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	6.34e4	6.34e4	1.000	3.19	3.24	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	1.30e4	1.30e4	1.000	3.56	3.57	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	8.75e4	8.75e4	1.000	3.65	3.70	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	9.15e4	9.15e4	1.000	3.83	3.88	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.55e4	1.55e4	1.000	3.89	3.93	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	9.36e4	9.36e4	1.000	4.01	4.04	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	7.49e4	7.49e4	1.000	4.17	4.21	12.5	12.5	100.0
59	59	Total PFBS	299 > 79.7	7.09e3	4.92e3		2.96		18.0	9.69	
60	60	Total PFHxS	398.9 > 79.6	7.54e3	5.73e3		3.52		16.5	9.72	
61	61	Total PFOA	413 > 368.7	7.26e4	9.86e4		3.65		9.17	9.25	
62	62	Total PFOS	499 > 79.9	1.24e4	1.53e4		3.89		10.1	8.54	
63	63	Total N-Me-FOSAA	570.1 > 419	2.03e4	1.71e4		4.03		193	9.72	
64	64	Total N-EtFOSAA	584.2 > 419	1.63e4	1.67e4		4.17		159	9.83	

50 - 150

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 26, 2017 15:21:41 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:22:19 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170726M1_1	IPA	26-Jul-17	11:02:28
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3	170726M1_3	IPA	26-Jul-17	11:24:08
4	170726M1_4	1700851-04RE1@10X 18-GW-18MCAS03-2-...	26-Jul-17	11:34:55
5	170726M1_5	1700851-09RE1@10X 24-GW-24EX11-20170...	26-Jul-17	11:45:44
6	170726M1_6	IPA	26-Jul-17	11:56:28
7	170726M1_7	1700851-05RE1 18-GW-18MCAS02-5-20170...	26-Jul-17	12:07:14
8	170726M1_8	1700851-10RE1 SGV-GW-SGV Transfer Stati...	26-Jul-17	12:18:02
9	170726M1_9	IPA	26-Jul-17	12:28:43
10	170726M1_10	ST170726M1-2 PFC CS3 17G2503	26-Jul-17	12:39:26
11	170726M1_11	IPA	26-Jul-17	12:50:13

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170726M1\170726M1-10.qld

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Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

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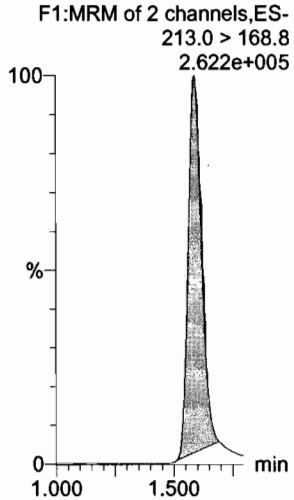

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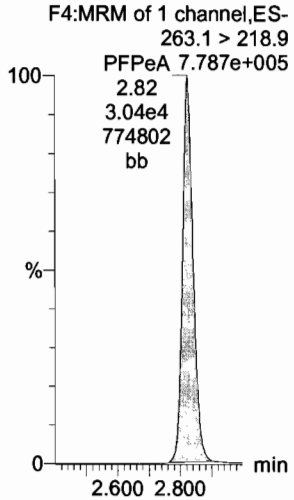

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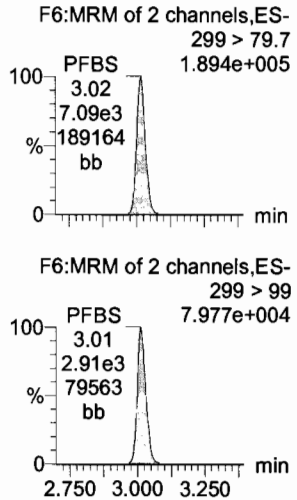

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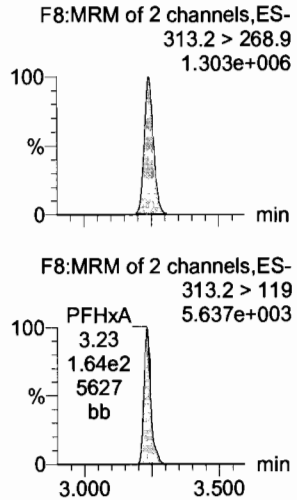

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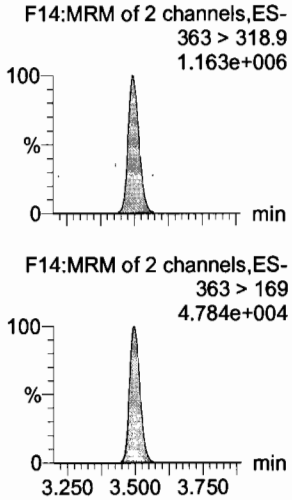

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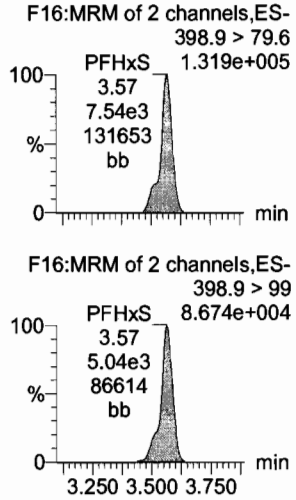

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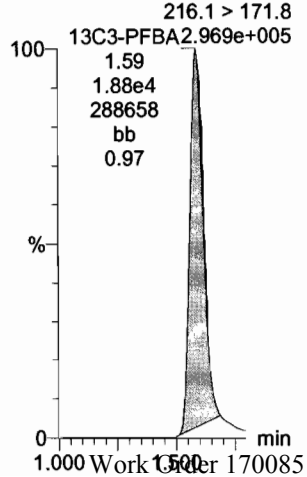

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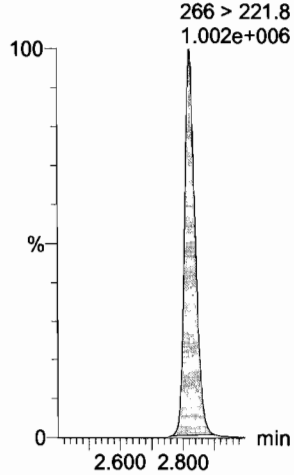

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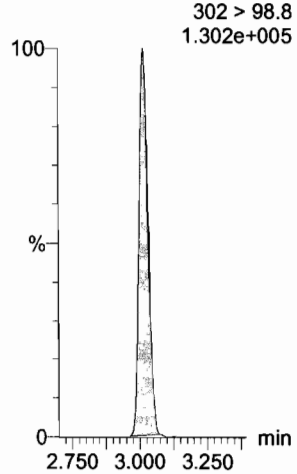

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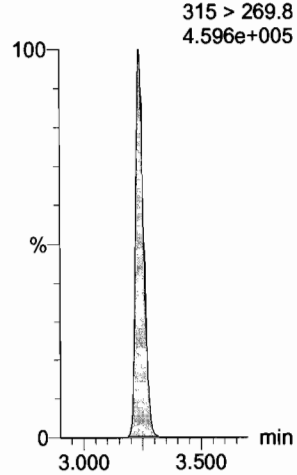

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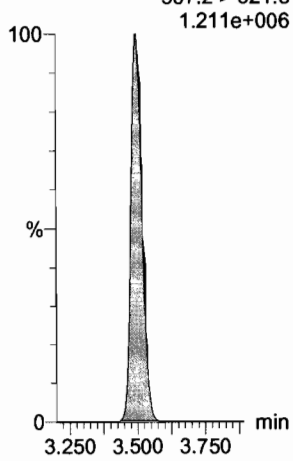

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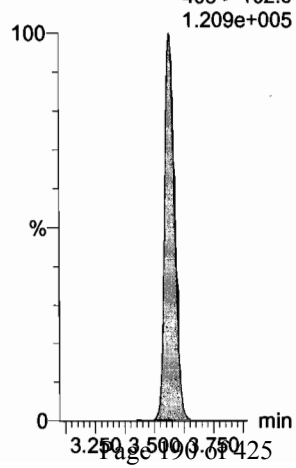

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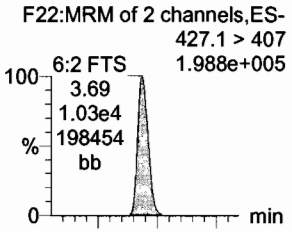
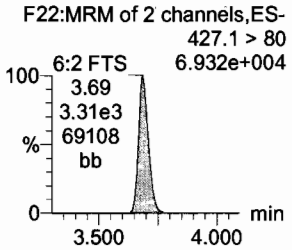
Printed: Wednesday, July 26, 2017 15:15:35 Pacific Daylight Time

Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

6:2 FTS





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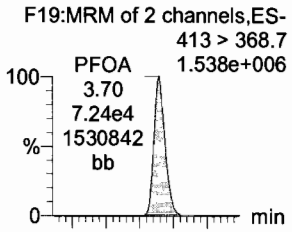

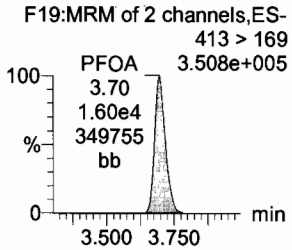

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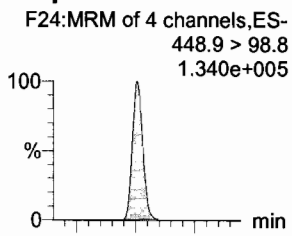

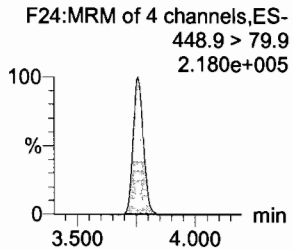

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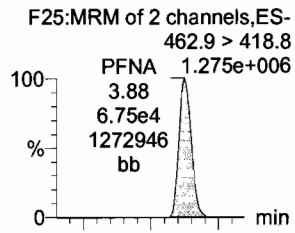

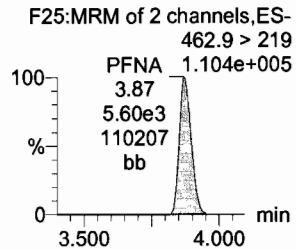

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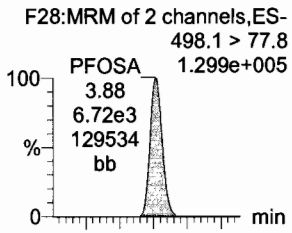

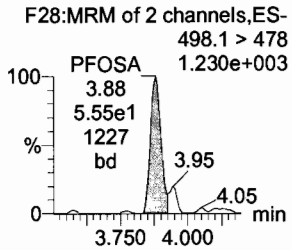

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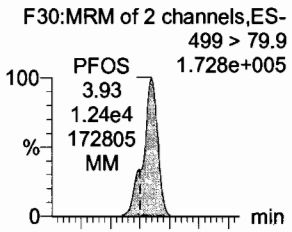

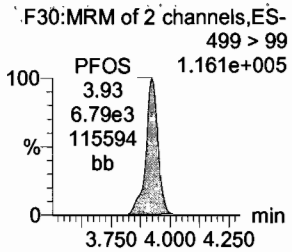

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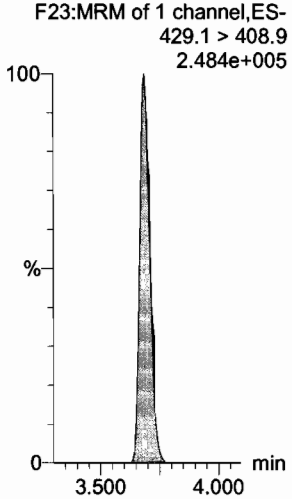

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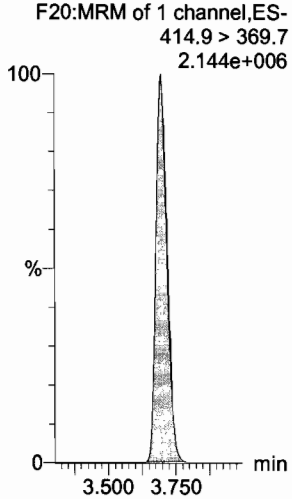

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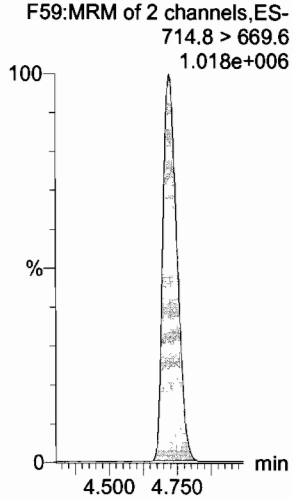

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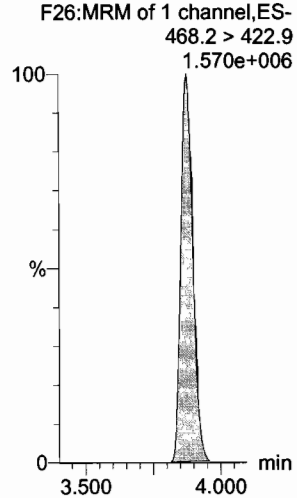

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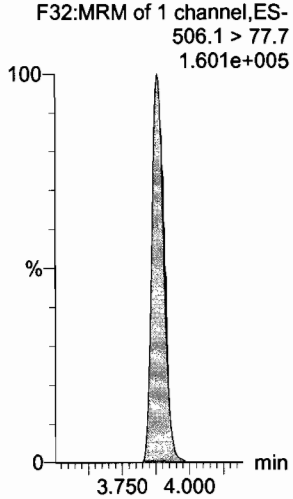

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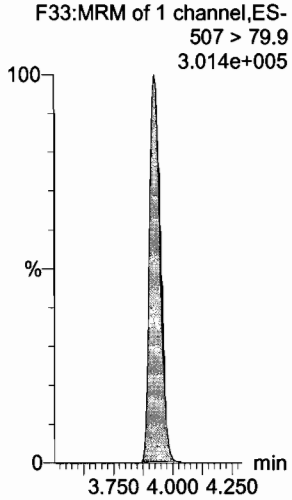

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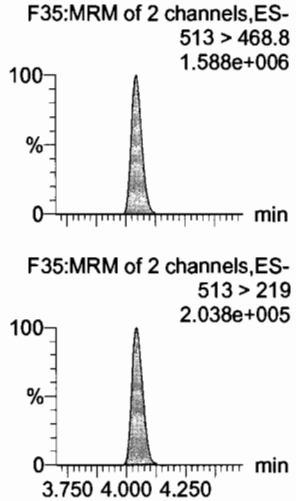
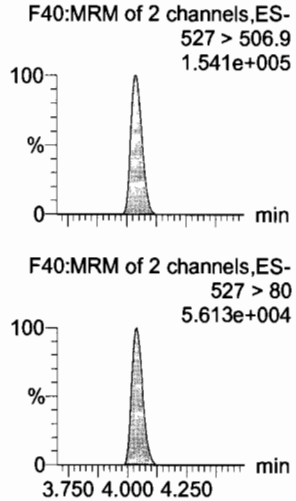
Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

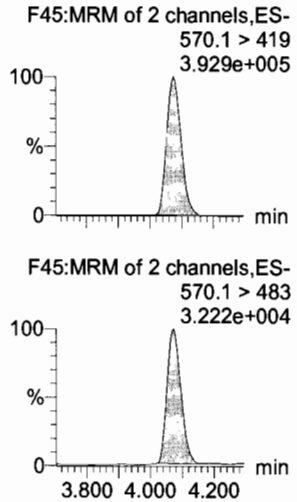
PFDA



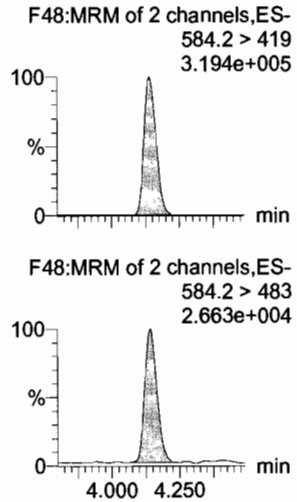
8:2 FTS



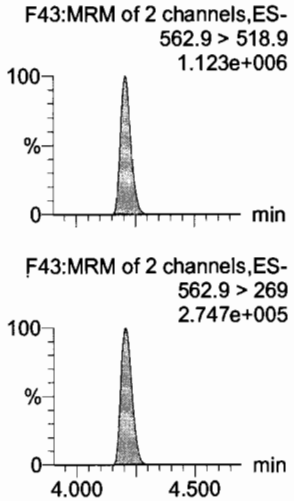
N-MeFOSAA



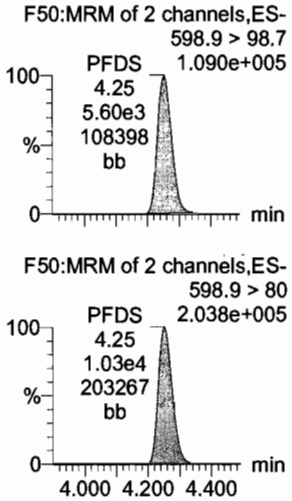
N-EtFOSAA



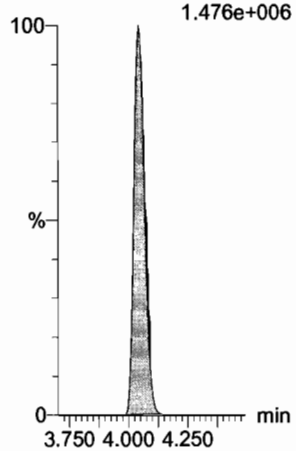
PFUnA



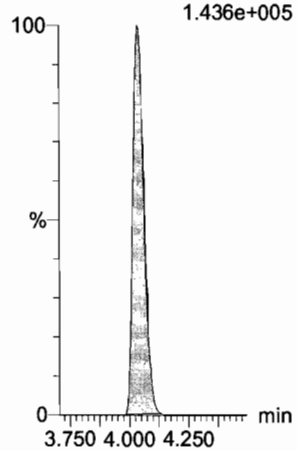
PFDS



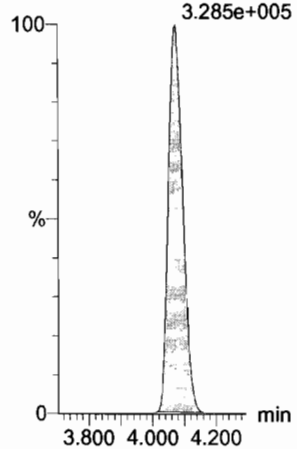
13C2-PFDA



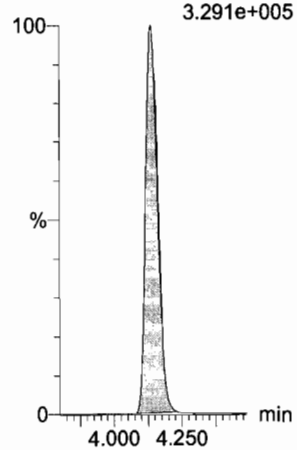
13C2-8:2 FTS



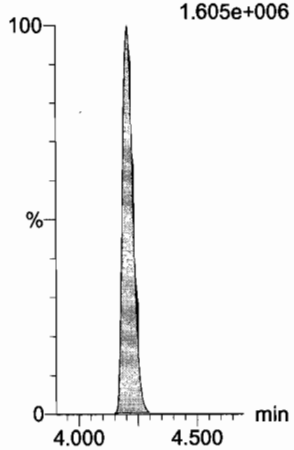
d3-N-MeFOSAA



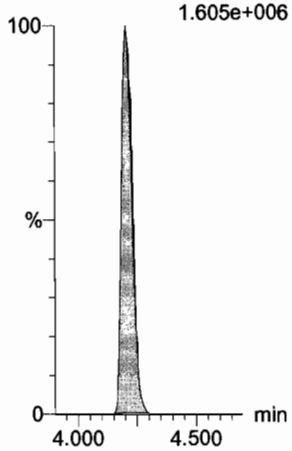
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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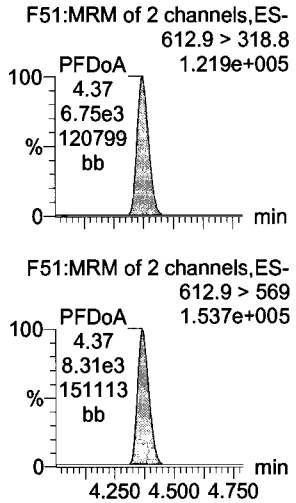
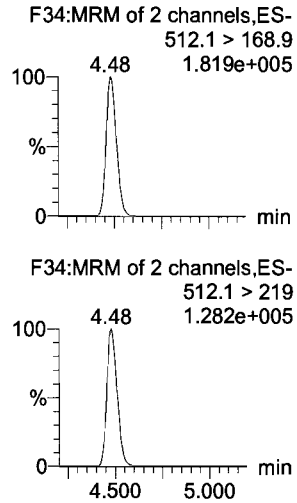
Last Altered: Wednesday, July 26, 2017 15:14:10 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:15:35 Pacific Daylight Time

Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

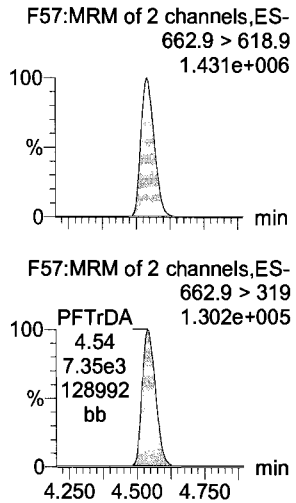
PFDoA



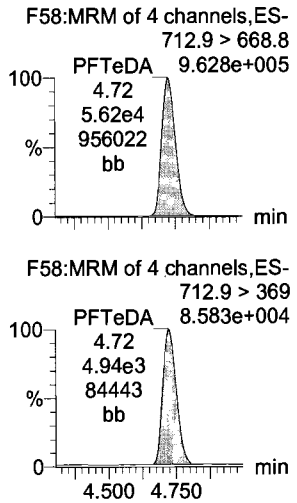
N-MeFOSA



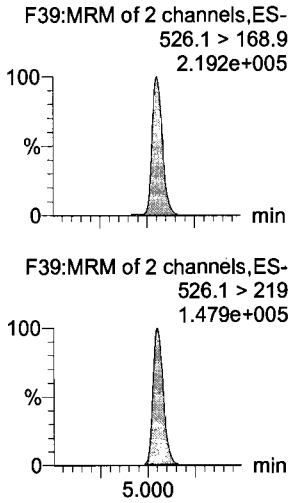
PFTrDA



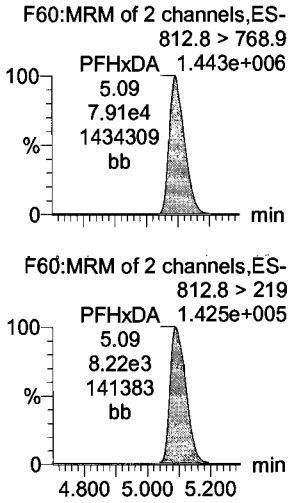
PFTeDA



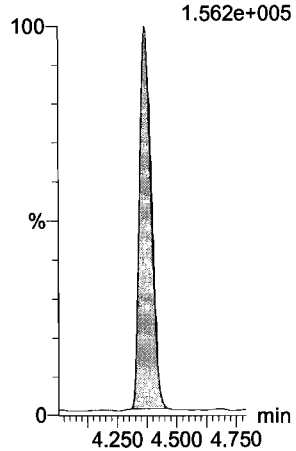
N-EtFOSA



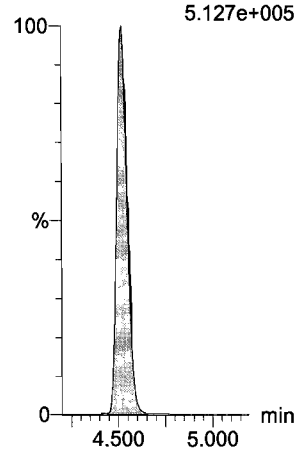
PFHxDA



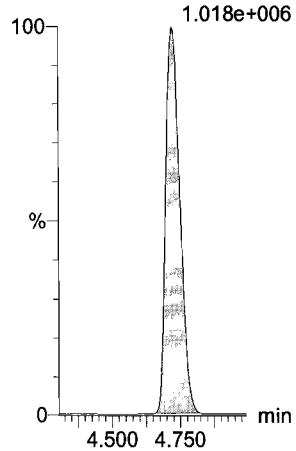
13C2-PFDoA



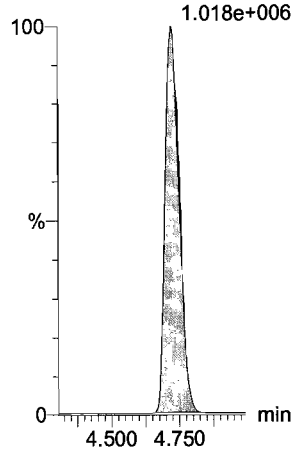
d3-N-MeFOSA



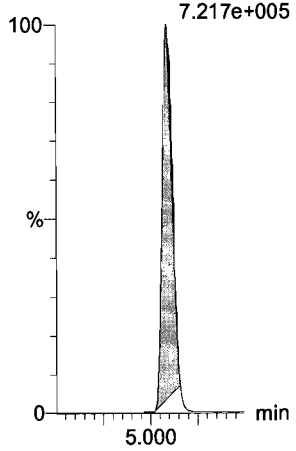
13C2-PFTeDA



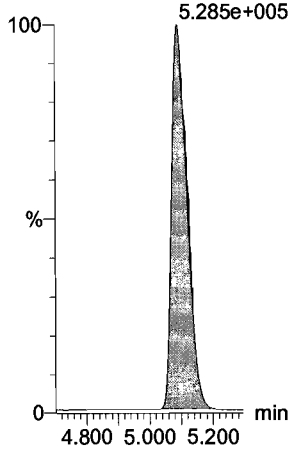
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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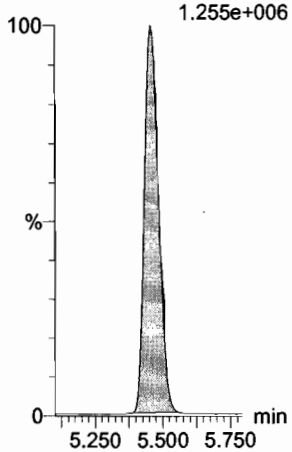
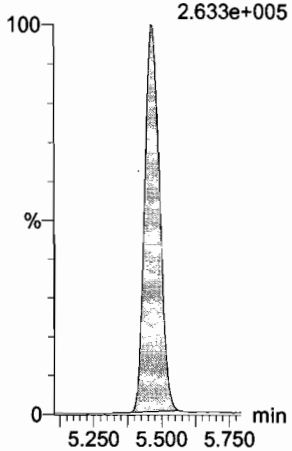
Last Altered: Wednesday, July 26, 2017 15:14:10 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:15:35 Pacific Daylight Time

Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

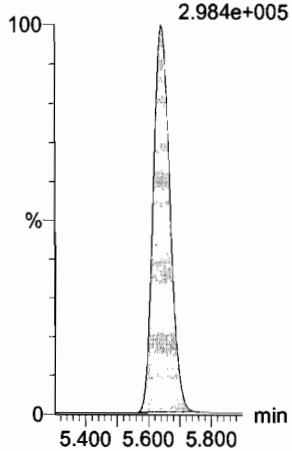
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.255e+006



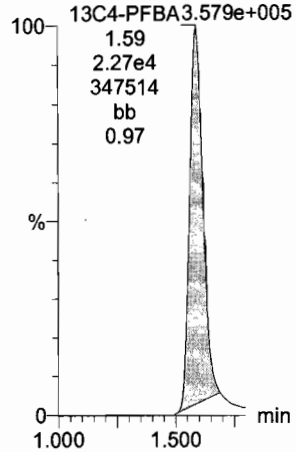
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.633e+005



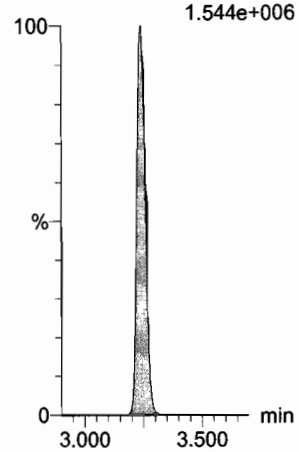
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.984e+005



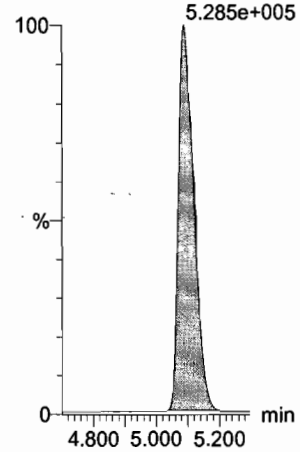
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
3.579e+005



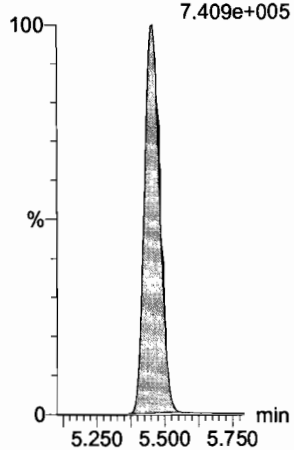
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.544e+006



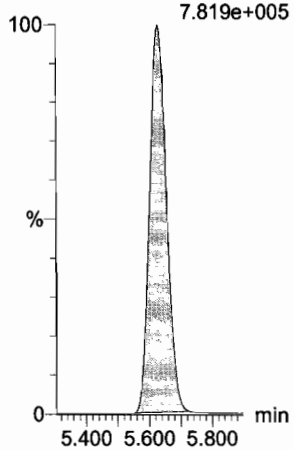
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
5.285e+005



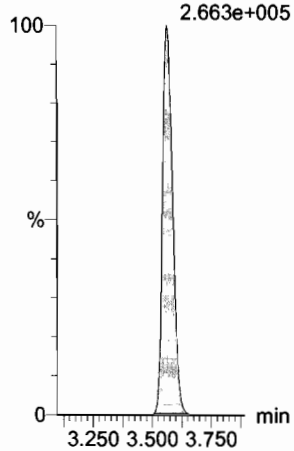
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.409e+005



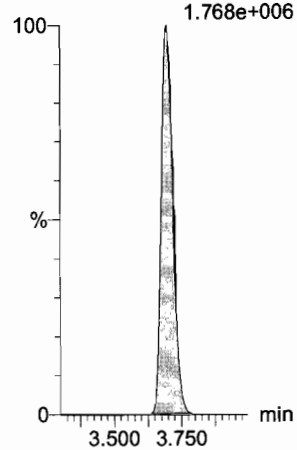
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.819e+005



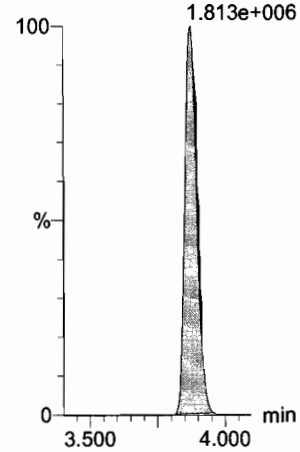
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.663e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.768e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.813e+006

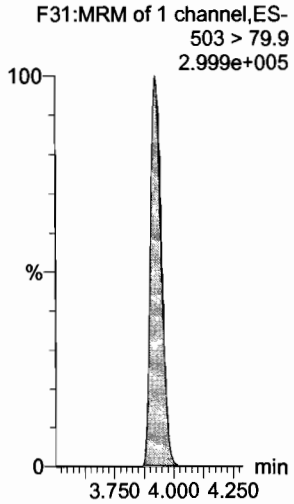


Dataset: U:\Q4.PRO\results\170726M1\170726M1-10.qld

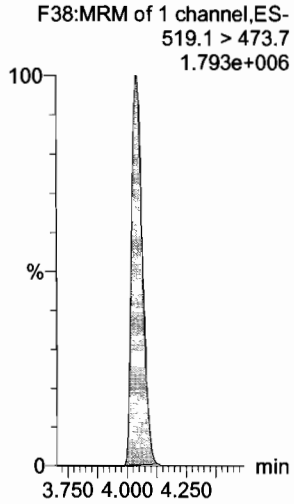
Last Altered: Wednesday, July 26, 2017 15:14:10 Pacific Daylight Time
Printed: Wednesday, July 26, 2017 15:15:35 Pacific Daylight Time

Name: 170726M1_10, Date: 26-Jul-2017, Time: 12:39:26, ID: ST170726M1-2 PFC CS3 17G2503, Description: PFC CS3 17G2503

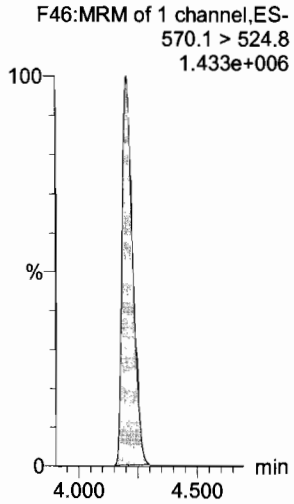
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-30.qld

Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

AC 7/31/17

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	1.31e4	1.55e4	1.0000		1.32	1.37	10.5	9.65	96.5	70-120
2	2	PFPeA	263.1 > 218.9	2.40e4	3.15e4	1.0000		2.77	2.67	9.53	9.88	98.8	
3	3	PFBS	299 > 79.7	5.10e3	3.67e3	1.0000		2.96	2.90	17.4	9.35	93.5	
4	4	PFHxA	313.2 > 268.9	4.21e4	1.55e4	1.0000		3.19	3.14	13.6	9.65	96.5	
5	5	PFHpA	363 > 318.9	3.76e4	4.18e4	1.0000		3.45	3.41	11.3	9.50	95.0	
6	6	PFHxS	398.9 > 79.6	4.65e3	3.72e3	1.0000		3.56	3.48	15.6	9.35	93.5	
7	7	PFOA	413 > 368.7	5.22e4	6.80e4	1.0000		3.65	3.62	9.60	9.75	97.5	
8	8	PFHpS	448.9 > 98.8	4.57e3	6.80e4	1.0000		3.65	3.68	0.841	10.1	100.6	
9	9	PFNA	462.9 > 418.8	5.68e4	6.06e4	1.0000		3.83	3.79	11.7	10.9	108.8	
10	10	PFOSA	498.1 > 77.8	6.61e3	7.93e3	1.0000		3.84	3.80	10.4	9.44	94.4	
11	11	PFOS	499 > 79.9	9.47e3	1.13e4	1.0000		3.89	3.84	10.5	10.5	105.4	
12	12	PFDA	513 > 468.8	6.14e4	6.27e4	1.0000		4.01	3.96	12.3	10.0	100.2	
13	13	N-MeFOSAA	570.1 > 419	1.59e4	1.39e4	1.0000		4.03	3.99	185	9.38	93.8	
14	14	N-EtFOSAA	584.2 > 419	1.27e4	1.36e4	1.0000		4.10	4.06	151	9.86	98.6	
15	15	PFUnA	562.9 > 518.9	4.14e4	7.07e4	1.0000		4.11	4.12	7.32	9.83	98.3	
16	16	PFDS	598.9 > 98.7	3.86e3	7.07e4	1.0000		4.22	4.17	0.682	9.61	96.1	
17	17	PFDoA	612.9 > 318.8	4.77e3	6.86e3	1.0000		4.34	4.29	8.69	10.8	107.7	
18	18	PFTrDA	662.9 > 618.9	5.59e4	6.86e3	1.0000		4.50	4.46	102	10.3	103.4	
19	19	PFTeDA	712.9 > 668.8	3.94e4	4.67e4	1.0000		4.68	4.63	10.6	10.0	100.4	
20	20	13C3-PFBA	216.1 > 171.8	1.55e4	1.37e4	1.0000	1.068	1.32	1.37	14.1	13.2	105.8	50-150
21	21	13C3-PFPeA	266 > 221.8	3.15e4	4.53e4	1.0000	0.271	2.77	2.67	3.48	12.8	102.4	
22	22	13C3-PFBS	302 > 98.8	3.67e3	4.53e4	1.0000	0.033	2.96	2.91	0.406	12.3	98.1	
23	23	13C2-PFHxA	315 > 269.8	1.55e4	4.53e4	1.0000	0.335	3.19	3.15	1.71	5.10	102.0	
24	24	13C4-PFHpA	367.2 > 321.8	4.18e4	4.53e4	1.0000	0.369	3.45	3.41	4.61	12.5	100.0	
25	25	18O2-PFHxS	403 > 102.6	3.72e3	7.45e3	1.0000	0.460	3.56	3.48	6.24	13.6	108.5	
26	26	13C2-PFOA	414.9 > 369.7	6.80e4	5.08e4	1.0000	1.293	3.65	3.61	16.7	12.9	103.4	
27	27	13C5-PFNA	468.2 > 422.9	6.06e4	6.14e4	1.0000	0.986	3.83	3.79	12.3	12.5	100.1	
28	28	13C8-PFOSA	506.1 > 77.7	7.93e3	6.15e4	1.0000	0.132	3.84	3.80	1.61	12.2	97.4	
29	29	13C8-PFOS	507 > 79.9	1.13e4	8.99e3	1.0000	1.184	3.89	3.84	15.7	13.3	106.1	
30	30	13C2-PFDA	515.1 > 469.9	6.27e4	6.57e4	1.0000	0.998	4.01	3.96	11.9	11.9	95.6	
31	31	d3-N-MeFOSAA	573.3 > 419	1.39e4	6.15e4	1.0000	0.018	4.03	3.99	2.83	160	98.5	

Dataset: U:\Q4.PRO\results\170728M2\170728M2-30.qld

Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32 d5-N-EtFOSAA	589.3 > 419	1.36e4	6.15e4	1.0000	0.018	4.12	4.05	2.77	156	96.0
33	33 13C2-PFUnA	565 > 519.8	7.07e4	6.15e4	1.0000	1.129	4.17	4.13	14.4	12.7	101.9
34	34 13C2-PFDoA	615 > 569.7	6.86e3	6.15e4	1.0000	0.116	4.34	4.28	1.39	12.0	96.2
35	35 13C2-PFTeDA	714.8 > 669.6	4.67e4	6.15e4	1.0000	0.762	4.68	4.63	9.49	12.5	99.6
36	36 13C4-PFBA	217 > 171.8	1.37e4	1.37e4	1.0000	1.000	1.32	1.37	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	4.53e4	4.53e4	1.0000	1.000	3.19	3.15	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	7.45e3	7.45e3	1.0000	1.000	3.56	3.48	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	5.08e4	5.08e4	1.0000	1.000	3.65	3.62	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	6.14e4	6.14e4	1.0000	1.000	3.83	3.79	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	8.99e3	8.99e3	1.0000	1.000	3.89	3.84	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	6.57e4	6.57e4	1.0000	1.000	4.01	3.96	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	6.15e4	6.15e4	1.0000	1.000	4.17	4.13	12.5	12.5	100.0

50-150

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 31, 2017 13:08:00 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:08:24 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170728M2_1	IPA	28-Jul-17	16:09:52
2	170728M2_2	ST170728M2-1 PFC CS-2 17G2824	28-Jul-17	16:20:47
3	170728M2_3	ST170728M2-2 PFC CS-1 17G2825	28-Jul-17	16:31:32
4	170728M2_4	ST170728M2-3 PFC CS0 17G2826	28-Jul-17	16:42:11
5	170728M2_5	ST170728M2-4 PFC CS1 17G2827	28-Jul-17	16:52:57
6	170728M2_6	ST170728M2-5 PFC CS2 17G2828	28-Jul-17	17:03:36
7	170728M2_7	ST170728M2-6 PFC CS3 17G2829	28-Jul-17	17:14:14
8	170728M2_8	ST170728M2-7 PFC CS4 17G2830	28-Jul-17	17:24:53
9	170728M2_9	ST170728M2-8 PFC CS5 17G2831	28-Jul-17	17:35:31
10	170728M2_10	ST170728M2-9 PFC CS6 17G2801	28-Jul-17	17:46:09
11	170728M2_11	ST170728M2-10 PFC CS7 17G2802	28-Jul-17	17:56:56
12	170728M2_12	IPA	28-Jul-17	18:07:42
13	170728M2_13	SS170728M2-1 PFC SSS 17G2823	28-Jul-17	18:18:40
14	170728M2_14	IPA	28-Jul-17	18:29:24
15	170728M2_15	B7G0107-BS1 OPR 0.125	28-Jul-17	18:40:10
16	170728M2_16	IPA	28-Jul-17	18:50:48
17	170728M2_17	B7G0107-BLK1 Method Blank 0.125	28-Jul-17	19:01:27
18	170728M2_18	1700851-01RE1 SB 01_20170710 0.12032	28-Jul-17	19:12:13
19	170728M2_19	1700851-02RE1 EB 01_20170710 0.11963	28-Jul-17	19:22:51
20	170728M2_20	1700851-03RE1 18-GW-18MCAS03-5-20170...	28-Jul-17	19:33:38
21	170728M2_21	1700851-04RE1 18-GW-18MCAS03-2-20170...	28-Jul-17	19:44:24
22	170728M2_22	1700851-06RE1 18-GW-18MCAS07-3-20170...	28-Jul-17	19:55:11
23	170728M2_23	1700851-07RE1 24-GW-24MW08B-20170710...	28-Jul-17	20:05:59
24	170728M2_24	1700851-08RE1 DUP03-20170710 0.12071	28-Jul-17	20:16:58
25	170728M2_25	1700851-09RE1 24-GW-24EX11-20170710 0....	28-Jul-17	20:27:52
26	170728M2_26	B7G0107-MS2 Matrix Spike 0.11945	28-Jul-17	20:38:42
27	170728M2_27	B7G0107-MSD2 Matrix Spike Dup 0.12098	28-Jul-17	20:49:29
28	170728M2_28	1700846-07 7-10-17 #5 1	28-Jul-17	21:00:07
29	170728M2_29	IPA	28-Jul-17	21:10:46
30	170728M2_30	ST170728M2-11 PFC CS3 17G2829	28-Jul-17	21:21:32
31	170728M2_31	IPA	28-Jul-17	21:32:10

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 31, 2017 13:08:00 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:08:24 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
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33	170728M2_33	1700847-02RE1 DPH-MW9-17 0.11474	28-Jul-17	21:53:35
34	170728M2_34	1700847-03RE1 DPH-MW2D 0.11785	28-Jul-17	22:04:22
35	170728M2_35	1700848-01RE1 DPH-MW7-17 0.11765	28-Jul-17	22:15:00
36	170728M2_36	1700848-02RE1 DPH-IRELAND WELL 0.11439	28-Jul-17	22:25:46
37	170728M2_37	1700848-03RE1 DPH-#1 PW 0.11705	28-Jul-17	22:37:00
38	170728M2_38	1700848-04RE1 DPH-MW1-17 0.10364	28-Jul-17	22:48:44
39	170728M2_39	1700848-05RE1 DPH-MW2-17 0.12259	28-Jul-17	23:00:14
40	170728M2_40	1700848-06RE1 DPH-MW8-17 0.12027	28-Jul-17	23:10:52
41	170728M2_41	1700848-07RE1 DPH-MW5-17 0.11998	28-Jul-17	23:21:39
42	170728M2_42	IPA	28-Jul-17	23:32:25
43	170728M2_43	ST170728M2-12 PFC CS3 17G2729	28-Jul-17	23:43:12
44	170728M2_44	IPA	28-Jul-17	23:53:50

LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	ST170728M2-11	L (M) H	N/A	☑	☑	☑	☑	☑	☐
Calibration ID:	↓ -12	L (M) H	☑	☑	☑	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 6/21/17

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: 7/31/17
Initials/Date

Comments:

Vista Analytical Laboratory

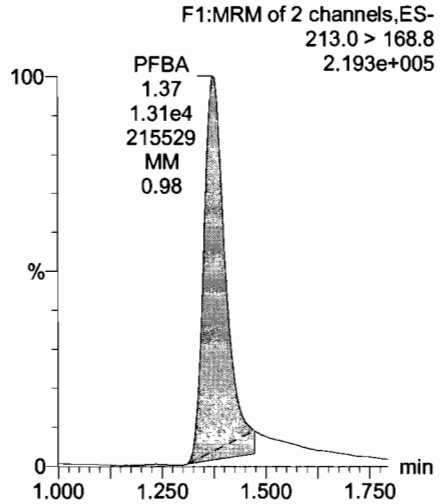
Dataset: U:\Q4.PRO\results\170728M2\170728M2-30.qld

Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

PFBA



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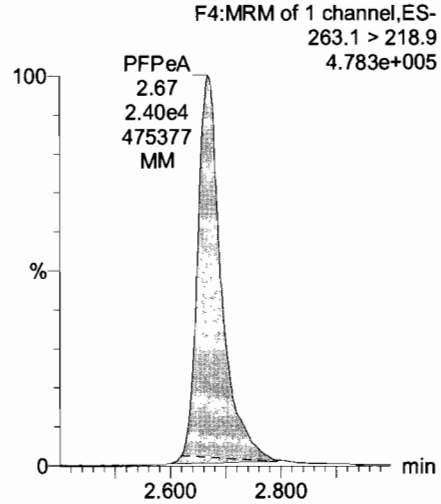

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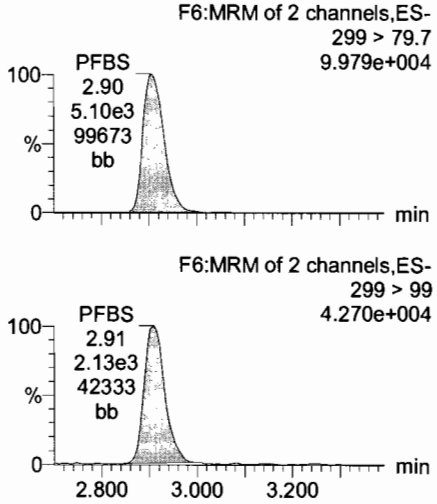

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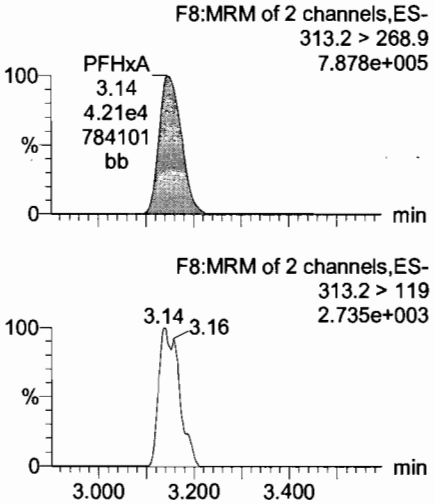

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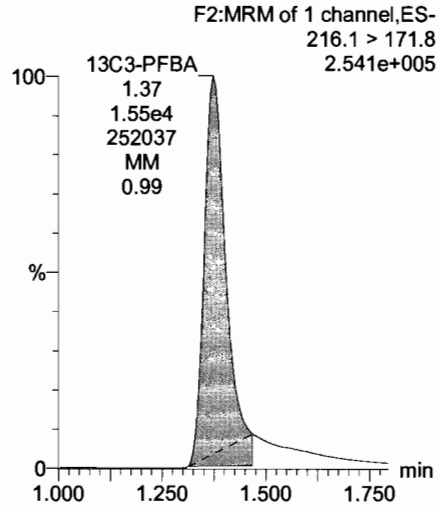

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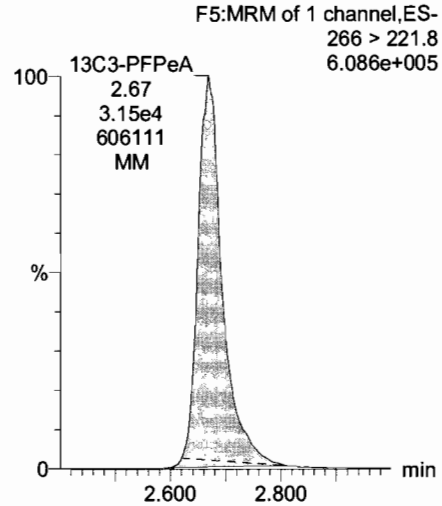

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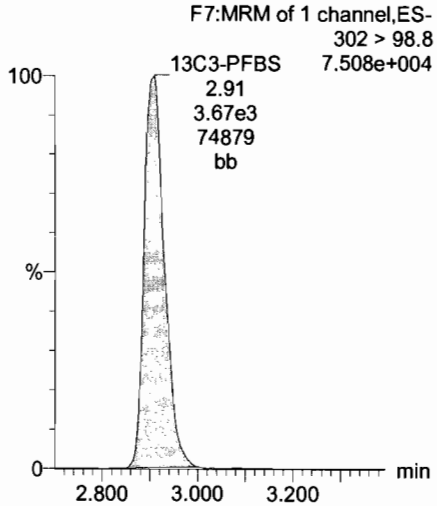

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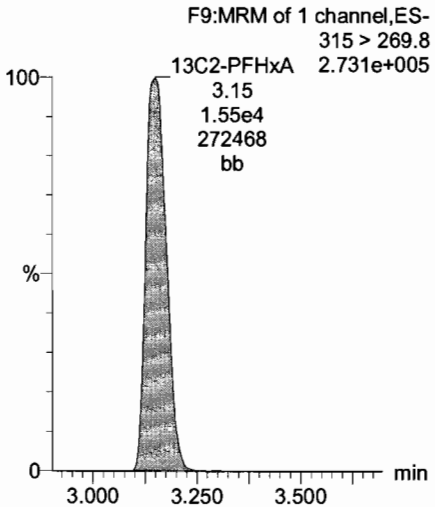

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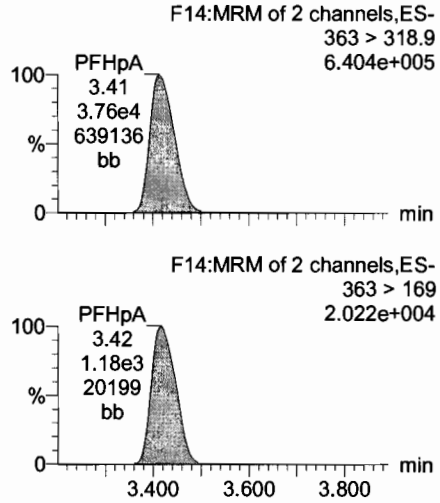
Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

PFHpA



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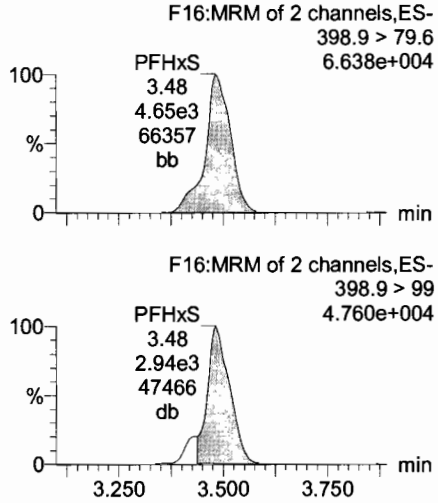

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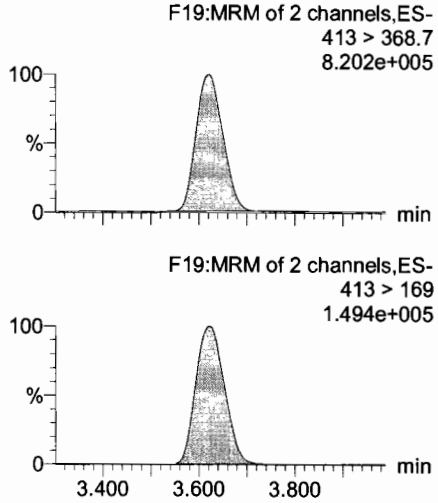

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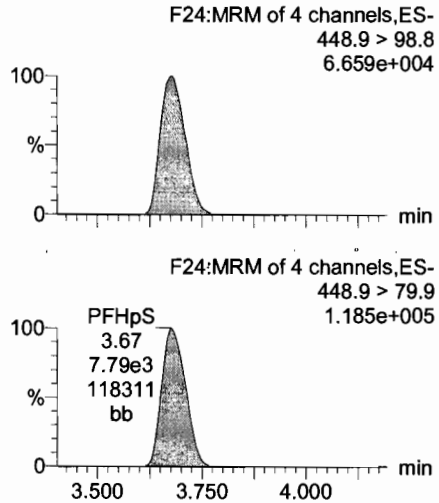

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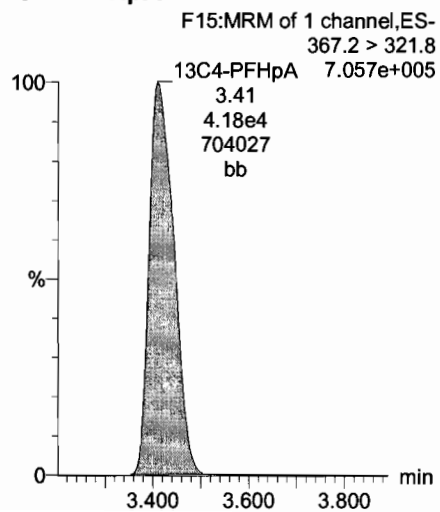

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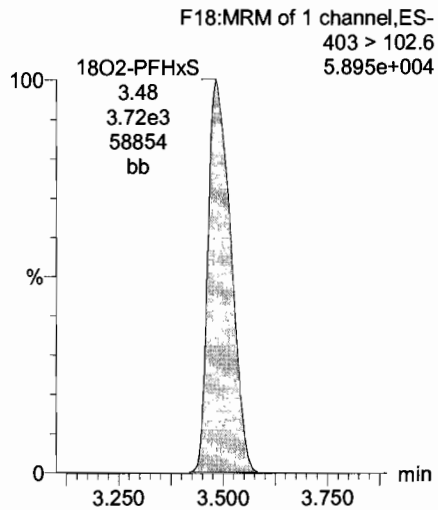

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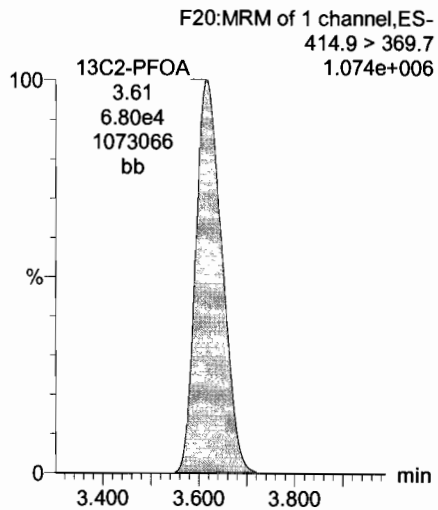

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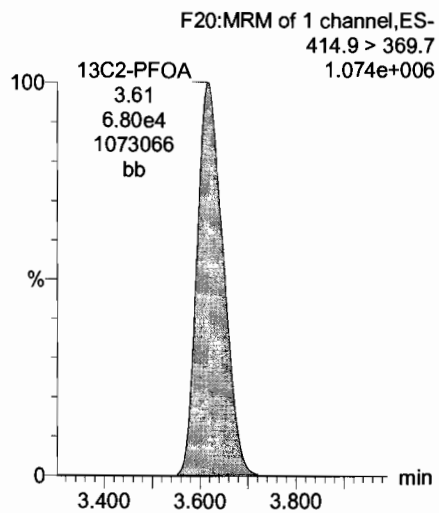

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Dataset: U:\Q4.PRO\results\170728M2\170728M2-30.qld

Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

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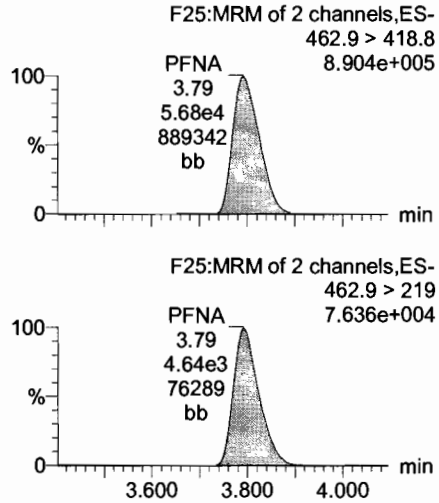

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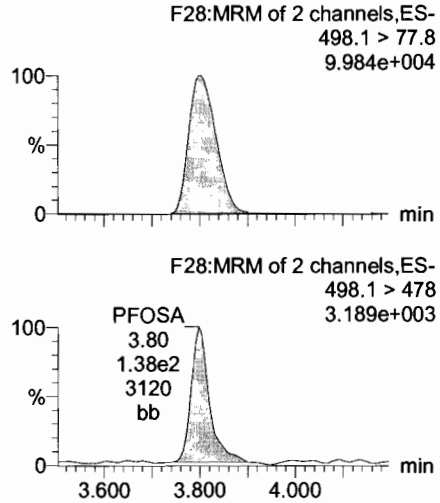

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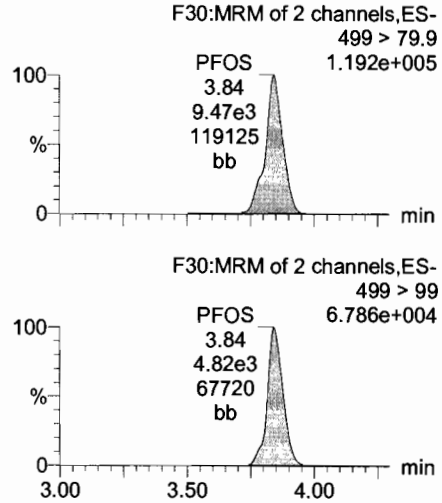

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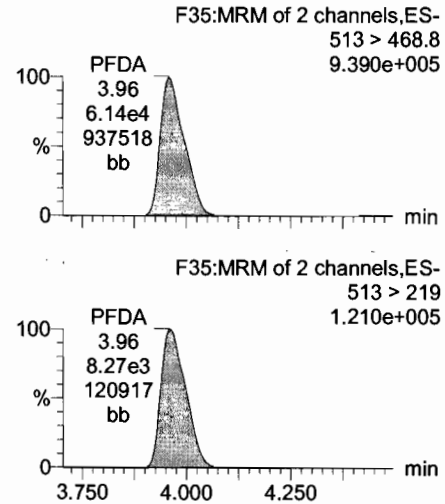

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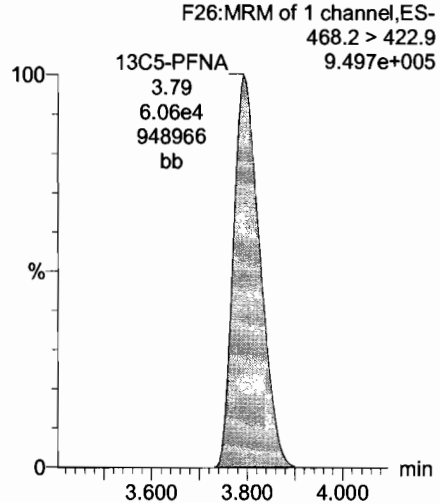

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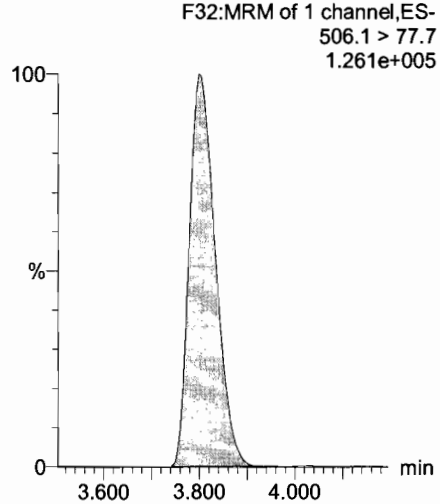
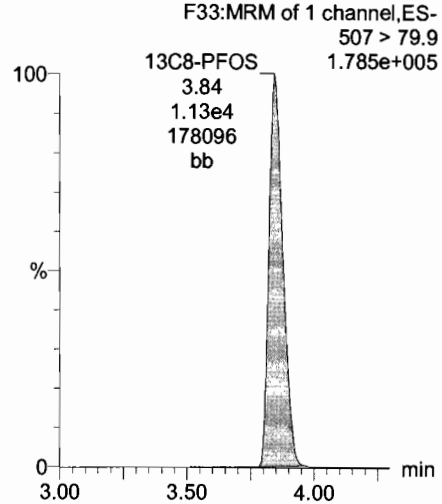


13C8-PFOS



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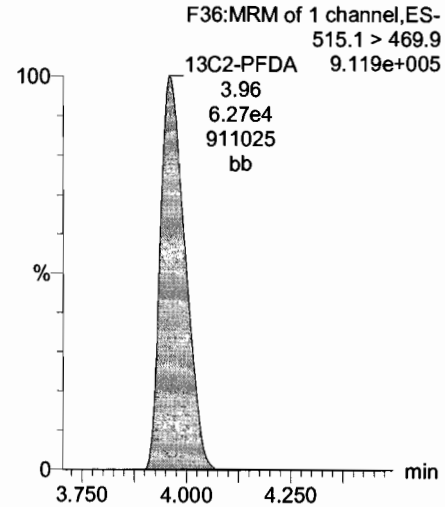

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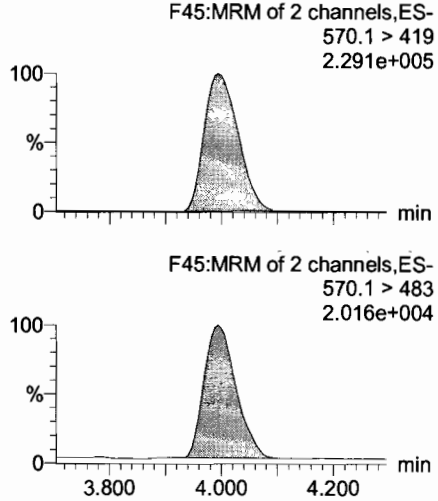
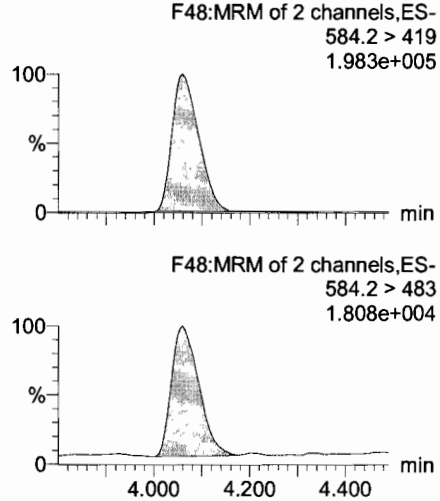
Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

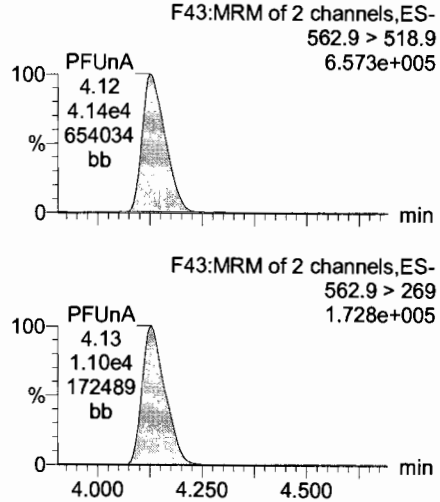
N-MeFOSAA



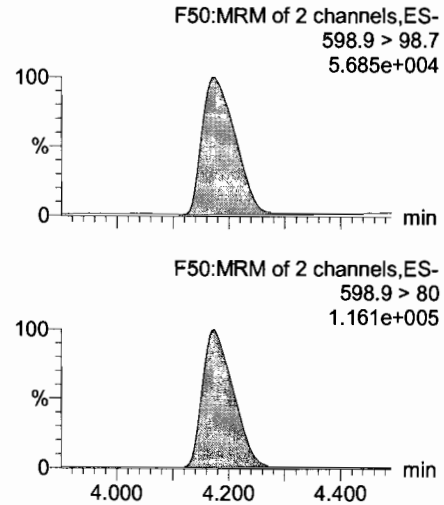
N-EtFOSAA



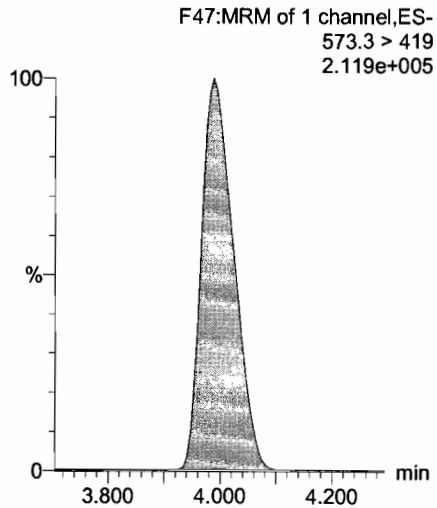
PFUnA



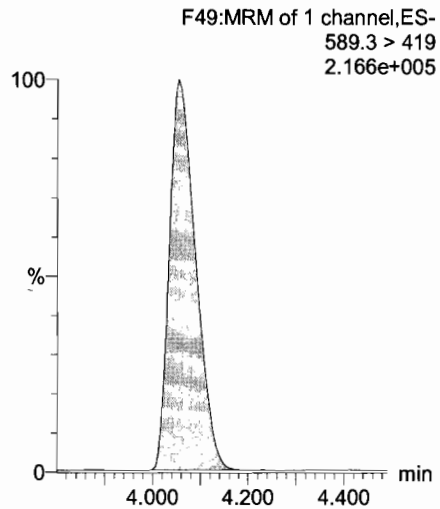
PFDS



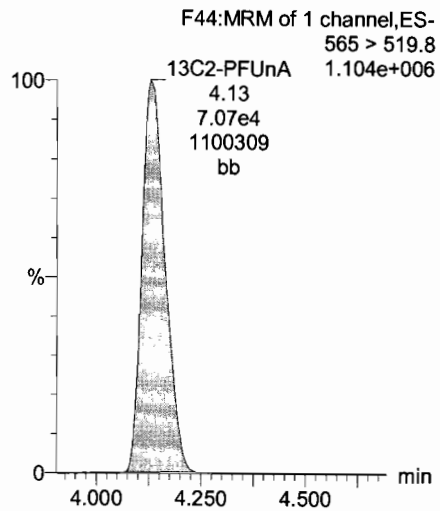
d3-N-MeFOSAA



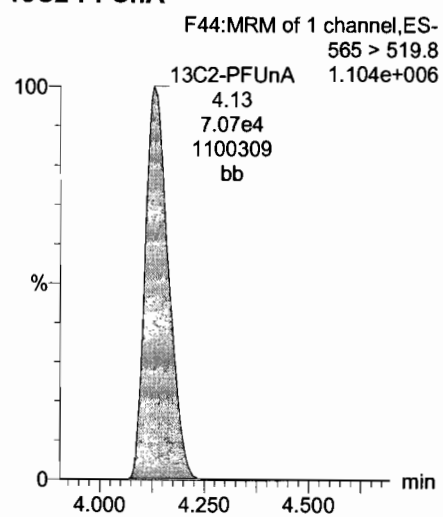
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

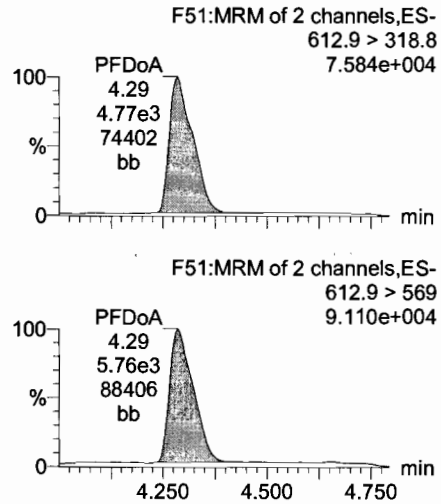


Dataset: U:\Q4.PRO\results\170728M2\170728M2-30.qld

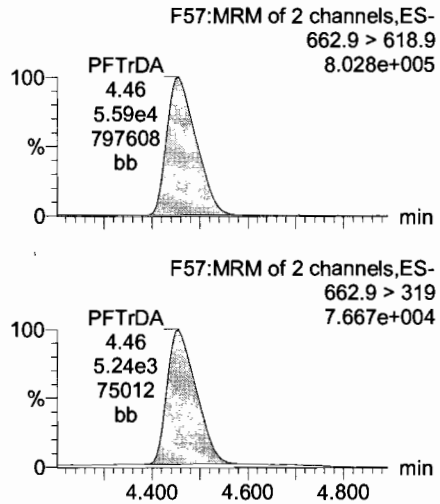
Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

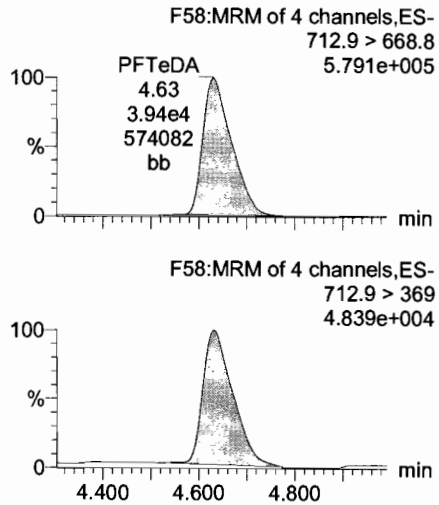
PFDoA



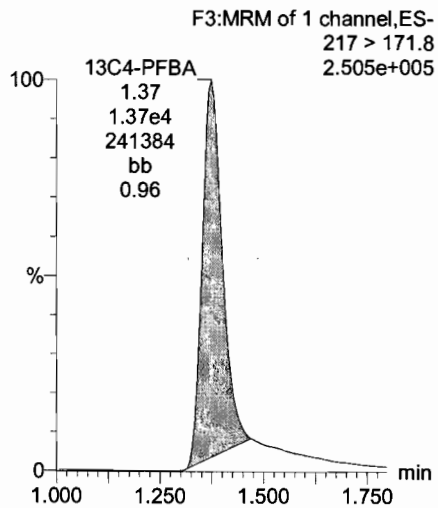
PFTrDA



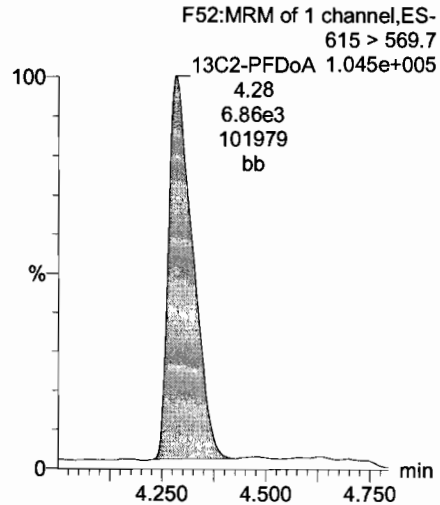
PFTeDA



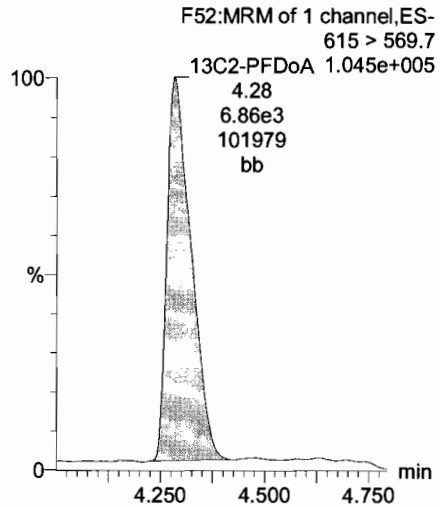
13C4-PFBA



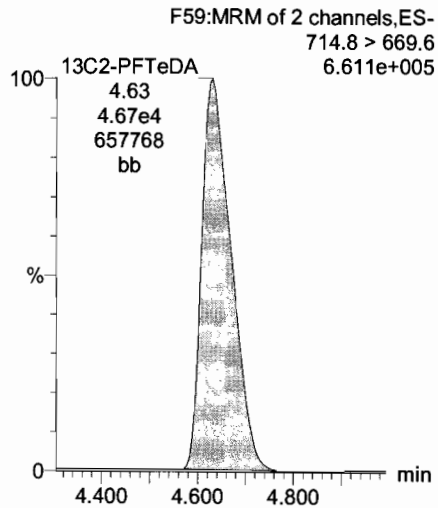
13C2-PFDoA



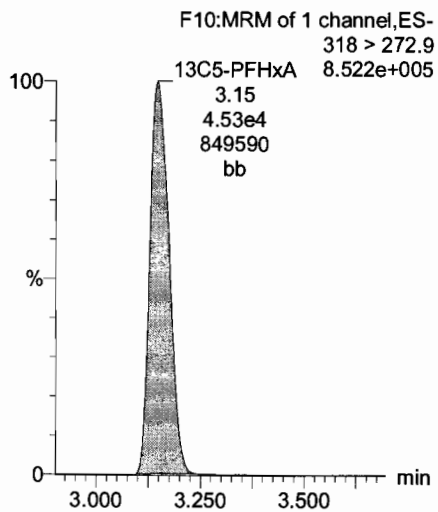
13C2-PFDoA



13C2-PFTeDA



13C5-PFHxA



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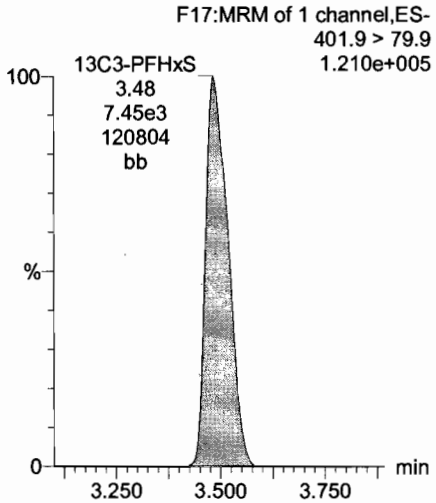
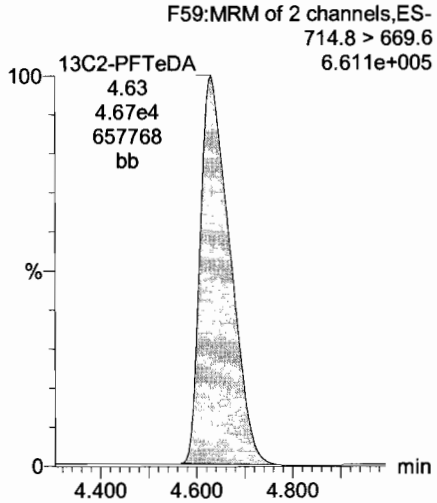
Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

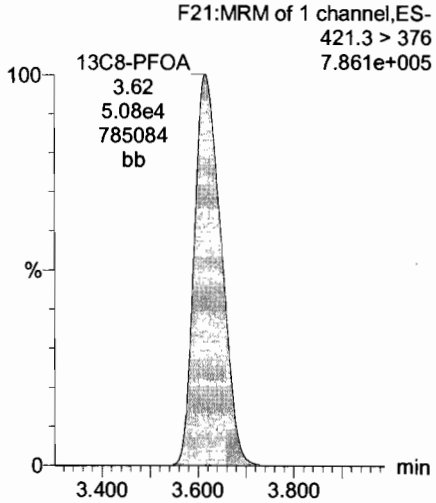
13C3-PFHxS



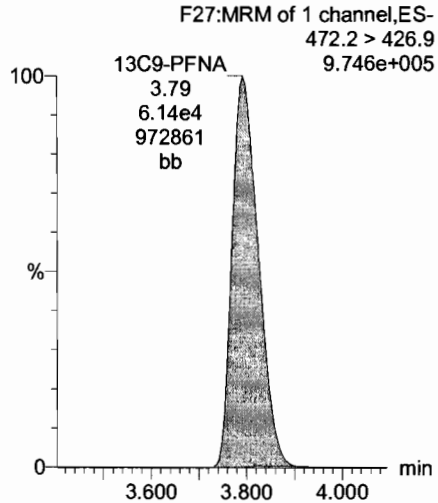
13C2-PFTeDA



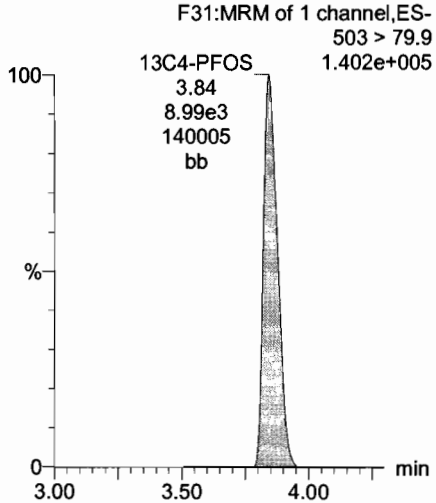
13C8-PFOA



13C9-PFNA



13C4-PFOS

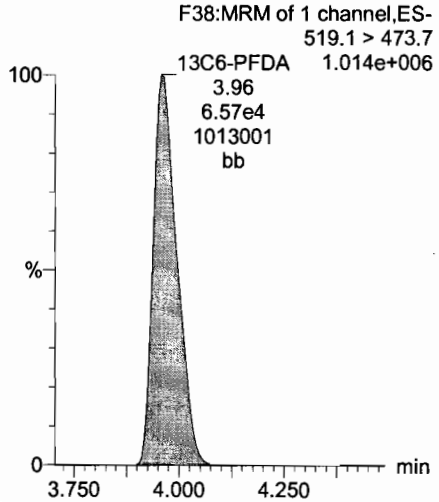


Dataset: U:\Q4.PRO\results\170728M2\170728M2-30.qld

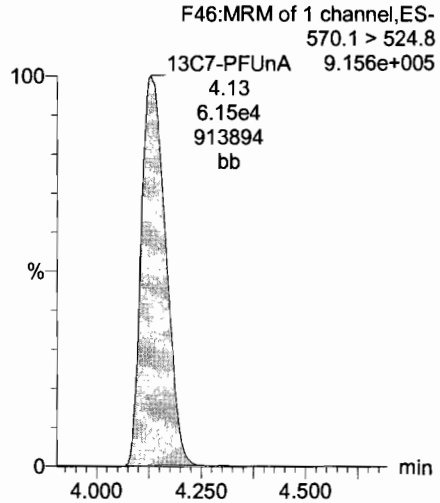
Last Altered: Monday, July 31, 2017 13:01:58 Pacific Daylight Time
Printed: Monday, July 31, 2017 13:03:01 Pacific Daylight Time

Name: 170728M2_30, Date: 28-Jul-2017, Time: 21:21:32, ID: ST170728M2-11 PFC CS3 17G2829, Description: PFC CS3 17G2829

13C6-PFDA



13C7-PFUnA



INITIAL CALIBRATION

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:40:40 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 24 Jul 2017 15:22:13
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

AC 7/24/17

KEL 7/24/17

Compound name: PFBA
Correlation coefficient: r = 0.999644, r^2 = 0.999287
Calibration curve: 1.1275 * x + 0.163356
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	1.55	407.719	12354.435	0.413	0.2	-11.6	NO	0.999	NO	bb
2	2	170724M1_4	Standard	0.500	1.55	682.657	12177.060	0.701	0.5	-4.7	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	1.55	1308.852	12151.235	1.346	1.0	4.9	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	1.55	2608.698	12859.778	2.536	2.1	5.2	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	1.55	6350.984	12263.796	6.473	5.6	11.9	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	1.55	11274.906	12983.228	10.855	9.5	-5.2	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	1.55	55148.398	12298.162	56.053	49.6	-0.9	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	1.57	109673.492	12111.065	113.196	100.2	0.2	NO	0.999	NO	bb

Compound name: PFPeA
Correlation coefficient: r = 0.999528, r^2 = 0.999056
Calibration curve: 0.99208 * x + 0.104629
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	2.80	607.592	24708.574	0.307	0.2	-18.3	NO	0.999	NO	bb
2	2	170724M1_4	Standard	0.500	2.80	1138.424	24374.584	0.584	0.5	-3.4	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	2.80	2230.288	24321.555	1.146	1.0	5.0	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	2.80	4575.088	25826.396	2.214	2.1	6.3	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	2.80	11044.060	24387.125	5.661	5.6	12.0	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	2.81	20066.025	25621.486	9.790	9.8	-2.4	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	2.80	97100.672	23859.781	50.870	51.2	2.3	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	2.81	190500.000	24378.607	97.678	98.4	-1.6	NO	0.999	NO	bb

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
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Compound name: PFBS
Correlation coefficient: r = 0.999611, r^2 = 0.999223
Calibration curve: 1.85223 * x + 0.0752948
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.00	116.281	3068.403	0.474	0.2	-14.0	NO	0.999	NO	bb
2	2	170724M1_4	Standard	0.500	3.00	214.965	3020.354	0.890	0.4	-12.1	NO	0.999	NO	MM
3	3	170724M1_5	Standard	1.000	2.99	512.501	3001.774	2.134	1.1	11.2	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	3.00	1085.602	3295.993	4.117	2.2	9.1	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	3.00	2583.207	3132.764	10.307	5.5	10.5	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	3.00	4677.829	3302.426	17.706	9.5	-4.8	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	3.00	22355.119	2994.649	93.313	50.3	0.7	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	3.00	43420.234	2946.134	184.225	99.4	-0.6	NO	0.999	NO	bb

Compound name: PFHxA
Correlation coefficient: r = 0.999648, r^2 = 0.999296
Calibration curve: 1.50967 * x + 0.157344
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.22	1079.404	11341.955	0.476	0.2	-15.6	NO	0.999	NO	bb
2	2	170724M1_4	Standard	0.500	3.22	1906.946	10636.292	0.896	0.5	-2.1	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	3.22	3807.136	10865.864	1.752	1.1	5.6	NO	0.999	NO	db
4	4	170724M1_6	Standard	2.000	3.22	7912.540	12006.801	3.295	2.1	3.9	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	3.22	18325.188	10585.094	8.656	5.6	12.6	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	3.22	34348.887	11649.966	14.742	9.7	-3.4	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	3.22	154915.125	10379.170	74.628	49.3	-1.3	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	3.22	320392.531	10569.161	151.570	100.3	0.3	NO	0.999	NO	bb

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
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Compound name: PFHpA
Correlation coefficient: r = 0.999811, r^2 = 0.999621
Calibration curve: 1.25322 * x + 0.0796155
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.47	835.892	29540.787	0.354	0.2	-12.5	NO	1.000	NO	bb
2	2	170724M1_4	Standard	0.500	3.48	1686.437	28831.211	0.731	0.5	4.0	NO	1.000	NO	db
3	3	170724M1_5	Standard	1.000	3.48	3129.354	30065.992	1.301	1.0	-2.5	NO	1.000	NO	bb
4	4	170724M1_6	Standard	2.000	3.48	6923.302	31499.152	2.747	2.1	6.4	NO	1.000	NO	bb
5	5	170724M1_7	Standard	5.000	3.48	17221.189	31478.633	6.838	5.4	7.9	NO	1.000	NO	bb
6	6	170724M1_8	Standard	10.000	3.48	32050.246	32505.703	12.325	9.8	-2.3	NO	1.000	NO	bb
7	7	170724M1_9	Standard	50.000	3.48	148752.578	30043.684	61.890	49.3	-1.4	NO	1.000	NO	bb
8	8	170724M1_10	Standard	100.000	3.48	294885.219	29270.332	125.932	100.4	0.4	NO	1.000	NO	bb

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999711
Calibration curve: -0.00151846 * x^2 + 1.70838 * x + -0.0114403
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.56	73.733	2957.523	0.312	0.2	-24.3	NO	1.000	NO	MM
2	2	170724M1_4	Standard	0.500	3.55	233.030	2945.944	0.989	0.6	17.2	NO	1.000	NO	bb
3	3	170724M1_5	Standard	1.000	3.55	387.605	2882.763	1.681	1.0	-0.9	NO	1.000	NO	bb
4	4	170724M1_6	Standard	2.000	3.55	883.679	3069.216	3.599	2.1	5.9	NO	1.000	NO	bb
5	5	170724M1_7	Standard	5.000	3.55	2121.650	3078.477	8.615	5.1	1.4	NO	1.000	NO	MM
6	6	170724M1_8	Standard	10.000	3.55	3757.863	2827.577	16.613	9.8	-1.8	NO	1.000	NO	MM
7	7	170724M1_9	Standard	50.000	3.55	19494.768	2990.466	81.487	49.9	-0.2	NO	1.000	NO	MM
8	8	170724M1_10	Standard	100.000	3.55	36940.883	2965.238	155.725	100.1	0.1	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

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Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.997533
Calibration curve: -0.00313053 * x^2 + 1.07473 * x + 0.134469
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.67	204.440	7589.777	0.337	0.2	-24.7	NO	0.998	NO	bb
2	2	170724M1_4	Standard	0.500	3.67	400.907	7687.979	0.652	0.5	-3.6	NO	0.998	NO	bb
3	3	170724M1_5	Standard	1.000	3.67	747.740	7427.477	1.258	1.0	4.9	NO	0.998	NO	bb
4	4	170724M1_6	Standard	2.000	3.66	1573.173	7868.375	2.499	2.2	10.7	NO	0.998	NO	bb
5	5	170724M1_7	Standard	5.000	3.66	3802.596	7544.070	6.301	5.8	16.7	NO	0.998	NO	bb
6	6	170724M1_8	Standard	10.000	3.67	6777.476	8079.142	10.486	9.9	-0.8	NO	0.998	NO	bb
7	7	170724M1_9	Standard	50.000	3.67	31001.344	8775.410	44.159	47.5	-4.9	NO	0.998	NO	bb
8	8	170724M1_10	Standard	100.000	3.66	59887.281	9696.150	77.205	102.0	2.0	NO	0.998	NO	bb

Compound name: PFOA
Correlation coefficient: r = 0.999233, r^2 = 0.998466
Calibration curve: 0.970801 * x + 0.199778
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.67	1654.212	55437.824	0.373	0.2	-28.6	NO	0.998	NO	bb
2	2	170724M1_4	Standard	0.500	3.67	2766.273	52853.566	0.654	0.5	-6.4	NO	0.998	NO	bb
3	3	170724M1_5	Standard	1.000	3.67	5264.665	53444.164	1.231	1.1	6.3	NO	0.998	NO	bb
4	4	170724M1_6	Standard	2.000	3.68	10233.177	55652.324	2.298	2.2	8.1	NO	0.998	NO	bb
5	5	170724M1_7	Standard	5.000	3.68	26080.451	55510.707	5.873	5.8	16.9	NO	0.998	NO	bb
6	6	170724M1_8	Standard	10.000	3.68	45105.969	54392.293	10.366	10.5	4.7	NO	0.998	NO	bb
7	7	170724M1_9	Standard	50.000	3.67	220048.344	55876.563	49.226	50.5	1.0	NO	0.998	NO	bb
8	8	170724M1_10	Standard	100.000	3.68	421252.813	55196.383	95.399	98.1	-1.9	NO	0.998	NO	bb

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Compound name: PFHpS
Correlation coefficient: r = 0.999150, r^2 = 0.998301
Calibration curve: 0.0887442 * x + 0.014645
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.74	113.671	55437.824	0.026	0.1	-50.5	NO	0.998	NO	bbX
2	2	170724M1_4	Standard	0.500	3.74	222.089	52853.566	0.053	0.4	-14.6	NO	0.998	NO	bb
3	3	170724M1_5	Standard	1.000	3.73	522.454	53444.164	0.122	1.2	21.2	NO	0.998	NO	bb
4	4	170724M1_6	Standard	2.000	3.74	936.558	55652.324	0.210	2.2	10.3	NO	0.998	NO	bb
5	5	170724M1_7	Standard	5.000	3.73	2346.630	55510.707	0.528	5.8	15.8	NO	0.998	NO	bb
6	6	170724M1_8	Standard	10.000	3.74	4004.412	54392.293	0.920	10.2	2.0	NO	0.998	NO	bb
7	7	170724M1_9	Standard	50.000	3.74	19773.092	55876.563	4.423	49.7	-0.6	NO	0.998	NO	bb
8	8	170724M1_10	Standard	100.000	3.74	38852.836	55196.383	8.799	99.0	-1.0	NO	0.998	NO	bb

Compound name: PFNA
Correlation coefficient: r = 0.998659, r^2 = 0.997320
Calibration curve: 1.09835 * x + 0.147218
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.85	1506.464	55001.828	0.342	0.2	-28.9	NO	0.997	NO	MM
2	2	170724M1_4	Standard	0.500	3.85	2694.965	54762.438	0.615	0.4	-14.8	NO	0.997	NO	bb
3	3	170724M1_5	Standard	1.000	3.85	5691.902	55321.512	1.286	1.0	3.7	NO	0.997	NO	bb
4	4	170724M1_6	Standard	2.000	3.85	12559.827	59225.996	2.651	2.3	14.0	NO	0.997	NO	bb
5	5	170724M1_7	Standard	5.000	3.85	29286.219	53341.520	6.863	6.1	22.3	NO	0.997	NO	bb
6	6	170724M1_8	Standard	10.000	3.85	53683.984	56161.168	11.949	10.7	7.4	NO	0.997	NO	bb
7	7	170724M1_9	Standard	50.000	3.85	236461.688	55495.742	53.261	48.4	-3.3	NO	0.997	NO	bb
8	8	170724M1_10	Standard	100.000	3.85	475993.000	54308.789	109.557	99.6	-0.4	NO	0.997	NO	bb

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Compound name: PFOSA
Correlation coefficient: r = 0.998808, r^2 = 0.997616
Calibration curve: 1.0493 * x + 0.0489398
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.86	163.860	6633.945	0.309	0.2	-1.0	NO	0.998	NO	bb
2	2	170724M1_4	Standard	0.500	3.85	301.866	6613.513	0.571	0.5	-0.6	NO	0.998	NO	bb
3	3	170724M1_5	Standard	1.000	3.85	477.914	6491.109	0.920	0.8	-17.0	NO	0.998	NO	bb
4	4	170724M1_6	Standard	2.000	3.86	1315.264	7021.902	2.341	2.2	9.2	NO	0.998	NO	bb
5	5	170724M1_7	Standard	5.000	3.86	2927.381	6519.732	5.613	5.3	6.0	NO	0.998	NO	bb
6	6	170724M1_8	Standard	10.000	3.86	5570.263	6576.866	10.587	10.0	0.4	NO	0.998	NO	bb
7	7	170724M1_9	Standard	50.000	3.86	26459.754	5926.425	55.809	53.1	6.3	NO	0.998	NO	bb
8	8	170724M1_10	Standard	100.000	3.86	50171.699	6190.267	101.312	96.5	-3.5	NO	0.998	NO	bb

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999148
Calibration curve: -0.00122032 * x^2 + 1.19038 * x + 0.0183073
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	3.90	300.610	10711.932	0.351	0.3	11.8	NO	0.999	NO	MM
2	2	170724M1_4	Standard	0.500	3.90	466.042	10010.674	0.582	0.5	-5.3	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	3.90	1032.724	10207.536	1.265	1.0	4.8	NO	0.999	NO	MM
4	4	170724M1_6	Standard	2.000	3.90	1981.837	10715.066	2.312	1.9	-3.5	NO	0.999	NO	MM
5	5	170724M1_7	Standard	5.000	3.90	5099.578	10217.659	6.239	5.3	5.1	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	3.90	8336.075	9647.514	10.801	9.1	-8.6	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	3.91	43091.355	9325.974	57.757	51.2	2.4	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	3.90	78910.156	9278.883	106.303	99.4	-0.6	NO	0.999	NO	bb

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Compound name: PFDA
Correlation coefficient: r = 0.999397, r^2 = 0.998795
Calibration curve: 1.29731 * x + 0.128184
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.02	1671.759	55156.438	0.379	0.2	-22.7	NO	0.999	NO	bb
2	2	170724M1_4	Standard	0.500	4.02	3226.587	49449.902	0.816	0.5	6.0	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	4.02	6606.647	59736.465	1.382	1.0	-3.3	NO	0.999	NO	db
4	4	170724M1_6	Standard	2.000	4.02	14672.154	61862.684	2.965	2.2	9.3	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	4.02	32741.914	53915.461	7.591	5.8	15.1	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	4.02	60142.156	58734.430	12.800	9.8	-2.3	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	4.03	291430.906	57610.250	63.233	48.6	-2.7	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	4.02	519240.375	49628.984	130.781	100.7	0.7	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.996738
Calibration curve: -0.00420182 * x^2 + 1.49722 * x + 0.133523
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.01	116.059	5712.626	0.254	0.1	-67.8	NO	0.997	NO	bbX
2	2	170724M1_4	Standard	0.500	4.02	436.336	5926.817	0.920	0.5	5.2	NO	0.997	NO	bb
3	3	170724M1_5	Standard	1.000	4.01	704.575	5605.082	1.571	1.0	-3.7	NO	0.997	NO	bb
4	4	170724M1_6	Standard	2.000	4.01	1467.688	6033.180	3.041	2.0	-2.4	NO	0.997	NO	bb
5	5	170724M1_7	Standard	5.000	4.02	3942.699	5463.454	9.021	6.0	20.8	NO	0.997	NO	bb
6	6	170724M1_8	Standard	10.000	4.02	6715.274	5614.961	14.950	10.2	1.9	NO	0.997	NO	bb
7	7	170724M1_9	Standard	50.000	4.02	29821.402	6078.795	61.323	47.1	-5.8	NO	0.997	NO	bb
8	8	170724M1_10	Standard	100.000	4.02	56335.957	6441.568	109.321	102.3	2.3	NO	0.997	NO	bb

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Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999848
Calibration curve: -0.0104077 * x^2 + 19.9194 * x + 0.547687
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.05	448.925	12099.400	6.029	0.3	10.1	NO	1.000	NO	bb
2	2	170724M1_4	Standard	0.500	4.05	716.809	11504.973	10.124	0.5	-3.8	NO	1.000	NO	bb
3	3	170724M1_5	Standard	1.000	4.06	1261.768	11265.637	18.200	0.9	-11.3	NO	1.000	NO	bb
4	4	170724M1_6	Standard	2.000	4.05	3173.830	12505.027	41.243	2.0	2.3	NO	1.000	NO	bb
5	5	170724M1_7	Standard	5.000	4.05	7648.363	12072.939	102.946	5.2	3.1	NO	1.000	NO	bb
6	6	170724M1_8	Standard	10.000	4.05	14431.390	11803.941	198.671	10.0	-0.0	NO	1.000	NO	bb
7	7	170724M1_9	Standard	50.000	4.05	69860.063	11737.307	967.195	49.8	-0.3	NO	1.000	NO	bb
8	8	170724M1_10	Standard	100.000	4.05	130379.672	11210.404	1889.914	100.1	0.1	NO	1.000	NO	bb

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999908
Calibration curve: -0.00439744 * x^2 + 16.1657 * x + 0.0580373
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.12	300.173	12172.007	4.007	0.2	-2.3	NO	1.000	NO	bb
2	2	170724M1_4	Standard	0.500	4.12	550.297	11615.228	7.699	0.5	-5.5	NO	1.000	NO	bb
3	3	170724M1_5	Standard	1.000	4.12	1245.830	11653.344	17.372	1.1	7.1	NO	1.000	NO	bb
4	4	170724M1_6	Standard	2.000	4.12	2483.220	12504.510	32.270	2.0	-0.3	NO	1.000	NO	bb
5	5	170724M1_7	Standard	5.000	4.12	6280.812	12228.059	83.466	5.2	3.3	NO	1.000	NO	bb
6	6	170724M1_8	Standard	10.000	4.12	12176.978	12339.168	160.364	9.9	-0.6	NO	1.000	NO	bb
7	7	170724M1_9	Standard	50.000	4.12	57061.832	11695.135	792.855	49.7	-0.6	NO	1.000	NO	bb
8	8	170724M1_10	Standard	100.000	4.12	112917.555	11651.338	1574.849	100.1	0.1	NO	1.000	NO	bb

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Compound name: PFUnA
Coefficient of Determination: R^2 = 0.998430
Calibration curve: -0.0020331 * x^2 + 0.901478 * x + 0.00751751
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.18	1408.556	65735.461	0.268	0.3	15.6	NO	0.998	NO	bb
2	2	170724M1_4	Standard	0.500	4.19	2456.148	63870.914	0.481	0.5	5.1	NO	0.998	NO	bb
3	3	170724M1_5	Standard	1.000	4.19	4367.807	64348.984	0.848	0.9	-6.5	NO	0.998	NO	bb
4	4	170724M1_6	Standard	2.000	4.19	9271.418	67160.539	1.726	1.9	-4.3	NO	0.998	NO	bb
5	5	170724M1_7	Standard	5.000	4.19	22206.646	66089.180	4.200	4.7	-6.0	NO	0.998	NO	bb
6	6	170724M1_8	Standard	10.000	4.19	40104.945	61335.543	8.173	9.3	-7.5	NO	0.998	NO	bb
7	7	170724M1_9	Standard	50.000	4.19	187190.781	55960.629	41.813	52.6	5.2	NO	0.998	NO	bb
8	8	170724M1_10	Standard	100.000	4.19	357250.000	64722.215	68.997	98.3	-1.7	NO	0.998	NO	bb

Compound name: PFDS
Coefficient of Determination: R^2 = 0.998889
Calibration curve: -0.000220781 * x^2 + 0.0914068 * x + -0.00228704
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.24	125.500	65735.461	0.024	0.3	14.5	NO	0.999	NO	bb
2	2	170724M1_4	Standard	0.500	4.24	213.650	63870.914	0.042	0.5	-3.4	NO	0.999	NO	MM
3	3	170724M1_5	Standard	1.000	4.23	432.153	64348.984	0.084	0.9	-5.4	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	4.24	998.163	67160.539	0.186	2.1	3.4	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	4.23	2251.549	66089.180	0.426	4.7	-5.2	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	4.23	4080.028	61335.543	0.831	9.3	-6.7	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	4.24	18621.564	55960.629	4.160	52.1	4.2	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	4.23	35549.465	64722.215	6.866	98.6	-1.4	NO	0.999	NO	bb

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Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999700
Calibration curve: -0.000446703 * x^2 + 0.926687 * x + 0.203454
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.34	212.884	6396.985	0.416	0.2	-8.3	NO	1.000	NO	MM
2	2	170724M1_4	Standard	0.500	4.35	285.030	5632.353	0.633	0.5	-7.4	NO	1.000	NO	MM
3	3	170724M1_5	Standard	1.000	4.35	576.941	5998.723	1.202	1.1	7.8	NO	1.000	NO	bb
4	4	170724M1_6	Standard	2.000	4.35	1144.260	6584.378	2.172	2.1	6.3	NO	1.000	NO	bb
5	5	170724M1_7	Standard	5.000	4.35	2601.126	6419.244	5.065	5.3	5.2	NO	1.000	NO	bb
6	6	170724M1_8	Standard	10.000	4.35	4871.013	6690.135	9.101	9.6	-3.5	NO	1.000	NO	bb
7	7	170724M1_9	Standard	50.000	4.35	21850.346	6031.607	45.283	49.8	-0.3	NO	1.000	NO	bb
8	8	170724M1_10	Standard	100.000	4.35	43781.789	6184.443	88.492	100.1	0.1	NO	1.000	NO	bb

Compound name: N-MeFOSA
Correlation coefficient: r = 0.999273, r^2 = 0.998546
Calibration curve: 1.0376 * x + 0.213391
Response type: Internal Std (Ref 45), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	1.250	4.39	228.733	27834.387	1.233	1.0	-21.4	NO	0.999	NO	MM
2	2	170724M1_4	Standard	2.500	4.39	521.665	26795.877	2.920	2.6	4.3	NO	0.999	NO	db
3	3	170724M1_5	Standard	5.000	4.39	1023.477	27001.328	5.686	5.3	5.5	NO	0.999	NO	bb
4	4	170724M1_6	Standard	10.000	4.39	2219.793	28178.129	11.817	11.2	11.8	NO	0.999	NO	bb
5	5	170724M1_7	Standard	25.000	4.39	5367.556	27075.477	29.737	28.5	13.8	NO	0.999	NO	bb
6	6	170724M1_8	Standard	50.000	4.39	9739.016	27395.363	53.325	51.2	2.4	NO	0.999	NO	db
7	7	170724M1_9	Standard	250.000	4.39	46919.371	26470.068	265.882	256.0	2.4	NO	0.999	NO	bb
8	8	170724M1_10	Standard	500.000	4.39	92806.148	27480.182	506.580	488.0	-2.4	NO	0.999	NO	bb

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Compound name: PFTrDA
Correlation coefficient: r = 0.999414, r^2 = 0.998828
Calibration curve: 10.9255 * x + 1.79
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.52	1936.804	6396.985	3.785	0.2	-27.0	NO	0.999	NO	MM
2	2	170724M1_4	Standard	0.500	4.52	3347.446	5632.353	7.429	0.5	3.2	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	4.52	6246.435	5998.723	13.016	1.0	2.8	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	4.52	13537.021	6584.378	25.699	2.2	9.4	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	4.52	32633.807	6419.244	63.547	5.7	13.1	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	4.52	58224.531	6690.135	108.788	9.8	-2.1	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	4.52	270796.875	6031.607	561.204	51.2	2.4	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	4.52	531631.563	6184.443	1074.534	98.2	-1.8	NO	0.999	NO	bb

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999057
Calibration curve: -0.000800394 * x^2 + 1.14875 * x + 0.111533
Response type: Internal Std (Ref 46), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	4.70	1552.113	52611.504	0.369	0.2	-10.4	NO	0.999	NO	MM
2	2	170724M1_4	Standard	0.500	4.70	2285.720	43220.855	0.661	0.5	-4.3	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	4.70	4798.681	44254.344	1.355	1.1	8.4	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	4.70	9477.179	47041.410	2.518	2.1	4.9	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	4.70	23144.785	45392.488	6.374	5.5	9.4	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	4.70	40819.449	48426.250	10.536	9.1	-8.7	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	4.70	191033.828	42647.246	55.992	50.4	0.8	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	4.70	370959.375	43405.691	106.829	99.8	-0.2	NO	0.999	NO	bb

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Compound name: N-EtFOSA
Correlation coefficient: r = 0.999689, r^2 = 0.999377
Calibration curve: 0.904115 * x + 0.326191
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 170724M1_3	Standard	1.250	4.96	337.684	39437.277	1.284	1.1	-15.2	NO	0.999	NO	bb
2	2 170724M1_4	Standard	2.500	4.97	613.630	37412.609	2.460	2.4	-5.6	NO	0.999	NO	bb
3	3 170724M1_5	Standard	5.000	4.97	1267.991	37050.801	5.133	5.3	6.3	NO	0.999	NO	bb
4	4 170724M1_6	Standard	10.000	4.96	2697.465	40104.539	10.089	10.8	8.0	NO	0.999	NO	bb
5	5 170724M1_7	Standard	25.000	4.97	6431.737	38083.547	25.333	27.7	10.6	NO	0.999	NO	bb
6	6 170724M1_8	Standard	50.000	4.97	11627.879	39916.621	43.696	48.0	-4.1	NO	0.999	NO	db
7	7 170724M1_9	Standard	250.000	4.96	57443.004	37926.309	227.189	250.9	0.4	NO	0.999	NO	db
8	8 170724M1_10	Standard	500.000	4.97	116042.914	38657.641	450.272	497.7	-0.5	NO	0.999	NO	db

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999358
Calibration curve: -0.000715061 * x^2 + 1.34773 * x + 0.264398
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 170724M1_3	Standard	0.250	5.07	2816.818	25428.396	0.554	0.2	-14.1	NO	0.999	NO	bb
2	2 170724M1_4	Standard	0.500	5.07	3878.399	21542.566	0.900	0.5	-5.6	NO	0.999	NO	bb
3	3 170724M1_5	Standard	1.000	5.07	7068.157	21611.141	1.635	1.0	1.8	NO	0.999	NO	bb
4	4 170724M1_6	Standard	2.000	5.07	14417.972	22044.896	3.270	2.2	11.6	NO	0.999	NO	bb
5	5 170724M1_7	Standard	5.000	5.07	33676.410	22327.822	7.541	5.4	8.3	NO	0.999	NO	bb
6	6 170724M1_8	Standard	10.000	5.07	61493.496	22552.494	13.633	10.0	-0.3	NO	0.999	NO	bb
7	7 170724M1_9	Standard	50.000	5.07	276231.906	21452.613	64.382	48.8	-2.3	NO	0.999	NO	bb
8	8 170724M1_10	Standard	100.000	5.07	545977.438	21228.160	128.597	100.6	0.6	NO	0.999	NO	bb

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Compound name: PFODA
Correlation coefficient: r = 0.999378, r^2 = 0.998756
Calibration curve: 1.27561 * x + 0.10098
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	0.250	5.43	1893.557	25428.396	0.372	0.2	-14.9	NO	0.999	NO	MM
2	2	170724M1_4	Standard	0.500	5.44	3335.536	21542.566	0.774	0.5	5.5	NO	0.999	NO	bb
3	3	170724M1_5	Standard	1.000	5.44	6573.281	21611.141	1.521	1.1	11.3	NO	0.999	NO	bb
4	4	170724M1_6	Standard	2.000	5.44	13511.143	22044.896	3.064	2.3	16.2	NO	0.999	NO	bb
5	5	170724M1_7	Standard	5.000	5.44	32601.881	22327.822	7.301	5.6	12.9	NO	0.999	NO	bb
6	6	170724M1_8	Standard	10.000	5.44	59011.938	22552.494	13.083	10.2	1.8	NO	0.999	NO	bb
7	7	170724M1_9	Standard	50.000	5.43	274924.375	21452.613	64.077	50.2	0.3	NO	0.999	NO	bb
8	8	170724M1_10	Standard	100.000	5.44	534414.688	21228.160	125.874	98.6	-1.4	NO	0.999	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999476, r^2 = 0.998953
Calibration curve: 1.01603 * x + 0.461771
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	1.250	5.43	419.747	45355.609	1.388	0.9	-27.1	NO	0.999	NO	bb
2	2	170724M1_4	Standard	2.500	5.43	827.391	42298.965	2.934	2.4	-2.7	NO	0.999	NO	bb
3	3	170724M1_5	Standard	5.000	5.43	1698.216	42181.715	6.039	5.5	9.8	NO	0.999	NO	bb
4	4	170724M1_6	Standard	10.000	5.43	3509.137	44882.496	11.728	11.1	10.9	NO	0.999	NO	bb
5	5	170724M1_7	Standard	25.000	5.43	8229.911	42480.406	29.060	28.1	12.6	NO	0.999	NO	bb
6	6	170724M1_8	Standard	50.000	5.43	14647.859	44502.430	49.372	48.1	-3.7	NO	0.999	NO	bb
7	7	170724M1_9	Standard	250.000	5.43	72247.016	42011.336	257.955	253.4	1.4	NO	0.999	NO	bb
8	8	170724M1_10	Standard	500.000	5.43	142986.313	42682.813	502.496	494.1	-1.2	NO	0.999	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999680, r^2 = 0.999361
Calibration curve: 1.16673 * x + 0.501898
Response type: Internal Std (Ref 50), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	1.250	5.60	493.408	44922.563	1.648	1.0	-21.4	NO	0.999	NO	bb
2	2	170724M1_4	Standard	2.500	5.61	917.078	40989.961	3.356	2.4	-2.2	NO	0.999	NO	bb
3	3	170724M1_5	Standard	5.000	5.61	1793.908	40752.352	6.603	5.2	4.6	NO	0.999	NO	bb
4	4	170724M1_6	Standard	10.000	5.60	3804.083	43177.285	13.216	10.9	9.0	NO	0.999	NO	bb
5	5	170724M1_7	Standard	25.000	5.61	9310.704	42231.566	33.070	27.9	11.7	NO	0.999	NO	bb
6	6	170724M1_8	Standard	50.000	5.61	16671.494	42902.656	58.288	49.5	-0.9	NO	0.999	NO	bb
7	7	170724M1_9	Standard	250.000	5.60	80911.422	41552.719	292.080	249.9	-0.0	NO	0.999	NO	bb
8	8	170724M1_10	Standard	500.000	5.61	163300.031	42219.305	580.185	496.8	-0.6	NO	0.999	NO	bb

Compound name: 13C3-PFBA
Response Factor: 0.820483
RRF SD: 0.00867593, Relative SD: 1.05742
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	1.54	12354.435	15090.568	10.234	12.5	-0.2	NO		NO	bb
2	2	170724M1_4	Standard	12.500	1.55	12177.060	14962.116	10.173	12.4	-0.8	NO		NO	bb
3	3	170724M1_5	Standard	12.500	1.54	12151.235	14894.126	10.198	12.4	-0.6	NO		NO	bb
4	4	170724M1_6	Standard	12.500	1.55	12859.778	15482.658	10.382	12.7	1.2	NO		NO	bb
5	5	170724M1_7	Standard	12.500	1.55	12263.796	15091.931	10.158	12.4	-1.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	1.55	12983.228	15599.055	10.404	12.7	1.4	NO		NO	bb
7	7	170724M1_9	Standard	12.500	1.55	12298.162	14839.394	10.359	12.6	1.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	1.56	12111.065	14929.445	10.140	12.4	-1.1	NO		NO	bb

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Compound name: 13C3-PFPeA
Response Factor: 0.248174
RRF SD: 0.00555735, Relative SD: 2.2393
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	2.80	24708.574	40367.738	3.060	12.3	-1.3	NO		NO	bb
2	2	170724M1_4	Standard	12.500	2.80	24374.584	38823.406	3.139	12.6	1.2	NO		NO	bb
3	3	170724M1_5	Standard	12.500	2.80	24321.555	37967.629	3.203	12.9	3.2	NO		NO	bb
4	4	170724M1_6	Standard	12.500	2.80	25826.396	42133.270	3.065	12.3	-1.2	NO		NO	bb
5	5	170724M1_7	Standard	12.500	2.80	24387.125	39088.754	3.119	12.6	0.6	NO		NO	bb
6	6	170724M1_8	Standard	12.500	2.81	25621.486	41725.730	3.070	12.4	-1.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	2.80	23859.781	39920.477	2.988	12.0	-3.7	NO		NO	bb
8	8	170724M1_10	Standard	12.500	2.81	24378.607	38428.922	3.172	12.8	2.2	NO		NO	bb

Compound name: 13C3-PFBS
Response Factor: 0.0311034
RRF SD: 0.000697979, Relative SD: 2.24406
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.00	3068.403	40367.738	0.380	12.2	-2.2	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.00	3020.354	38823.406	0.389	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.00	3001.774	37967.629	0.395	12.7	1.7	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.00	3295.993	42133.270	0.391	12.6	0.6	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.00	3132.764	39088.754	0.401	12.9	3.1	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.00	3302.426	41725.730	0.396	12.7	1.8	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.00	2994.649	39920.477	0.375	12.1	-3.5	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.00	2946.134	38428.922	0.383	12.3	-1.4	NO		NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 0.27639
RRF SD: 0.00850433, Relative SD: 3.07693
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	5.000	3.22	11341.955	40367.738	1.405	5.1	1.7	NO		NO	bb
2	2	170724M1_4	Standard	5.000	3.22	10636.292	38823.406	1.370	5.0	-0.9	NO		NO	bb
3	3	170724M1_5	Standard	5.000	3.22	10865.864	37967.629	1.431	5.2	3.5	NO		NO	bb
4	4	170724M1_6	Standard	5.000	3.22	12006.801	42133.270	1.425	5.2	3.1	NO		NO	bb
5	5	170724M1_7	Standard	5.000	3.22	10585.094	39088.754	1.354	4.9	-2.0	NO		NO	bb
6	6	170724M1_8	Standard	5.000	3.22	11649.966	41725.730	1.396	5.1	1.0	NO		NO	bb
7	7	170724M1_9	Standard	5.000	3.22	10379.170	39920.477	1.300	4.7	-5.9	NO		NO	bb
8	8	170724M1_10	Standard	5.000	3.22	10569.161	38428.922	1.375	5.0	-0.5	NO		NO	bb

Compound name: 13C4-PFHpA
Response Factor: 0.305626
RRF SD: 0.0102637, Relative SD: 3.35826
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.48	29540.787	40367.738	3.659	12.0	-4.2	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.48	28831.211	38823.406	3.713	12.1	-2.8	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.48	30065.992	37967.629	3.959	13.0	3.6	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.48	31499.152	42133.270	3.738	12.2	-2.2	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.48	31478.633	39088.754	4.027	13.2	5.4	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.48	32505.703	41725.730	3.895	12.7	2.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.48	30043.684	39920.477	3.763	12.3	-1.5	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.48	29270.332	38428.922	3.808	12.5	-0.3	NO		NO	bb

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Compound name: 18O2-PFHxS
Response Factor: 0.392715
RRF SD: 0.0177977, Relative SD: 4.53197
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.55	2957.523	7582.089	4.876	12.4	-0.7	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.55	2945.944	7322.380	5.029	12.8	2.4	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.55	2882.763	7368.760	4.890	12.5	-0.4	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.55	3069.216	7556.806	5.077	12.9	3.4	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.55	3078.477	7669.834	5.017	12.8	2.2	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.55	2827.577	8056.833	4.387	11.2	-10.6	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.55	2990.466	7531.759	4.963	12.6	1.1	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.55	2965.238	7365.456	5.032	12.8	2.5	NO		NO	bb

Compound name: 13C2-6:2 FTS
Response Factor: 0.157694
RRF SD: 0.0188884, Relative SD: 11.9778
Response type: Internal Std (Ref 54), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.66	7589.777	50417.762	1.882	11.9	-4.5	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.66	7687.979	52862.527	1.818	11.5	-7.8	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.66	7427.477	49459.691	1.877	11.9	-4.8	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.67	7868.375	51986.957	1.892	12.0	-4.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.66	7544.070	54009.070	1.746	11.1	-11.4	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.67	8079.142	53144.688	1.900	12.1	-3.6	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.67	8775.410	49946.758	2.196	13.9	11.4	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.67	9696.150	49303.969	2.458	15.6	24.7	NO		NO	bb

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Compound name: 13C2-PFOA
Response Factor: 1.0675
RRF SD: 0.0457168, Relative SD: 4.28261
Response type: Internal Std (Ref 54), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.67	55437.824	50417.762	13.745	12.9	3.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.67	52853.566	52862.527	12.498	11.7	-6.3	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.67	53444.164	49459.691	13.507	12.7	1.2	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.67	55652.324	51986.957	13.381	12.5	0.3	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.67	55510.707	54009.070	12.848	12.0	-3.7	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.68	54392.293	53144.688	12.793	12.0	-4.1	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.67	55876.563	49946.758	13.984	13.1	4.8	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.67	55196.383	49303.969	13.994	13.1	4.9	NO		NO	bb

Compound name: 13C5-PFNA
Response Factor: 0.852128
RRF SD: 0.0623325, Relative SD: 7.31492
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.85	55001.828	63362.148	10.851	12.7	1.9	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.85	54762.438	66233.305	10.335	12.1	-3.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.85	55321.512	62897.914	10.994	12.9	3.2	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.85	59225.996	73098.813	10.128	11.9	-4.9	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.85	53341.520	71059.133	9.383	11.0	-11.9	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.85	56161.168	60050.086	11.690	13.7	9.8	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.85	55495.742	67689.273	10.248	12.0	-3.8	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.85	54308.789	58608.688	11.583	13.6	8.7	NO		NO	bb

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Compound name: 13C8-PFOSA
Response Factor: 0.0982354
RRF SD: 0.00607611, Relative SD: 6.18526
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.86	6633.945	66110.742	1.254	12.8	2.1	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.85	6613.513	63178.059	1.309	13.3	6.6	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.86	6491.109	65533.590	1.238	12.6	0.8	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.86	7021.902	74336.992	1.181	12.0	-3.8	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.86	6519.732	73722.414	1.105	11.3	-10.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.86	6576.866	61426.844	1.338	13.6	9.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.86	5926.425	63456.004	1.167	11.9	-4.9	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.86	6190.267	62878.969	1.231	12.5	0.2	NO		NO	bb

Compound name: 13C8-PFOS
Response Factor: 0.935738
RRF SD: 0.0307604, Relative SD: 3.28729
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.90	10711.932	10984.350	12.190	13.0	4.2	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.90	10010.674	10756.134	11.634	12.4	-0.5	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.90	10207.536	10707.182	11.917	12.7	1.9	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.90	10715.066	11395.518	11.754	12.6	0.5	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.90	10217.659	10582.909	12.069	12.9	3.2	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.90	9647.514	10701.979	11.268	12.0	-3.7	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.91	9325.974	10546.740	11.053	11.8	-5.5	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.90	9278.883	9922.027	11.690	12.5	-0.1	NO		NO	bb

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Compound name: 13C2-PFDA
Response Factor: 0.809787
RRF SD: 0.0475325, Relative SD: 5.86975
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.02	55156.438	71538.672	9.638	11.9	-4.8	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.02	49449.902	67518.039	9.155	11.3	-9.6	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.02	59736.465	67946.188	10.990	13.6	8.6	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.02	61862.684	75237.898	10.278	12.7	1.5	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.02	53915.461	68309.617	9.866	12.2	-2.5	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.02	58734.430	69500.219	10.564	13.0	4.4	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.03	57610.250	72719.445	9.903	12.2	-2.2	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.02	49628.984	58601.402	10.586	13.1	4.6	NO		NO	bb

Compound name: 13C2-8:2 FTS
Response Factor: 0.0855752
RRF SD: 0.010191, Relative SD: 11.9089
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.01	5712.626	71538.672	0.998	11.7	-6.7	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.02	5926.817	67518.039	1.097	12.8	2.6	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.01	5605.082	67946.188	1.031	12.0	-3.6	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.01	6033.180	75237.898	1.002	11.7	-6.3	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.02	5463.454	68309.617	1.000	11.7	-6.5	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.02	5614.961	69500.219	1.010	11.8	-5.6	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.02	6078.795	72719.445	1.045	12.2	-2.3	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.02	6441.568	58601.402	1.374	16.1	28.5	NO		NO	bb

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Compound name: d3-N-MeFOSAA
Response Factor: 0.0136964
RRF SD: 0.000727833, Relative SD: 5.31404
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	162.500	4.05	12099.400	66110.742	2.288	167.0	2.8	NO		NO	bb
2	2	170724M1_4	Standard	162.500	4.05	11504.973	63178.059	2.276	166.2	2.3	NO		NO	bb
3	3	170724M1_5	Standard	162.500	4.05	11265.637	65533.590	2.149	156.9	-3.5	NO		NO	bb
4	4	170724M1_6	Standard	162.500	4.05	12505.027	74336.992	2.103	153.5	-5.5	NO		NO	bb
5	5	170724M1_7	Standard	162.500	4.05	12072.939	73722.414	2.047	149.5	-8.0	NO		NO	bb
6	6	170724M1_8	Standard	162.500	4.05	11803.941	61426.844	2.402	175.4	7.9	NO		NO	bb
7	7	170724M1_9	Standard	162.500	4.05	11737.307	63456.004	2.312	168.8	3.9	NO		NO	bb
8	8	170724M1_10	Standard	162.500	4.05	11210.404	62878.969	2.229	162.7	0.1	NO		NO	bb

Compound name: d5-N-EtFOSAA
Response Factor: 0.0139456
RRF SD: 0.000844744, Relative SD: 6.05742
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	162.500	4.12	12172.007	66110.742	2.301	165.0	1.6	NO		NO	bb
2	2	170724M1_4	Standard	162.500	4.12	11615.228	63178.059	2.298	164.8	1.4	NO		NO	bb
3	3	170724M1_5	Standard	162.500	4.12	11653.344	65533.590	2.223	159.4	-1.9	NO		NO	bb
4	4	170724M1_6	Standard	162.500	4.12	12504.510	74336.992	2.103	150.8	-7.2	NO		NO	bb
5	5	170724M1_7	Standard	162.500	4.12	12228.059	73722.414	2.073	148.7	-8.5	NO		NO	bb
6	6	170724M1_8	Standard	162.500	4.12	12339.168	61426.844	2.511	180.1	10.8	NO		NO	bb
7	7	170724M1_9	Standard	162.500	4.12	11695.135	63456.004	2.304	165.2	1.7	NO		NO	bb
8	8	170724M1_10	Standard	162.500	4.12	11651.338	62878.969	2.316	166.1	2.2	NO		NO	bb

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Compound name: 13C2-PFUnA
Response Factor: 0.962105
RRF SD: 0.058365, Relative SD: 6.06639
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.18	65735.461	66110.742	12.429	12.9	3.3	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.18	63870.914	63178.059	12.637	13.1	5.1	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.19	64348.984	65533.590	12.274	12.8	2.1	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.18	67160.539	74336.992	11.293	11.7	-6.1	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.19	66089.180	73722.414	11.206	11.6	-6.8	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.19	61335.543	61426.844	12.481	13.0	3.8	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.18	55960.629	63456.004	11.024	11.5	-8.3	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.19	64722.215	62878.969	12.866	13.4	7.0	NO		NO	bb

Compound name: 13C2-PFDoA
Response Factor: 0.0944269
RRF SD: 0.00712756, Relative SD: 7.54822
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.34	6396.985	66110.742	1.210	12.8	2.5	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.35	5632.353	63178.059	1.114	11.8	-5.6	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.35	5998.723	65533.590	1.144	12.1	-3.1	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.35	6584.378	74336.992	1.107	11.7	-6.2	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.35	6419.244	73722.414	1.088	11.5	-7.8	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.35	6690.135	61426.844	1.361	14.4	15.3	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.35	6031.607	63456.004	1.188	12.6	0.7	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.35	6184.443	62878.969	1.229	13.0	4.2	NO		NO	bd

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Compound name: d3-N-MeFOSA
Response Factor: 0.0344131
RRF SD: 0.00225283, Relative SD: 6.54642
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	150.000	4.42	27834.387	66110.742	5.263	152.9	2.0	NO		NO	bb
2	2	170724M1_4	Standard	150.000	4.42	26795.877	63178.059	5.302	154.1	2.7	NO		NO	bb
3	3	170724M1_5	Standard	150.000	4.42	27001.328	65533.590	5.150	149.7	-0.2	NO		NO	bb
4	4	170724M1_6	Standard	150.000	4.42	28178.129	74336.992	4.738	137.7	-8.2	NO		NO	bb
5	5	170724M1_7	Standard	150.000	4.42	27075.477	73722.414	4.591	133.4	-11.1	NO		NO	bb
6	6	170724M1_8	Standard	150.000	4.43	27395.363	61426.844	5.575	162.0	8.0	NO		NO	bb
7	7	170724M1_9	Standard	150.000	4.42	26470.068	63456.004	5.214	151.5	1.0	NO		NO	bb
8	8	170724M1_10	Standard	150.000	4.43	27480.182	62878.969	5.463	158.7	5.8	NO		NO	bb

Compound name: 13C2-PFTeDA
Response Factor: 0.694311
RRF SD: 0.0655535, Relative SD: 9.44152
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.70	52611.504	66110.742	9.948	14.3	14.6	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.70	43220.855	63178.059	8.551	12.3	-1.5	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.70	44254.344	65533.590	8.441	12.2	-2.7	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.70	47041.410	74336.992	7.910	11.4	-8.9	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.70	45392.488	73722.414	7.697	11.1	-11.3	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.70	48426.250	61426.844	9.854	14.2	13.5	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.70	42647.246	63456.004	8.401	12.1	-3.2	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.70	43405.691	62878.969	8.629	12.4	-0.6	NO		NO	bb

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Compound name: d5-N-ETFOSA
Response Factor: 0.0486714
RRF SD: 0.00353064, Relative SD: 7.25403
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	150.000	5.00	39437.277	66110.742	7.457	153.2	2.1	NO		NO	MM
2	2	170724M1_4	Standard	150.000	5.01	37412.609	63178.059	7.402	152.1	1.4	NO		NO	MM
3	3	170724M1_5	Standard	150.000	5.01	37050.801	65533.590	7.067	145.2	-3.2	NO		NO	MM
4	4	170724M1_6	Standard	150.000	5.01	40104.539	74336.992	6.744	138.6	-7.6	NO		NO	MM
5	5	170724M1_7	Standard	150.000	5.01	38083.547	73722.414	6.457	132.7	-11.6	NO		NO	MM
6	6	170724M1_8	Standard	150.000	5.01	39916.621	61426.844	8.123	166.9	11.3	NO		NO	MM
7	7	170724M1_9	Standard	150.000	5.01	37926.309	63456.004	7.471	153.5	2.3	NO		NO	MM
8	8	170724M1_10	Standard	150.000	5.01	38657.641	62878.969	7.685	157.9	5.3	NO		NO	MM

Compound name: 13C2-PFHxDA
Response Factor: 0.843007
RRF SD: 0.0734853, Relative SD: 8.71705
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	5.000	5.07	25428.396	66110.742	4.808	5.7	14.1	NO		NO	bb
2	2	170724M1_4	Standard	5.000	5.07	21542.566	63178.059	4.262	5.1	1.1	NO		NO	bb
3	3	170724M1_5	Standard	5.000	5.07	21611.141	65533.590	4.122	4.9	-2.2	NO		NO	bb
4	4	170724M1_6	Standard	5.000	5.07	22044.896	74336.992	3.707	4.4	-12.1	NO		NO	bb
5	5	170724M1_7	Standard	5.000	5.07	22327.822	73722.414	3.786	4.5	-10.2	NO		NO	bb
6	6	170724M1_8	Standard	5.000	5.07	22552.494	61426.844	4.589	5.4	8.9	NO		NO	bb
7	7	170724M1_9	Standard	5.000	5.07	21452.613	63456.004	4.226	5.0	0.3	NO		NO	bb
8	8	170724M1_10	Standard	5.000	5.07	21228.160	62878.969	4.220	5.0	0.1	NO		NO	bb

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

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Compound name: d7-N-MeFOSE
Response Factor: 0.054631
RRF SD: 0.0039309, Relative SD: 7.19536
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 170724M1_3	Standard	150.000	5.42	45355.609	66110.742	8.576	157.0	4.6	NO		NO	bb
2	2 170724M1_4	Standard	150.000	5.42	42298.965	63178.059	8.369	153.2	2.1	NO		NO	bb
3	3 170724M1_5	Standard	150.000	5.42	42181.715	65533.590	8.046	147.3	-1.8	NO		NO	bb
4	4 170724M1_6	Standard	150.000	5.42	44882.496	74336.992	7.547	138.1	-7.9	NO		NO	bb
5	5 170724M1_7	Standard	150.000	5.42	42480.406	73722.414	7.203	131.8	-12.1	NO		NO	bb
6	6 170724M1_8	Standard	150.000	5.42	44502.430	61426.844	9.056	165.8	10.5	NO		NO	bb
7	7 170724M1_9	Standard	150.000	5.42	42011.336	63456.004	8.276	151.5	1.0	NO		NO	bb
8	8 170724M1_10	Standard	150.000	5.42	42682.813	62878.969	8.485	155.3	3.5	NO		NO	bb

Compound name: d9-N-EtFOSE
Response Factor: 0.0534223
RRF SD: 0.00380471, Relative SD: 7.12196
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 170724M1_3	Standard	150.000	5.59	44922.563	66110.742	8.494	159.0	6.0	NO		NO	bb
2	2 170724M1_4	Standard	150.000	5.59	40989.961	63178.059	8.110	151.8	1.2	NO		NO	bb
3	3 170724M1_5	Standard	150.000	5.59	40752.352	65533.590	7.773	145.5	-3.0	NO		NO	bb
4	4 170724M1_6	Standard	150.000	5.59	43177.285	74336.992	7.260	135.9	-9.4	NO		NO	bb
5	5 170724M1_7	Standard	150.000	5.59	42231.566	73722.414	7.161	134.0	-10.6	NO		NO	bb
6	6 170724M1_8	Standard	150.000	5.59	42902.656	61426.844	8.730	163.4	8.9	NO		NO	bb
7	7 170724M1_9	Standard	150.000	5.59	41552.719	63456.004	8.185	153.2	2.1	NO		NO	bb
8	8 170724M1_10	Standard	150.000	5.59	42219.305	62878.969	8.393	157.1	4.7	NO		NO	bb

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

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Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 1.02787e-016, Relative SD: 1.02787e-014
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	1.55	15090.568	15090.568	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	1.55	14962.116	14962.116	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	1.55	14894.126	14894.126	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	1.55	15482.658	15482.658	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	1.55	15091.931	15091.931	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	1.55	15599.055	15599.055	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	1.55	14839.394	14839.394	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	1.56	14929.445	14929.445	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	5.000	3.22	40367.738	40367.738	5.000	5.0	0.0	NO		NO	bb
2	2	170724M1_4	Standard	5.000	3.22	38823.406	38823.406	5.000	5.0	0.0	NO		NO	bb
3	3	170724M1_5	Standard	5.000	3.22	37967.629	37967.629	5.000	5.0	0.0	NO		NO	bb
4	4	170724M1_6	Standard	5.000	3.22	42133.270	42133.270	5.000	5.0	0.0	NO		NO	bb
5	5	170724M1_7	Standard	5.000	3.22	39088.754	39088.754	5.000	5.0	0.0	NO		NO	bb
6	6	170724M1_8	Standard	5.000	3.22	41725.730	41725.730	5.000	5.0	0.0	NO		NO	bb
7	7	170724M1_9	Standard	5.000	3.23	39920.477	39920.477	5.000	5.0	0.0	NO		NO	bb
8	8	170724M1_10	Standard	5.000	3.22	38428.922	38428.922	5.000	5.0	0.0	NO		NO	bb

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

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Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 7.26812e-017, Relative SD: 7.26812e-015
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.55	7582.089	7582.089	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.55	7322.380	7322.380	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.55	7368.760	7368.760	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.55	7556.806	7556.806	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.55	7669.834	7669.834	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.55	8056.833	8056.833	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.55	7531.759	7531.759	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.55	7365.456	7365.456	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 9.3831e-017, Relative SD: 9.3831e-015
Response type: Internal Std (Ref 54), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.67	50417.762	50417.762	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.67	52862.527	52862.527	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.67	49459.691	49459.691	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.67	51986.957	51986.957	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.68	54009.070	54009.070	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.68	53144.688	53144.688	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.67	49946.758	49946.758	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.67	49303.969	49303.969	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 9.3831e-017, Relative SD: 9.3831e-015
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.85	63362.148	63362.148	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.85	66233.305	66233.305	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.85	62897.914	62897.914	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.85	73098.813	73098.813	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.85	71059.133	71059.133	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.85	60050.086	60050.086	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.86	67689.273	67689.273	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.85	58608.688	58608.688	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	3.90	10984.350	10984.350	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	3.90	10756.134	10756.134	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	3.90	10707.182	10707.182	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	3.90	11395.518	11395.518	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	3.90	10582.909	10582.909	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	3.90	10701.979	10701.979	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	3.91	10546.740	10546.740	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	3.90	9922.027	9922.027	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 1.25887e-016, Relative SD: 1.25887e-014
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.02	71538.672	71538.672	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.02	67518.039	67518.039	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.02	67946.188	67946.188	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.02	75237.898	75237.898	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.02	68309.617	68309.617	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.02	69500.219	69500.219	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.03	72719.445	72719.445	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.02	58601.402	58601.402	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C7-PFUnA
Response Factor: 1
RRF SD: 1.45362e-016, Relative SD: 1.45362e-014
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170724M1_3	Standard	12.500	4.18	66110.742	66110.742	12.500	12.5	0.0	NO		NO	bb
2	2	170724M1_4	Standard	12.500	4.19	63178.059	63178.059	12.500	12.5	0.0	NO		NO	bb
3	3	170724M1_5	Standard	12.500	4.18	65533.590	65533.590	12.500	12.5	0.0	NO		NO	bb
4	4	170724M1_6	Standard	12.500	4.19	74336.992	74336.992	12.500	12.5	0.0	NO		NO	bb
5	5	170724M1_7	Standard	12.500	4.19	73722.414	73722.414	12.500	12.5	0.0	NO		NO	bb
6	6	170724M1_8	Standard	12.500	4.19	61426.844	61426.844	12.500	12.5	0.0	NO		NO	bb
7	7	170724M1_9	Standard	12.500	4.18	63456.004	63456.004	12.500	12.5	0.0	NO		NO	bb
8	8	170724M1_10	Standard	12.500	4.19	62878.969	62878.969	12.500	12.5	0.0	NO		NO	bb

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 24, 2017 15:48:17 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:50:08 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 24 Jul 2017 15:34:12
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170724M1_2	IPA	24-Jul-17	13:40:23
2	170724M1_3	ST170724M1-1 PFC CS-2 17G2422	24-Jul-17	13:51:04
3	170724M1_4	ST170724M1-2 PFC CS-1 17G2119	24-Jul-17	14:01:50
4	170724M1_5	ST170724M1-3 PFC CS0 17G2423	24-Jul-17	14:12:36
5	170724M1_6	ST170724M1-4 PFC CS1 17G2424	24-Jul-17	14:23:23
6	170724M1_7	ST170724M1-5 PFC CS2 17G2425	24-Jul-17	14:34:02
7	170724M1_8	ST170724M1-6 PFC CS3 17G2118	24-Jul-17	14:44:48
8	170724M1_9	ST170724M1-7 PFC CS4 17G2426	24-Jul-17	14:55:34
9	170724M1_10	ST170724M1-8 PFC CS5 17G2427	24-Jul-17	15:06:35
10	170724M1_11	IPA	24-Jul-17	15:17:30
11	170724M1_12	SS170724M4-1 PFC SSS 17G2421	24-Jul-17	15:28:15

Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

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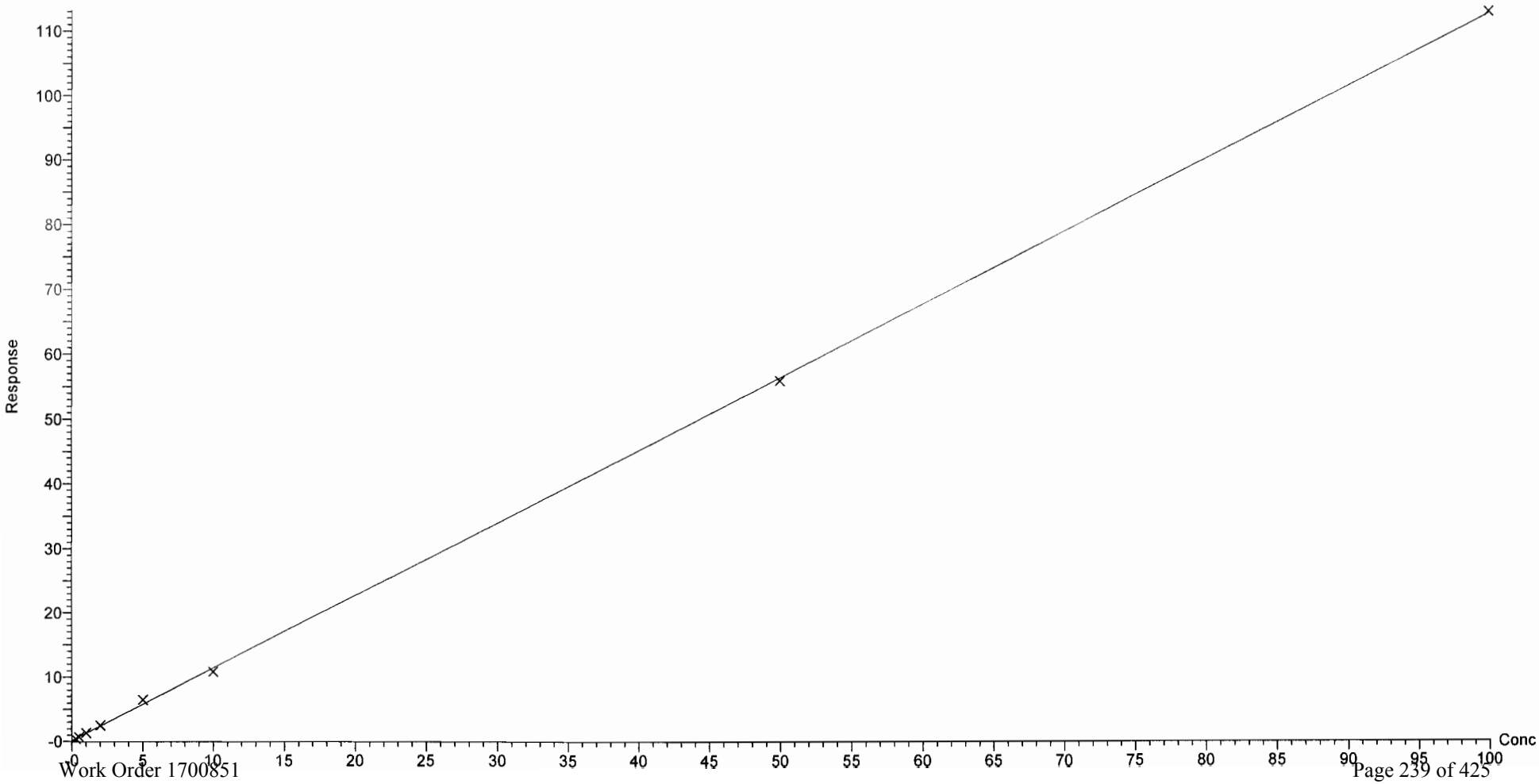
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 24 Jul 2017 15:22:13
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Compound name: PFBA
Correlation coefficient: r = 0.999644, r^2 = 0.999287
Calibration curve: 1.1275 * x + 0.163356
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

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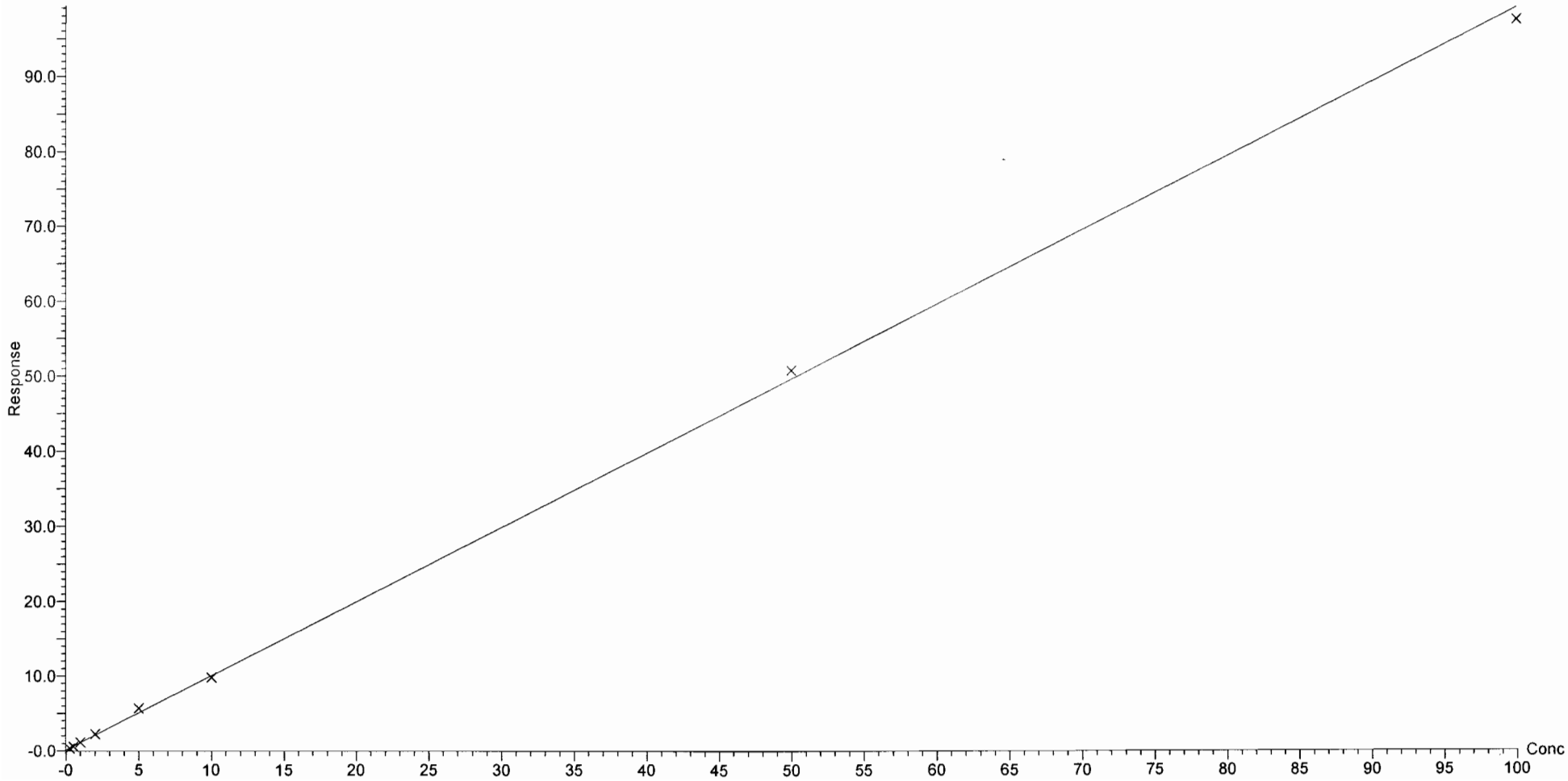
Compound name: PFPeA
Correlation coefficient: r = 0.999528, r^2 = 0.999056
Calibration curve: 0.99208 * x + 0.104629
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
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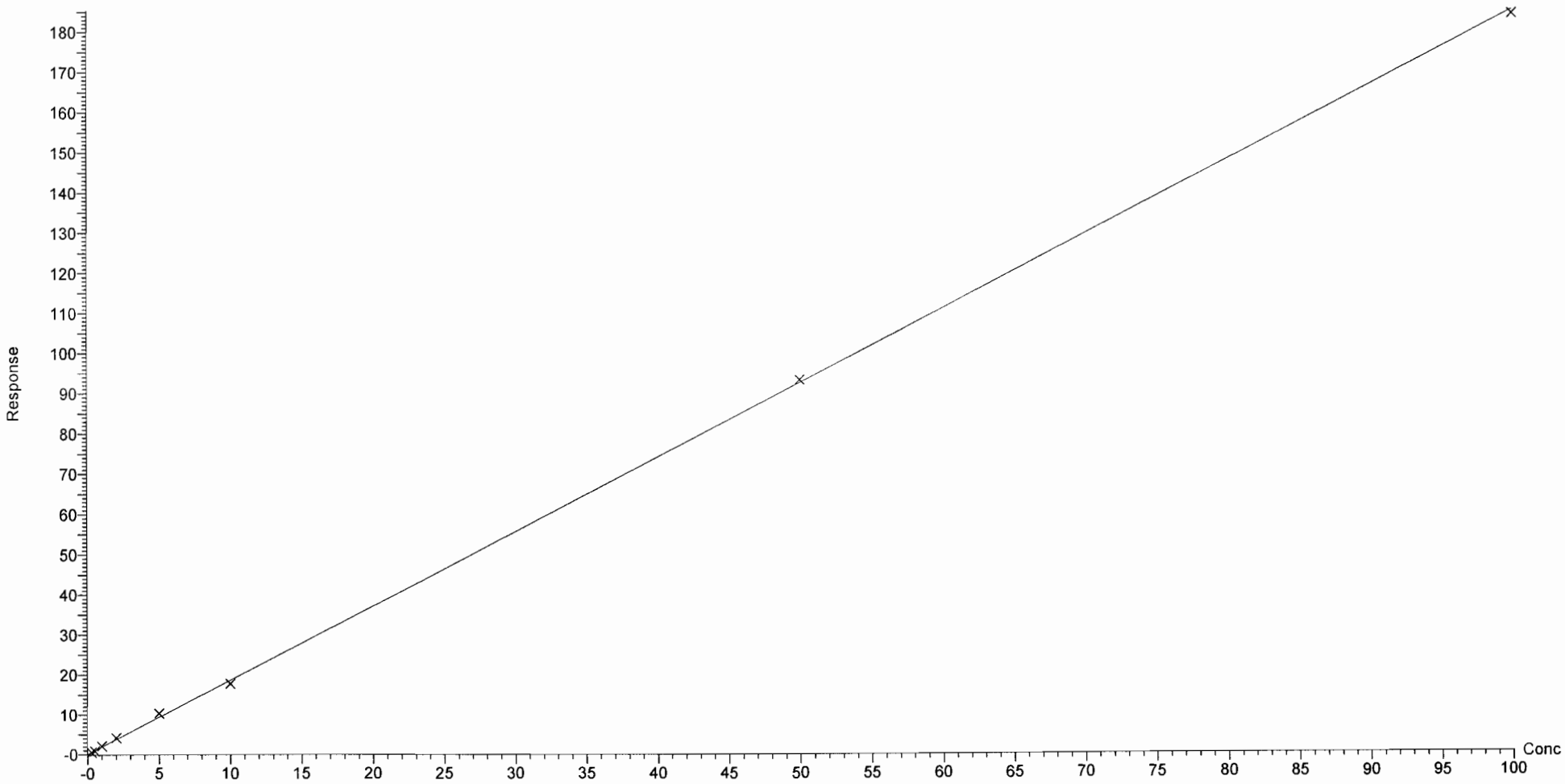
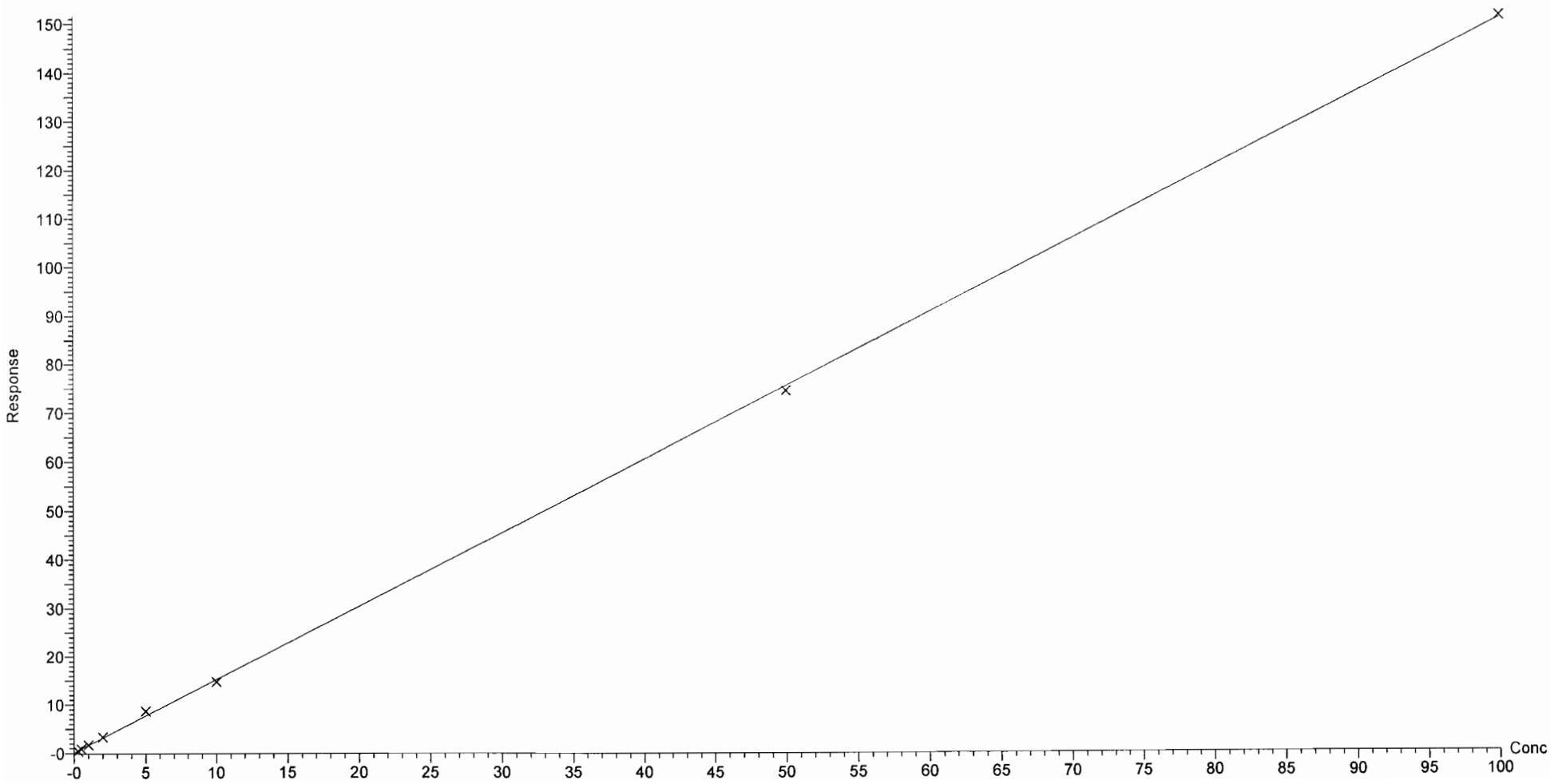
Compound name: PFBS
Correlation coefficient: r = 0.999611, r^2 = 0.999223
Calibration curve: 1.85223 * x + 0.0752948
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

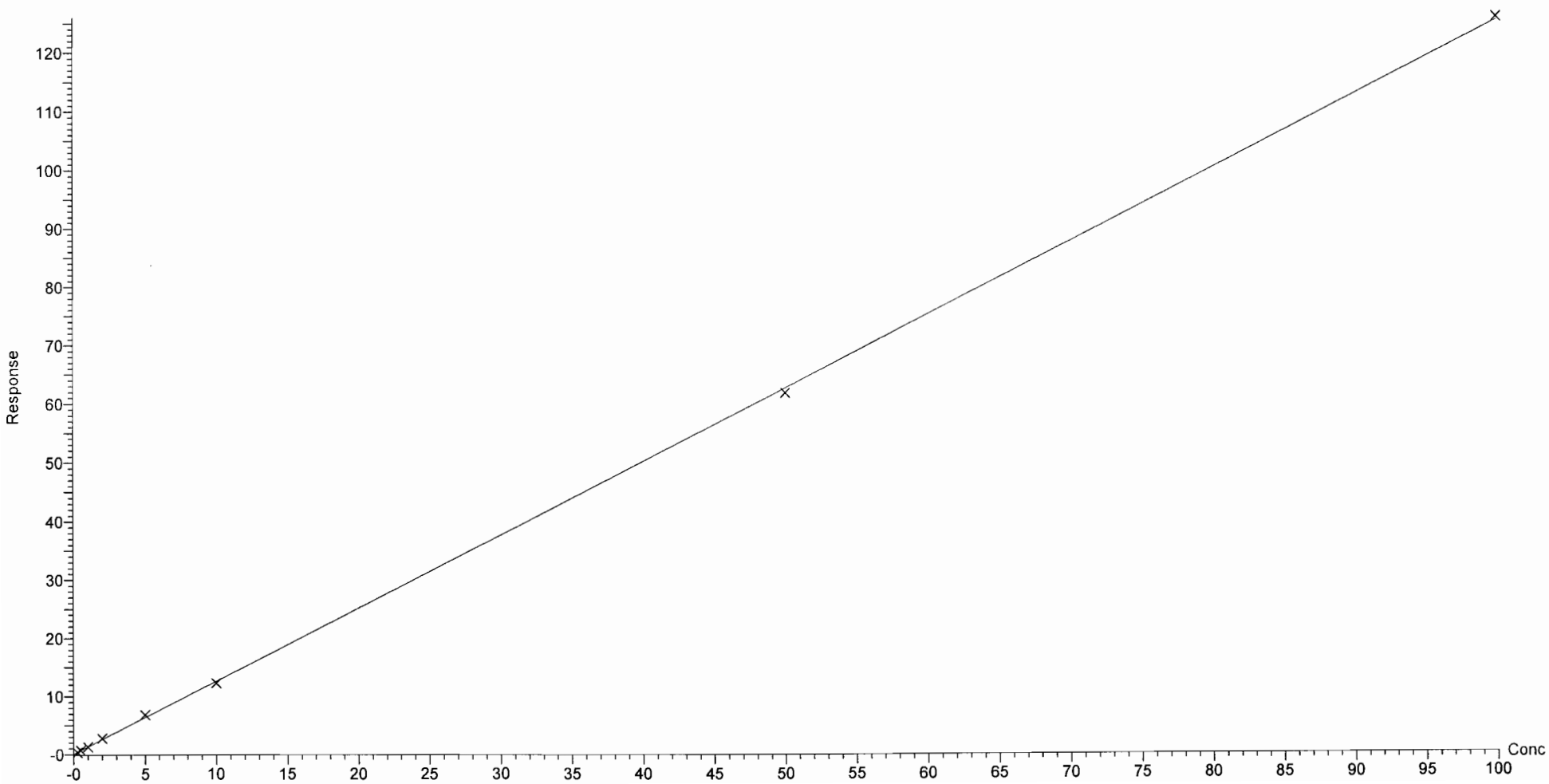
Compound name: PFHxA
Correlation coefficient: r = 0.999648, r^2 = 0.999296
Calibration curve: 1.50967 * x + 0.157344
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

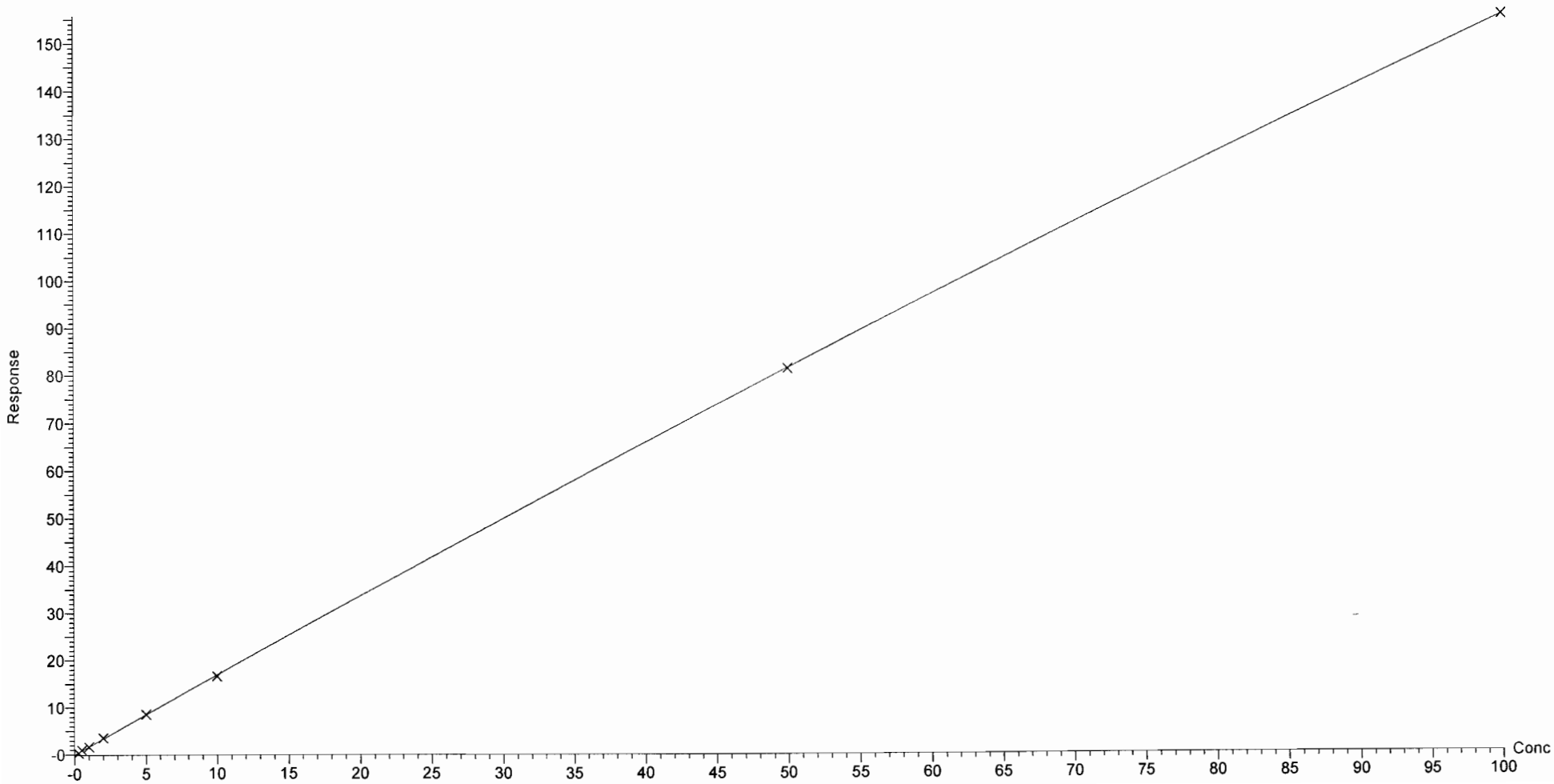
Compound name: PFHpA
Correlation coefficient: r = 0.999811, r^2 = 0.999621
Calibration curve: 1.25322 * x + 0.0796155
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

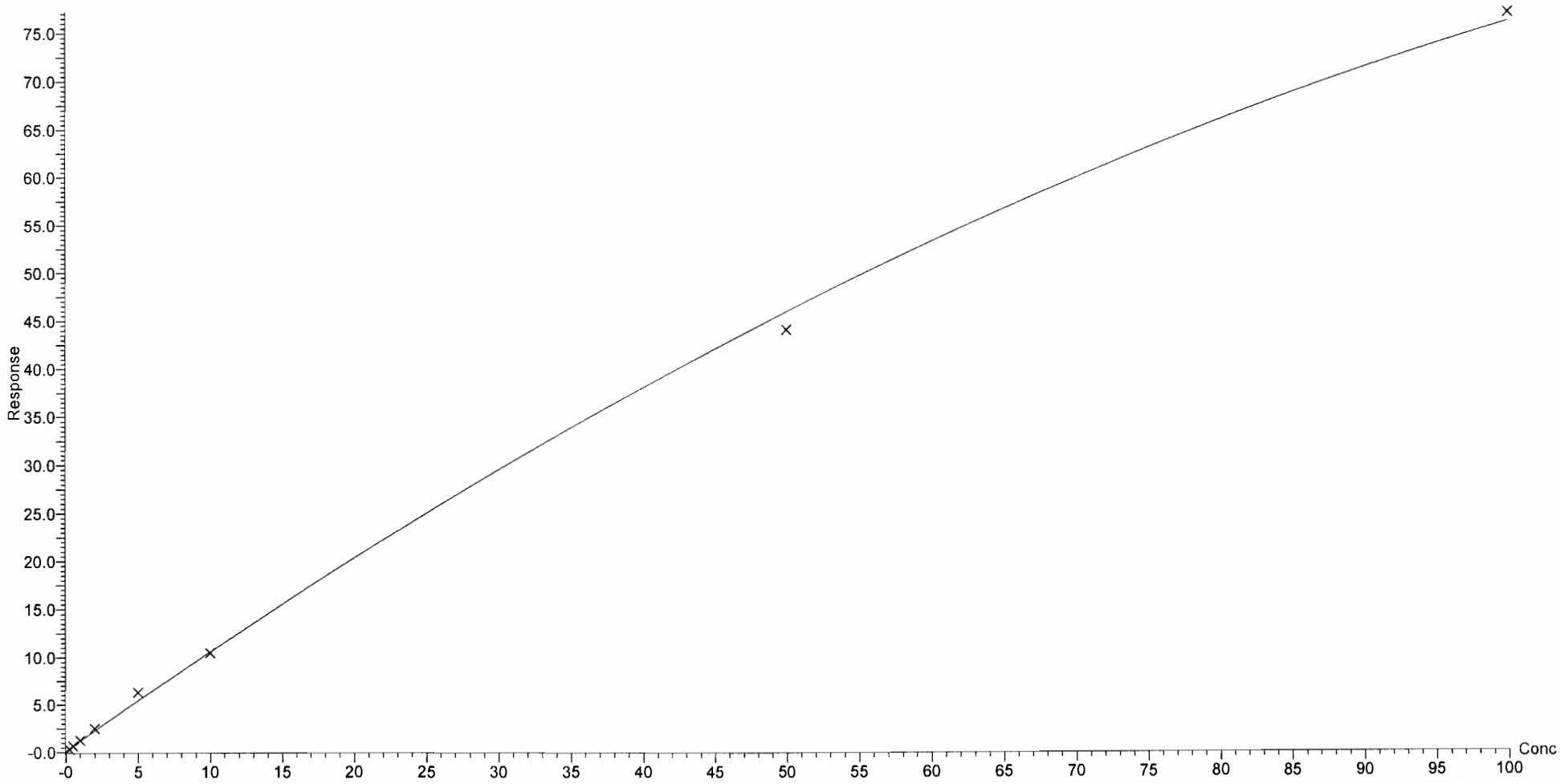
Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999711
Calibration curve: -0.00151846 * x^2 + 1.70838 * x + -0.0114403
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

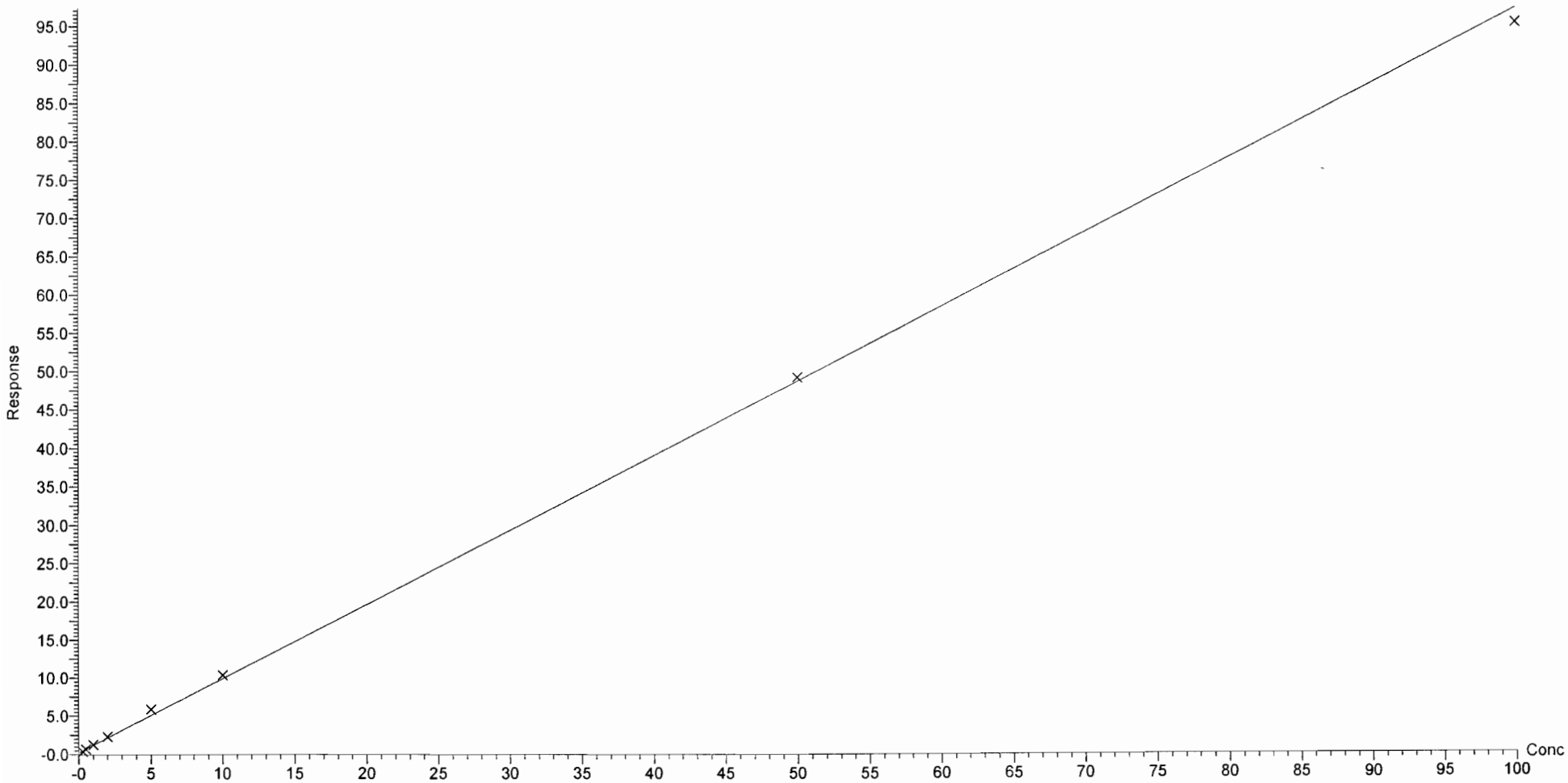
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.997533
Calibration curve: -0.00313053 * x^2 + 1.07473 * x + 0.134469
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

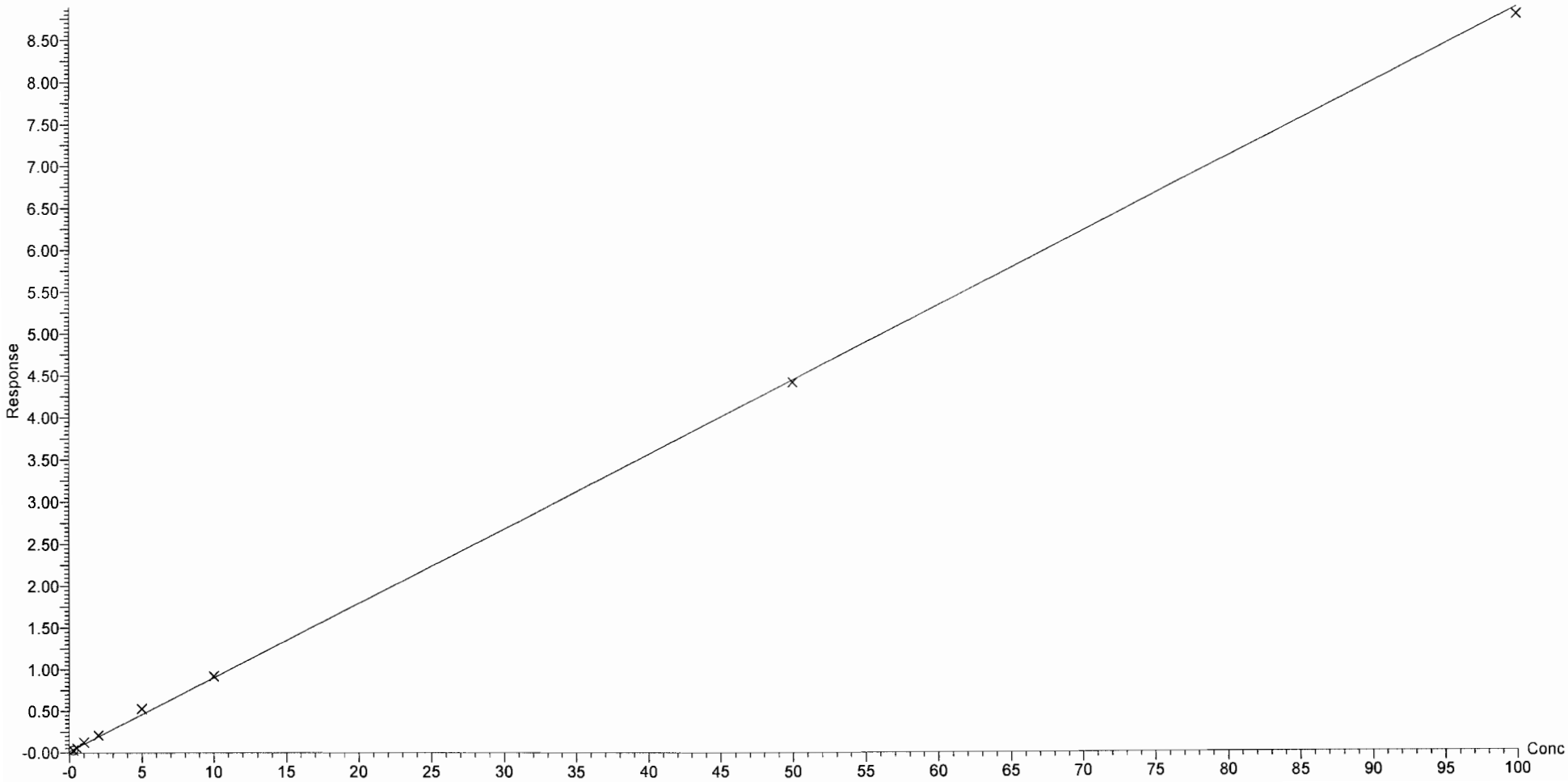
Compound name: PFOA
Correlation coefficient: r = 0.999233, r^2 = 0.998466
Calibration curve: 0.970801 * x + 0.199778
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

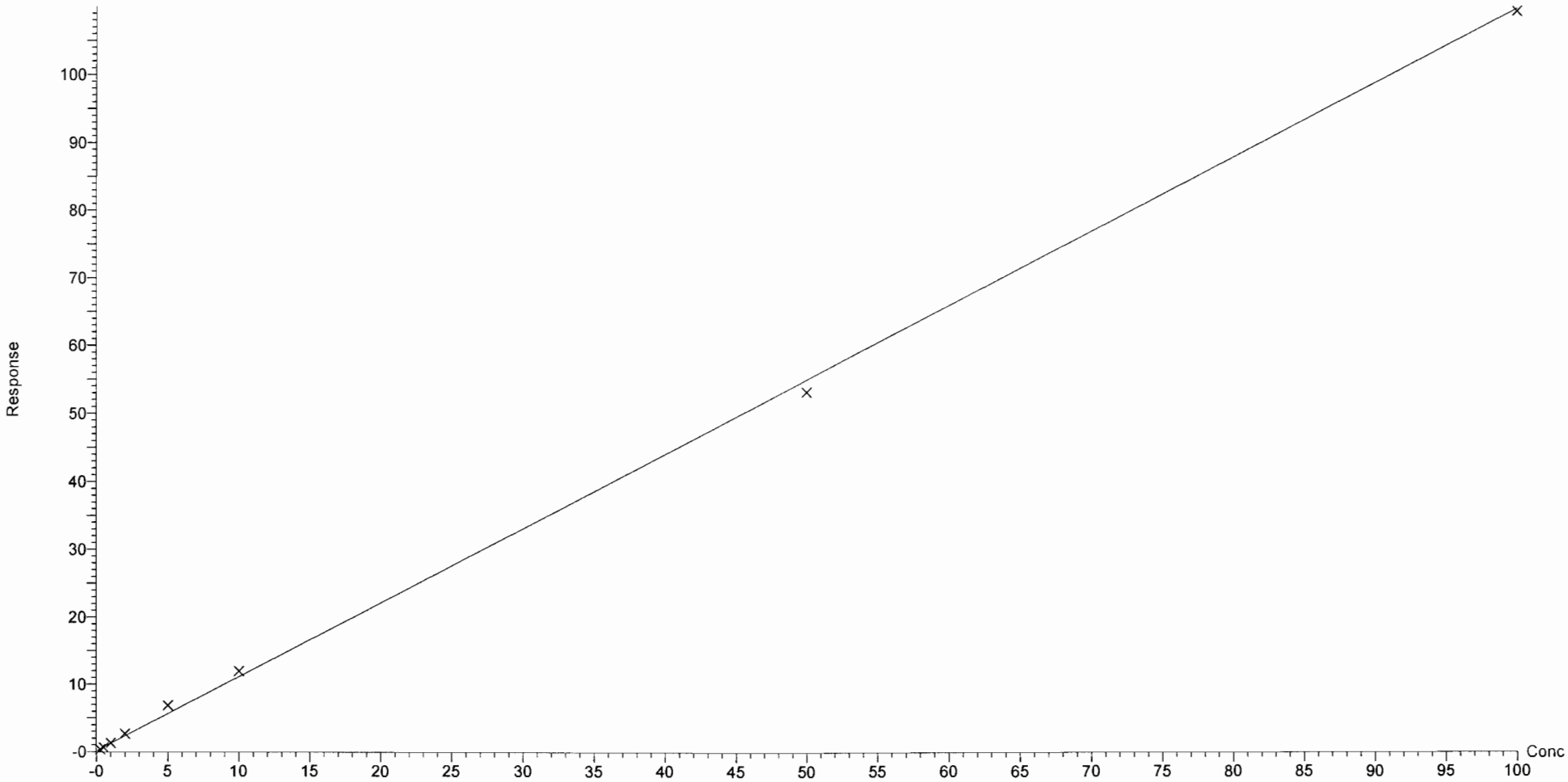
Compound name: PFHpS
Correlation coefficient: r = 0.999150, r^2 = 0.998301
Calibration curve: 0.0887442 * x + 0.014645
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

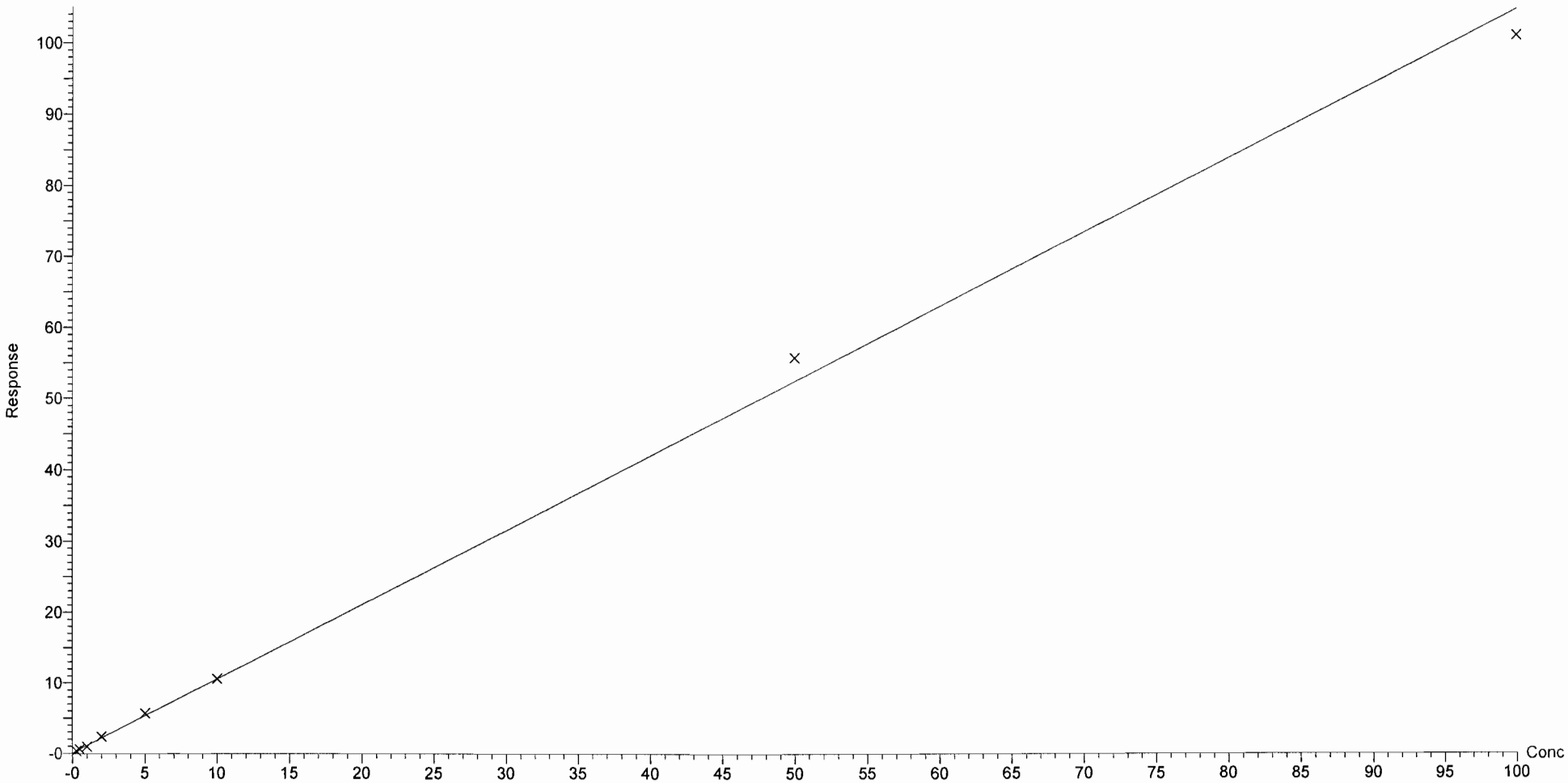
Compound name: PFNA
Correlation coefficient: r = 0.998659, r^2 = 0.997320
Calibration curve: 1.09835 * x + 0.147218
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

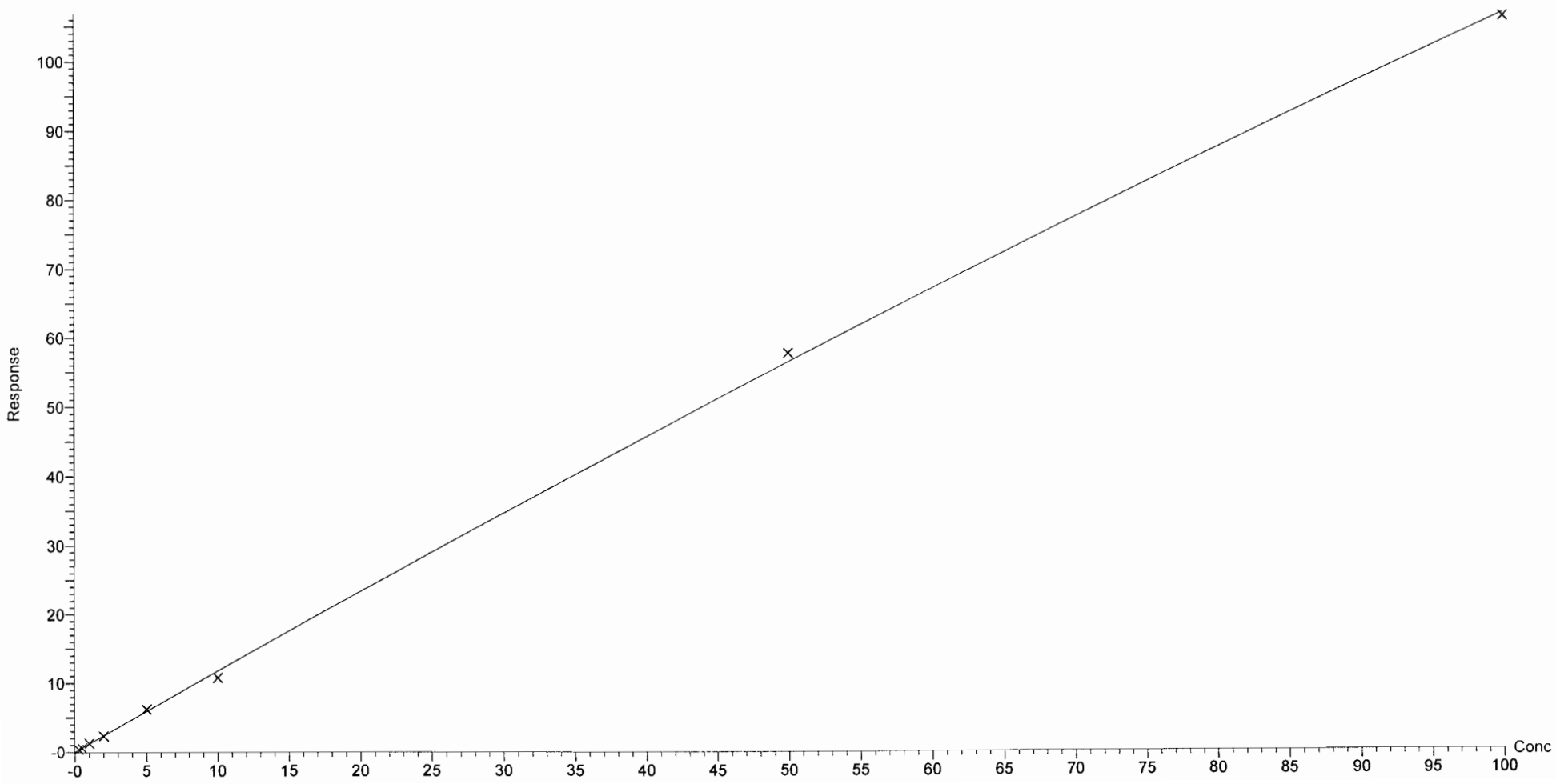
Compound name: PFOSA
Correlation coefficient: r = 0.998808, r^2 = 0.997616
Calibration curve: 1.0493 * x + 0.0489398
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

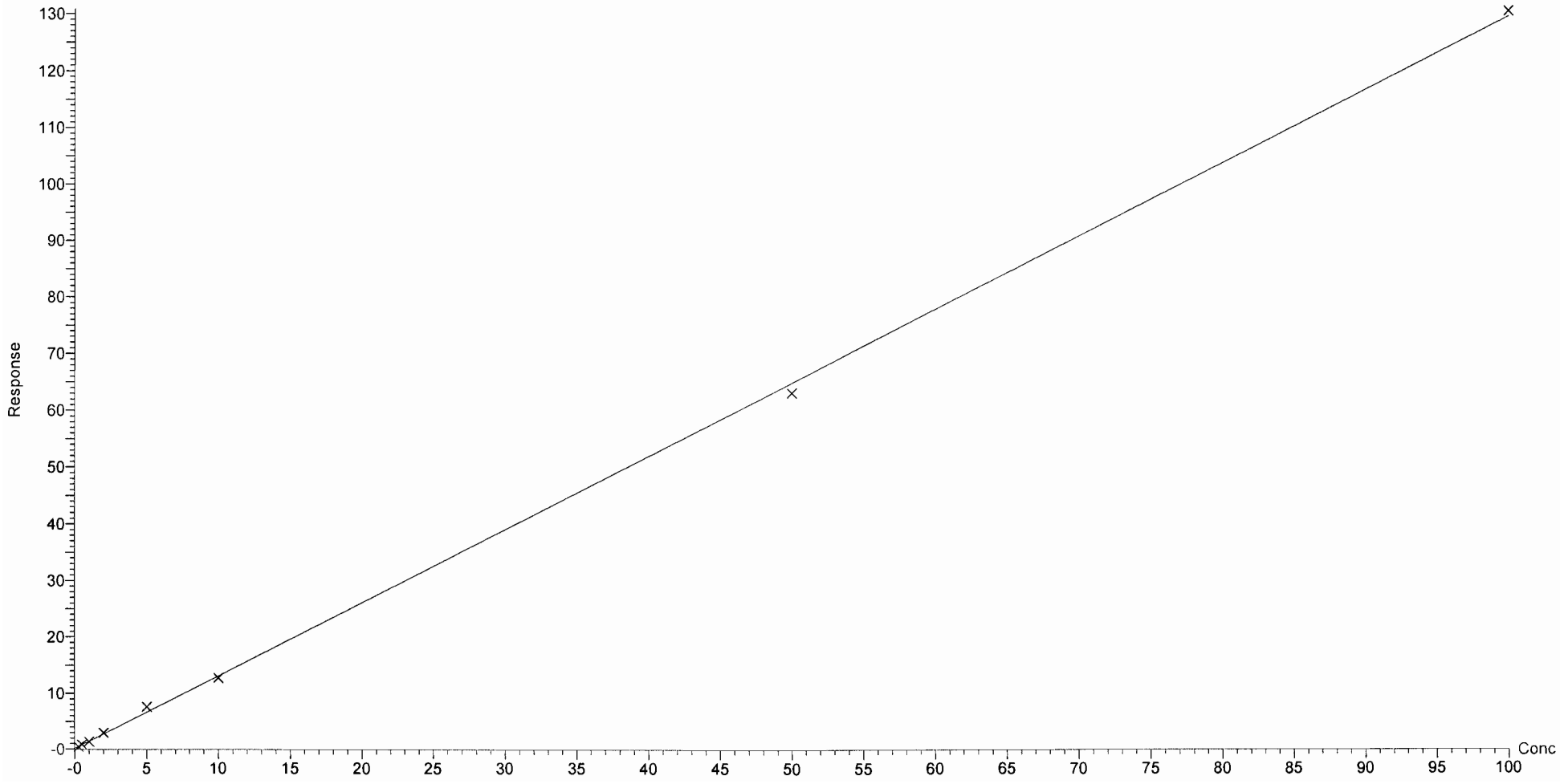
Compound name: PFOS
Coefficient of Determination: R^2 = 0.999148
Calibration curve: -0.00122032 * x^2 + 1.19038 * x + 0.0183073
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

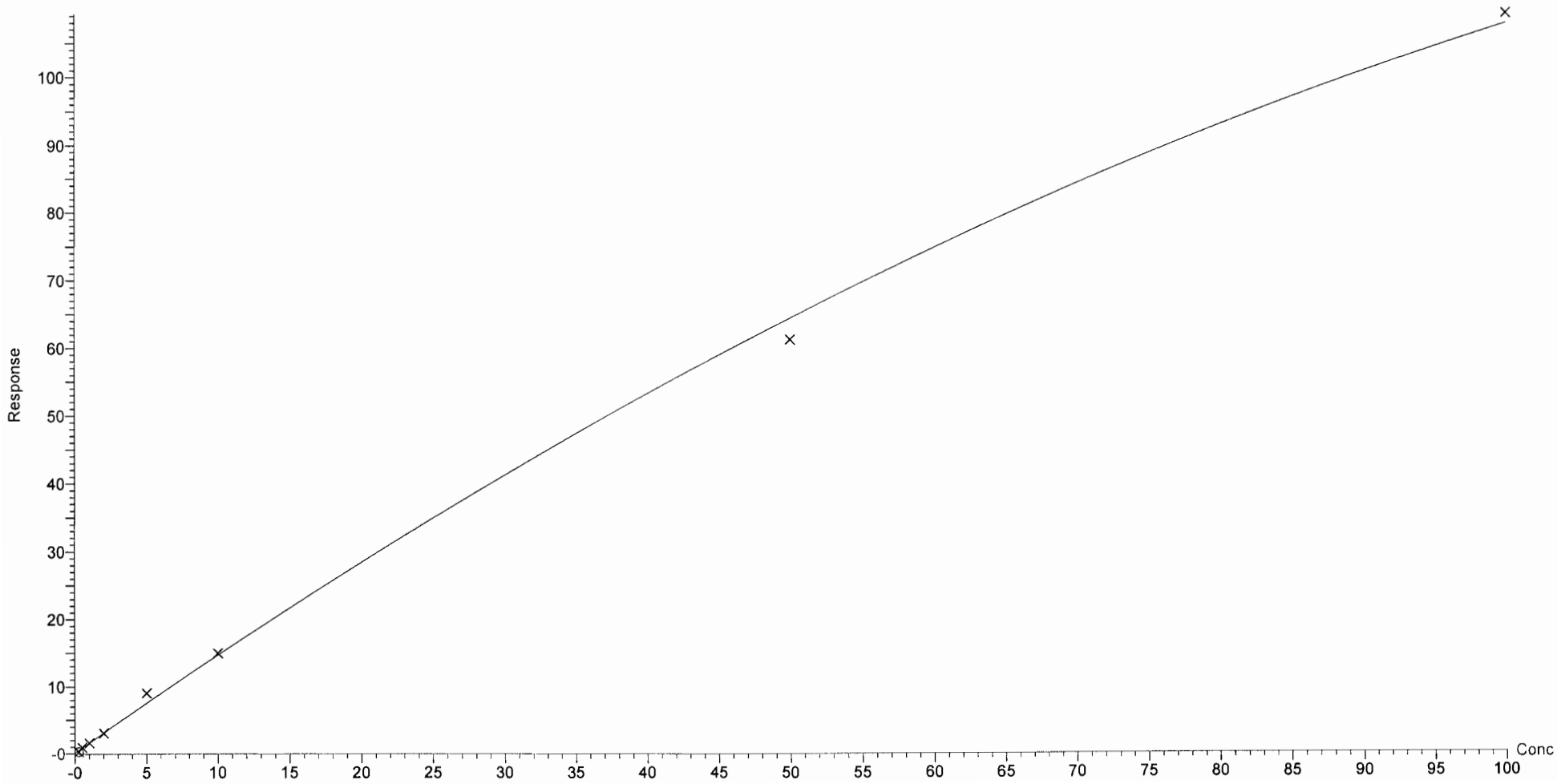
Compound name: PFDA
Correlation coefficient: r = 0.999397, r^2 = 0.998795
Calibration curve: 1.29731 * x + 0.128184
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

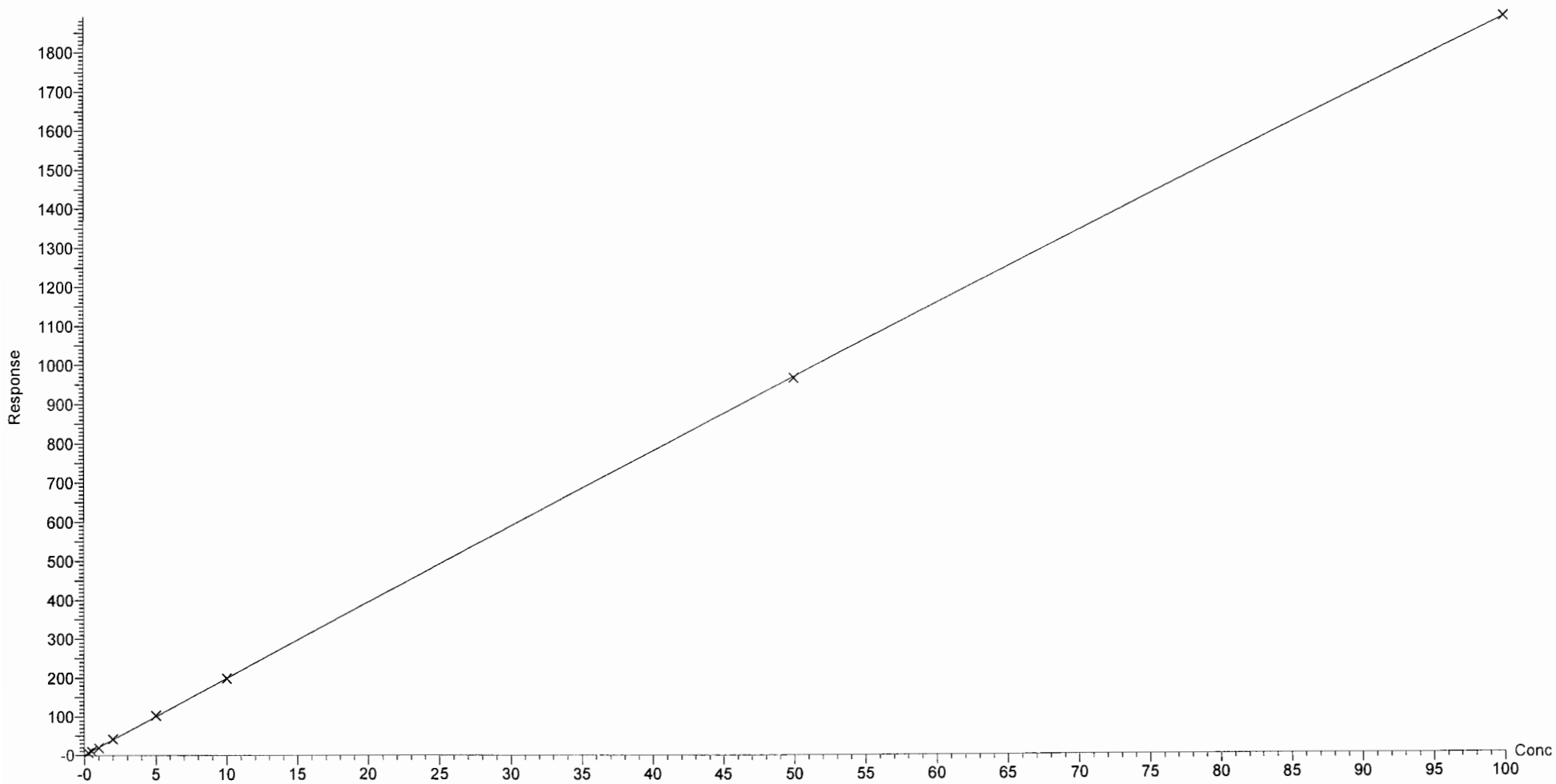
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.996738
Calibration curve: -0.00420182 * x^2 + 1.49722 * x + 0.133523
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

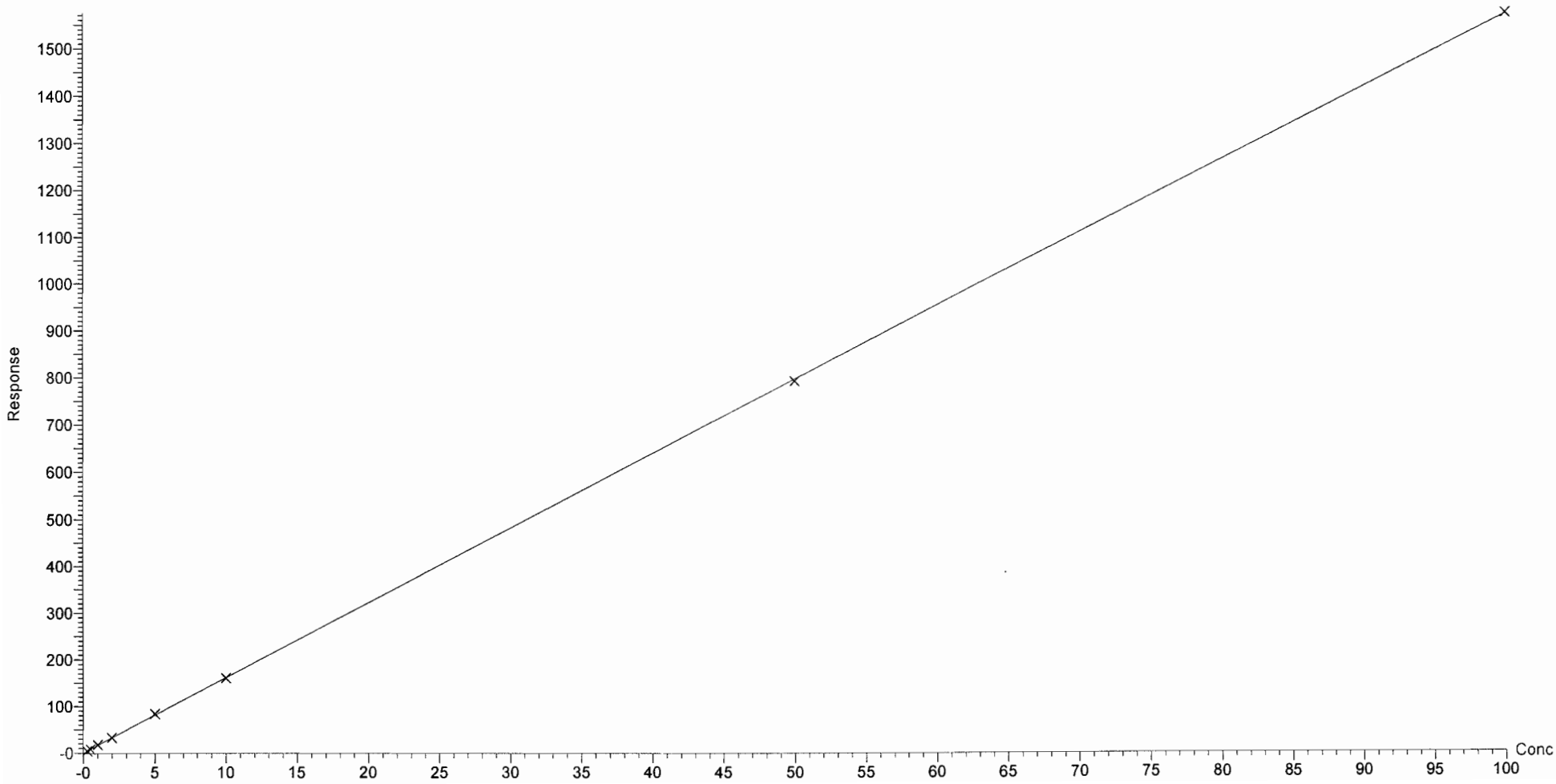
Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999848
Calibration curve: -0.0104077 * x^2 + 19.9194 * x + 0.547687
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

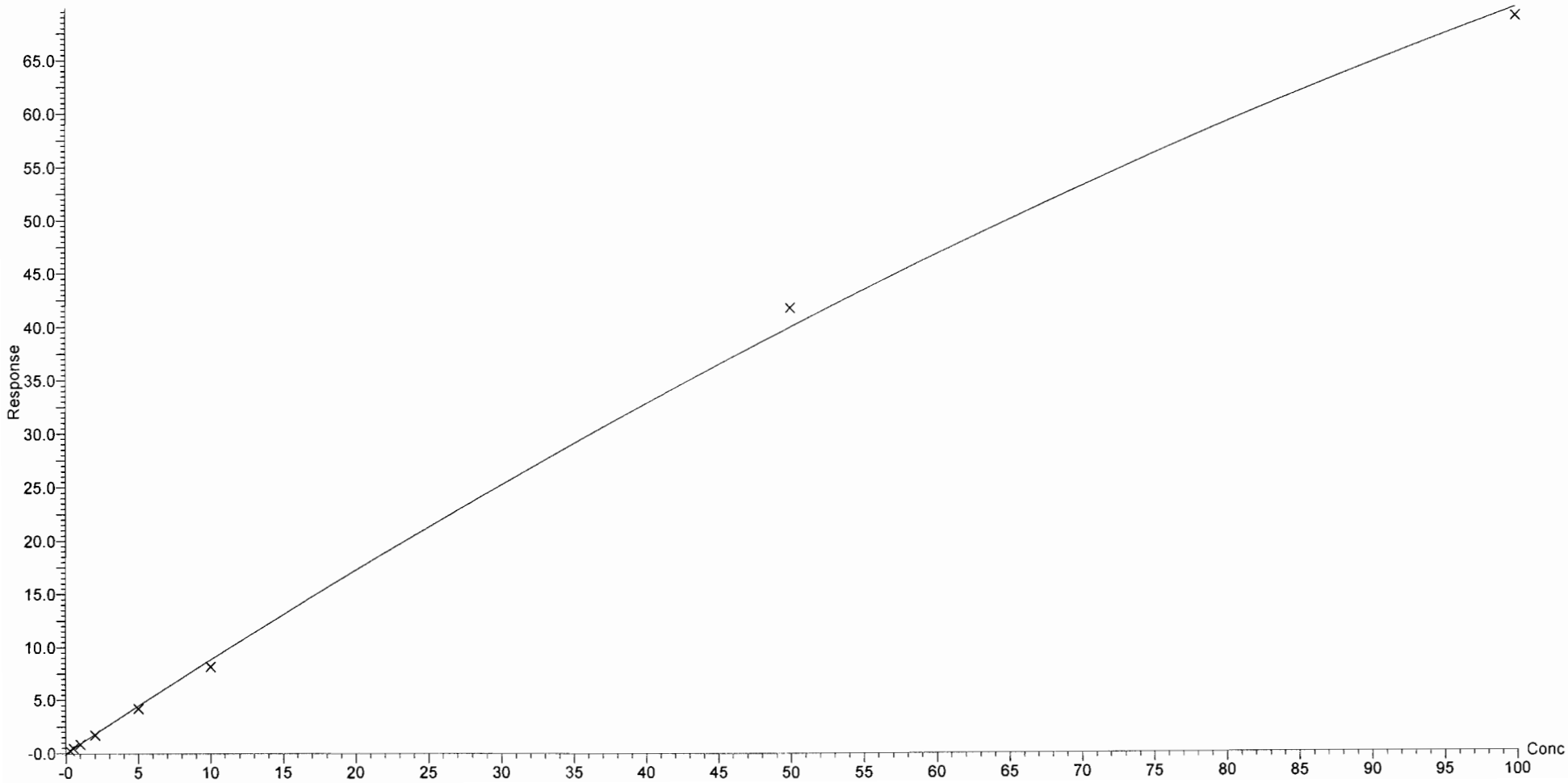
Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999908
Calibration curve: -0.00439744 * x^2 + 16.1657 * x + 0.0580373
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

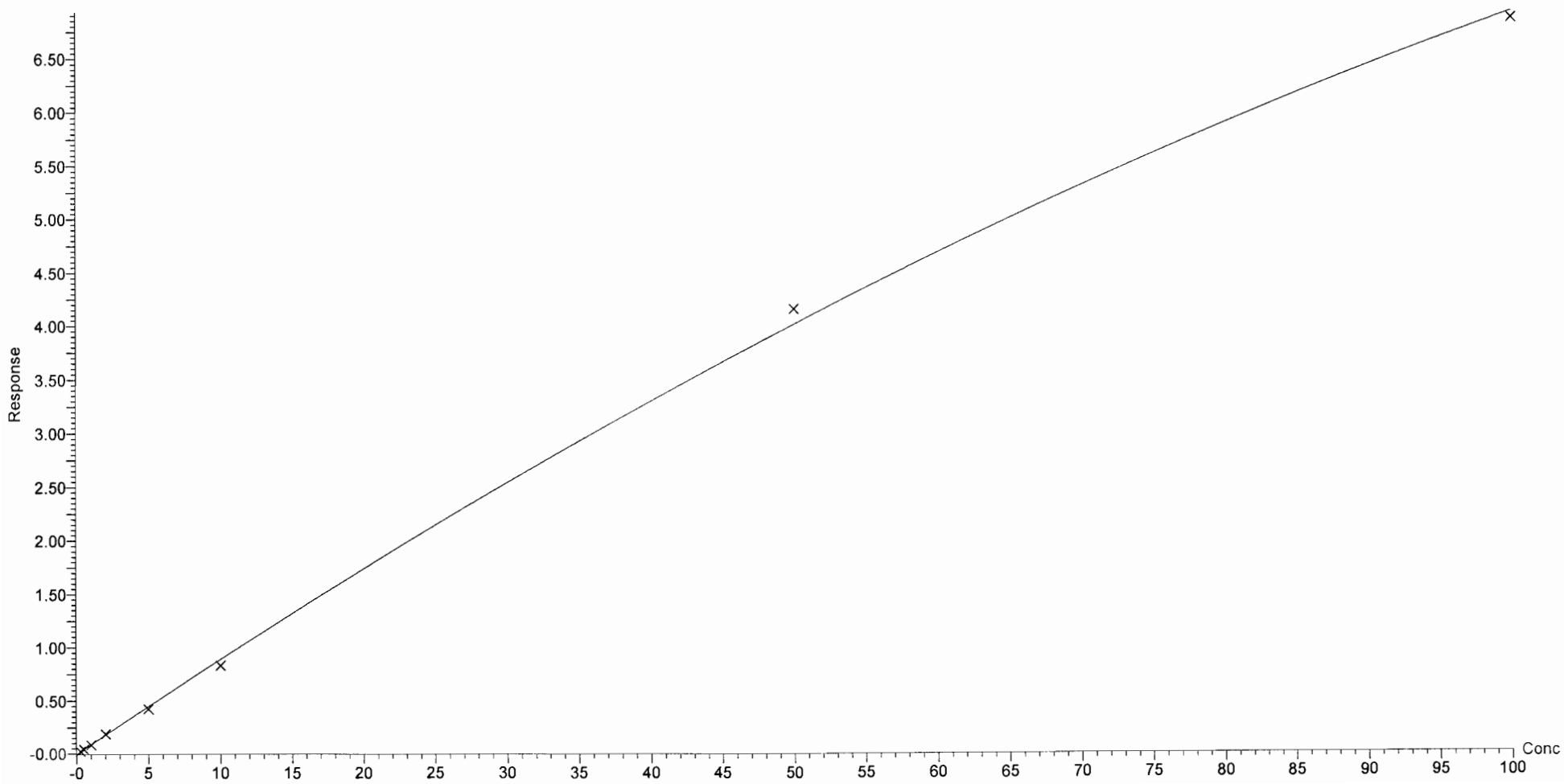
Compound name: PFUnA
Coefficient of Determination: R^2 = 0.998430
Calibration curve: -0.0020331 * x^2 + 0.901478 * x + 0.00751751
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

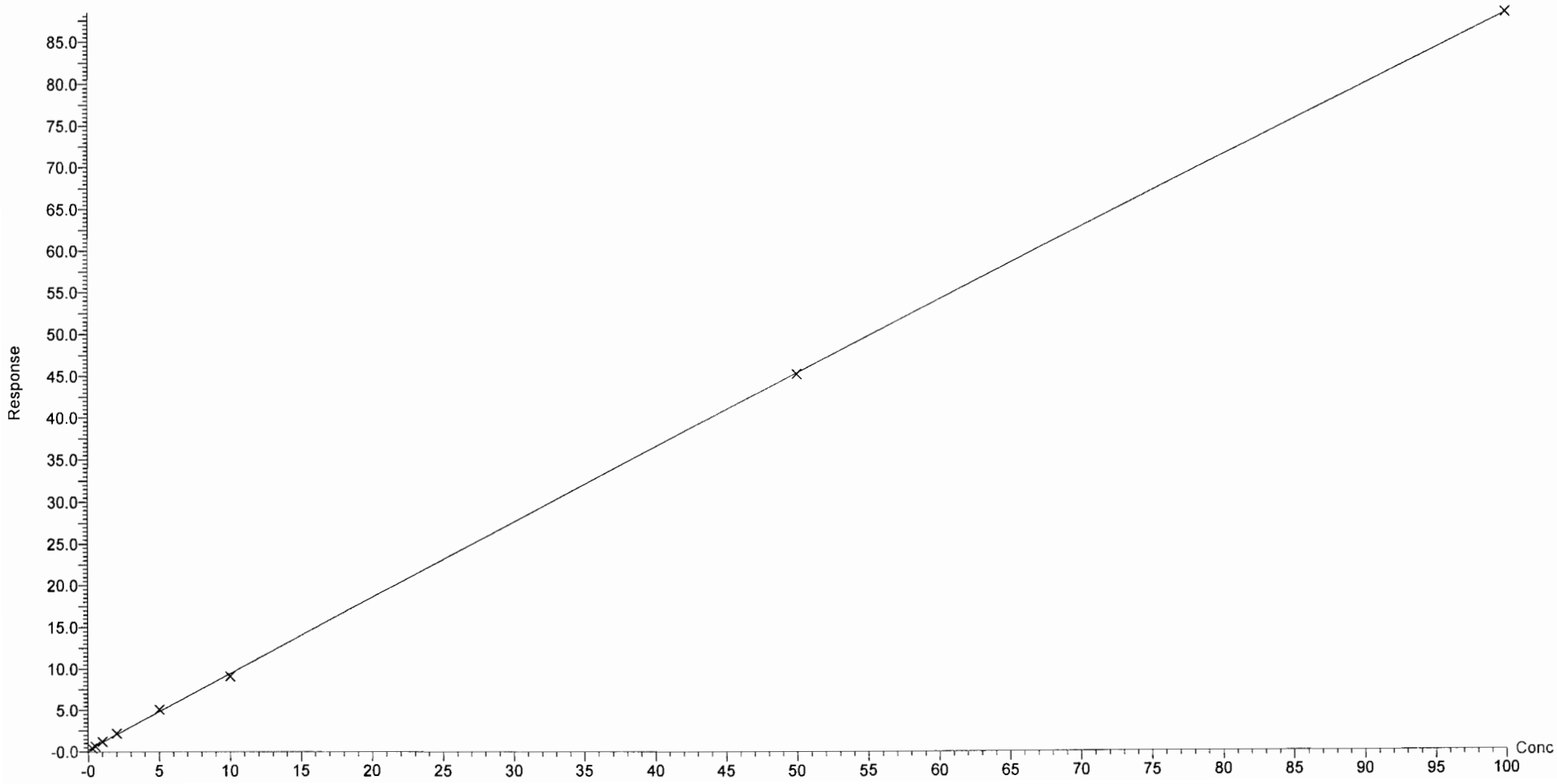
Compound name: PFDS
Coefficient of Determination: R^2 = 0.998889
Calibration curve: -0.000220781 * x^2 + 0.0914068 * x + -0.00228704
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

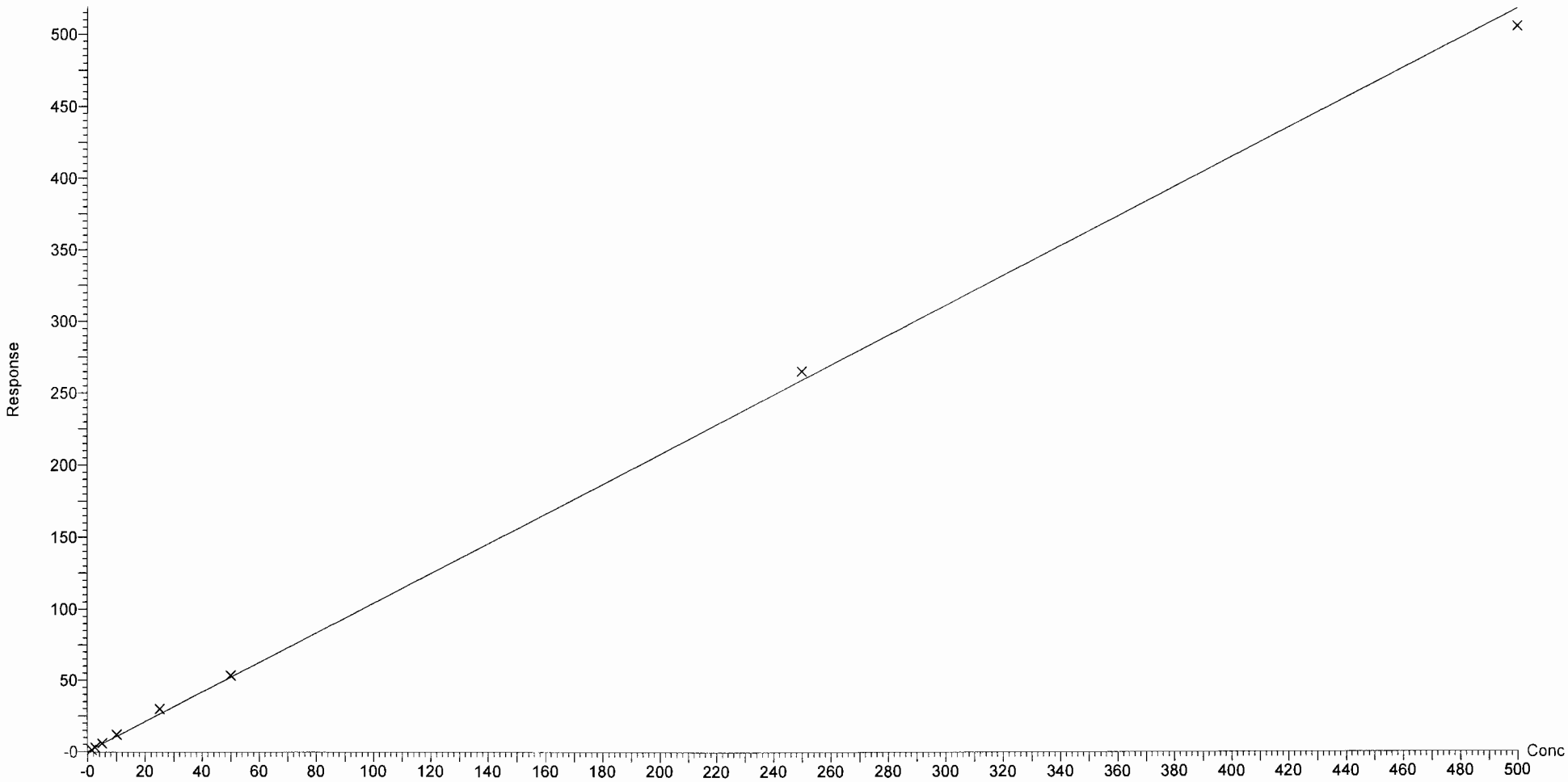
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999700
Calibration curve: -0.000446703 * x^2 + 0.926687 * x + 0.203454
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

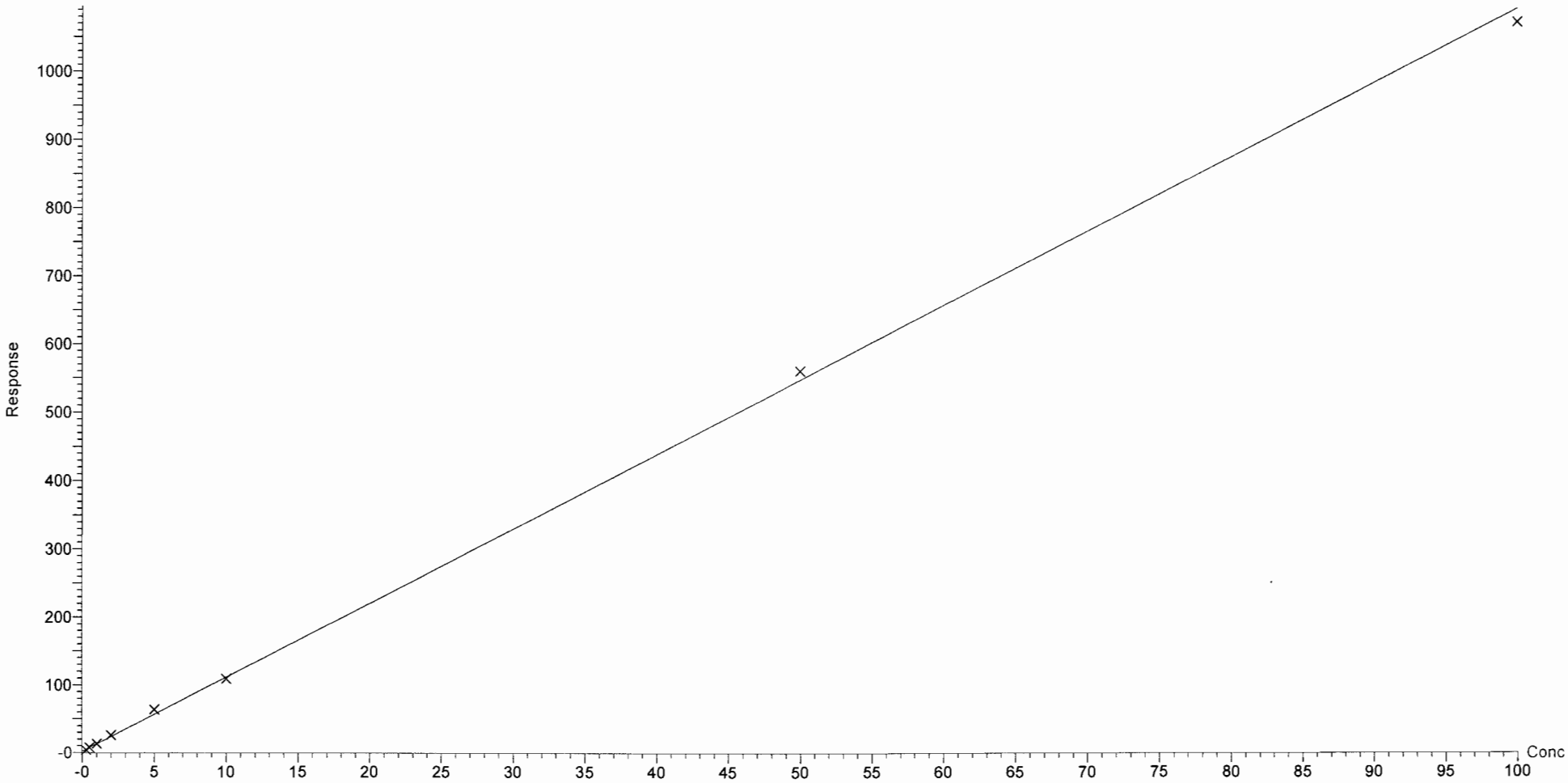
Compound name: N-MeFOSA
Correlation coefficient: r = 0.999273, r^2 = 0.998546
Calibration curve: 1.0376 * x + 0.213391
Response type: Internal Std (Ref 45), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

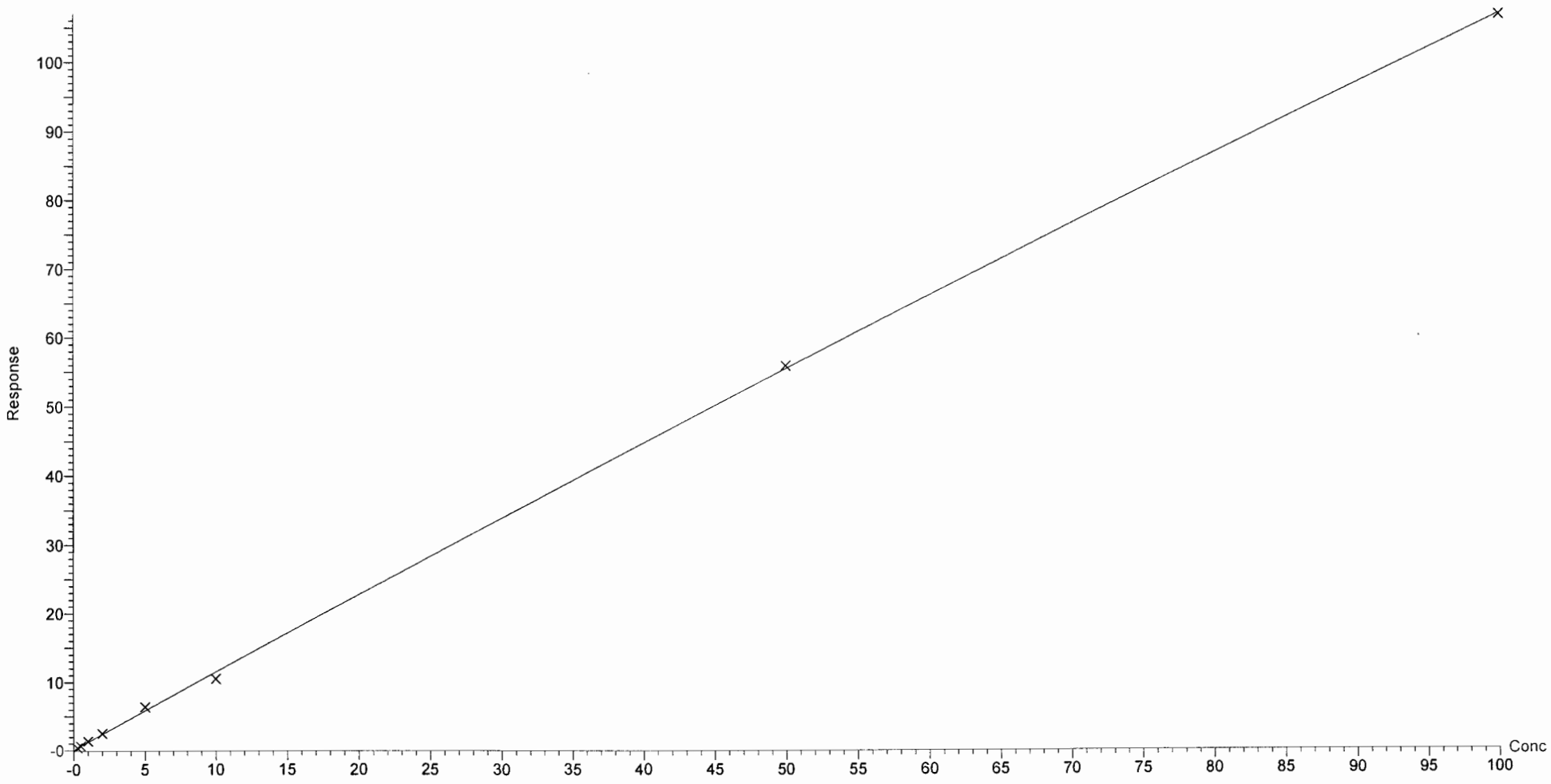
Compound name: PFTrDA
Correlation coefficient: r = 0.999414, r^2 = 0.998828
Calibration curve: 10.9255 * x + 1.79
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

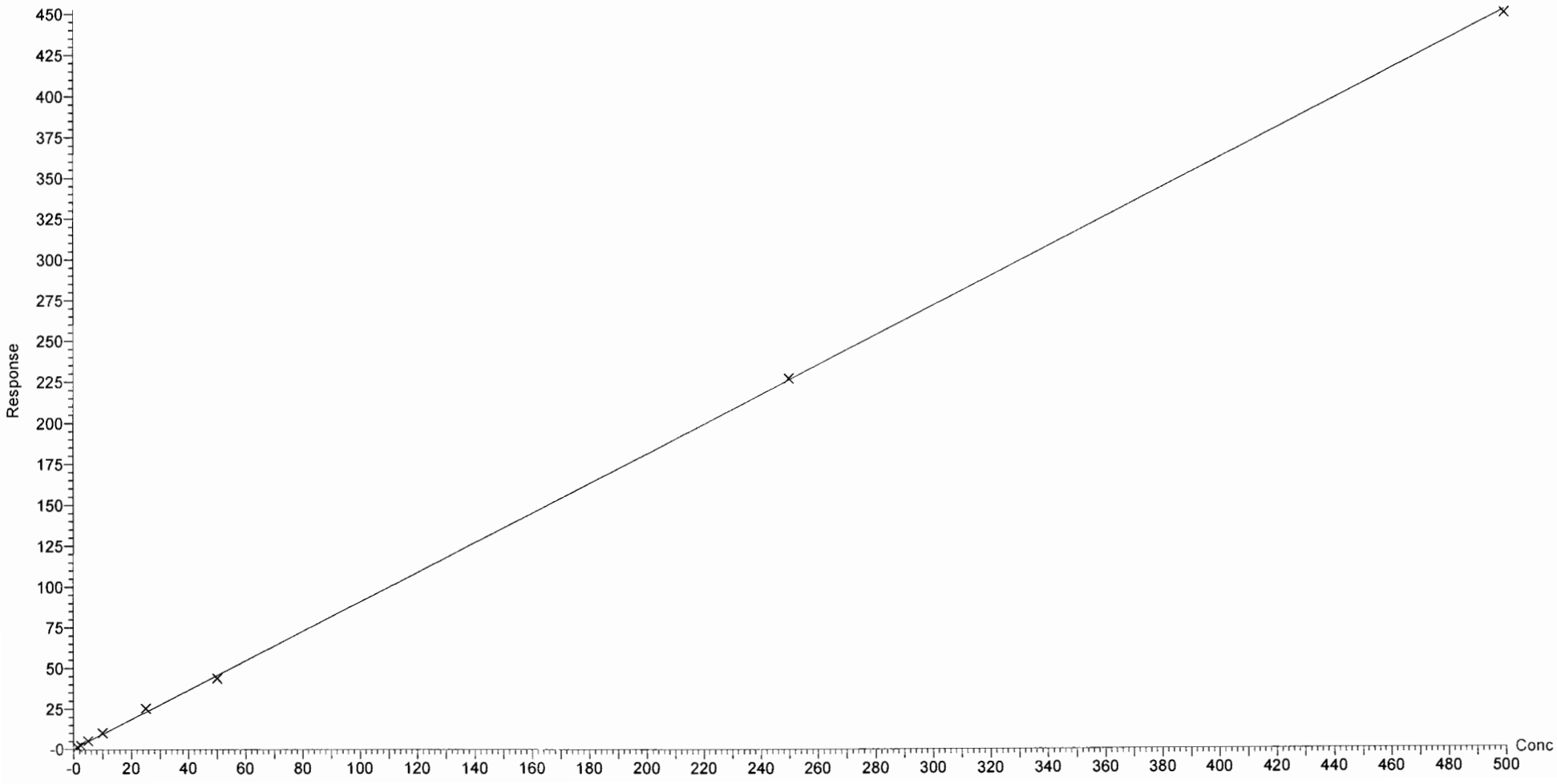
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999057
Calibration curve: -0.000800394 * x^2 + 1.14875 * x + 0.111533
Response type: Internal Std (Ref 46), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

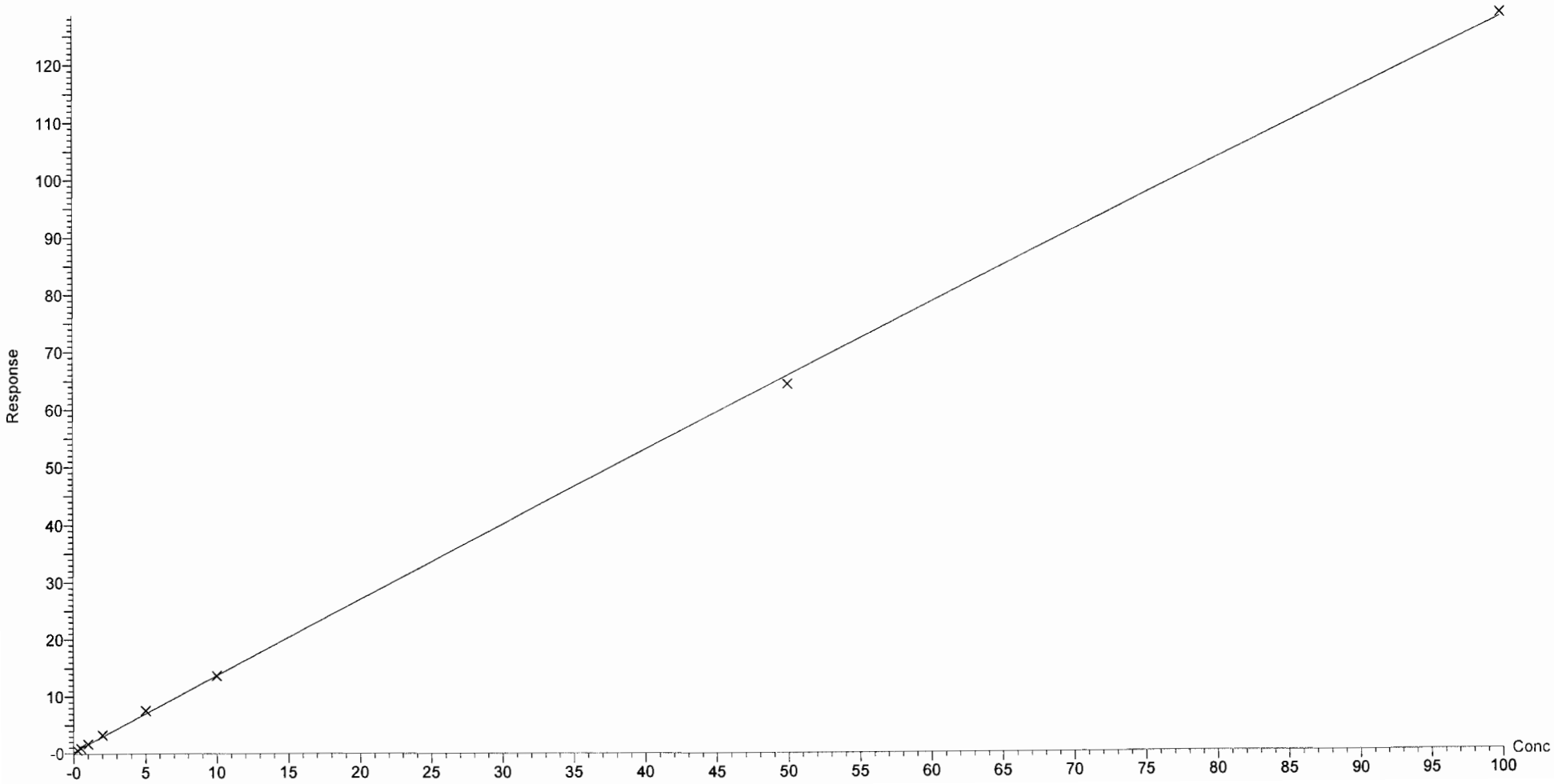
Compound name: N-EtFOSA
Correlation coefficient: r = 0.999689, r^2 = 0.999377
Calibration curve: 0.904115 * x + 0.326191
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

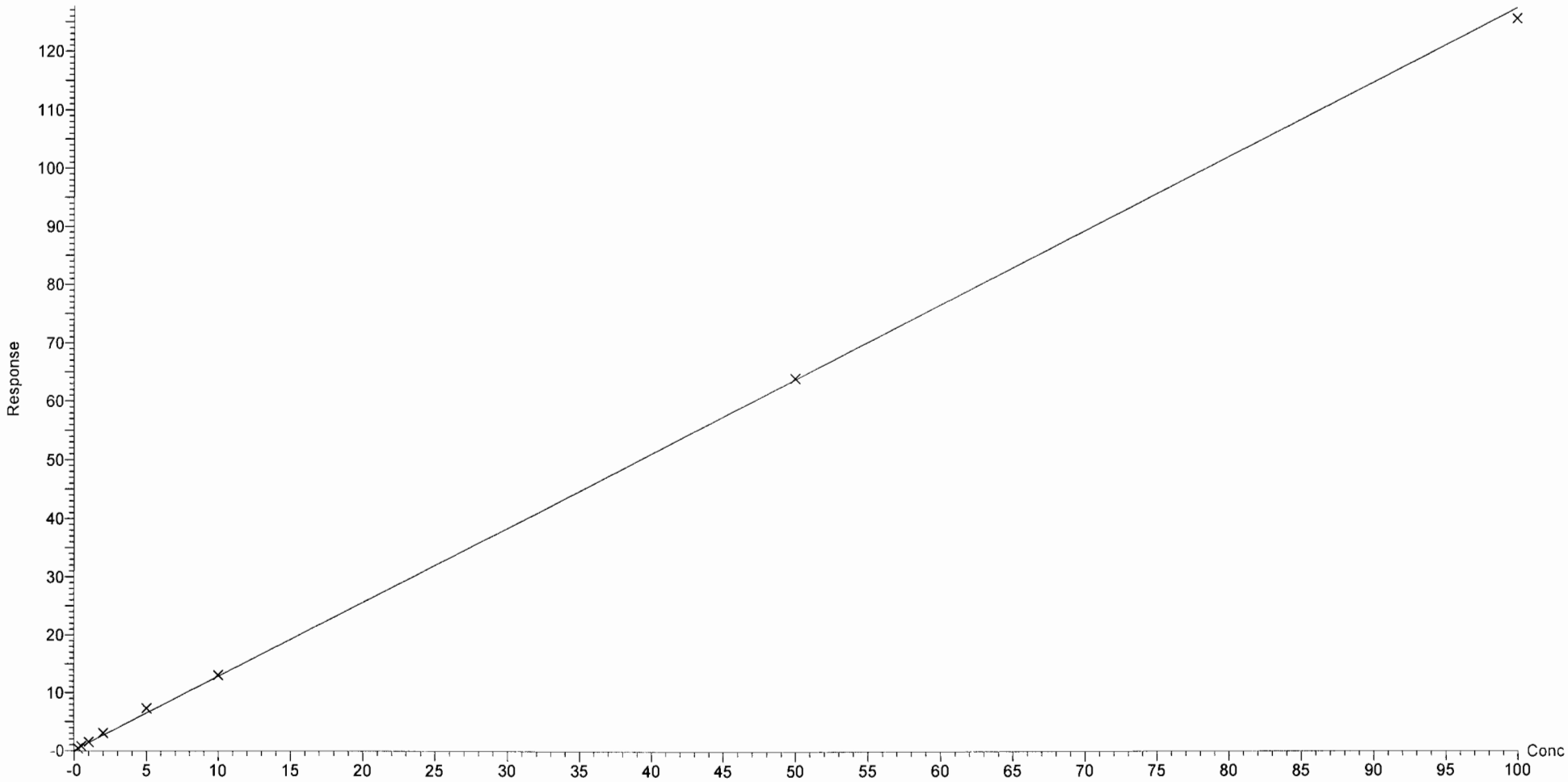
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999358
Calibration curve: -0.000715061 * x^2 + 1.34773 * x + 0.264398
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

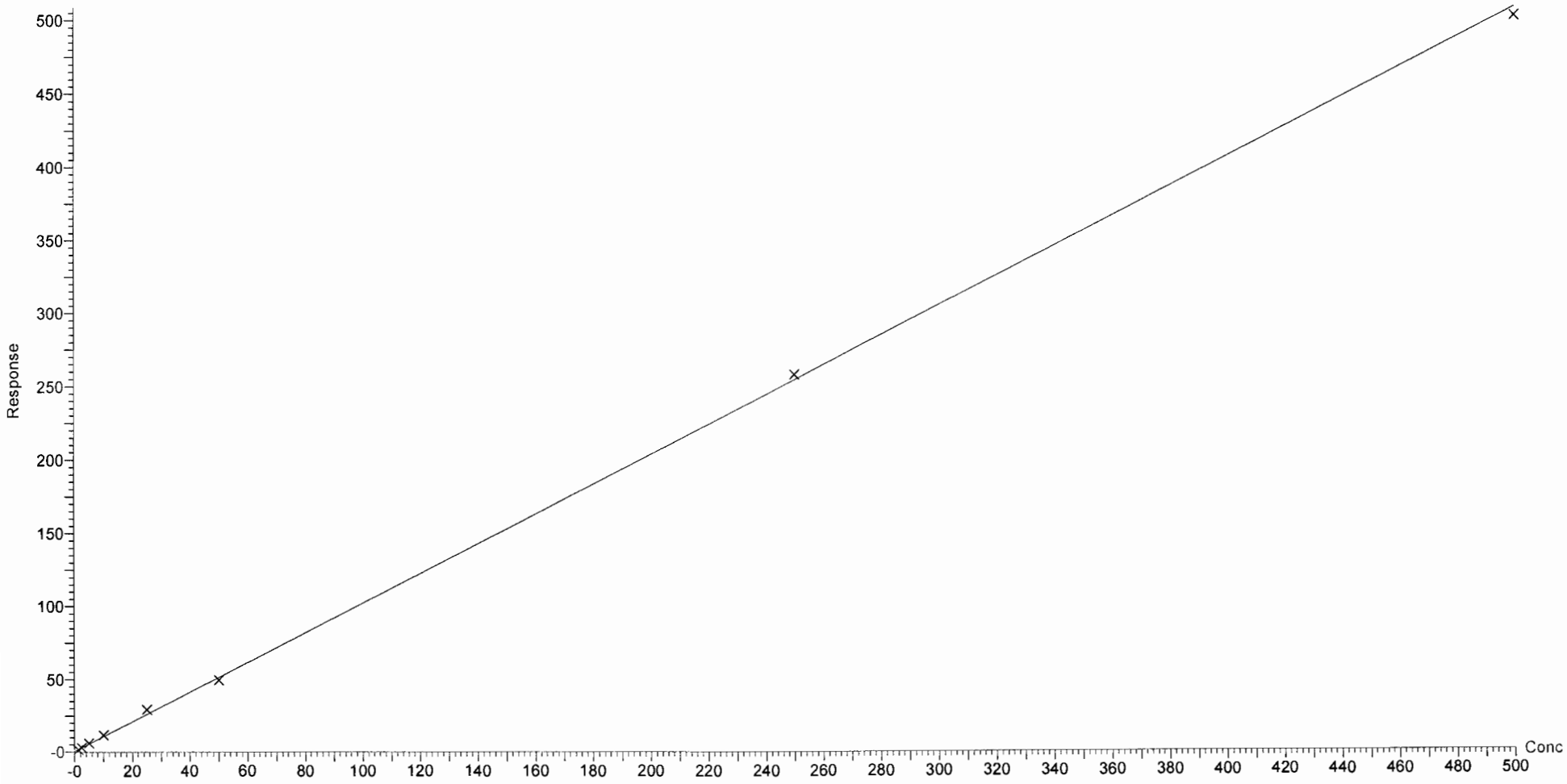
Compound name: PFODA
Correlation coefficient: r = 0.999378, r^2 = 0.998756
Calibration curve: 1.27561 * x + 0.10098
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

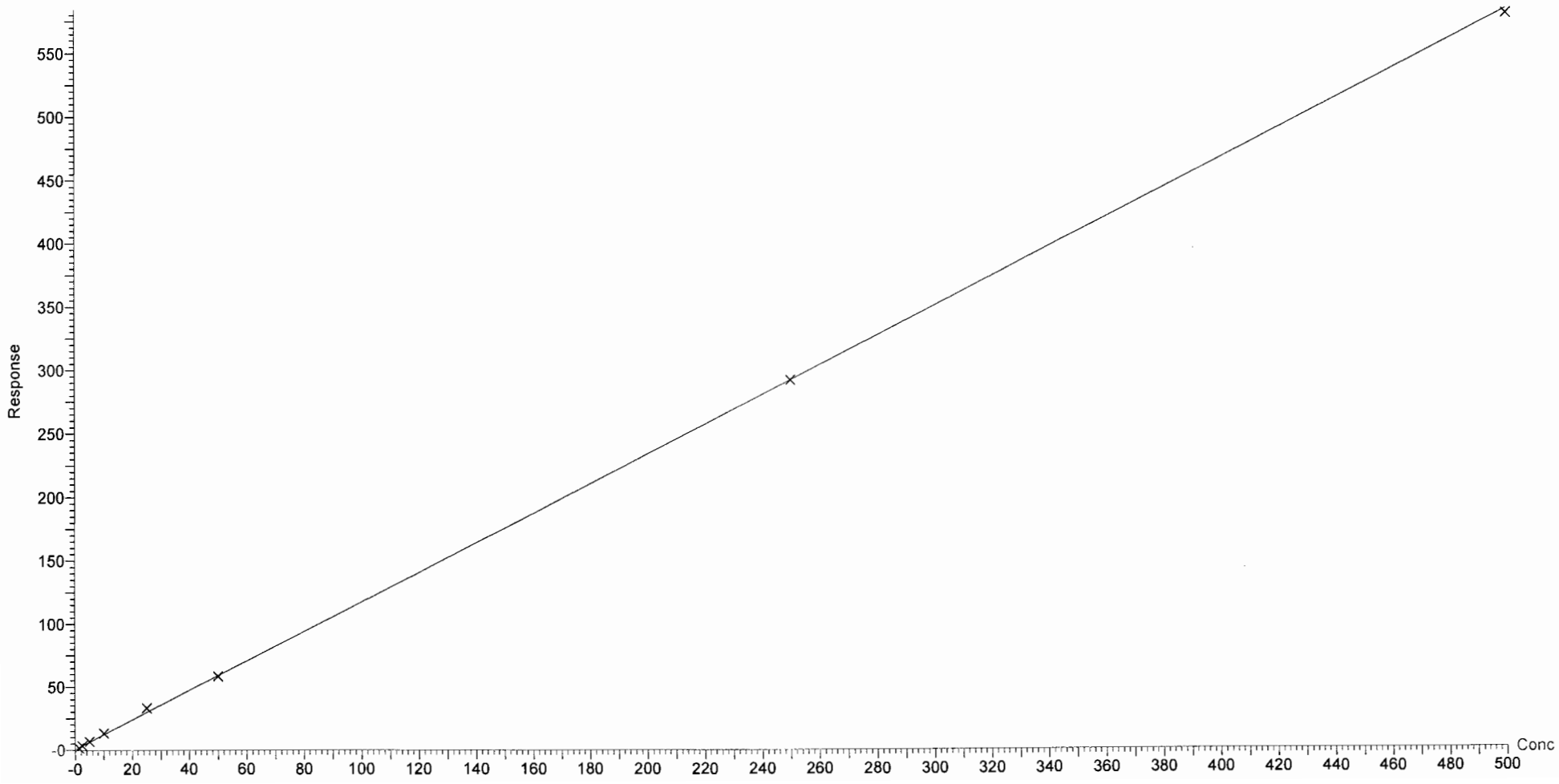
Compound name: N-MeFOSE
Correlation coefficient: r = 0.999476, r^2 = 0.998953
Calibration curve: 1.01603 * x + 0.461771
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:37:22 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999680, r^2 = 0.999361
Calibration curve: 1.16673 * x + 0.501898
Response type: Internal Std (Ref 50), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory

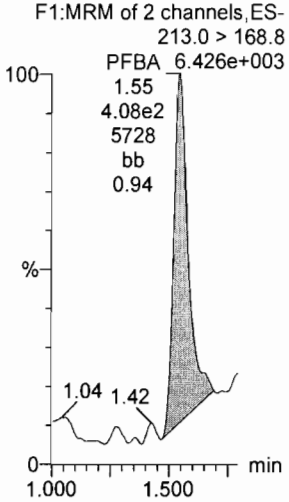
Dataset: U:\Q4.PRO\results\170724M1\170724M1-CRV.qld

Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:36:37 Pacific Daylight Time

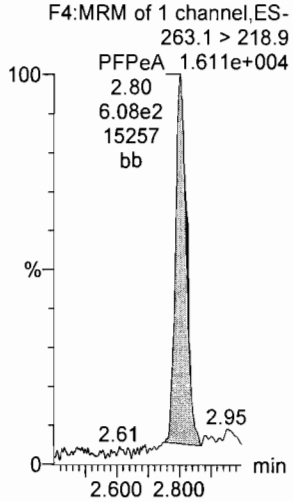
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 24 Jul 2017 15:22:13
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170724M1_3, Date: 24-Jul-2017, Time: 13:51:04, ID: ST170724M1-1 PFC CS-2 17G2422, Description: PFC CS-2 17G2422

PFBA



PFPeA



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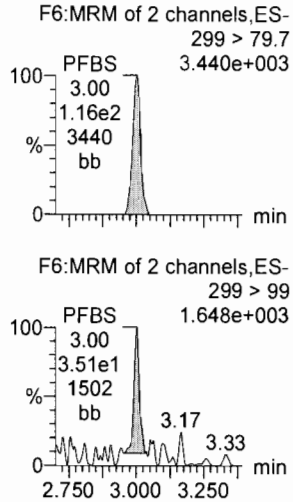

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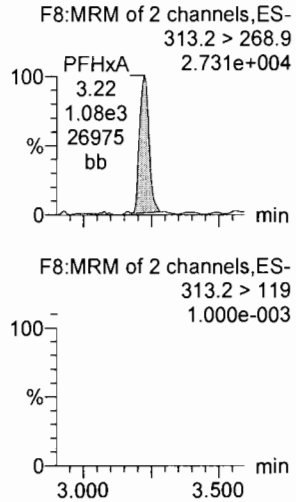

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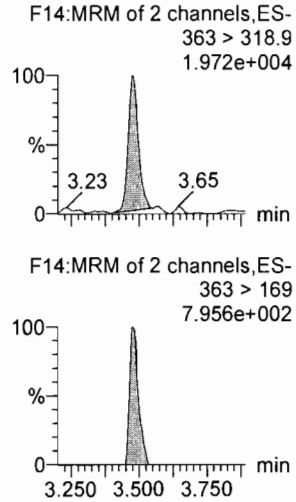

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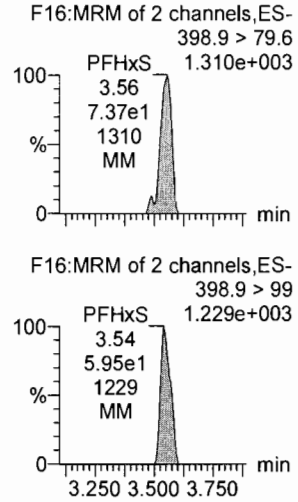

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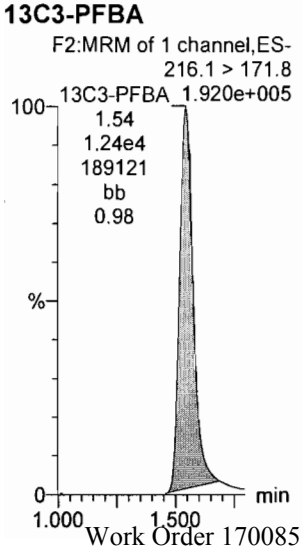

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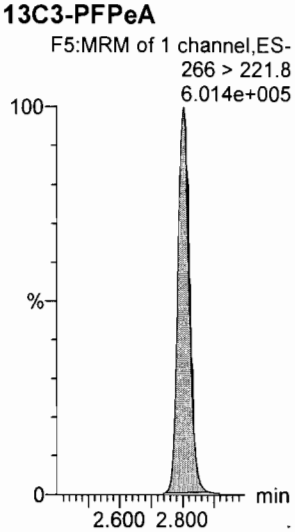

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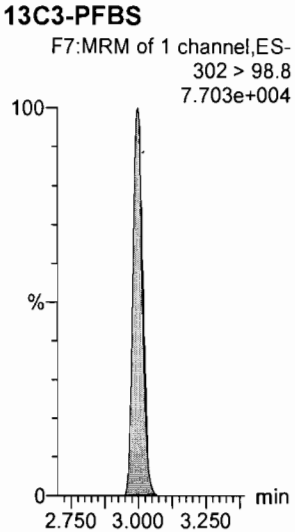

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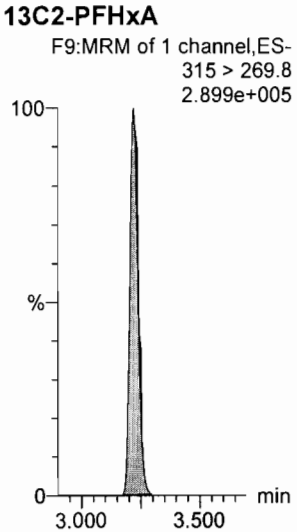

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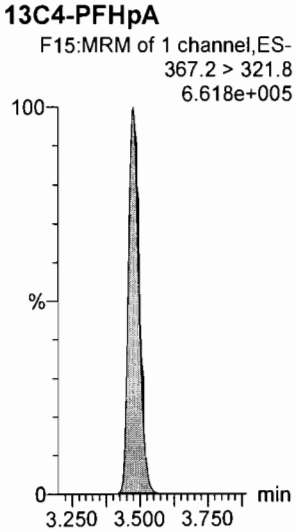

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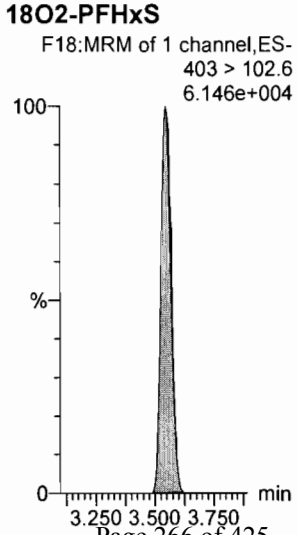

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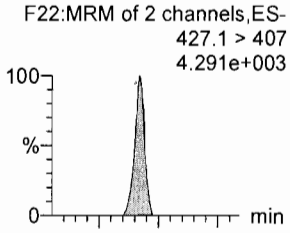
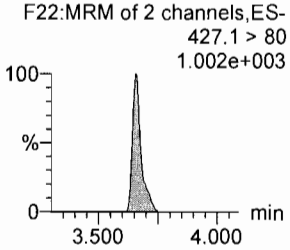
Name: 170724M1_3, Date: 24-Jul-2017, Time: 13:51:04, ID: ST170724M1-1 PFC CS-2 17G2422, Description: PFC CS-2 17G2422

6:2 FTS





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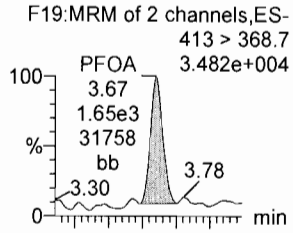

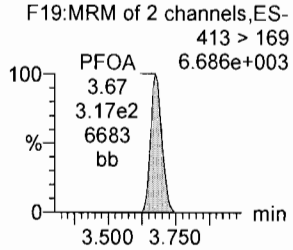

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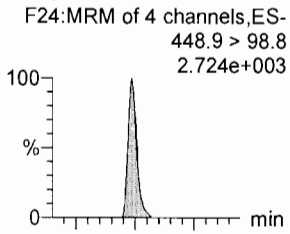

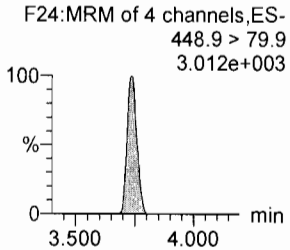

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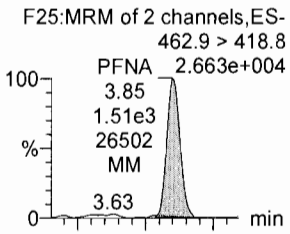

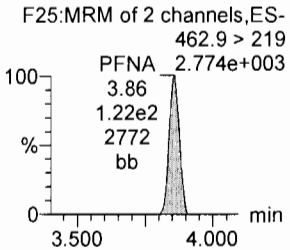

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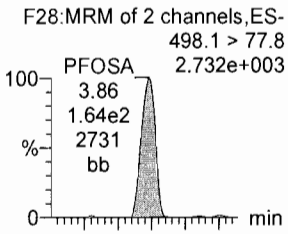

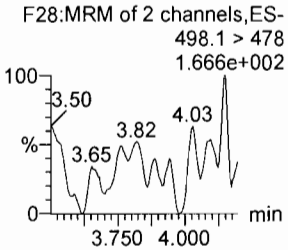

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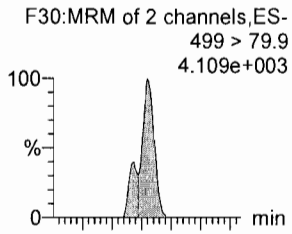

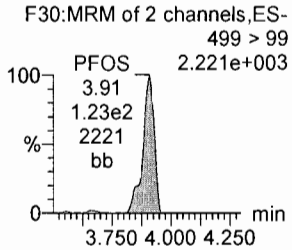

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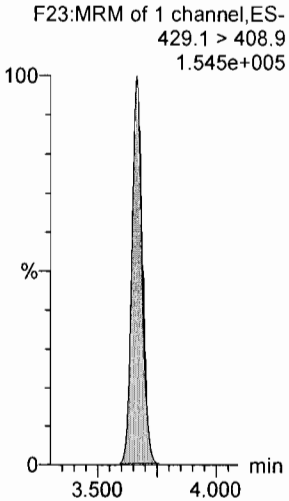

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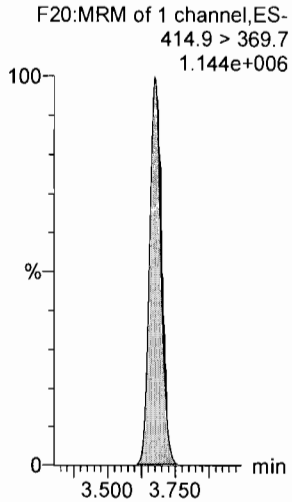

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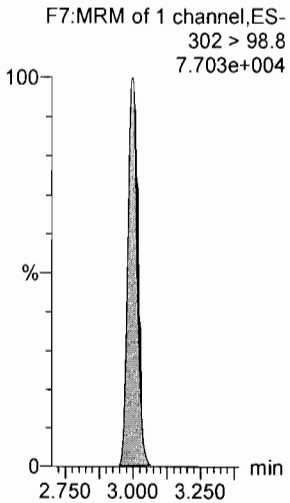

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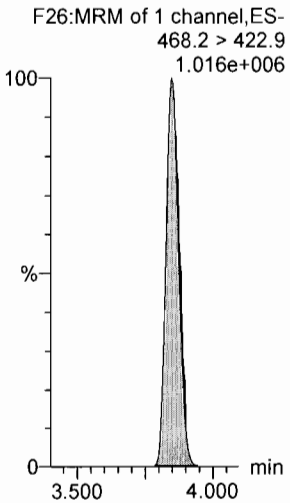

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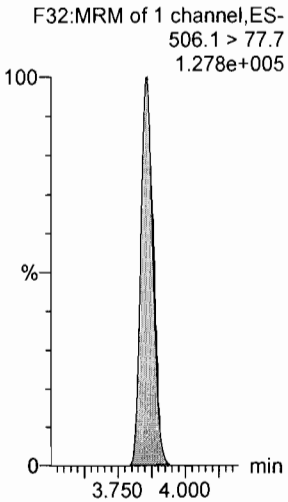

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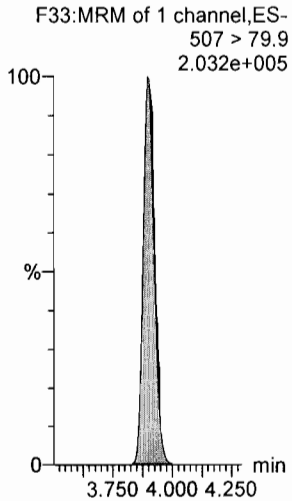

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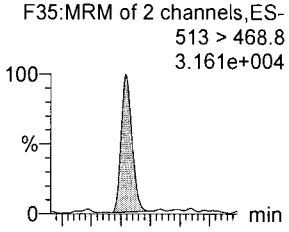
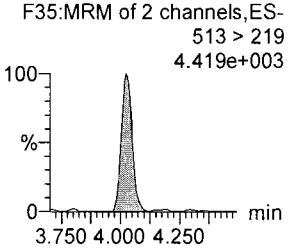
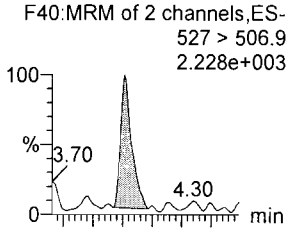
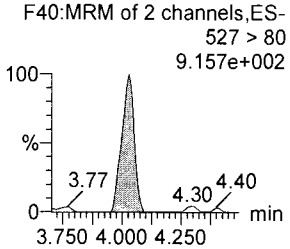




8:2 FTS





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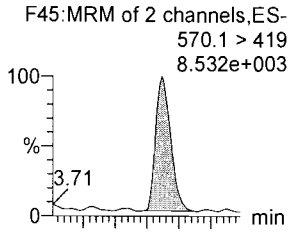

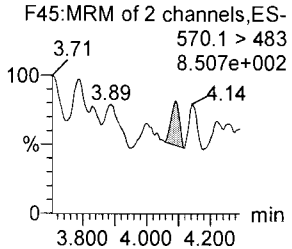

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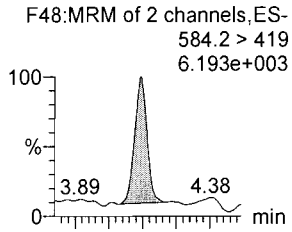

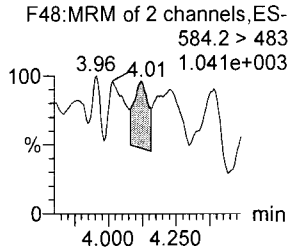

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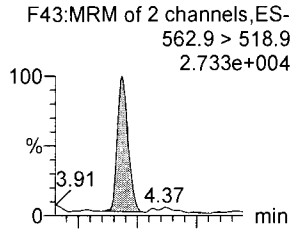

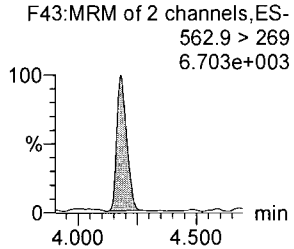

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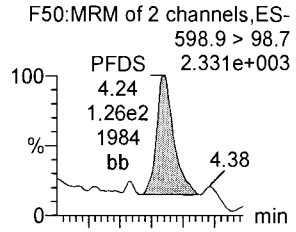

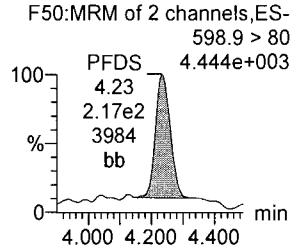

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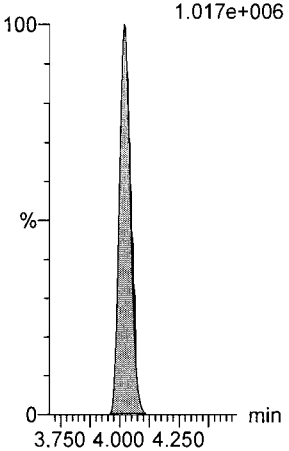

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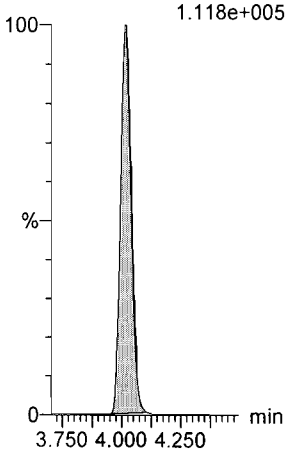

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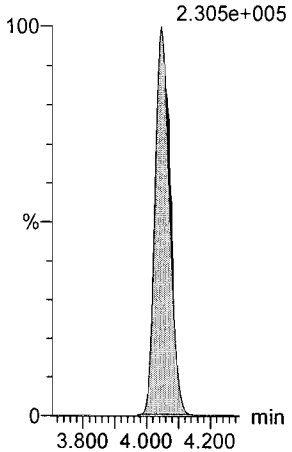

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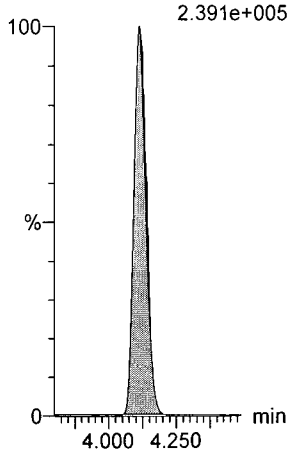

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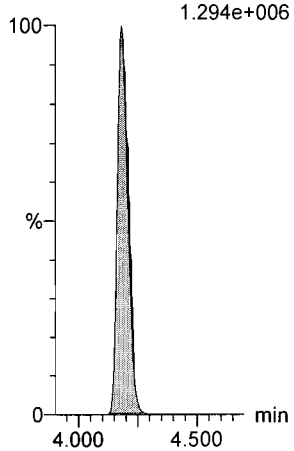

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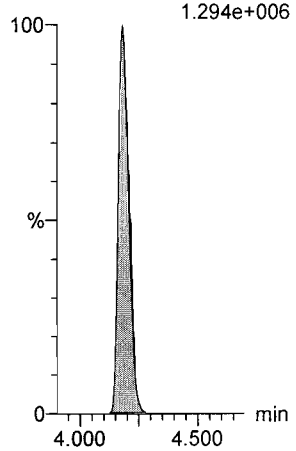

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Name: 170724M1_3, Date: 24-Jul-2017, Time: 13:51:04, ID: ST170724M1-1 PFC CS-2 17G2422, Description: PFC CS-2 17G2422

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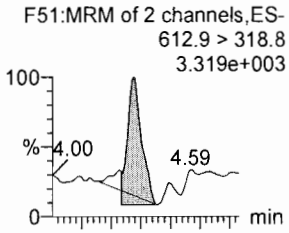

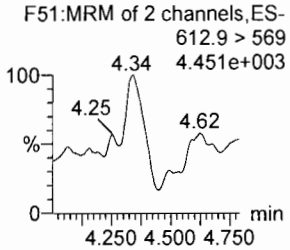

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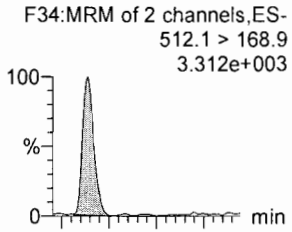

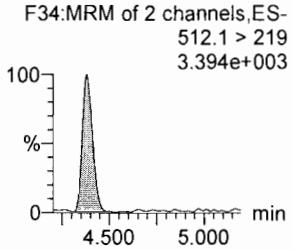

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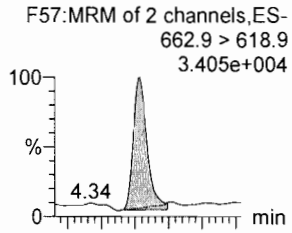
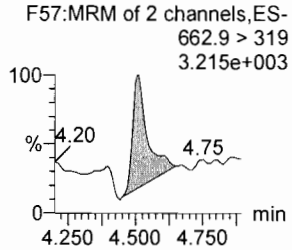
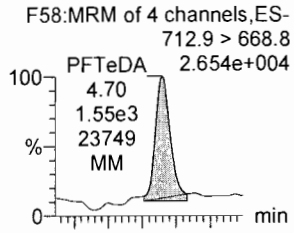
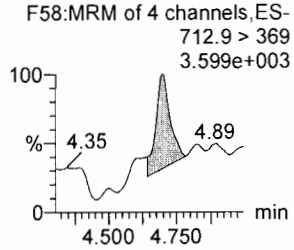


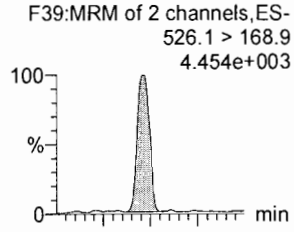


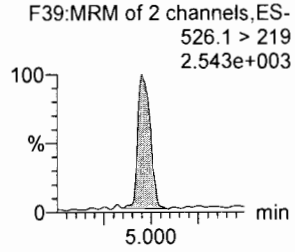
PFTeDA





N-EtFOSA





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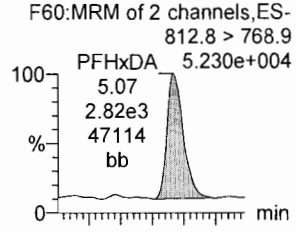

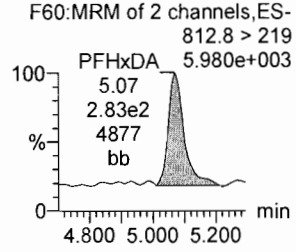

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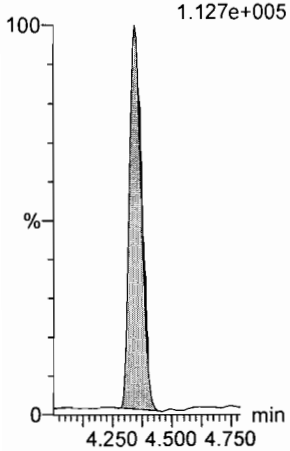
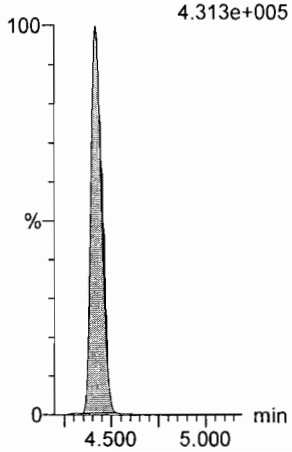


d3-N-MeFOSA



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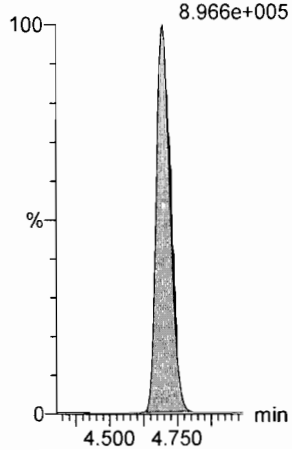

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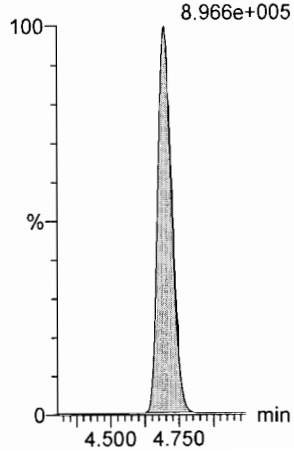

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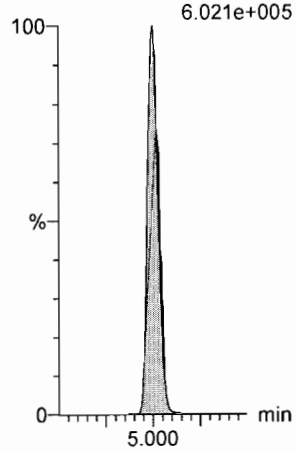
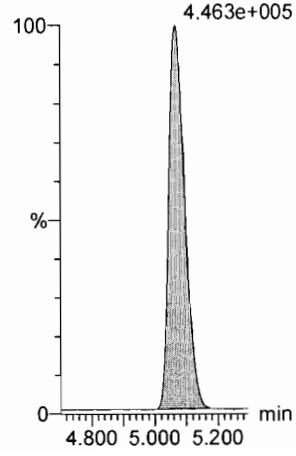


13C2-PFHxDA



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Name: 170724M1_3, Date: 24-Jul-2017, Time: 13:51:04, ID: ST170724M1-1 PFC CS-2 17G2422, Description: PFC CS-2 17G2422

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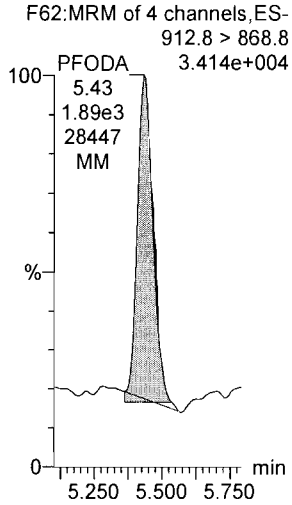

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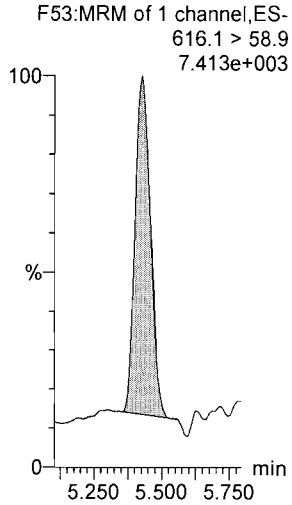

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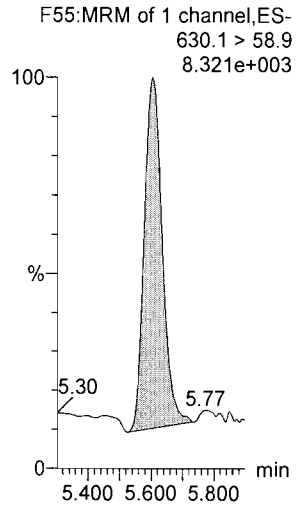

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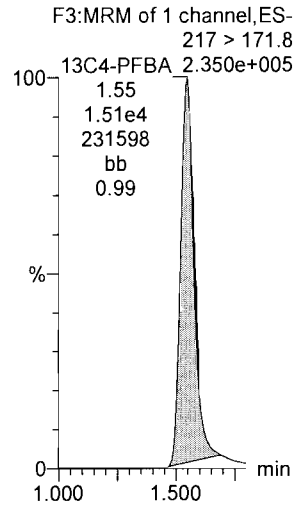

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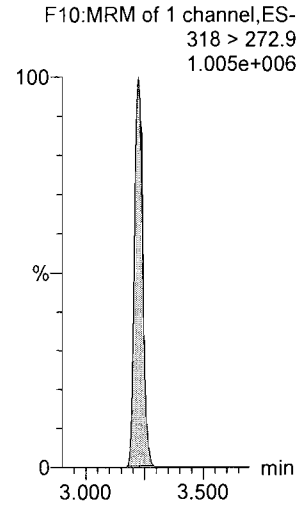

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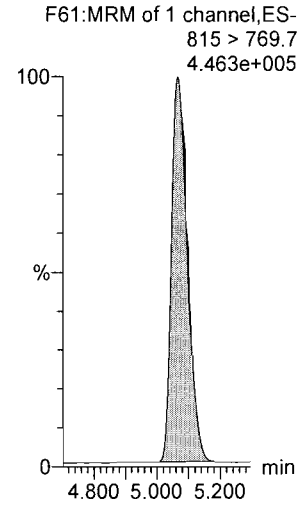
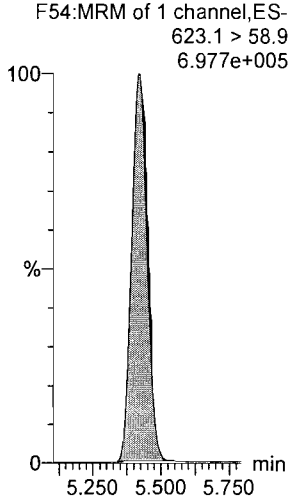
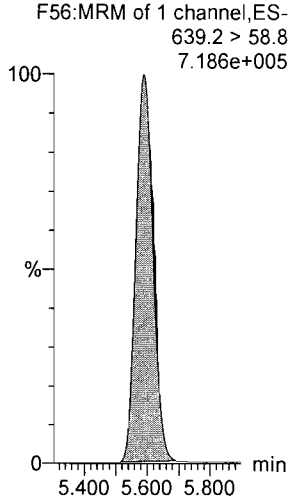


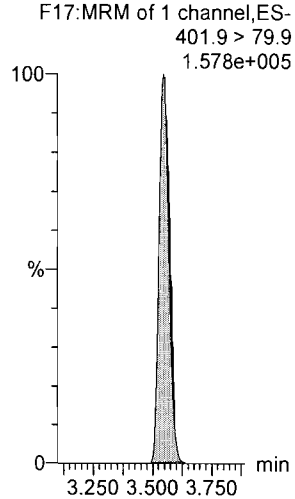
d7-N-MeFOSE



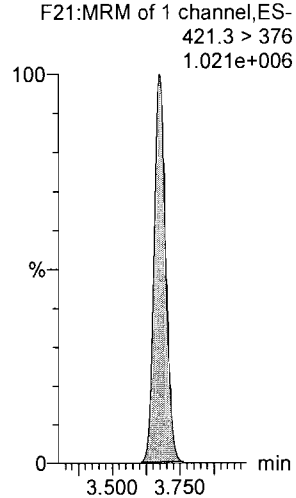
d9-N-EtFOSE



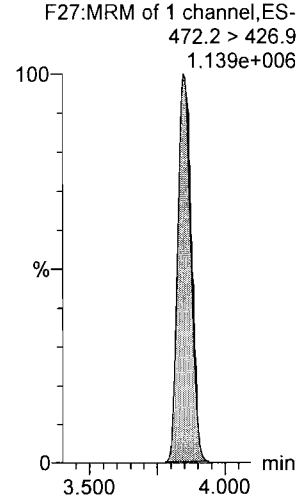
13C3-PFHxS



13C8-PFOA



13C9-PFNA



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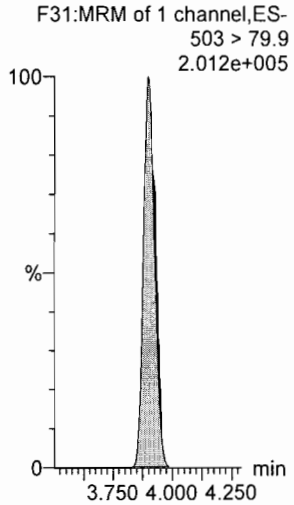
Name: 170724M1_3, Date: 24-Jul-2017, Time: 13:51:04, ID: ST170724M1-1 PFC CS-2 17G2422, Description: PFC CS-2 17G2422

13C4-PFOS



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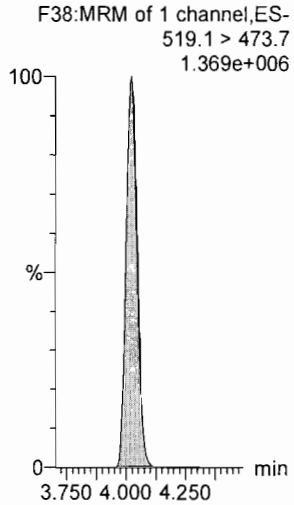

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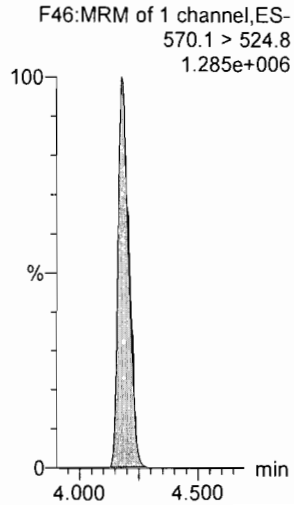

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Last Altered: Monday, July 24, 2017 15:32:30 Pacific Daylight Time
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Name: 170724M1_4, Date: 24-Jul-2017, Time: 14:01:50, ID: ST170724M1-2 PFC CS-1 17G2119, Description: PFC CS-1 17G2119

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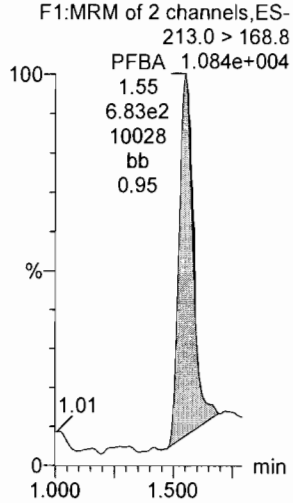

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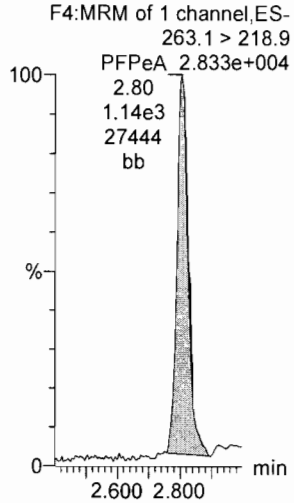

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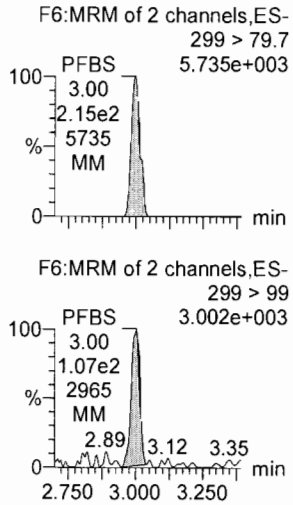

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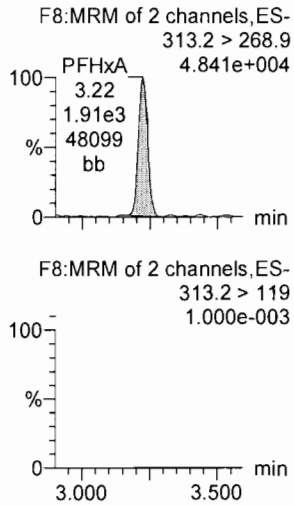
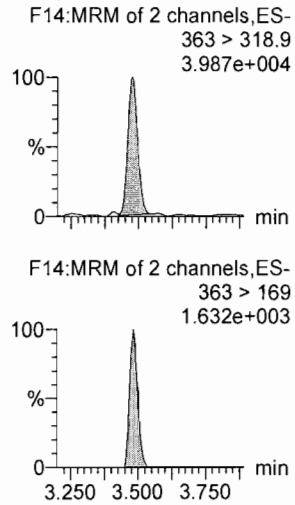
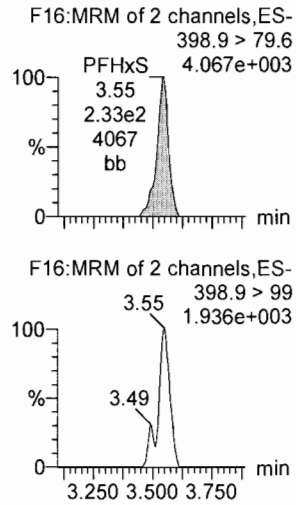


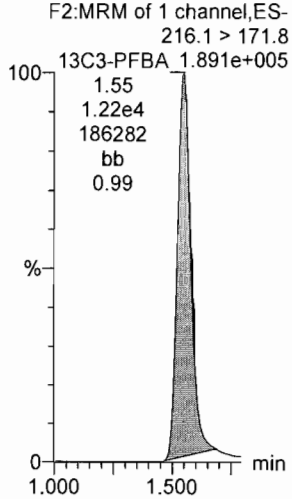
PFHpA



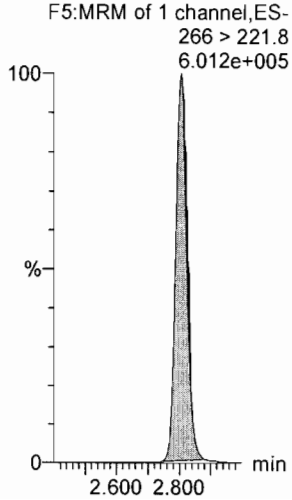
PFHxS



13C3-PFBA



13C3-PFPeA



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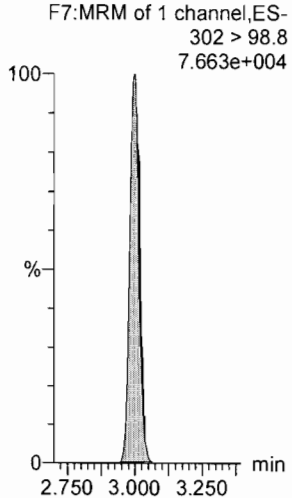

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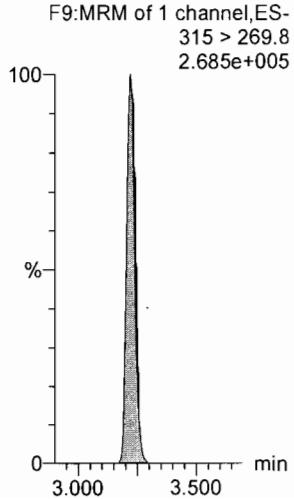
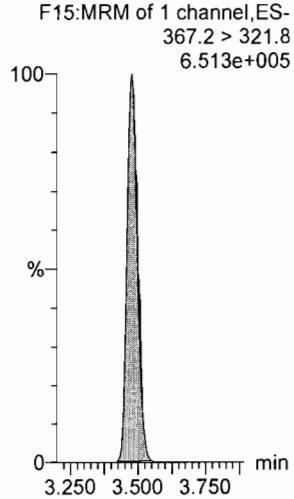


13C4-PFHpA



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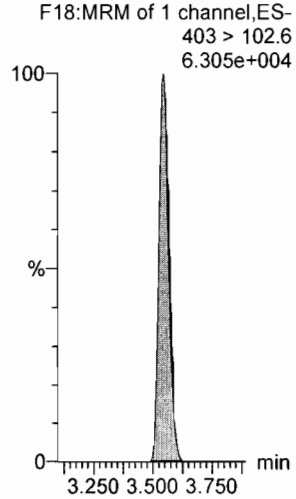

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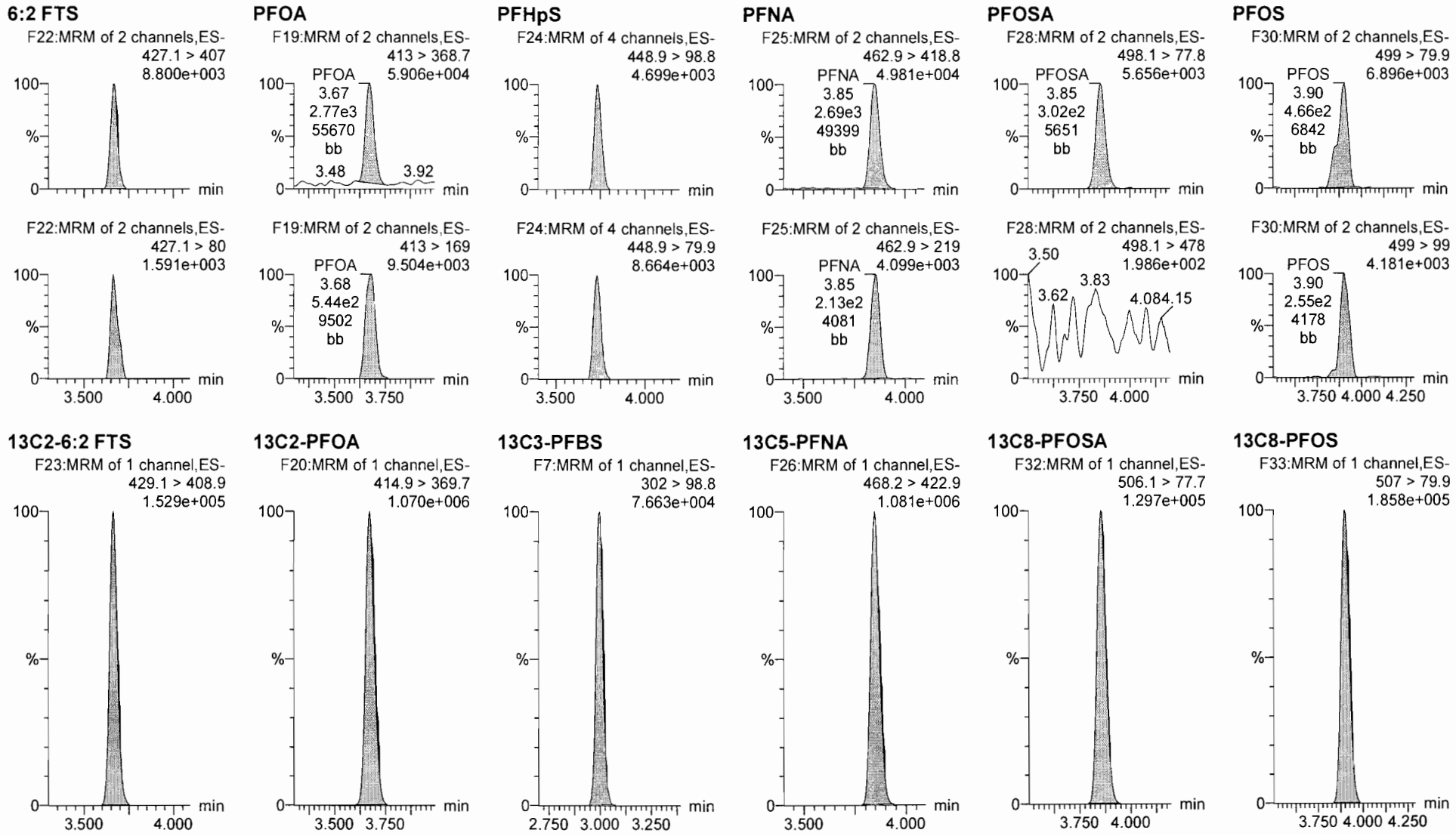
Name: 170724M1_4, Date: 24-Jul-2017, Time: 14:01:50, ID: ST170724M1-2 PFC CS-1 17G2119, Description: PFC CS-1 17G2119



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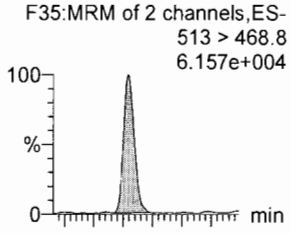
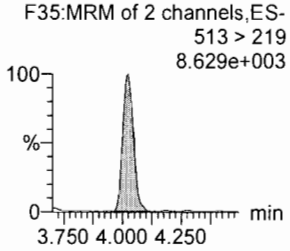
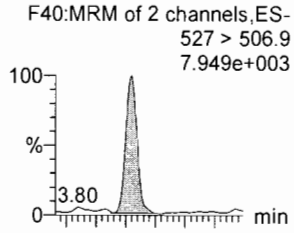
Name: 170724M1_4, Date: 24-Jul-2017, Time: 14:01:50, ID: ST170724M1-2 PFC CS-1 17G2119, Description: PFC CS-1 17G2119

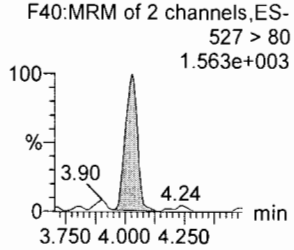
PFDA



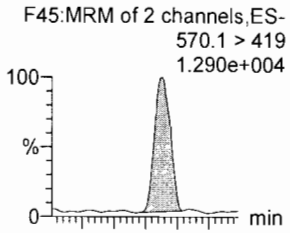


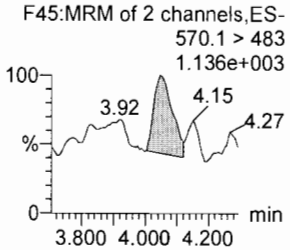
8:2 FTS





N-MeFOSAA





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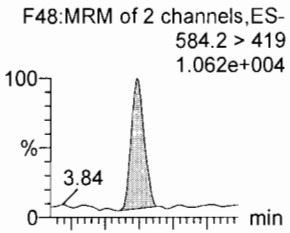

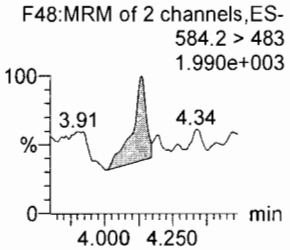

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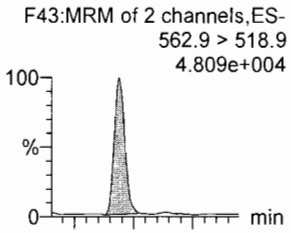

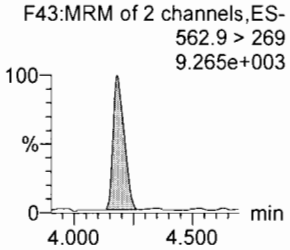

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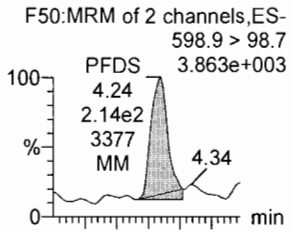
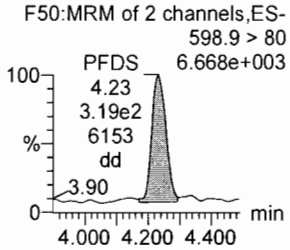
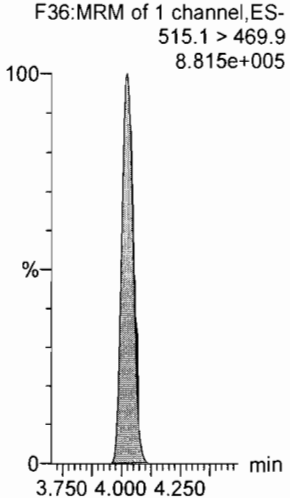
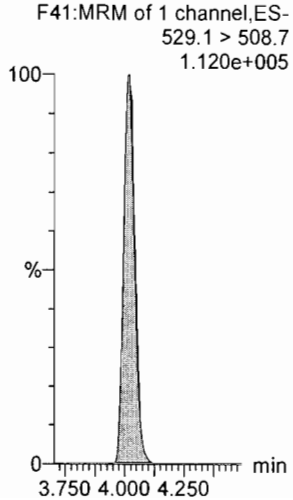




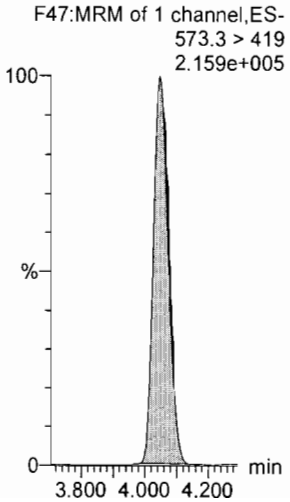
13C2-PFDA



13C2-8:2 FTS



d3-N-MeFOSAA



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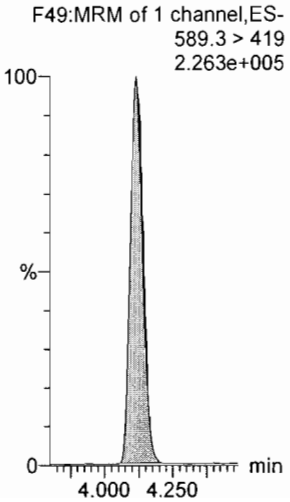

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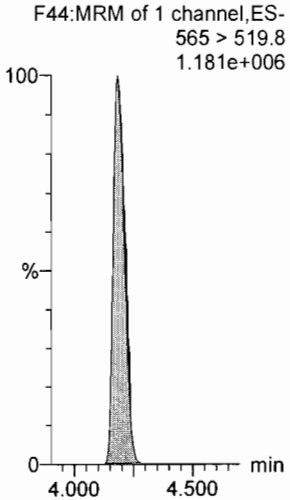

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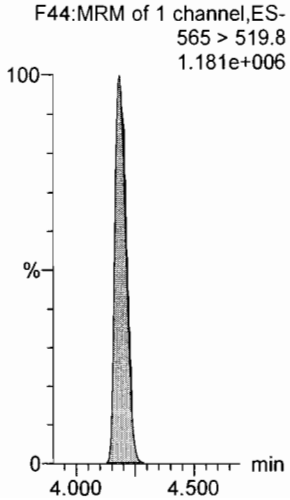

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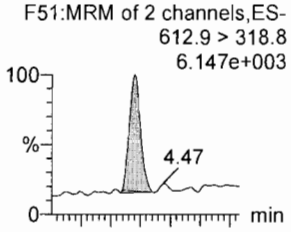
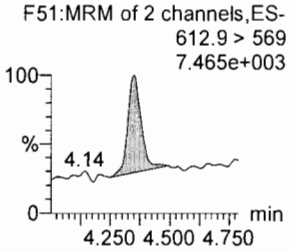
Printed: Monday, July 24, 2017 15:36:37 Pacific Daylight Time

Name: 170724M1_4, Date: 24-Jul-2017, Time: 14:01:50, ID: ST170724M1-2 PFC CS-1 17G2119, Description: PFC CS-1 17G2119

PFDoA





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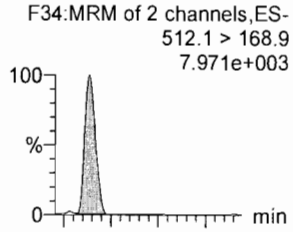

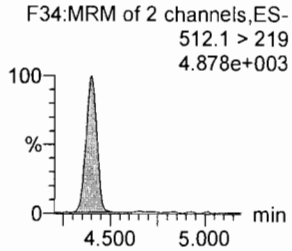

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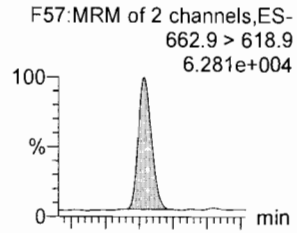

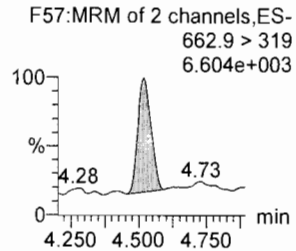

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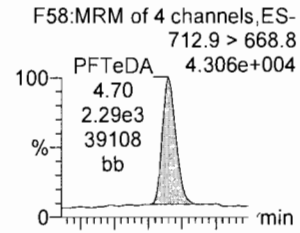

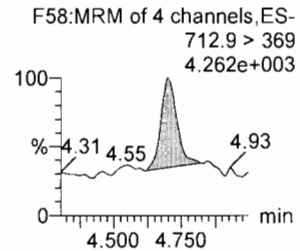

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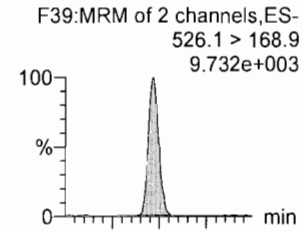

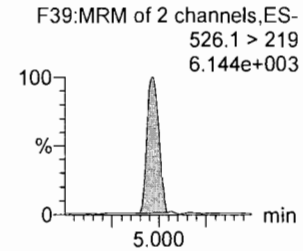

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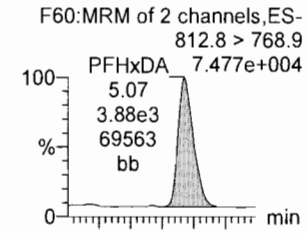

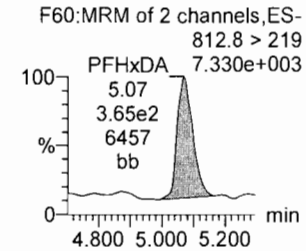

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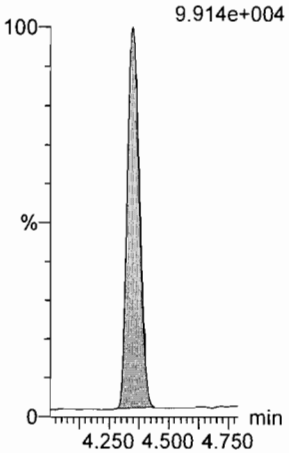
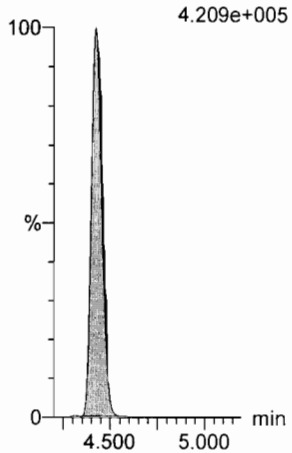


d3-N-MeFOSA



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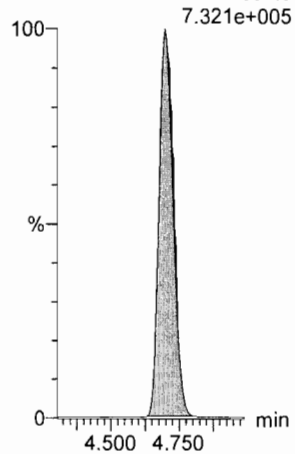

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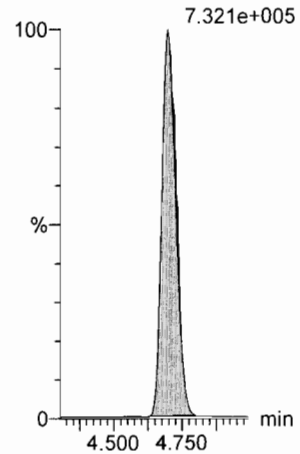

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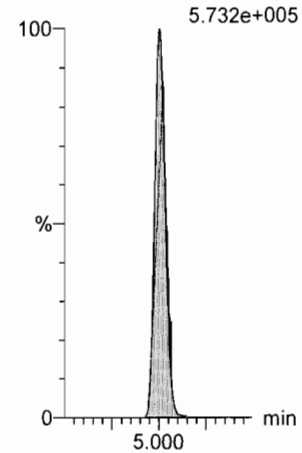

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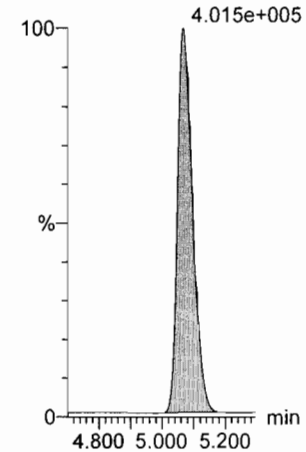

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Name: 170724M1_4, Date: 24-Jul-2017, Time: 14:01:50, ID: ST170724M1-2 PFC CS-1 17G2119, Description: PFC CS-1 17G2119

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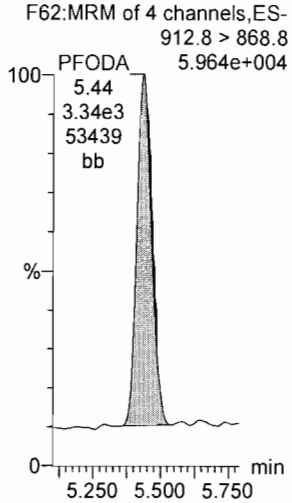

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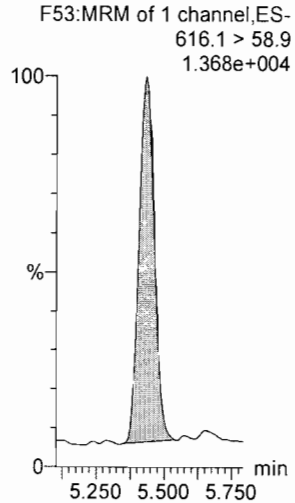

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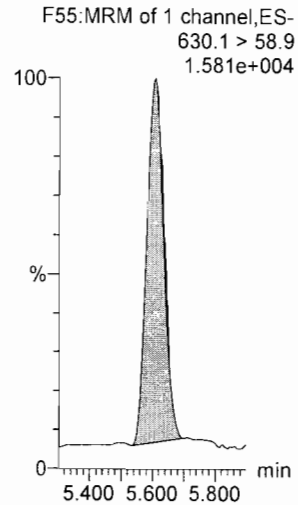

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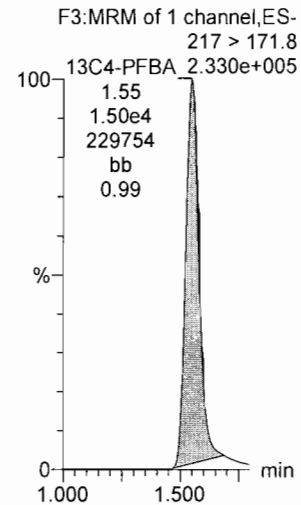
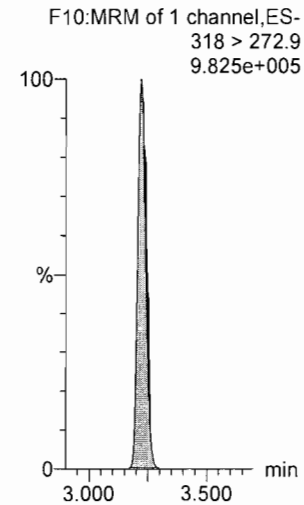


13C5-PFHxA



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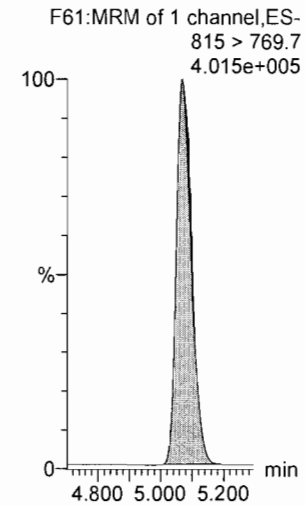
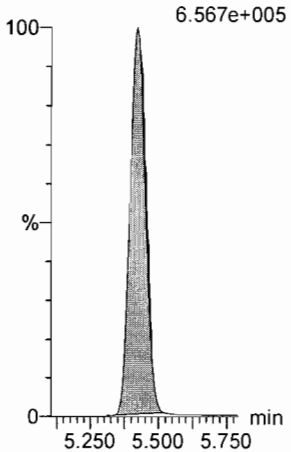
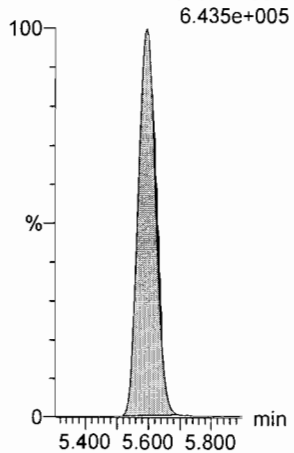


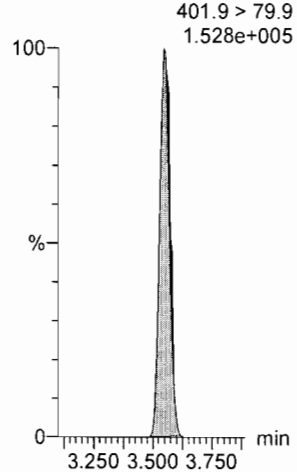
d7-N-MeFOSE



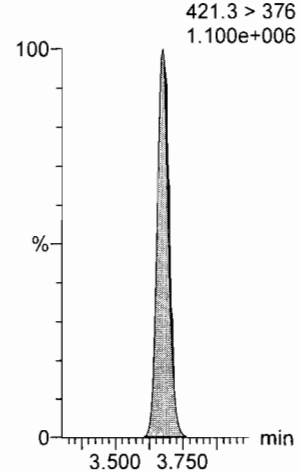
d9-N-EtFOSE



13C3-PFHxS



13C8-PFOA



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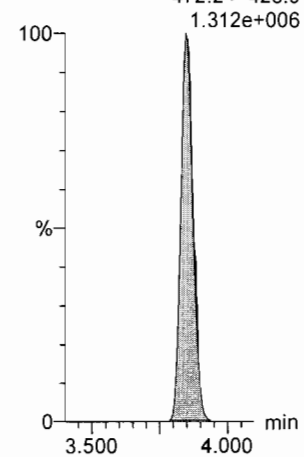

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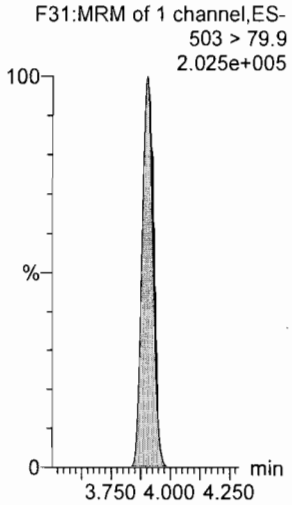
Name: 170724M1_4, Date: 24-Jul-2017, Time: 14:01:50, ID: ST170724M1-2 PFC CS-1 17G2119, Description: PFC CS-1 17G2119

13C4-PFOS



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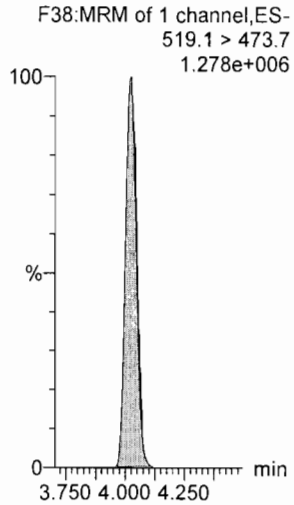
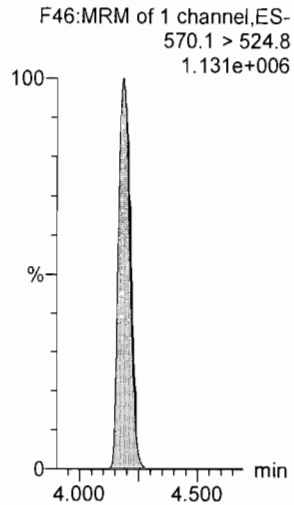


13C7-PFUnA



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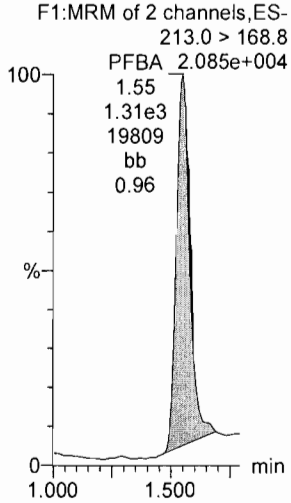

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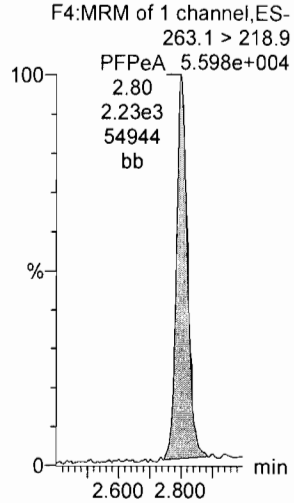

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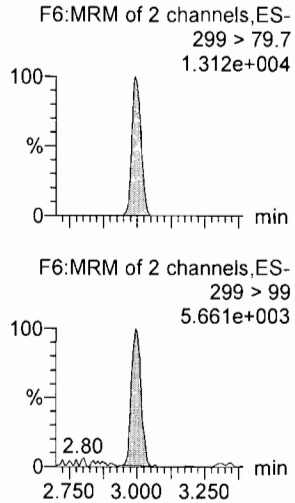

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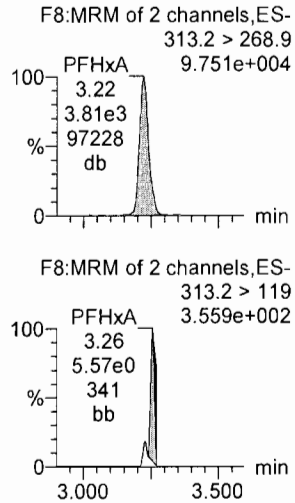

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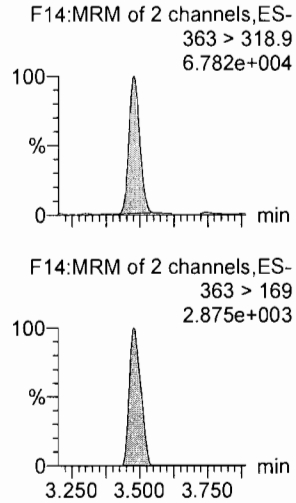

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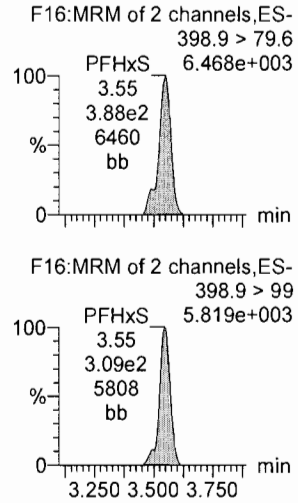

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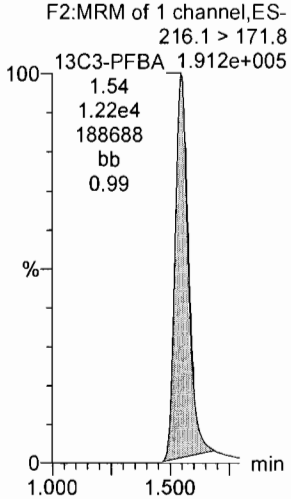

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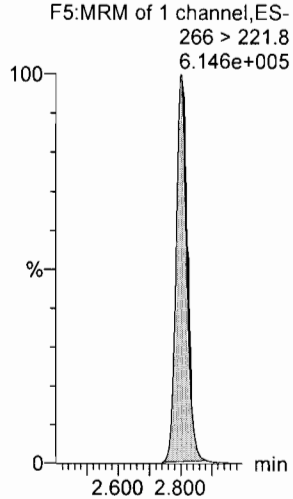

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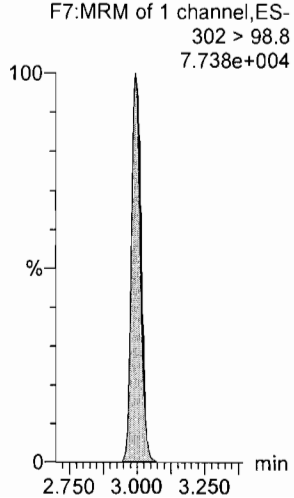
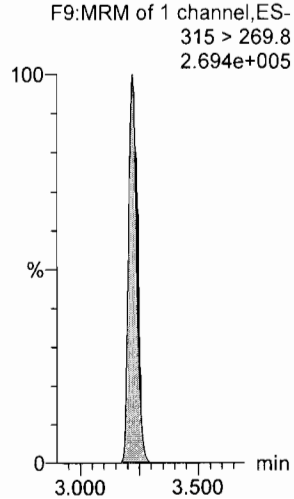


13C2-PFHxA



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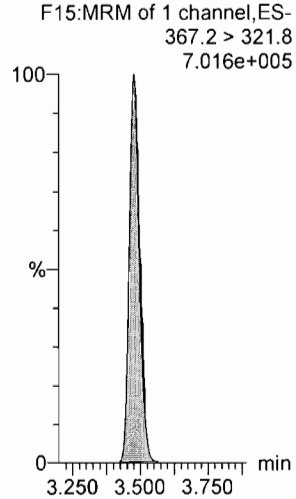

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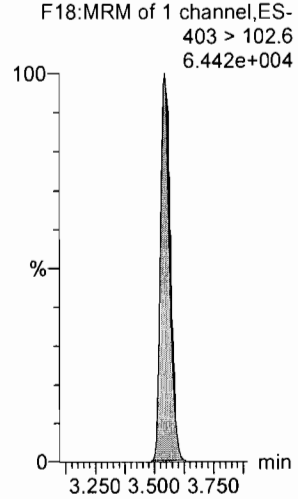

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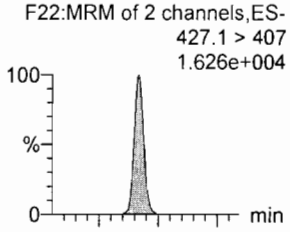
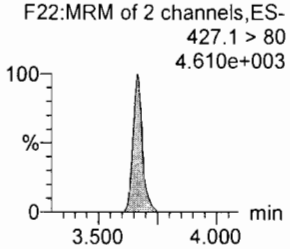
Name: 170724M1_5, Date: 24-Jul-2017, Time: 14:12:36, ID: ST170724M1-3 PFC CS0 17G2423, Description: PFC CS0 17G2423

6:2 FTS





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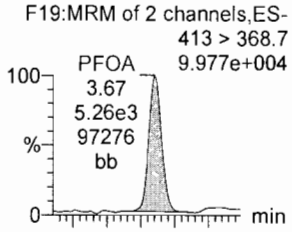

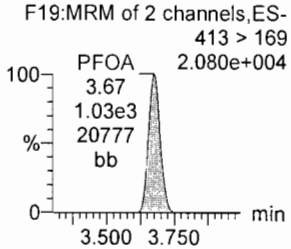

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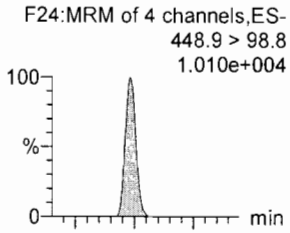

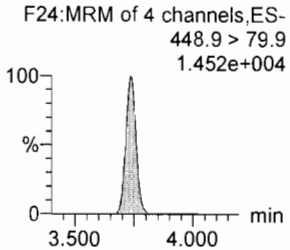

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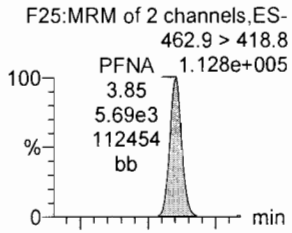

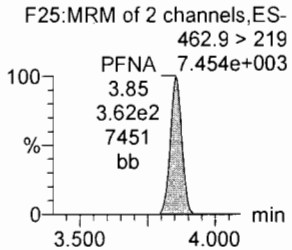

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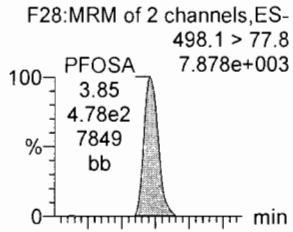

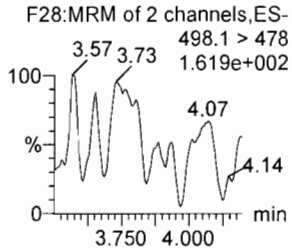

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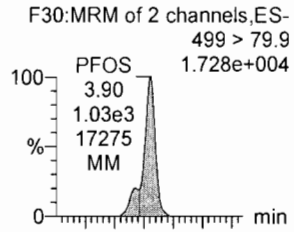

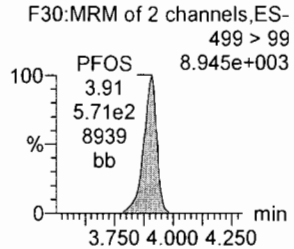

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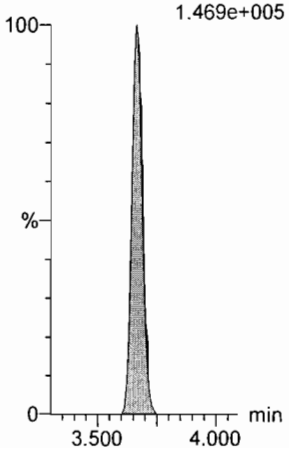

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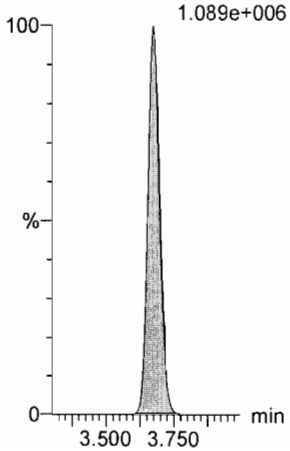

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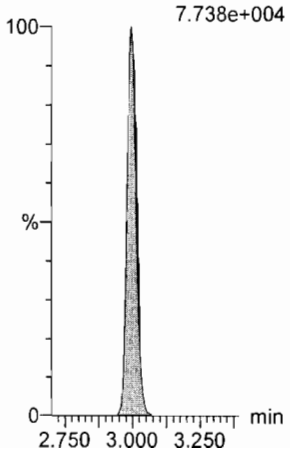

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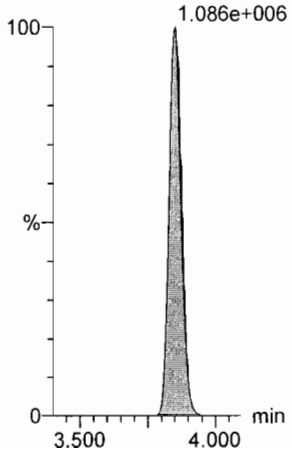

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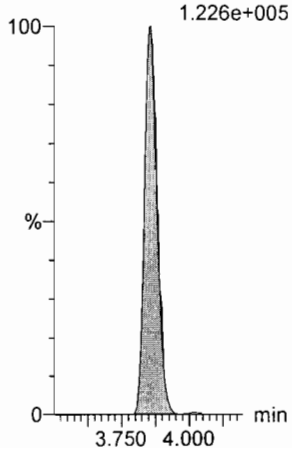

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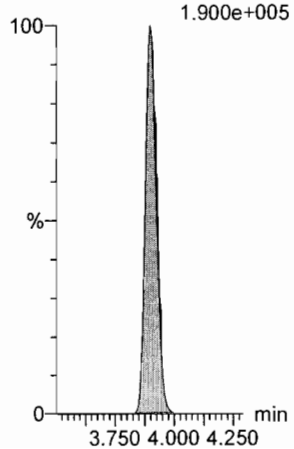

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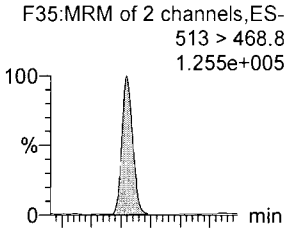
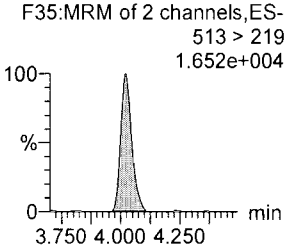
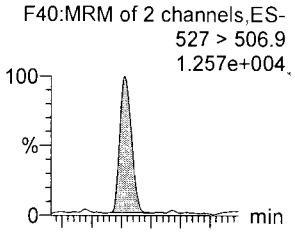
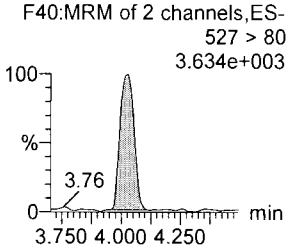




8:2 FTS





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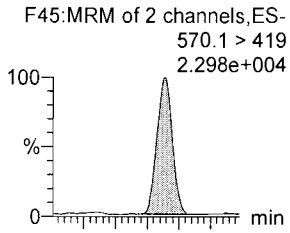

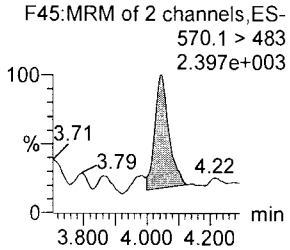

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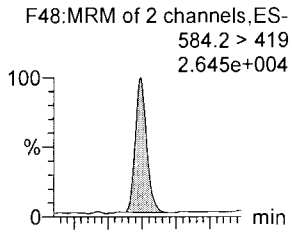

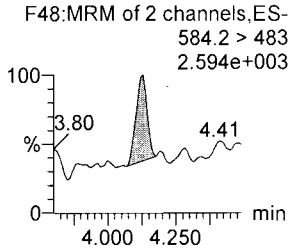

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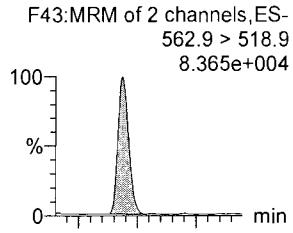

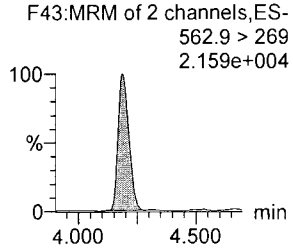

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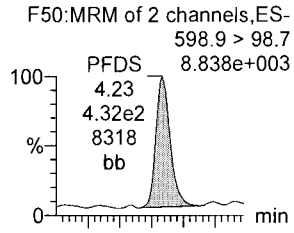

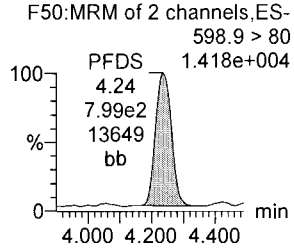

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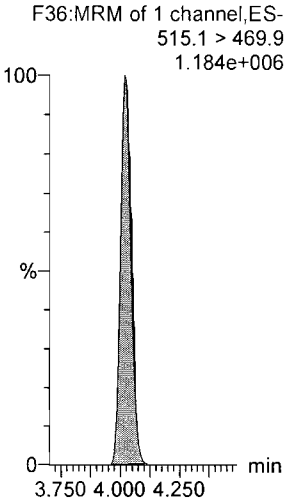

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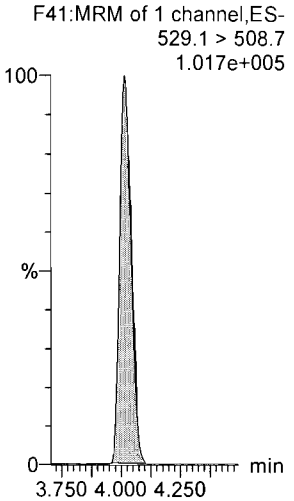

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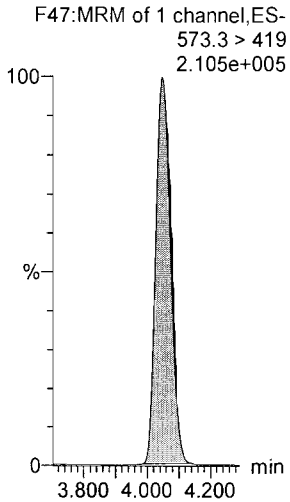

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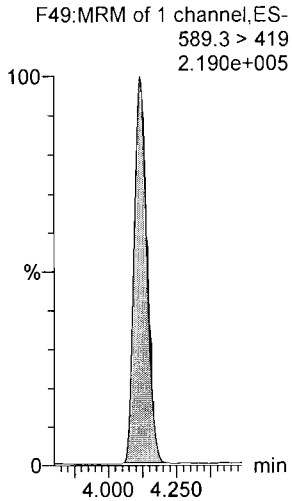

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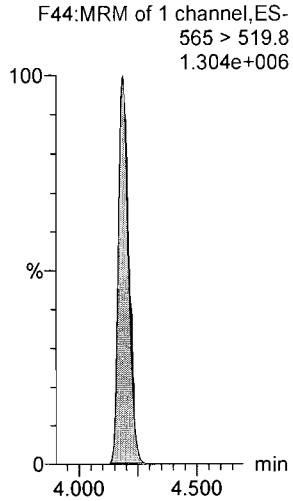

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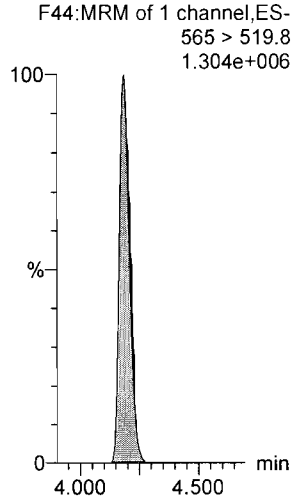

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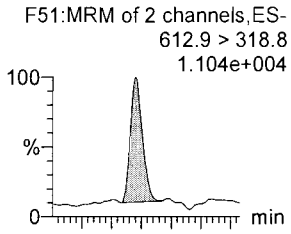

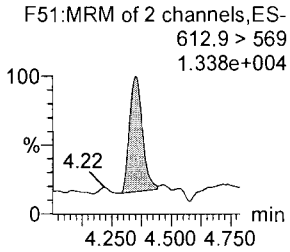

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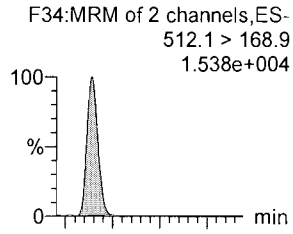

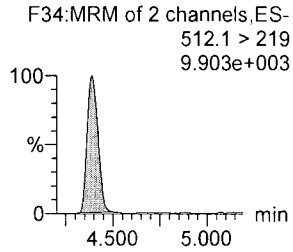

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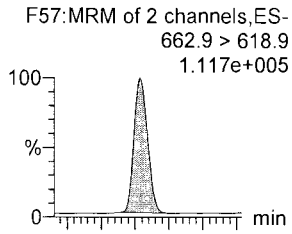

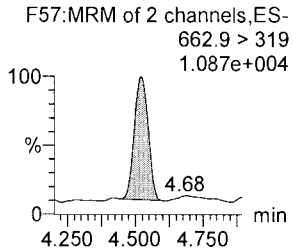

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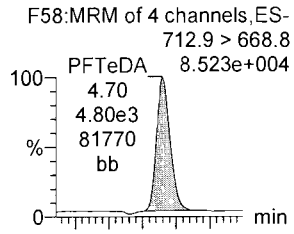

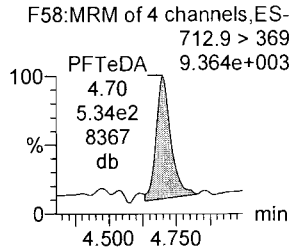

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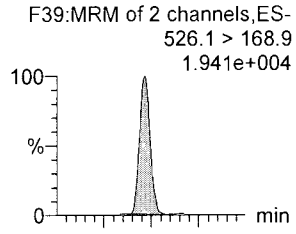

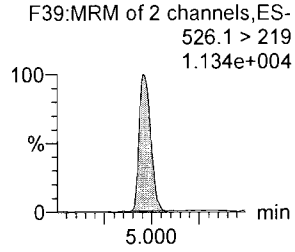

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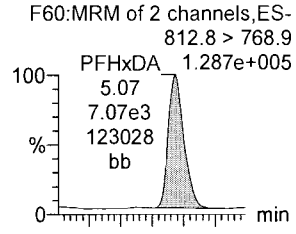

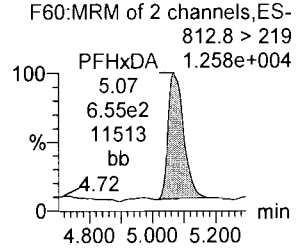

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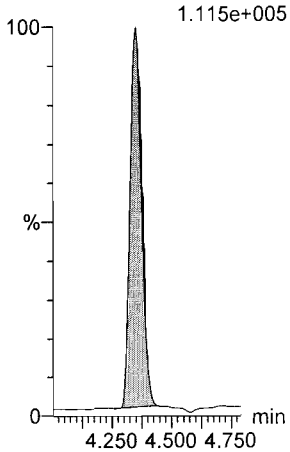
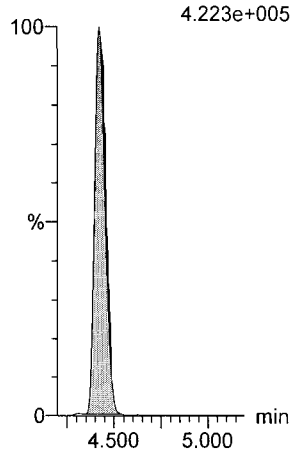
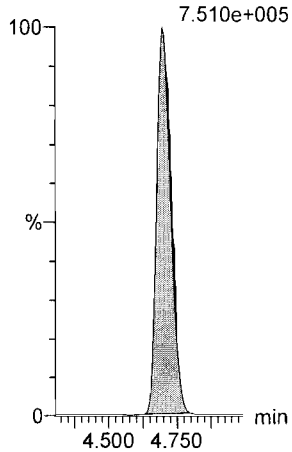


d3-N-MeFOSA



13C2-PFTeDA



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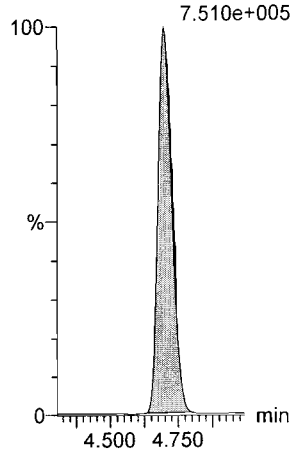

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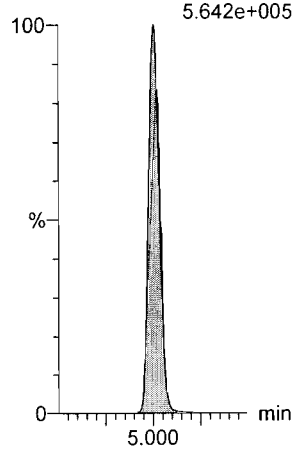
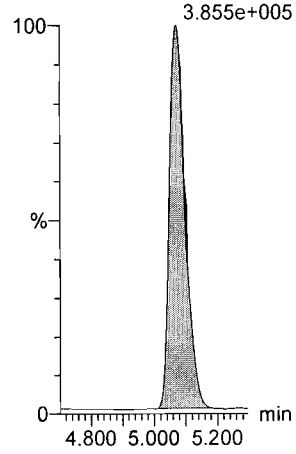


13C2-PFHxDA



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Name: 170724M1_5, Date: 24-Jul-2017, Time: 14:12:36, ID: ST170724M1-3 PFC CS0 17G2423, Description: PFC CS0 17G2423

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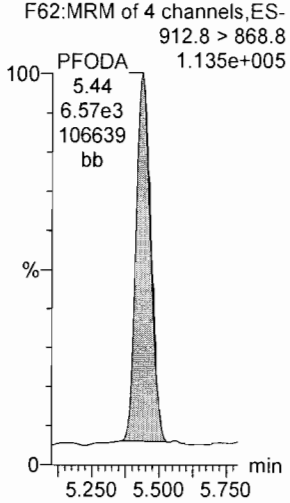

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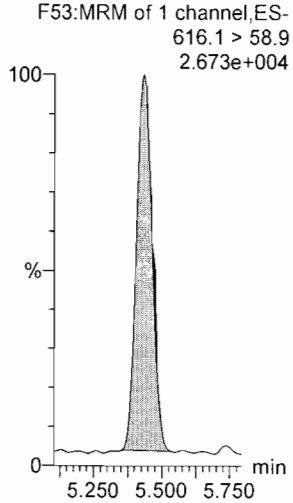

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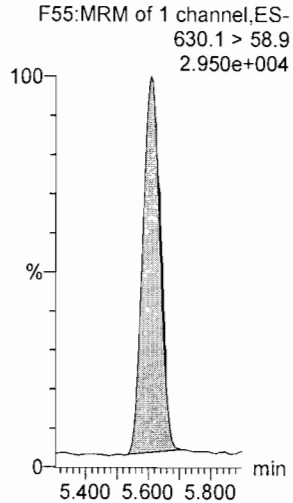

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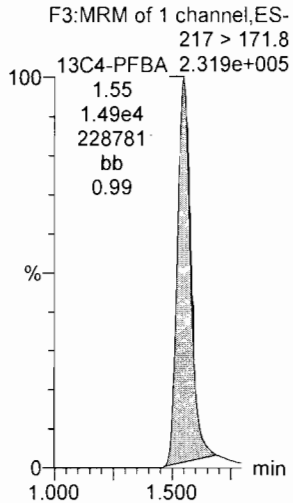
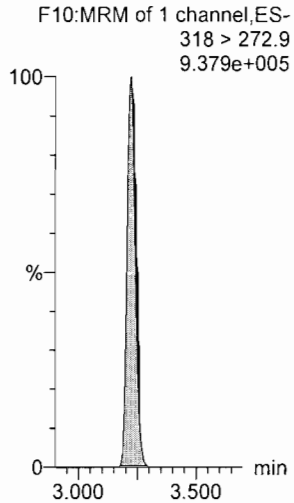


13C5-PFHxA



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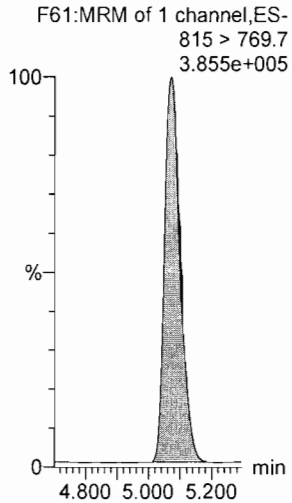
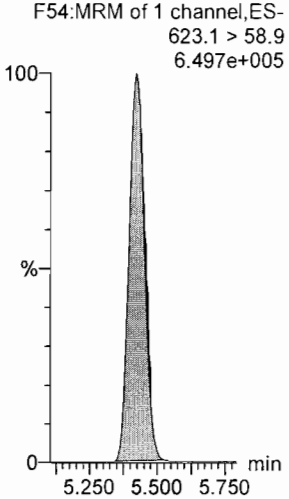


d7-N-MeFOSE



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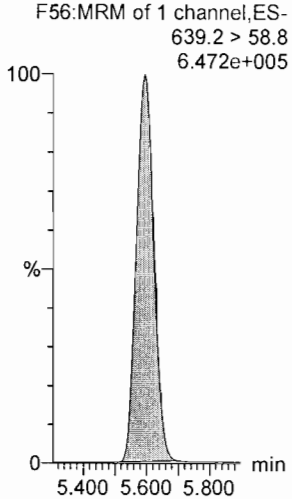
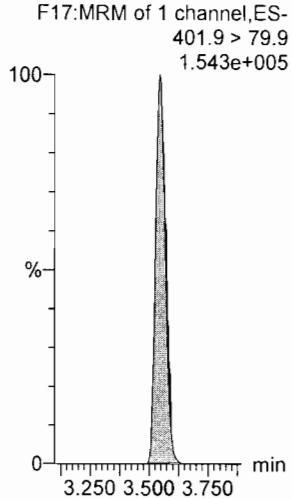
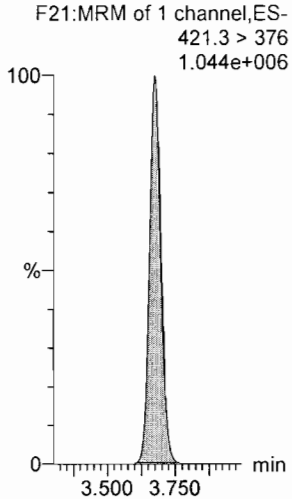


13C3-PFHxS



13C8-PFOA



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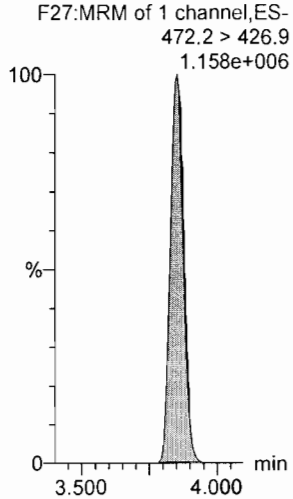

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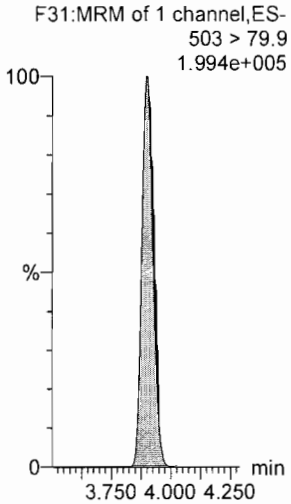
Name: 170724M1_5, Date: 24-Jul-2017, Time: 14:12:36, ID: ST170724M1-3 PFC CS0 17G2423, Description: PFC CS0 17G2423

13C4-PFOS



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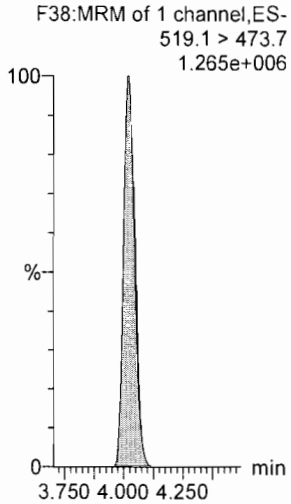

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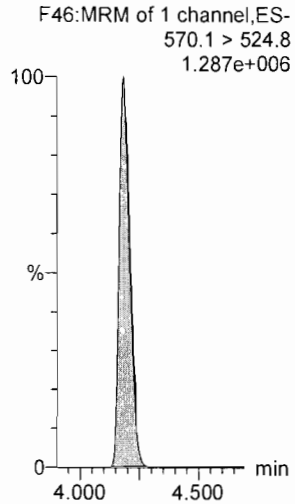

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Name: 170724M1_6, Date: 24-Jul-2017, Time: 14:23:23, ID: ST170724M1-4 PFC CS1 17G2424, Description: PFC CS1 17G2424

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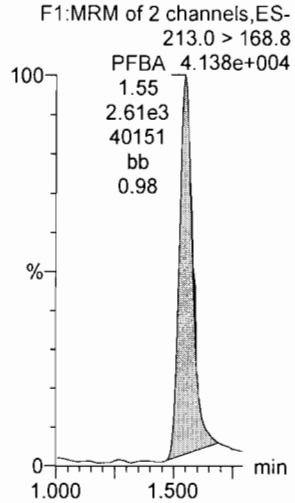

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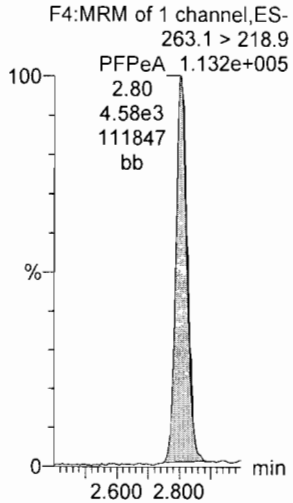

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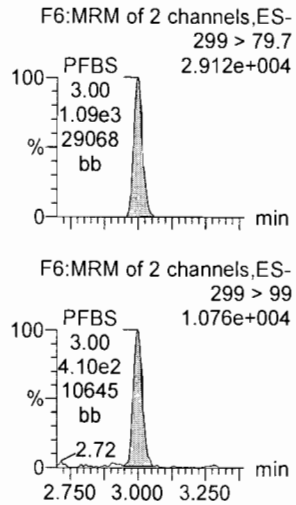

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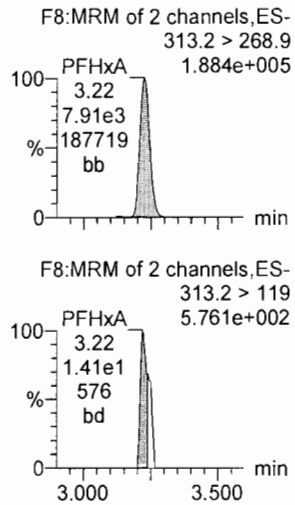

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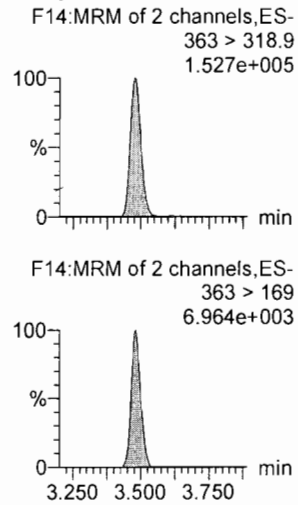

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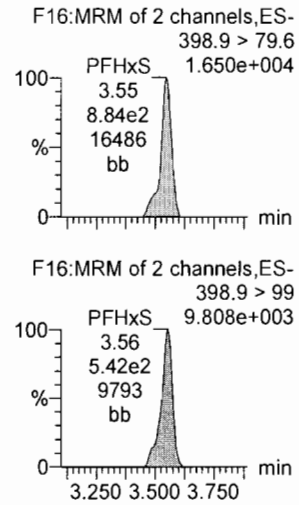

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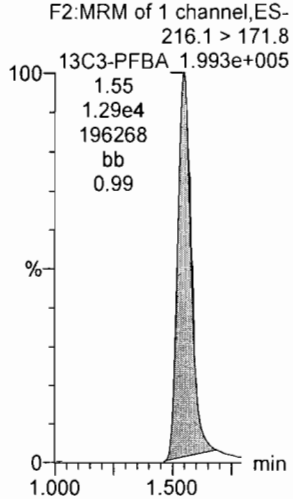

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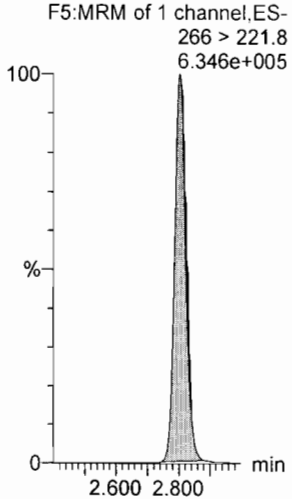

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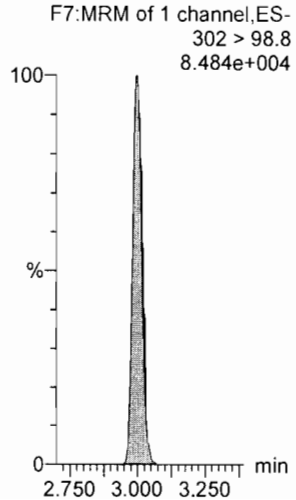

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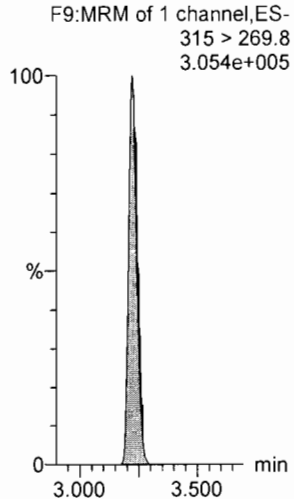

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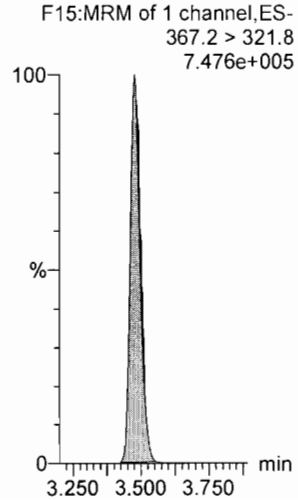

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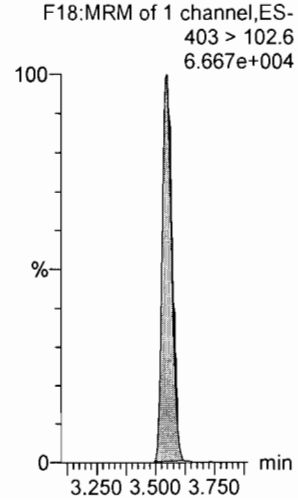

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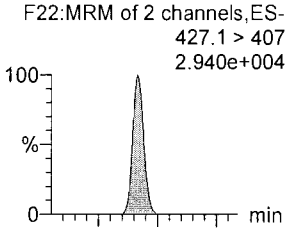
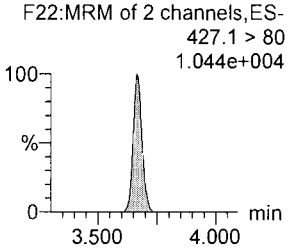
Name: 170724M1_6, Date: 24-Jul-2017, Time: 14:23:23, ID: ST170724M1-4 PFC CS1 17G2424, Description: PFC CS1 17G2424

6:2 FTS





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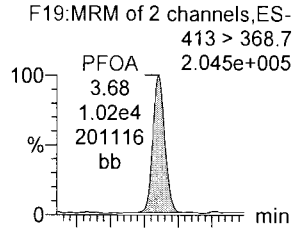

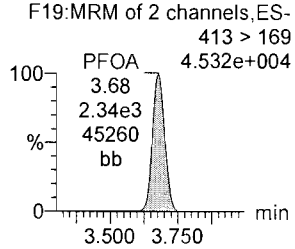

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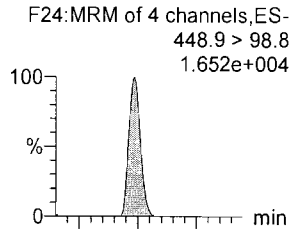

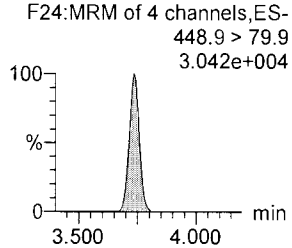

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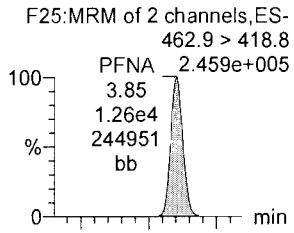

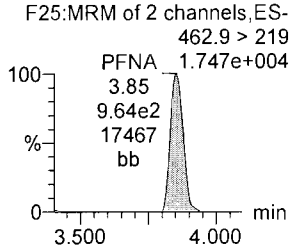

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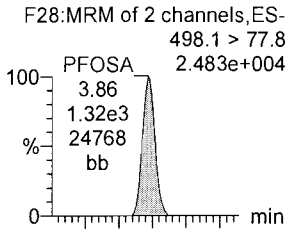

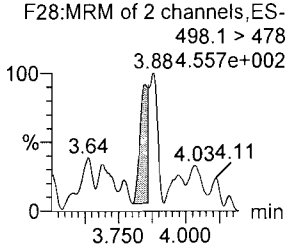

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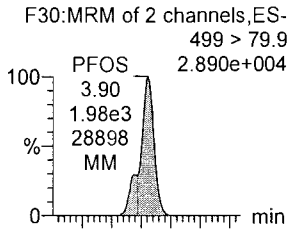

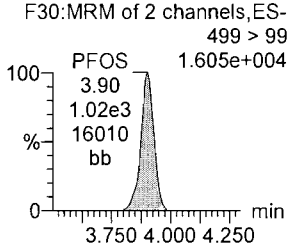

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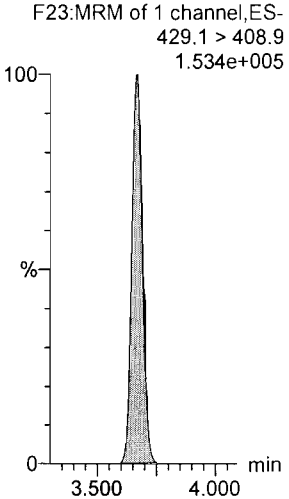

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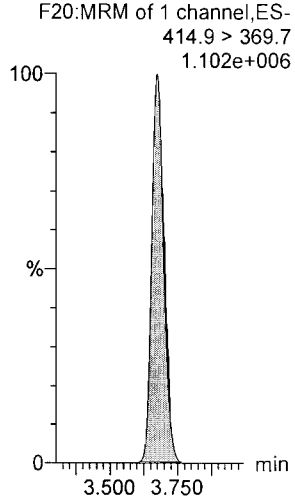
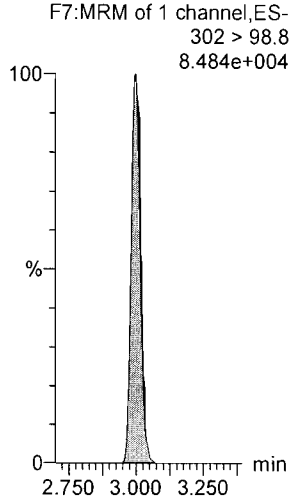


13C3-PFBS



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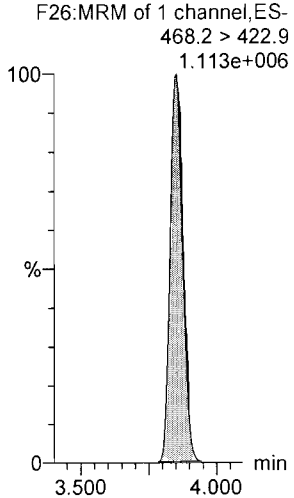

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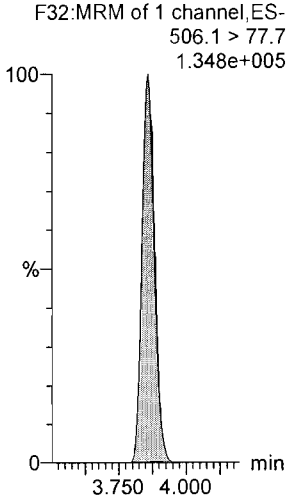

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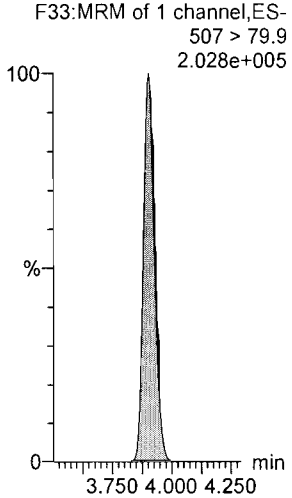

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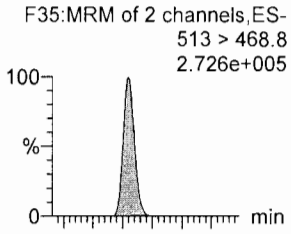
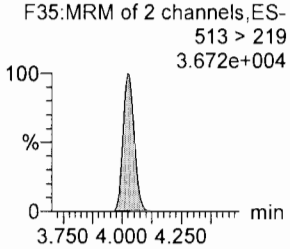
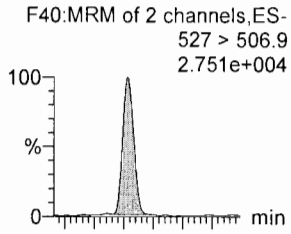
Name: 170724M1_6, Date: 24-Jul-2017, Time: 14:23:23, ID: ST170724M1-4 PFC CS1 17G2424, Description: PFC CS1 17G2424

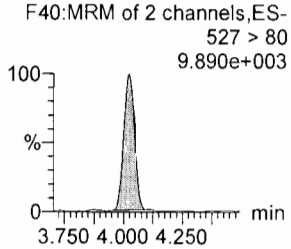
PFDA





8:2 FTS





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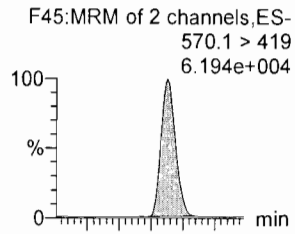

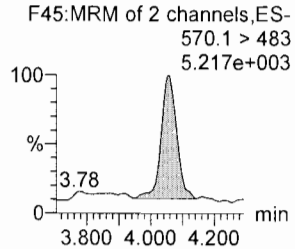

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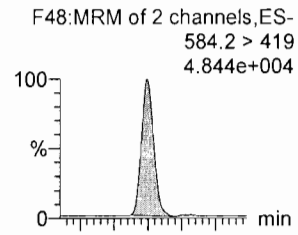

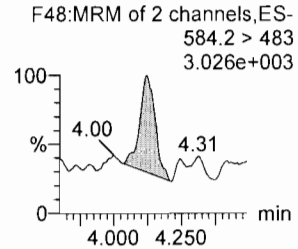

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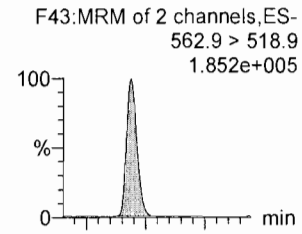

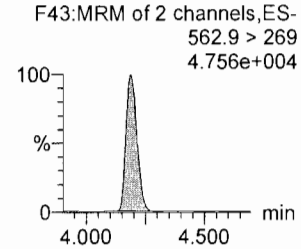

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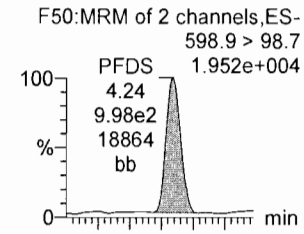

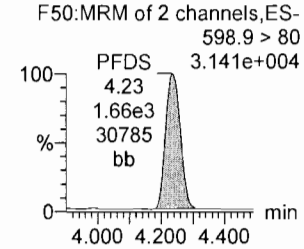

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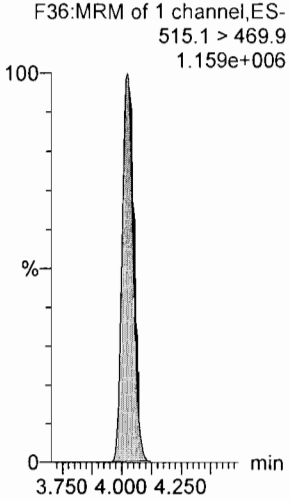

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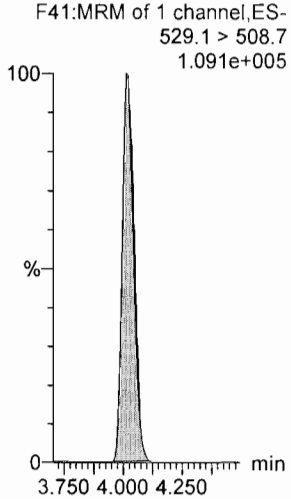

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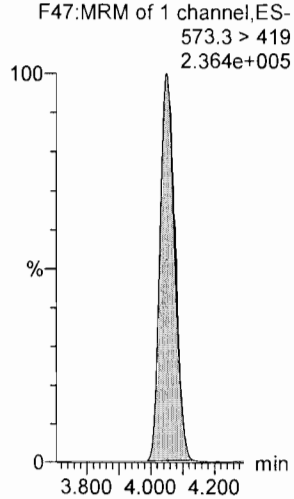

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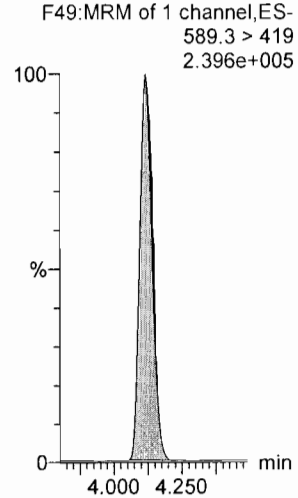

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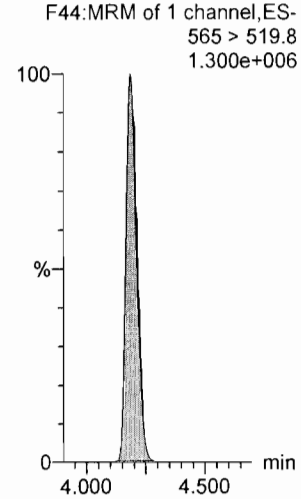

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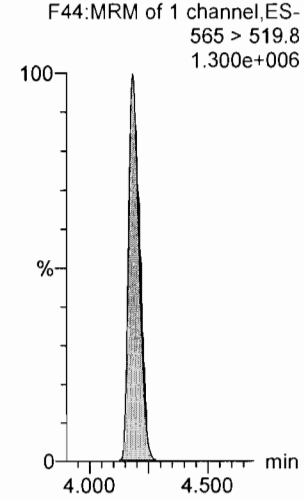

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Name: 170724M1_6, Date: 24-Jul-2017, Time: 14:23:23, ID: ST170724M1-4 PFC CS1 17G2424, Description: PFC CS1 17G2424

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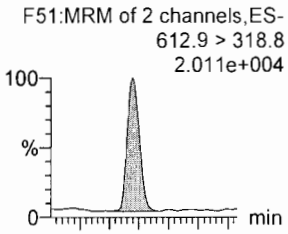

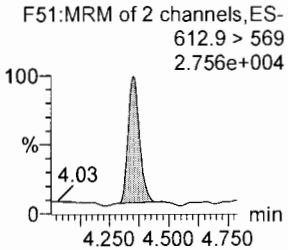

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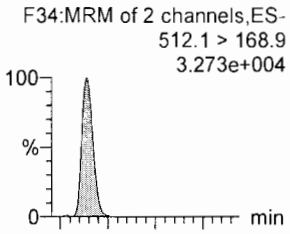

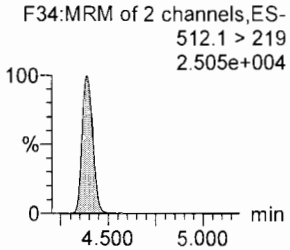

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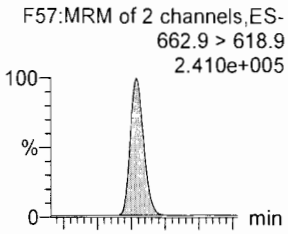

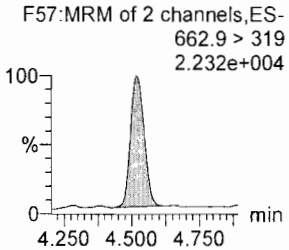

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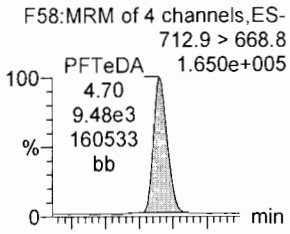

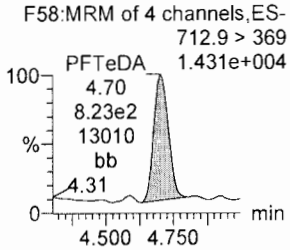

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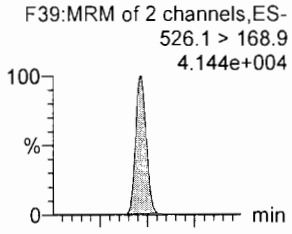

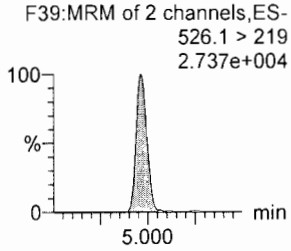

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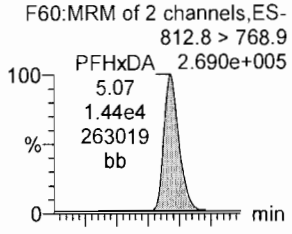

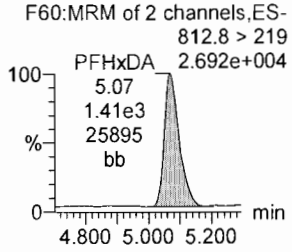

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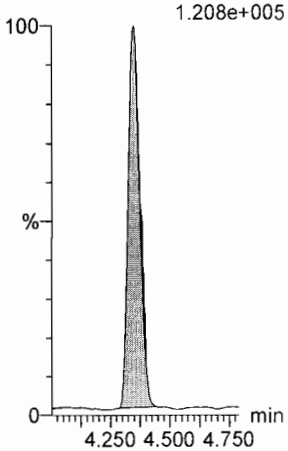

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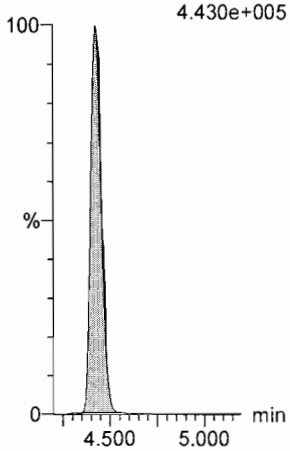

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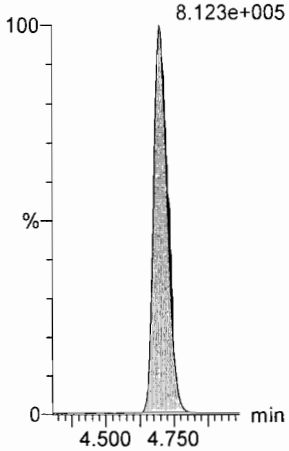

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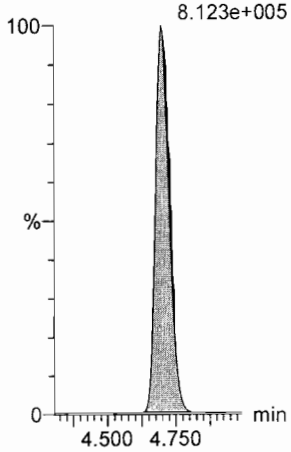

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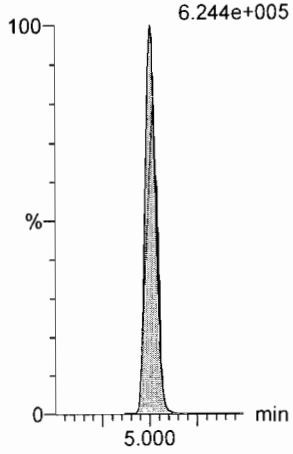

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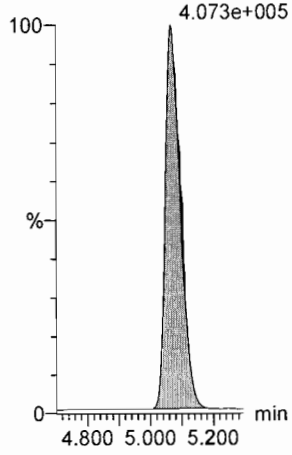

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Name: 170724M1_6, Date: 24-Jul-2017, Time: 14:23:23, ID: ST170724M1-4 PFC CS1 17G2424, Description: PFC CS1 17G2424

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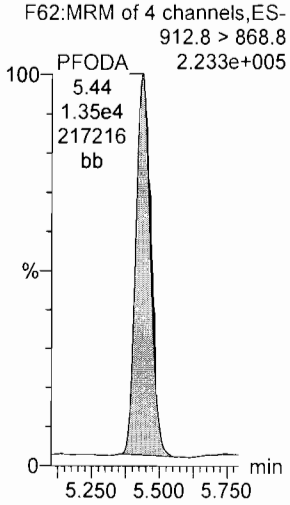

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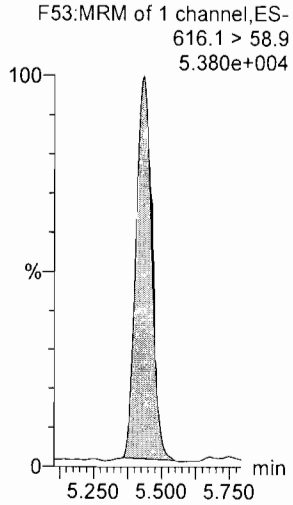

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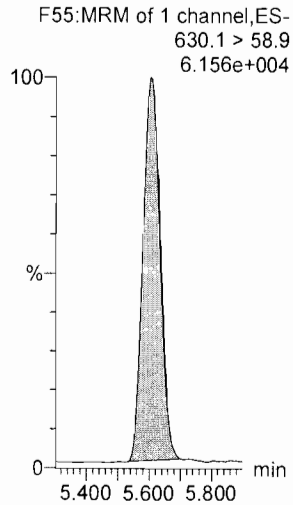

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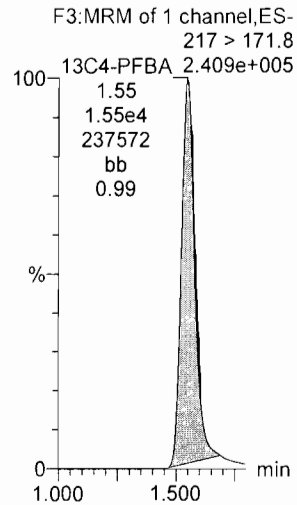

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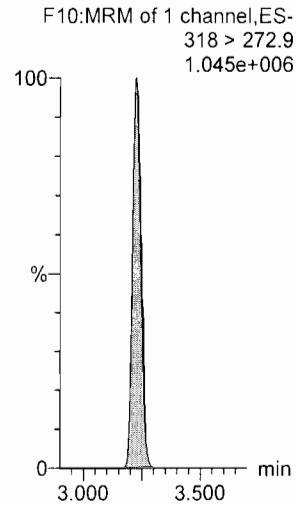

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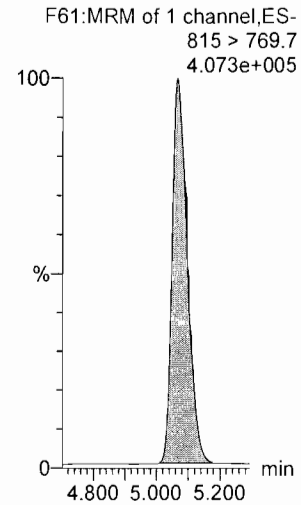

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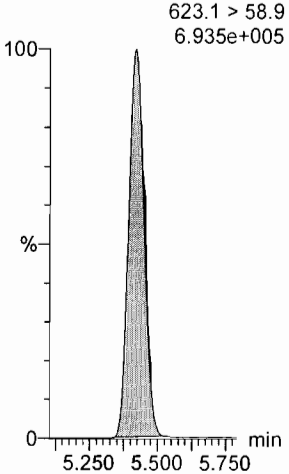
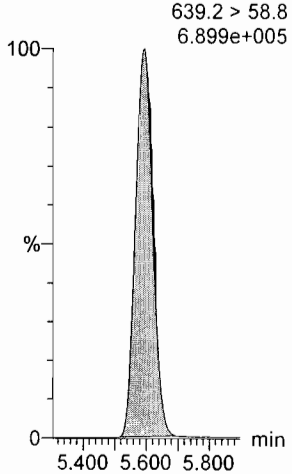


d9-N-EtFOSE



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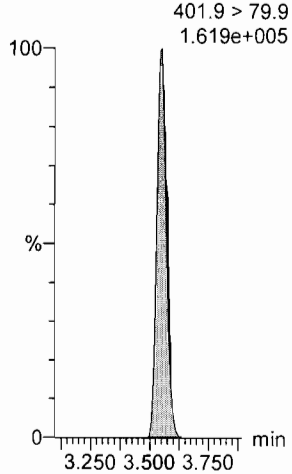

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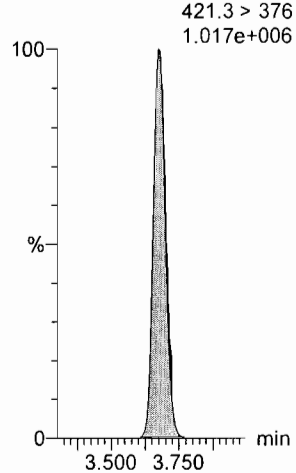

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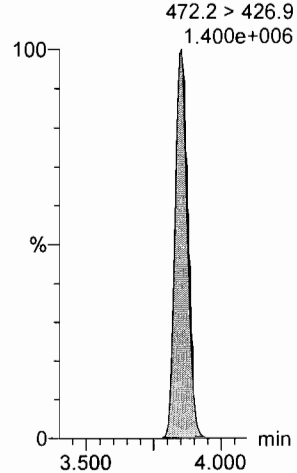

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Name: 170724M1_6, Date: 24-Jul-2017, Time: 14:23:23, ID: ST170724M1-4 PFC CS1 17G2424, Description: PFC CS1 17G2424

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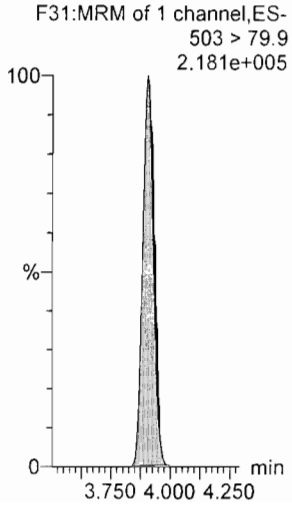

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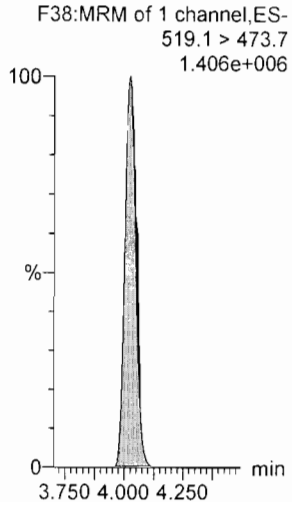

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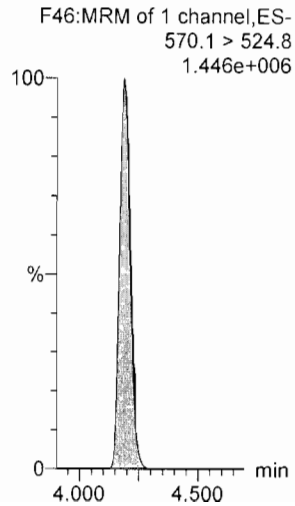

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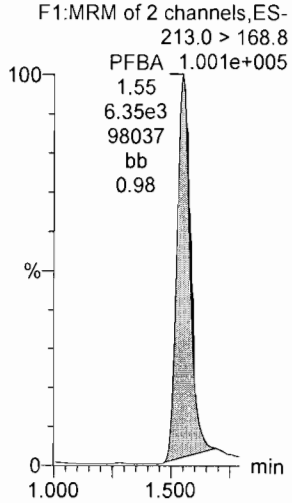

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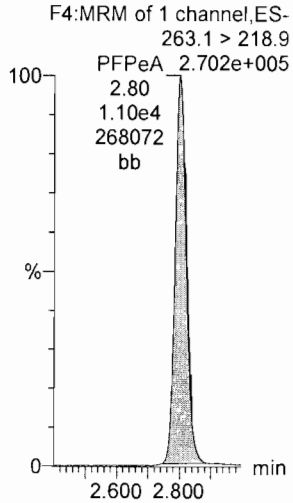

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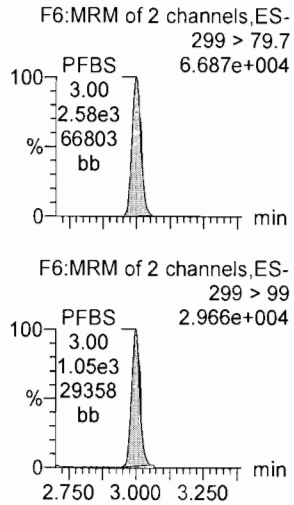

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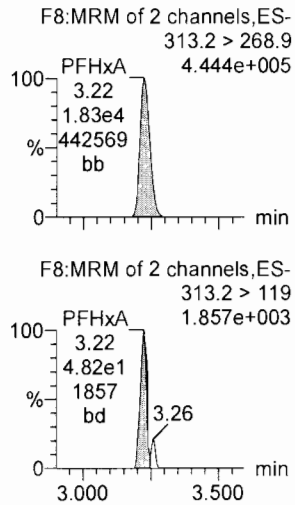

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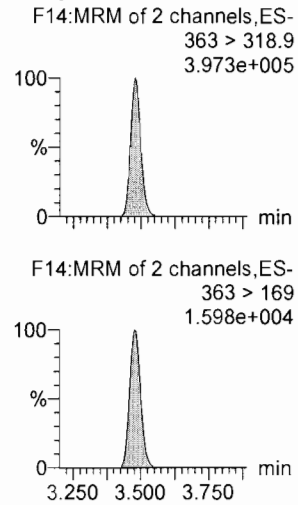

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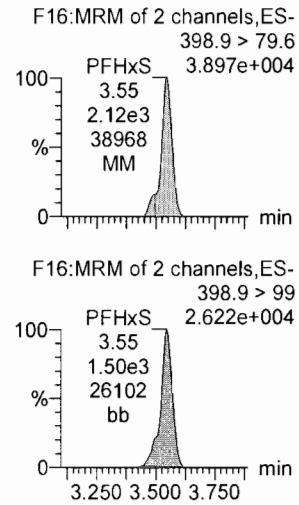

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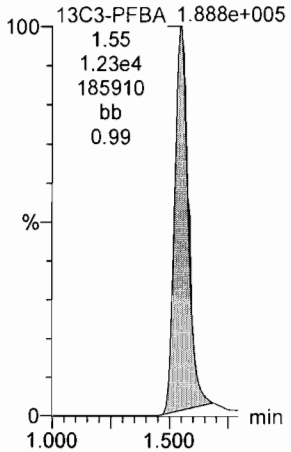

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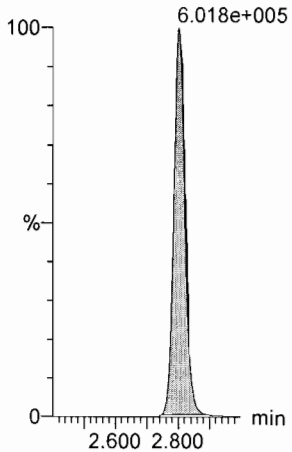

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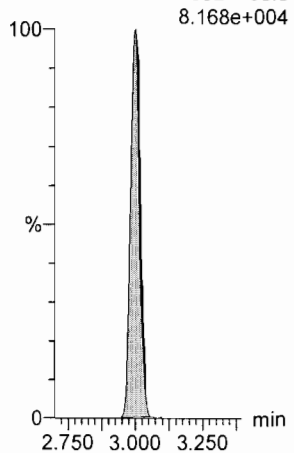

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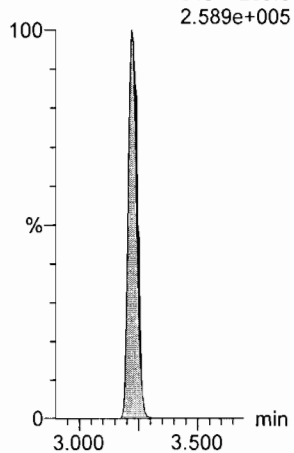

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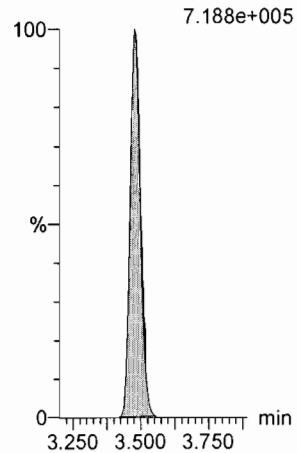

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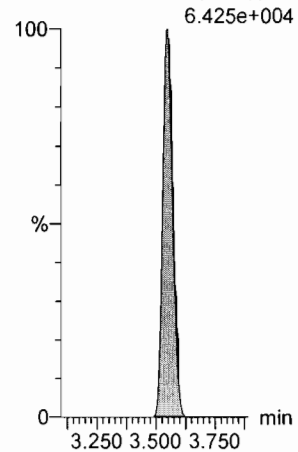

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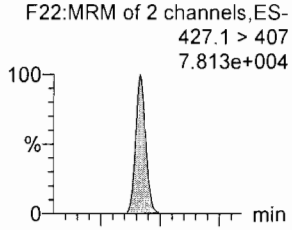
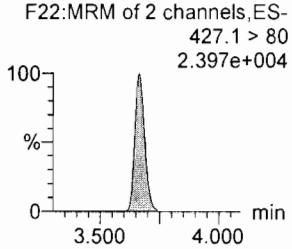
Name: 170724M1_7, Date: 24-Jul-2017, Time: 14:34:02, ID: ST170724M1-5 PFC CS2 17G2425, Description: PFC CS2 17G2425

6:2 FTS





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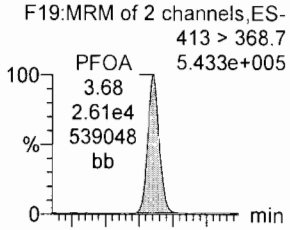

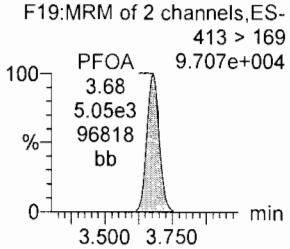

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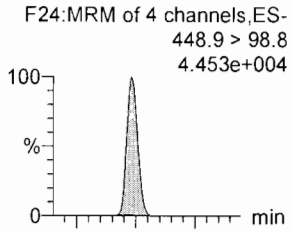

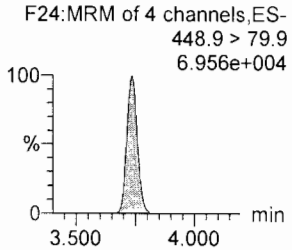

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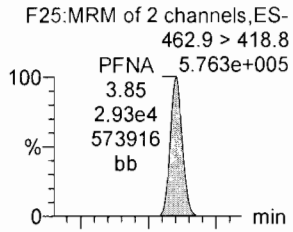

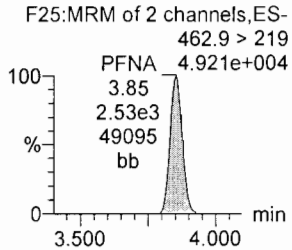

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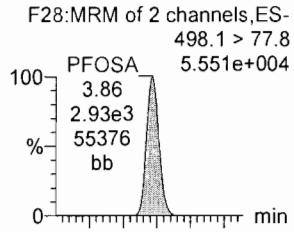

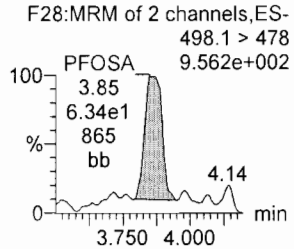

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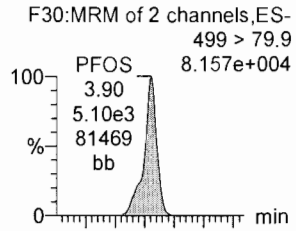
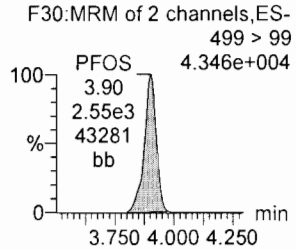
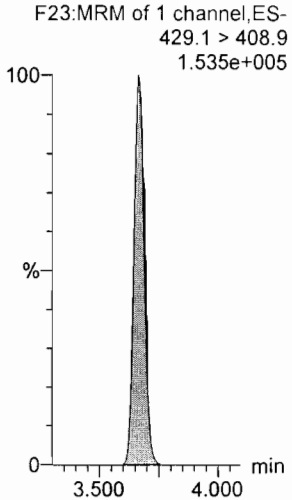




13C2-6:2 FTS



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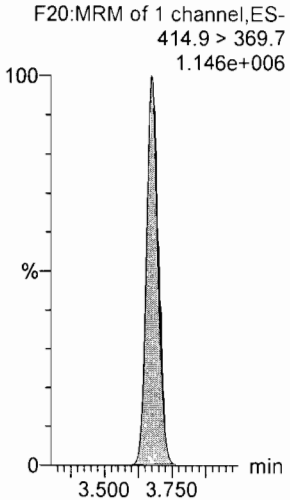
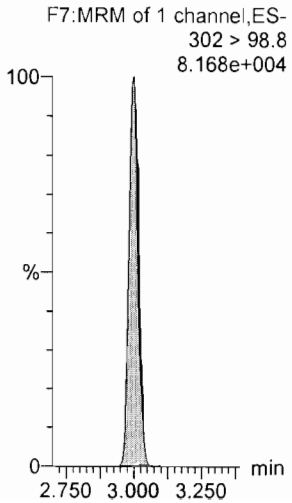


13C3-PFBS



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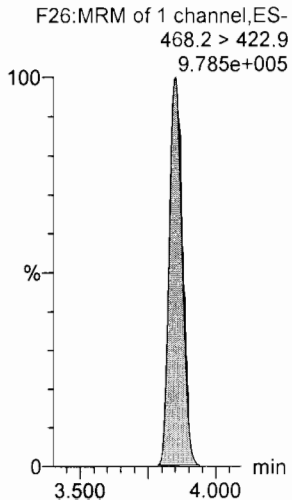

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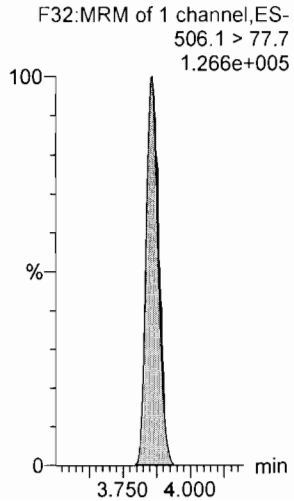

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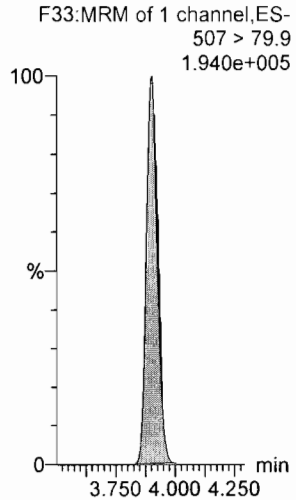

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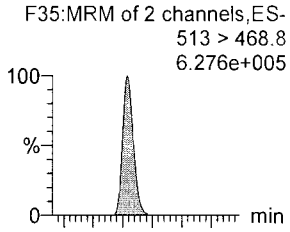
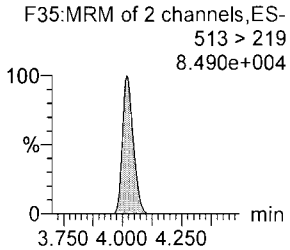
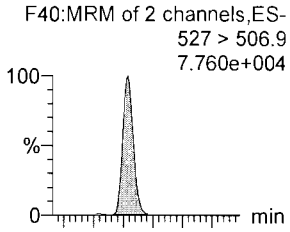
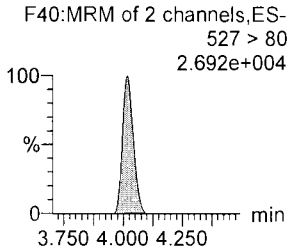




8:2 FTS





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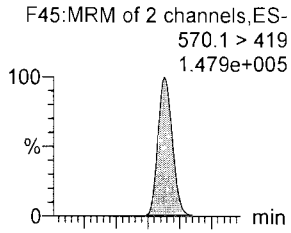

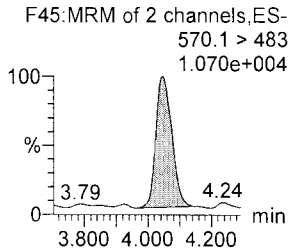

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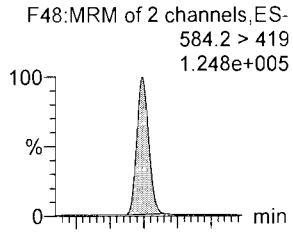

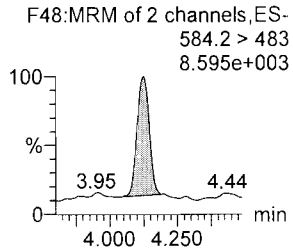

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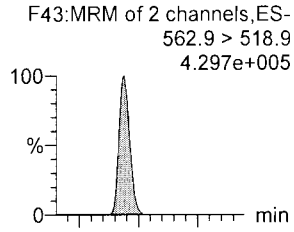

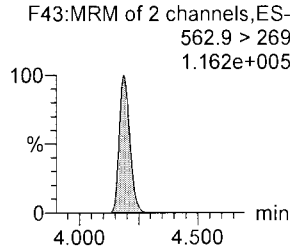

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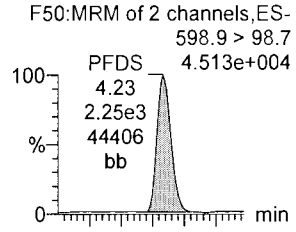

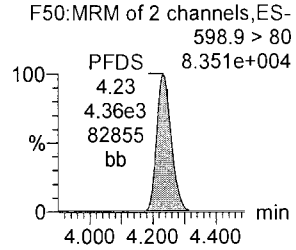

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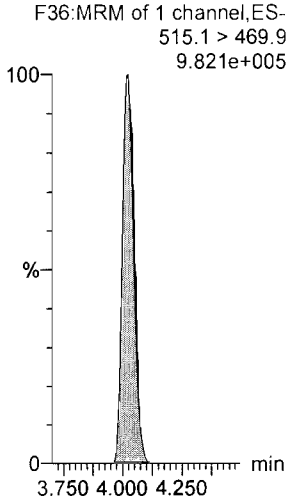

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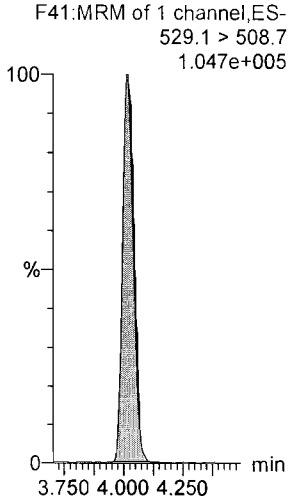

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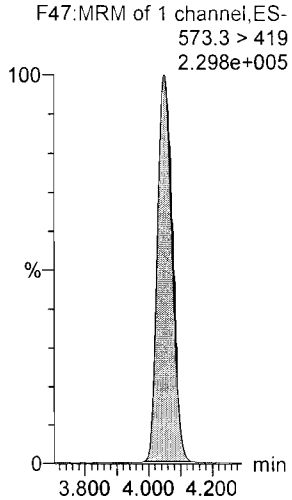

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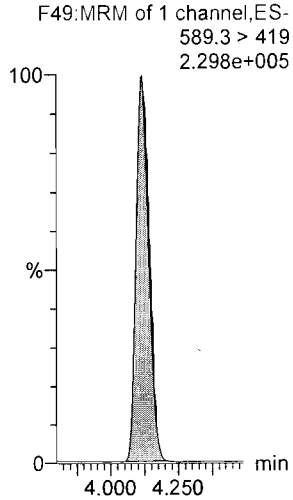

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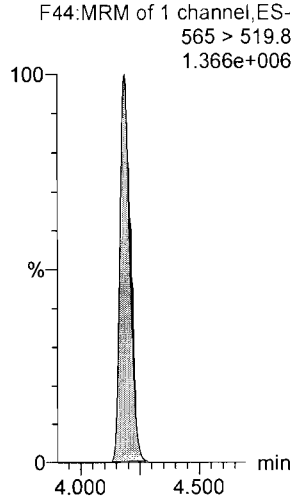

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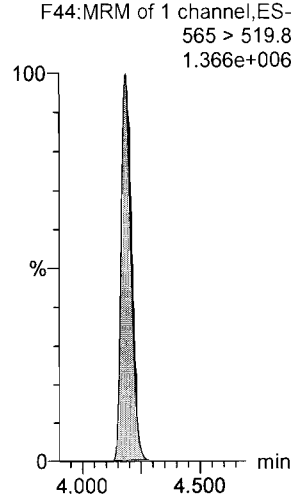

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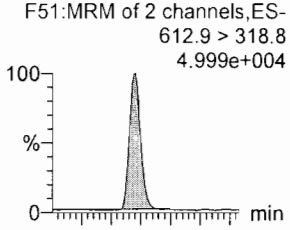

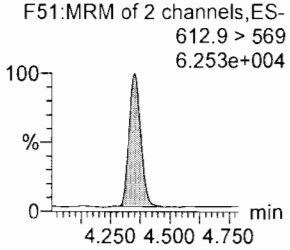

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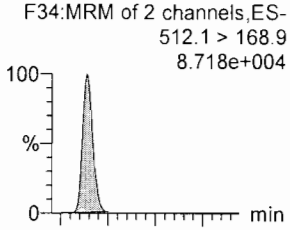

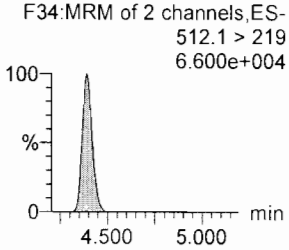

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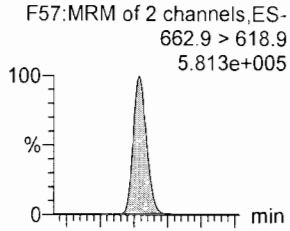
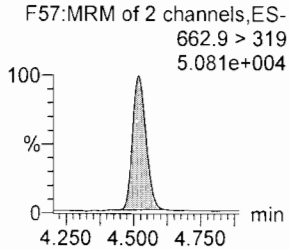
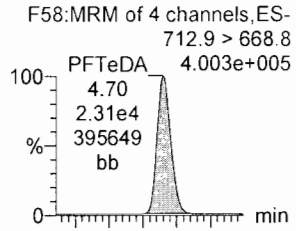
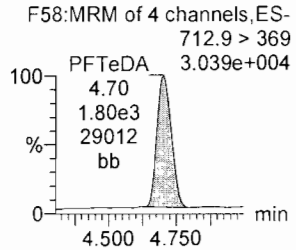


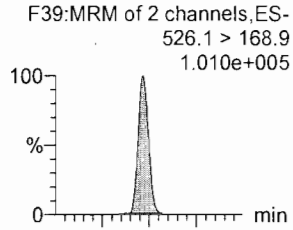


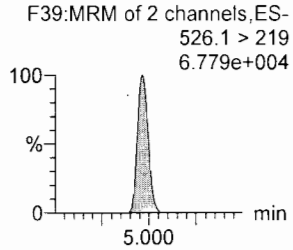
PFTeDA





N-EtFOSA





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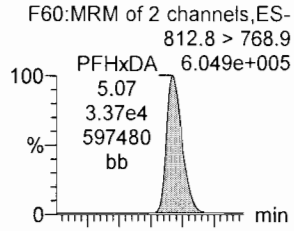

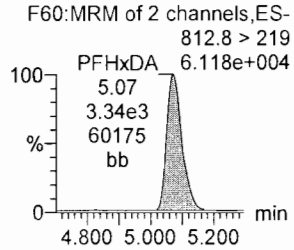

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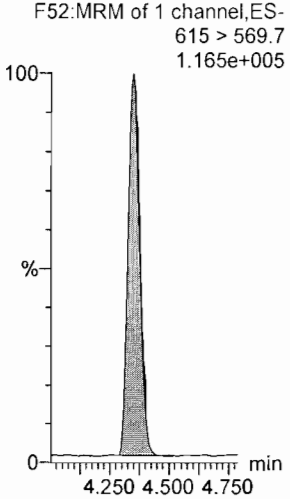
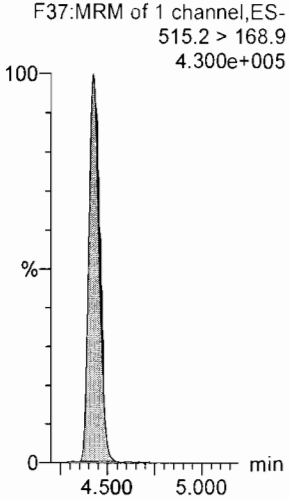


d3-N-MeFOSA



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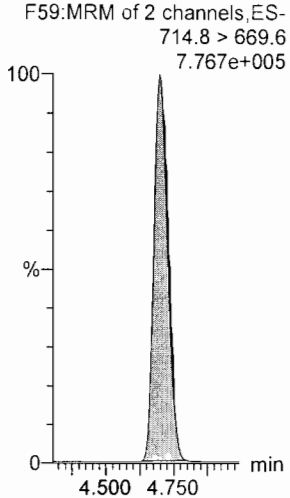

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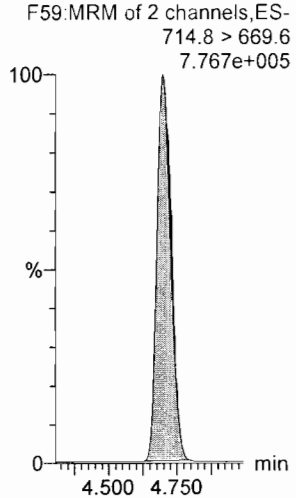

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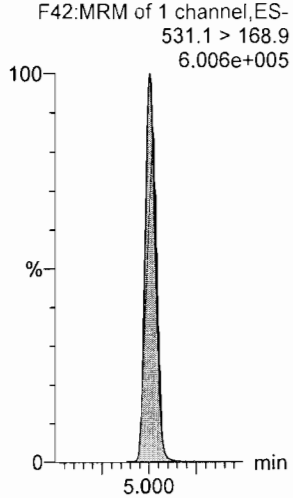
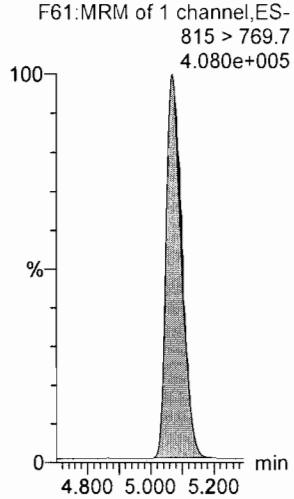


13C2-PFHxDA



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Name: 170724M1_7, Date: 24-Jul-2017, Time: 14:34:02, ID: ST170724M1-5 PFC CS2 17G2425, Description: PFC CS2 17G2425

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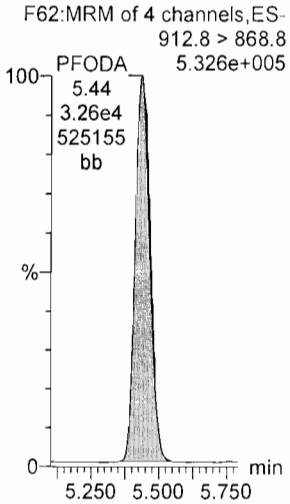

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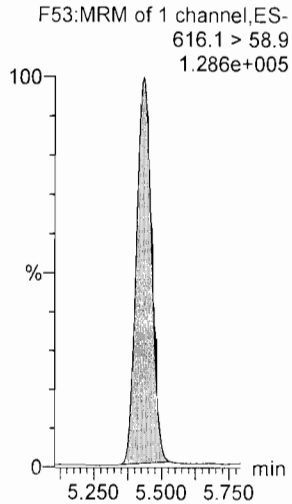

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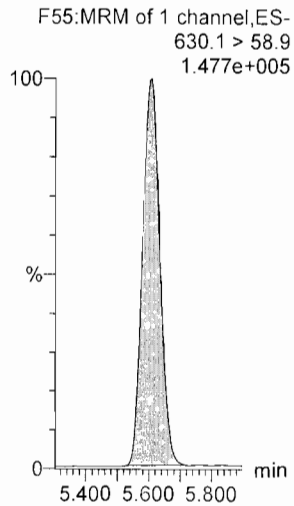

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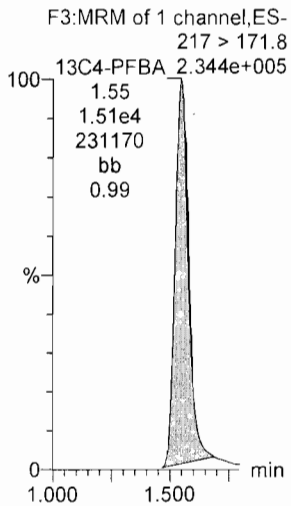

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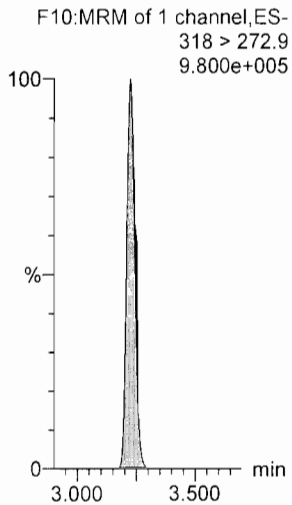

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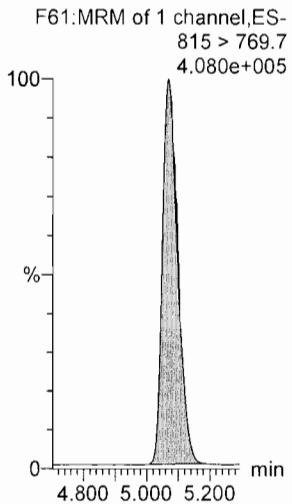
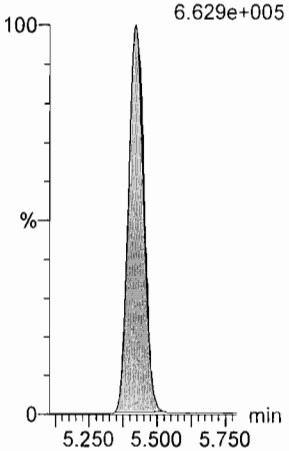


d7-N-MeFOSE



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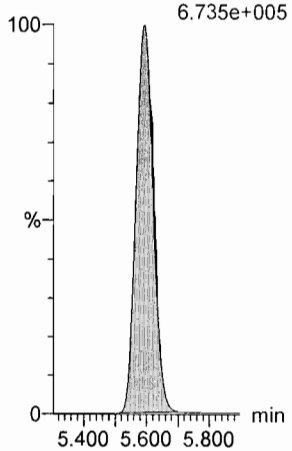

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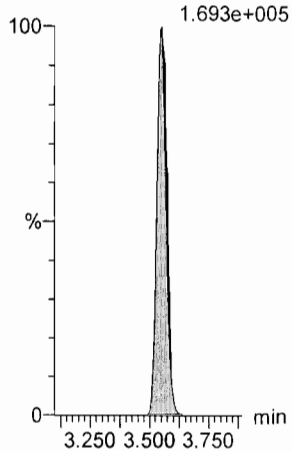
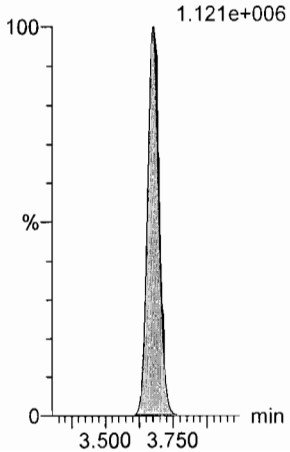
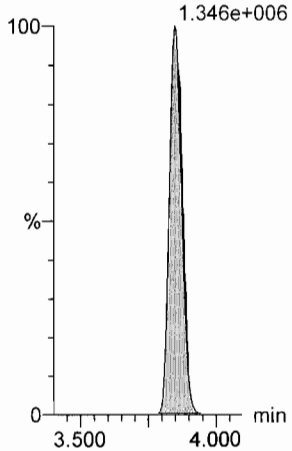


13C8-PFOA



13C9-PFNA



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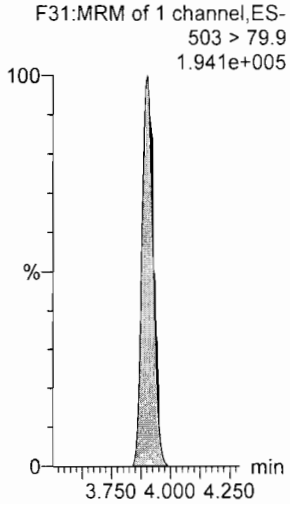
Name: 170724M1_7, Date: 24-Jul-2017, Time: 14:34:02, ID: ST170724M1-5 PFC CS2 17G2425, Description: PFC CS2 17G2425

13C4-PFOS



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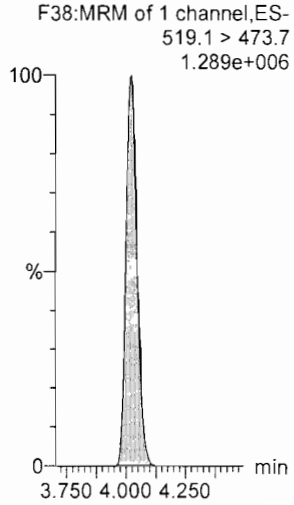

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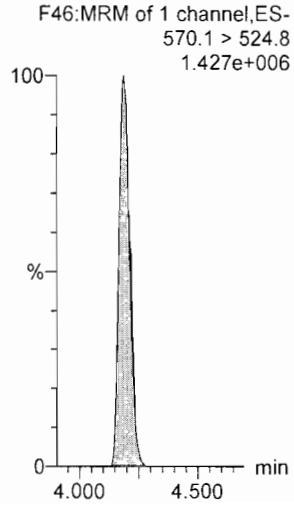

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Name: 170724M1_8, Date: 24-Jul-2017, Time: 14:44:48, ID: ST170724M1-6 PFC CS3 17G2118, Description: PFC CS3 17G2118

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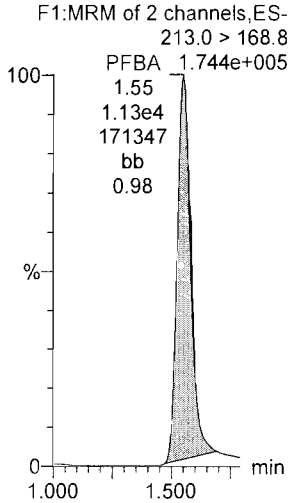

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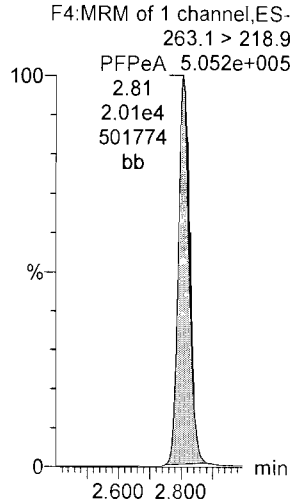

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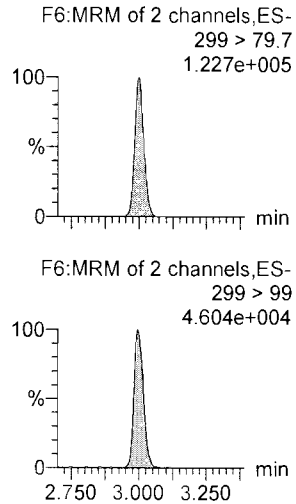

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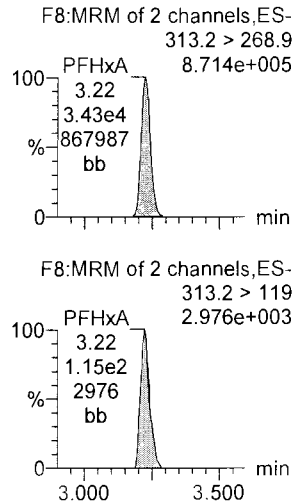

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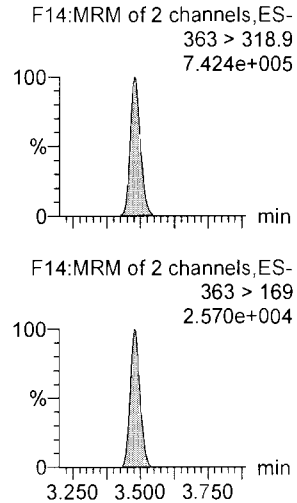

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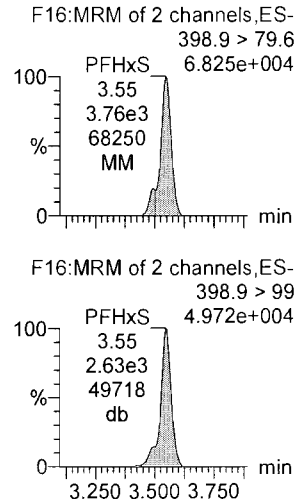

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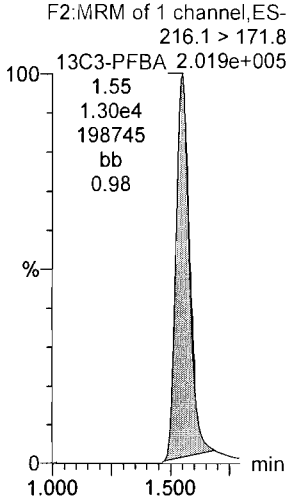

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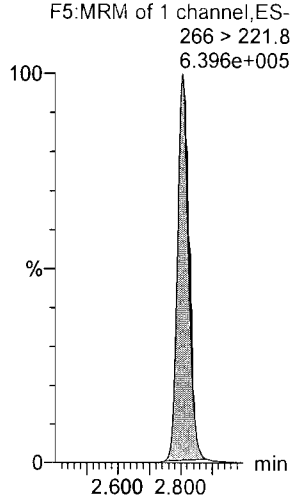

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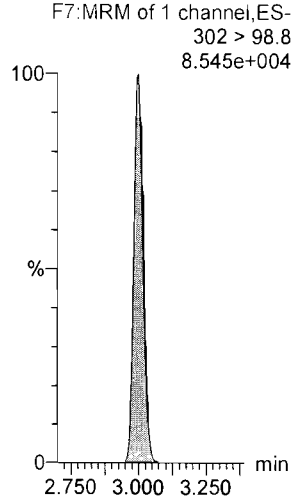

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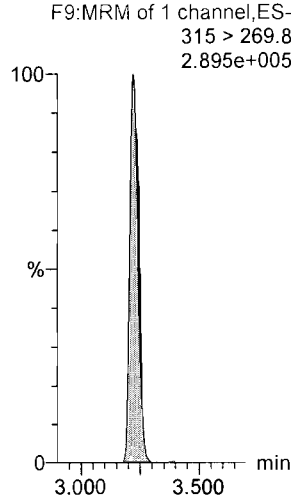
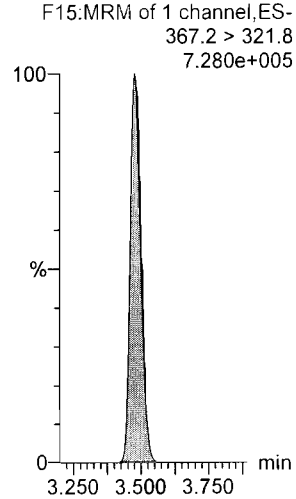


13C4-PFHpA



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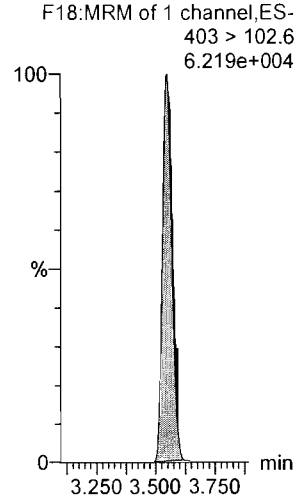

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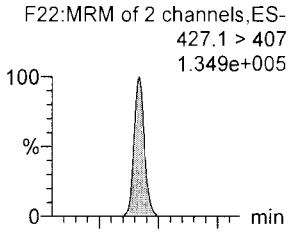
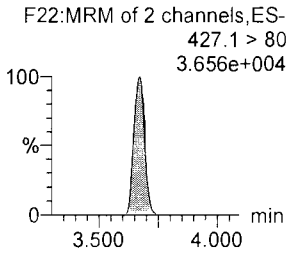
Name: 170724M1_8, Date: 24-Jul-2017, Time: 14:44:48, ID: ST170724M1-6 PFC CS3 17G2118, Description: PFC CS3 17G2118

6:2 FTS





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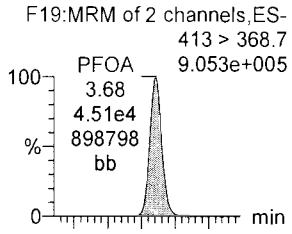

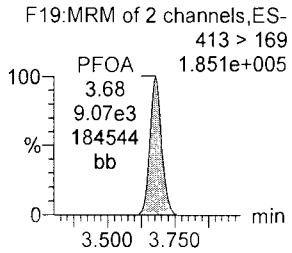

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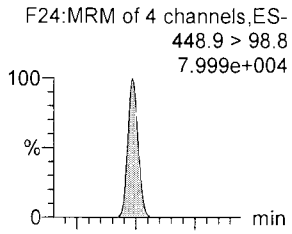

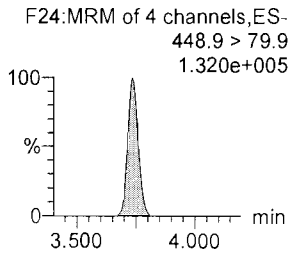

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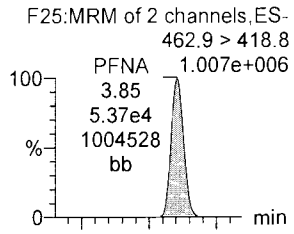

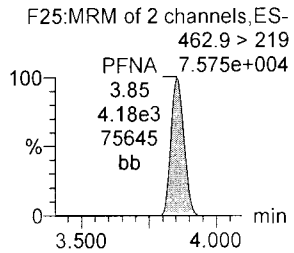

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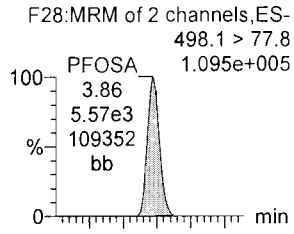

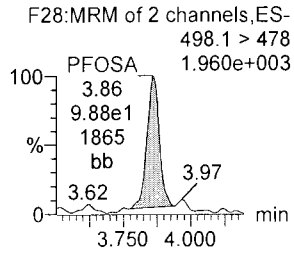

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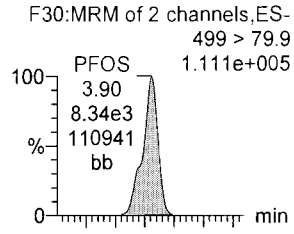
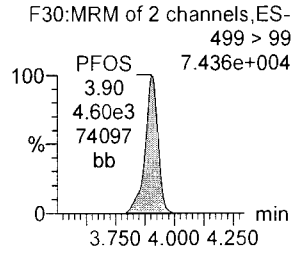
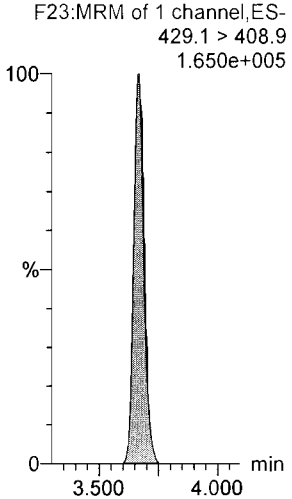
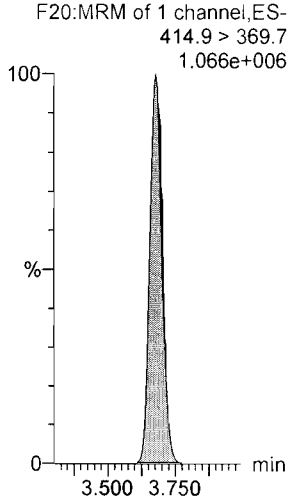




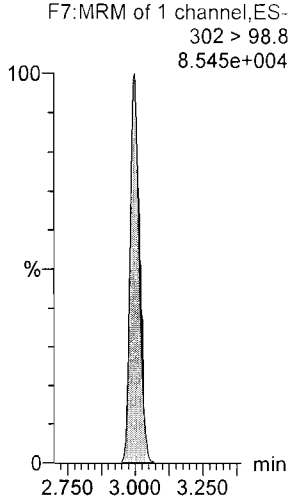
13C2-6:2 FTS



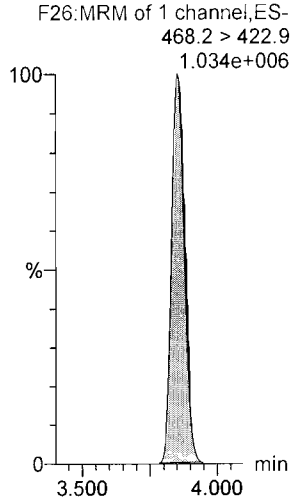
13C2-PFOA



13C3-PFBS



13C5-PFNA



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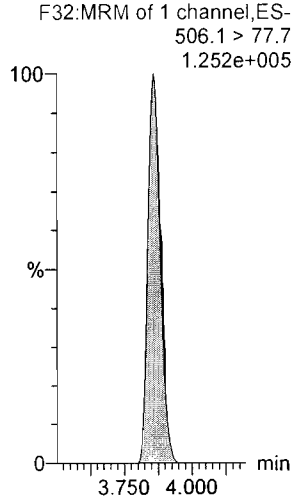

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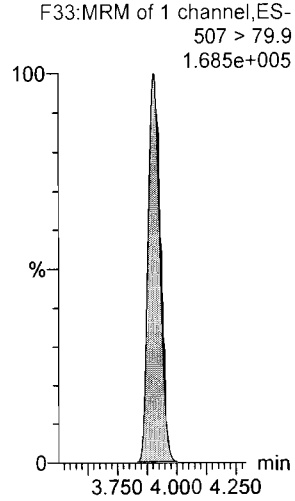

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Name: 170724M1_8, Date: 24-Jul-2017, Time: 14:44:48, ID: ST170724M1-6 PFC CS3 17G2118, Description: PFC CS3 17G2118

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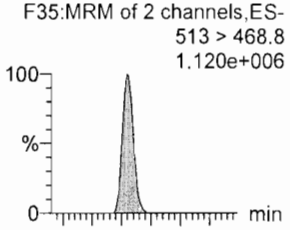
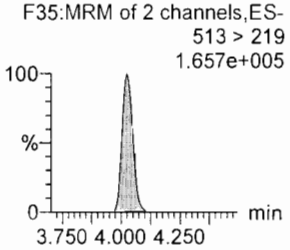
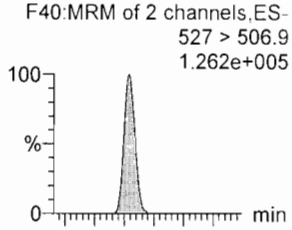
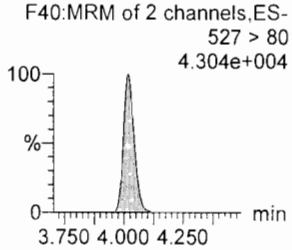




8:2 FTS





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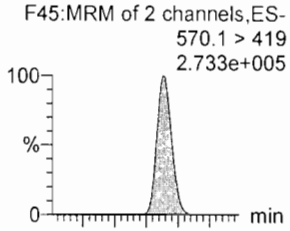

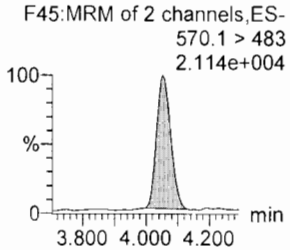

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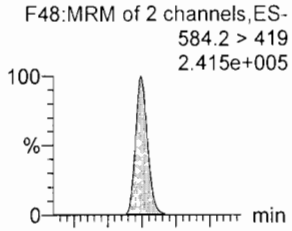

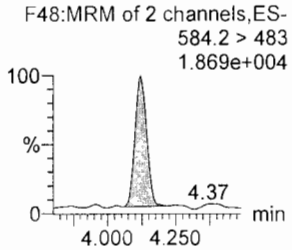

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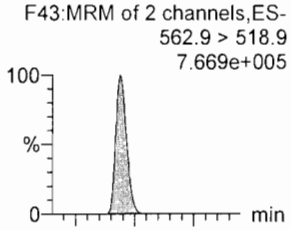

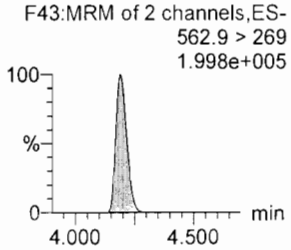

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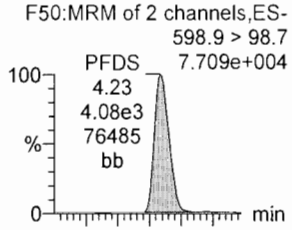

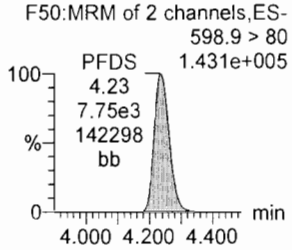

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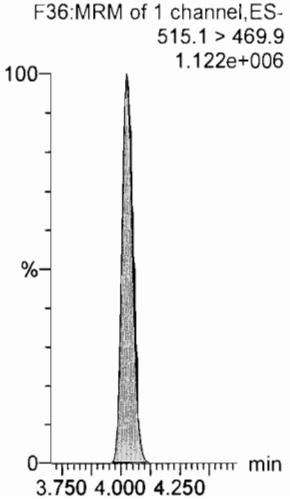
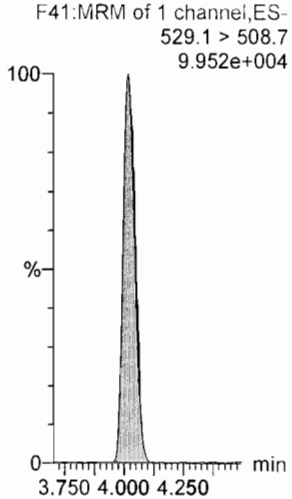


13C2-8:2 FTS



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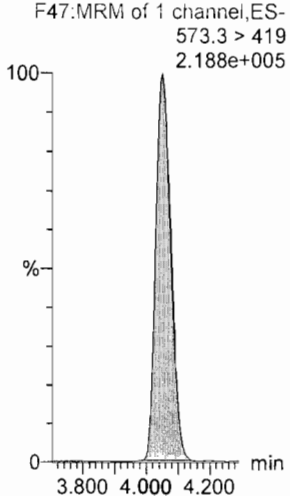

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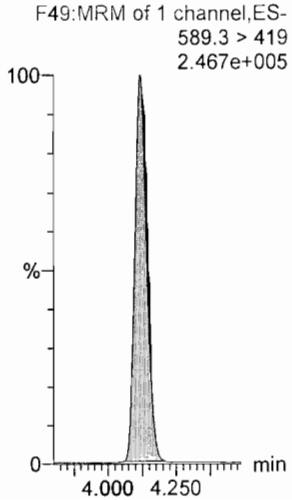

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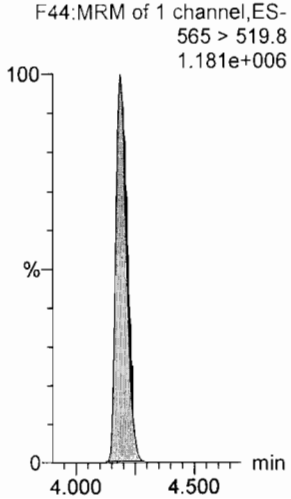

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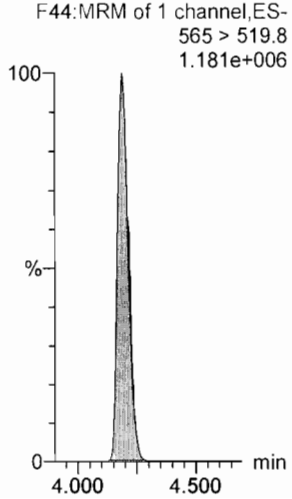

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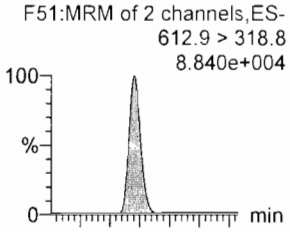

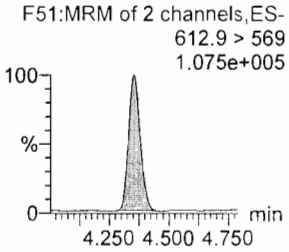

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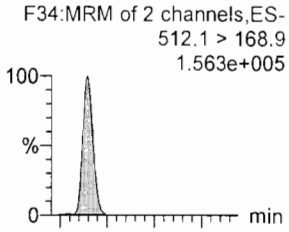

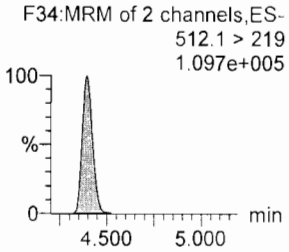

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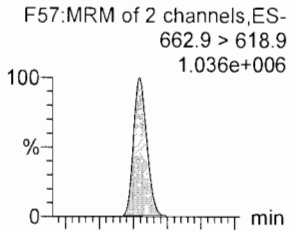

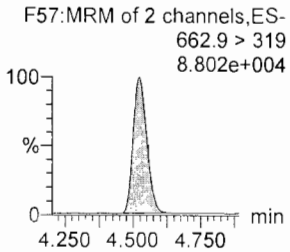

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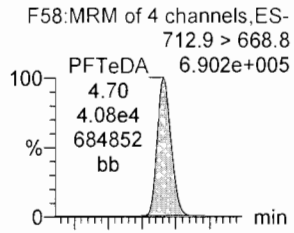

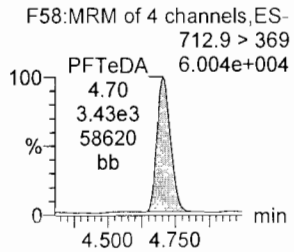

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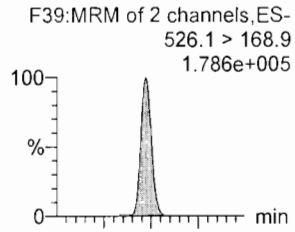

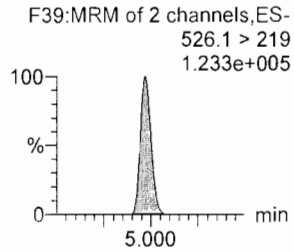

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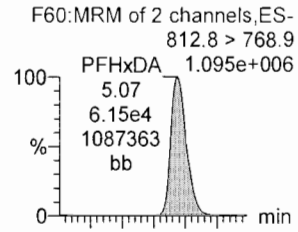

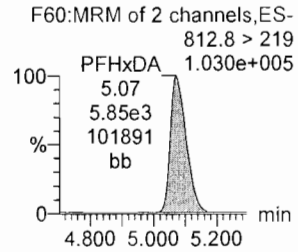

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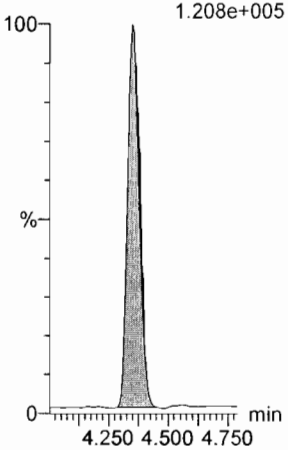

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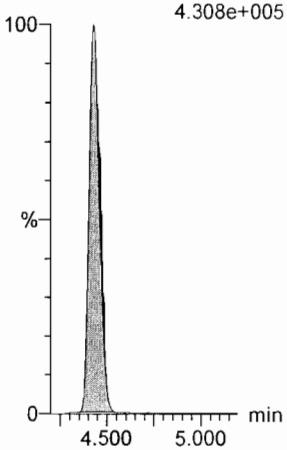

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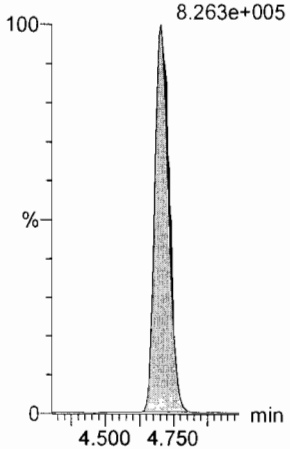

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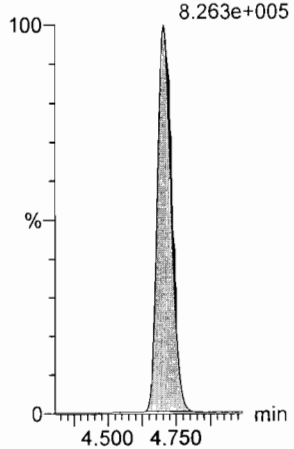

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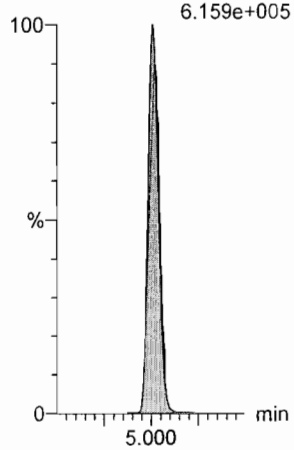

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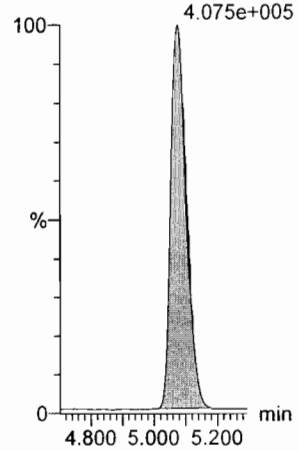

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Name: 170724M1_8, Date: 24-Jul-2017, Time: 14:44:48, ID: ST170724M1-6 PFC CS3 17G2118, Description: PFC CS3 17G2118

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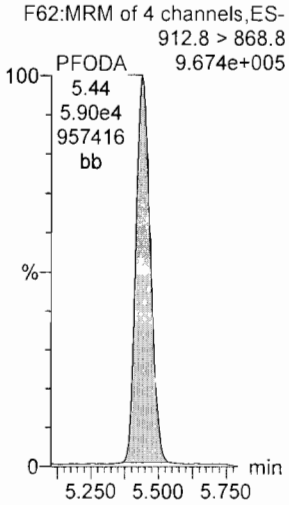

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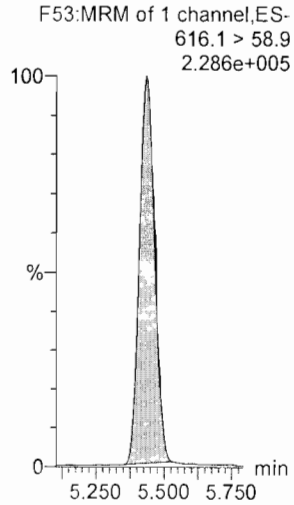

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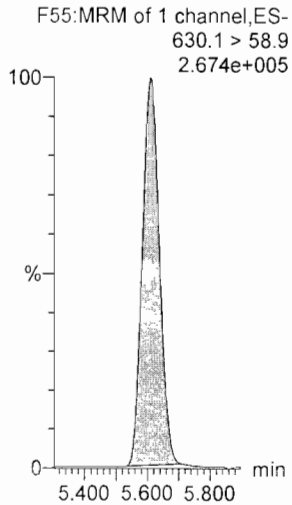

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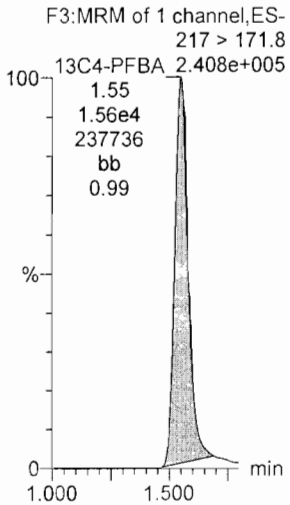
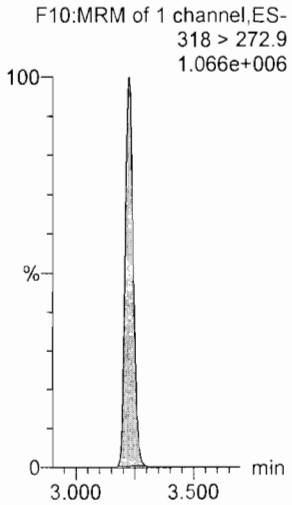
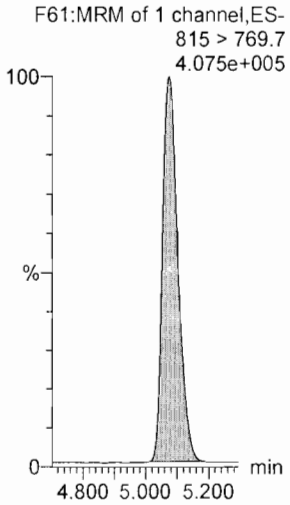


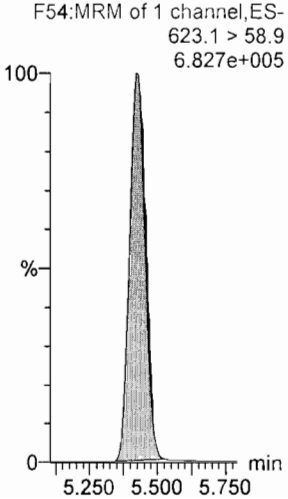
13C5-PFHxA



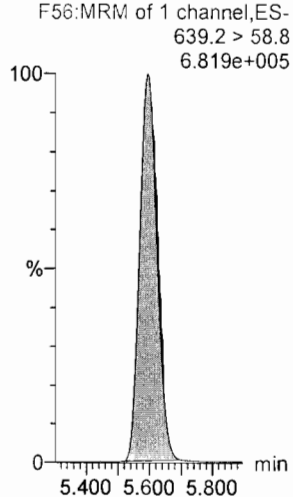
13C2-PFHxDA



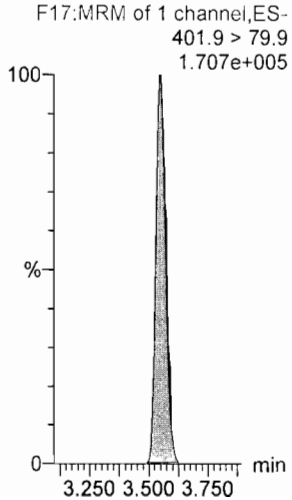
d7-N-MeFOSE



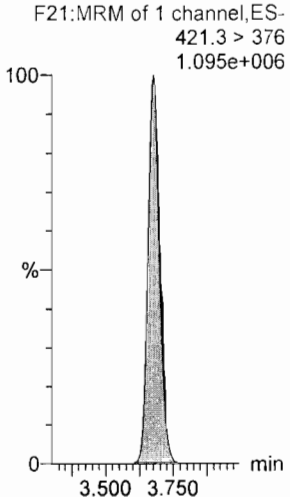
d9-N-EtFOSE



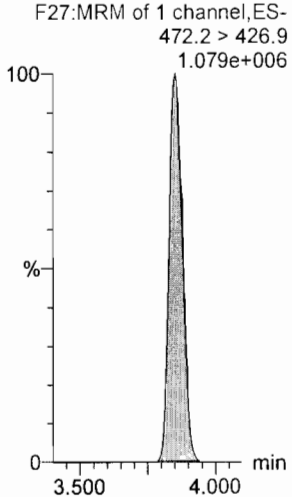
13C3-PFHxS



13C8-PFOA



13C9-PFNA



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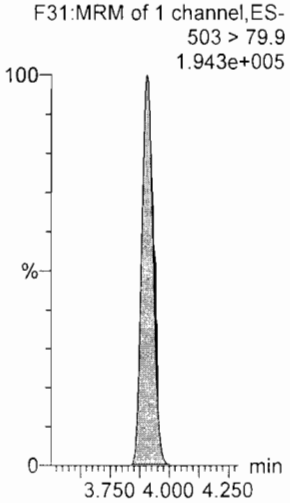
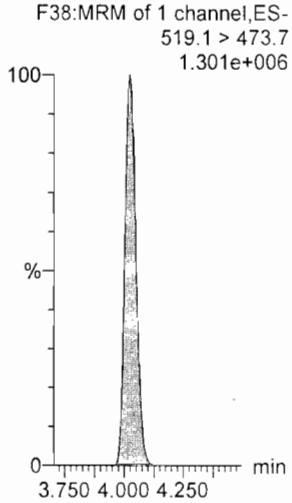
Printed: Monday, July 24, 2017 15:36:37 Pacific Daylight Time

Name: 170724M1_8, Date: 24-Jul-2017, Time: 14:44:48, ID: ST170724M1-6 PFC CS3 17G2118, Description: PFC CS3 17G2118

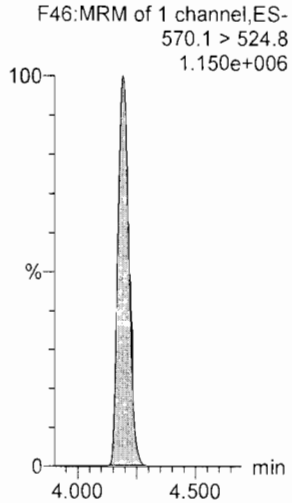
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Name: 170724M1_9, Date: 24-Jul-2017, Time: 14:55:34, ID: ST170724M1-7 PFC CS4 17G2426, Description: PFC CS4 17G2426

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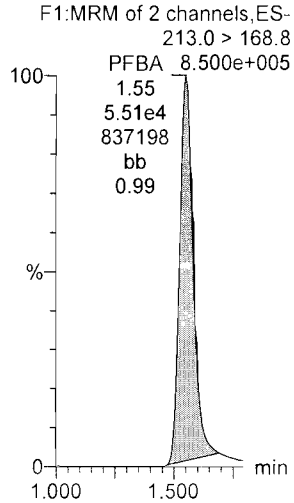

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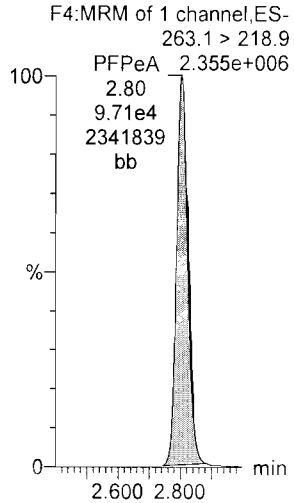

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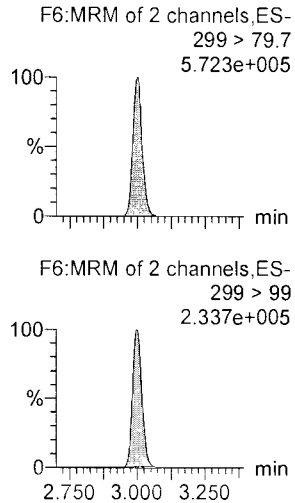

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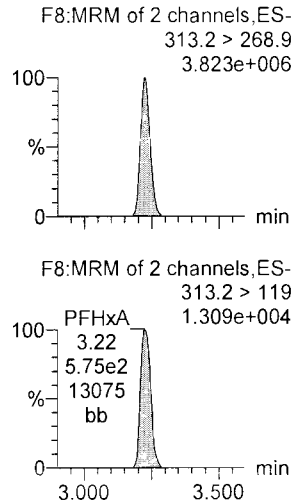

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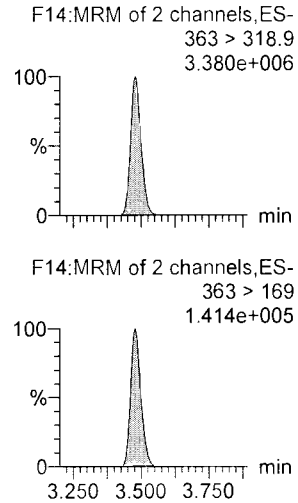

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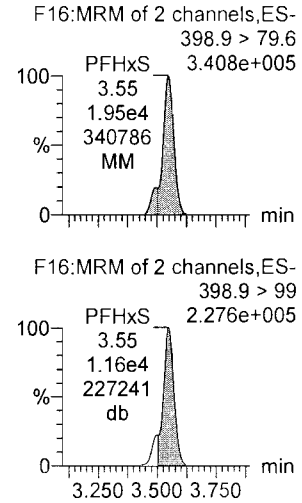

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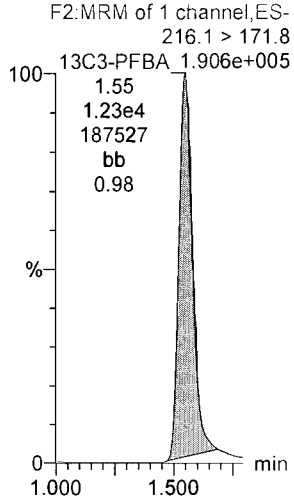

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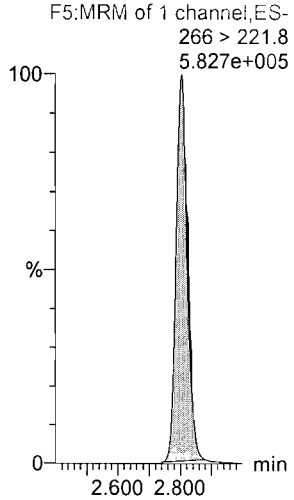

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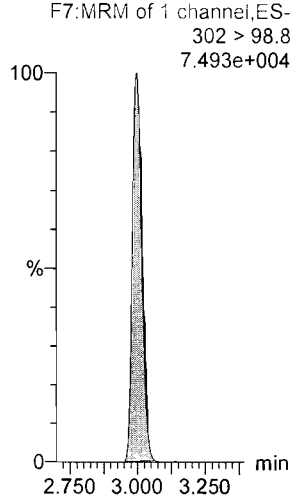

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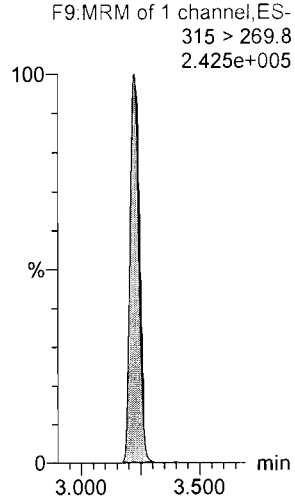
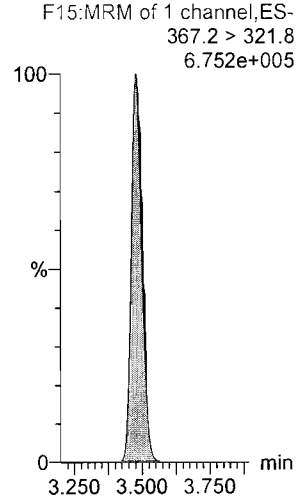
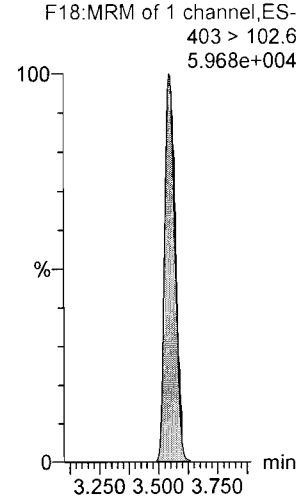


13C4-PFHpA



18O2-PFHxS



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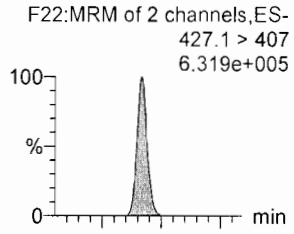
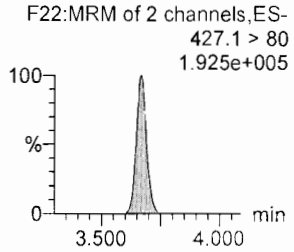
Name: 170724M1_9, Date: 24-Jul-2017, Time: 14:55:34, ID: ST170724M1-7 PFC CS4 17G2426, Description: PFC CS4 17G2426

6:2 FTS





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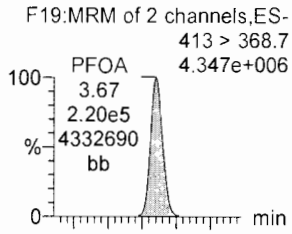

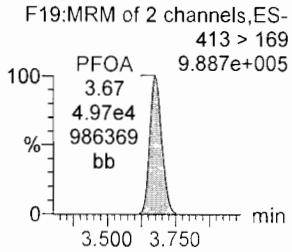

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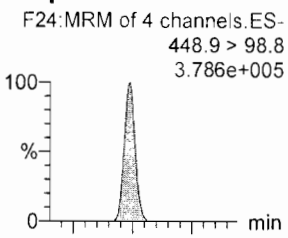

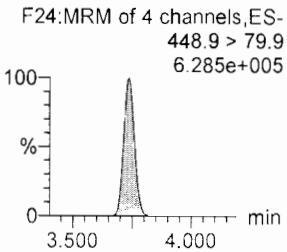

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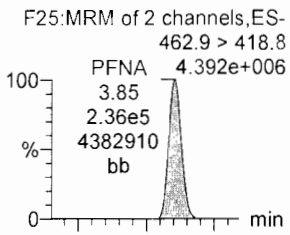

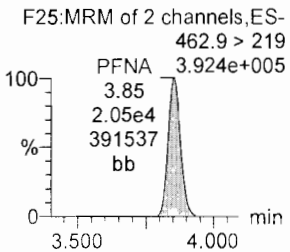

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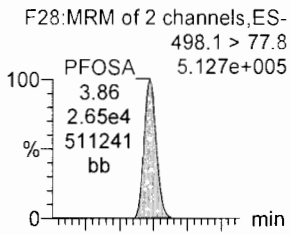

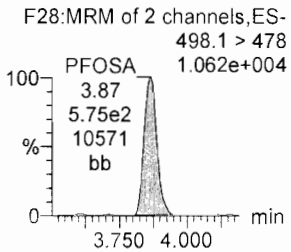

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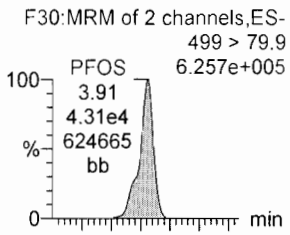
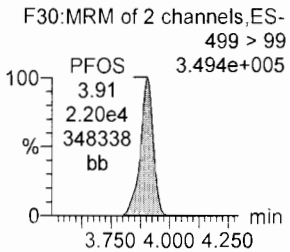
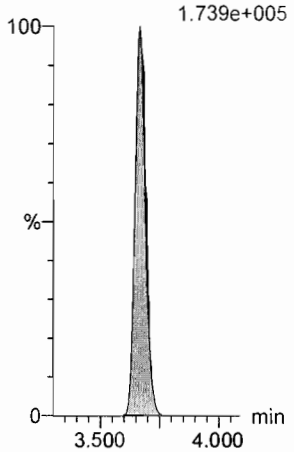
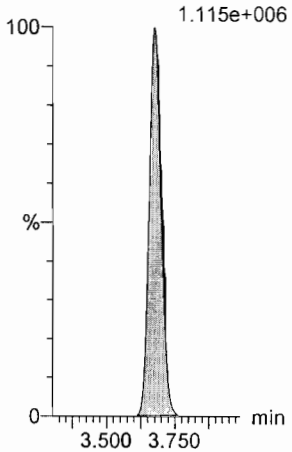




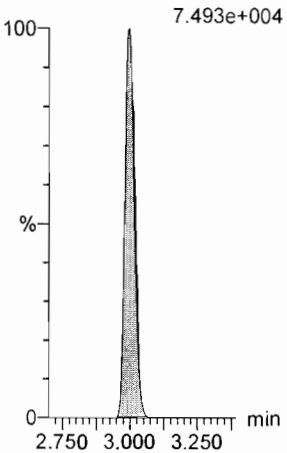
13C2-6:2 FTS



13C2-PFOA



13C3-PFBS



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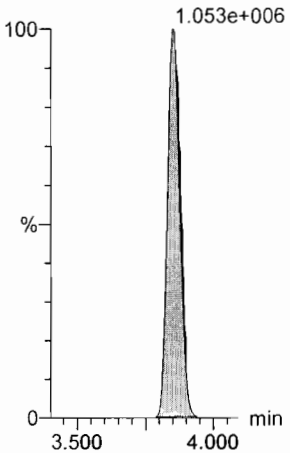
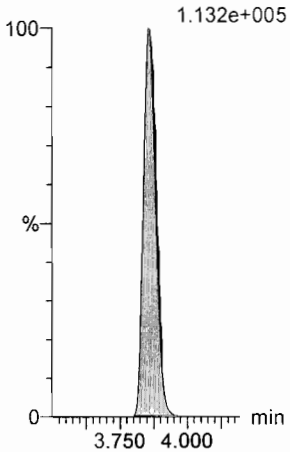


13C8-PFOSA



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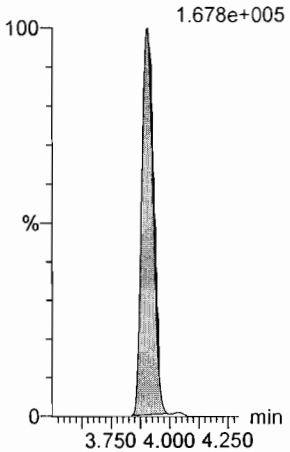

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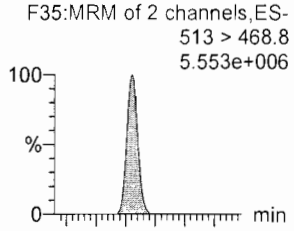
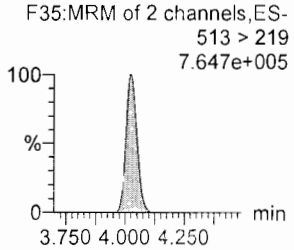
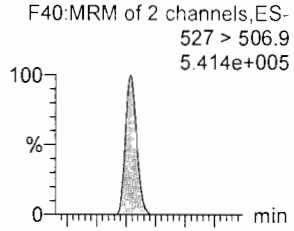
Name: 170724M1_9, Date: 24-Jul-2017, Time: 14:55:34, ID: ST170724M1-7 PFC CS4 17G2426, Description: PFC CS4 17G2426

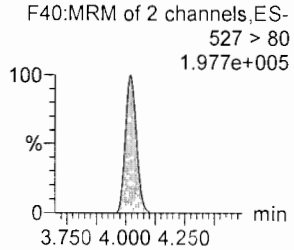
PFDA



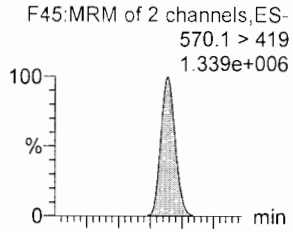


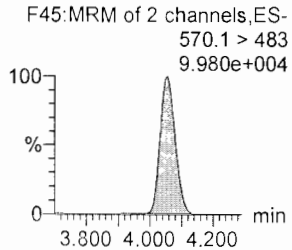
8:2 FTS



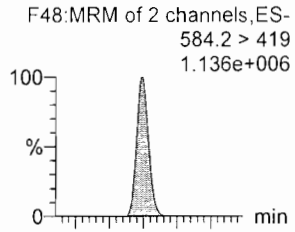


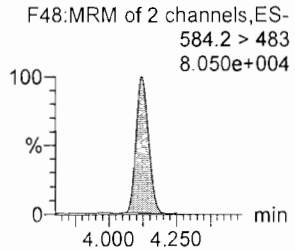
N-MeFOSAA





N-EtFOSAA





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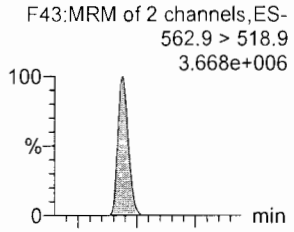

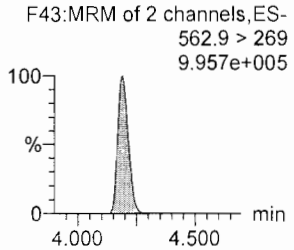

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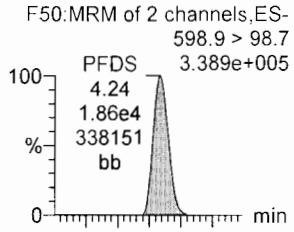

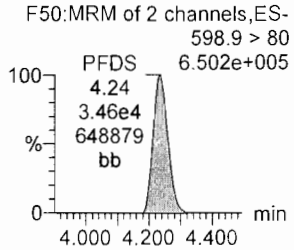

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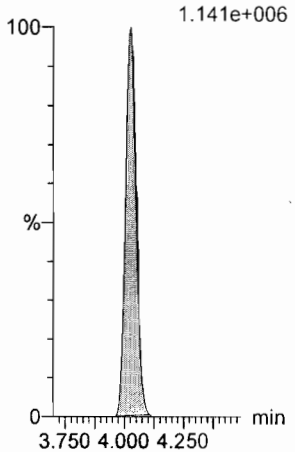

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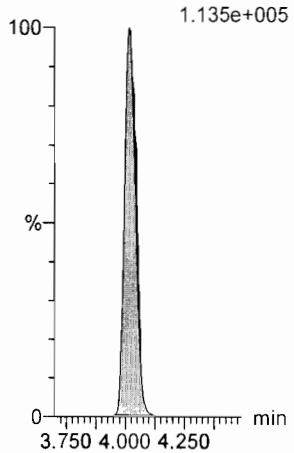

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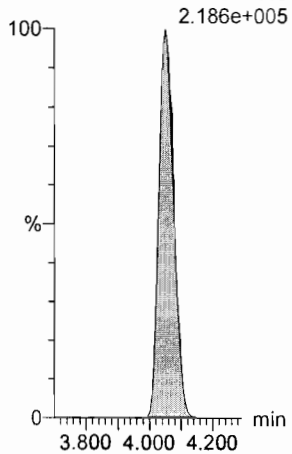
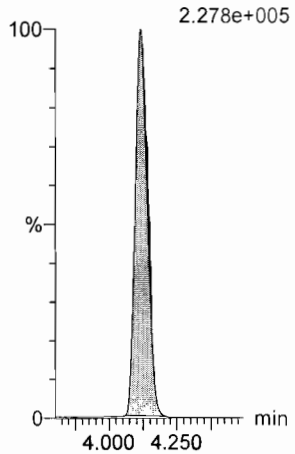
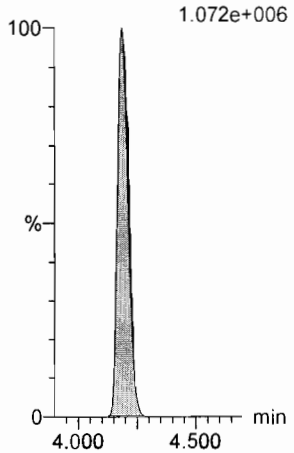


d5-N-EtFOSAA



13C2-PFUnA



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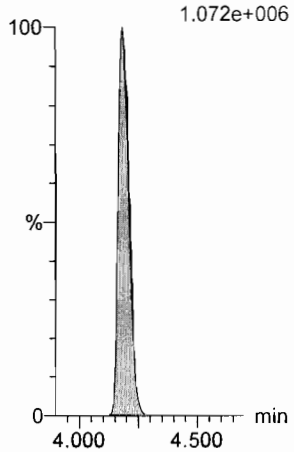

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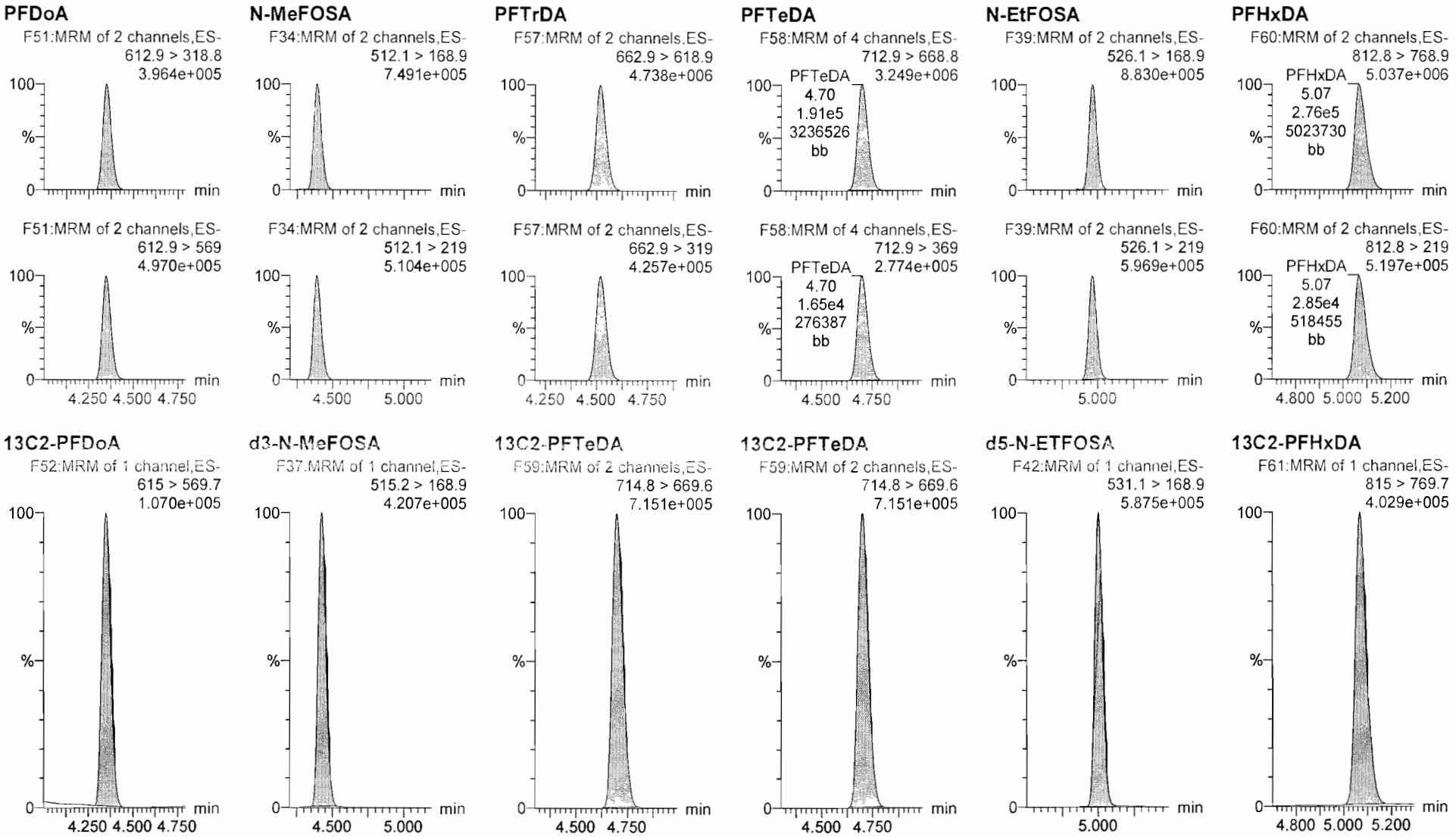
Printed: Monday, July 24, 2017 15:36:37 Pacific Daylight Time

Name: 170724M1_9, Date: 24-Jul-2017, Time: 14:55:34, ID: ST170724M1-7 PFC CS4 17G2426, Description: PFC CS4 17G2426



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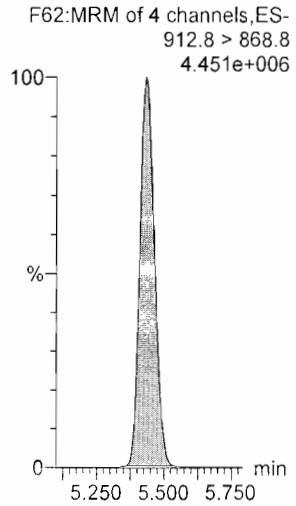

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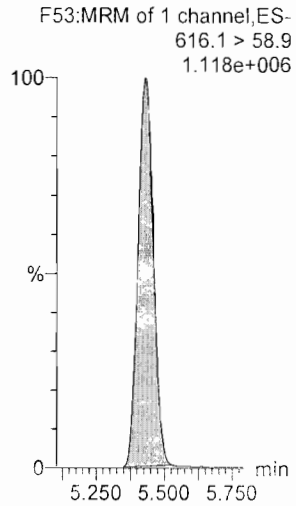

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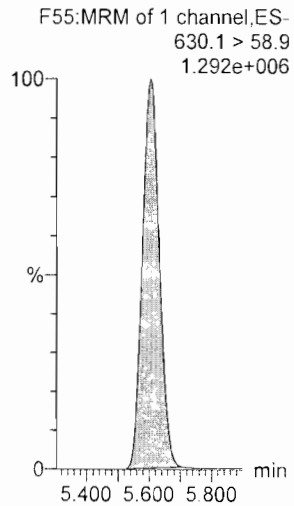

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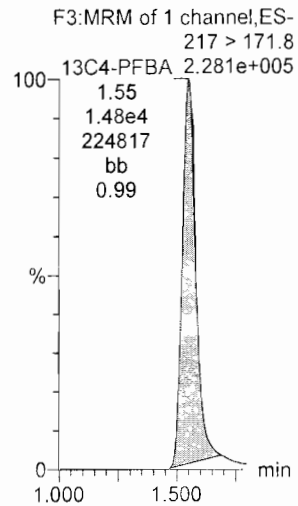

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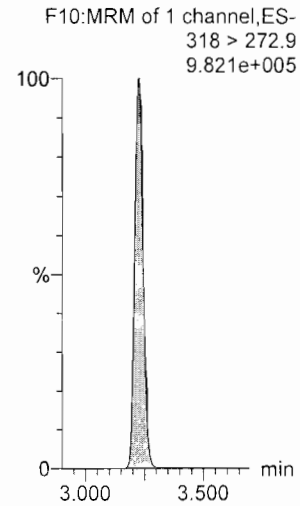

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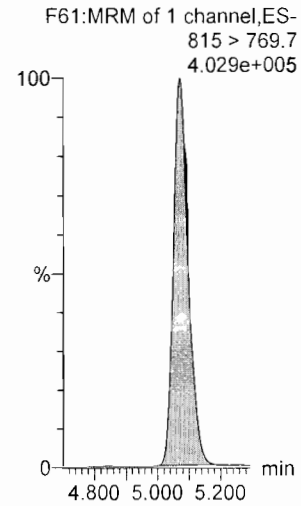

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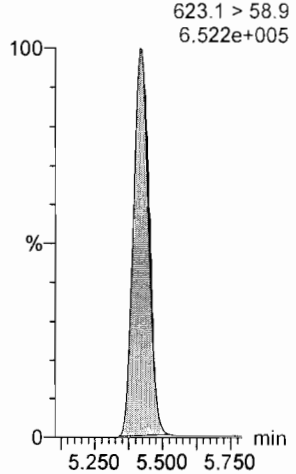

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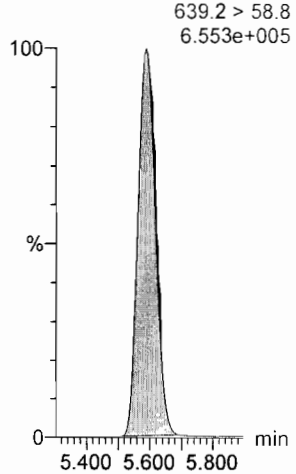

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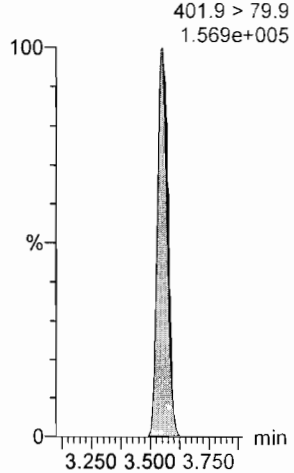

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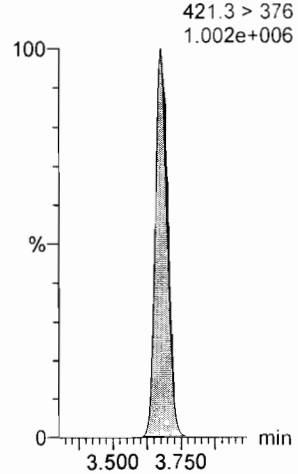

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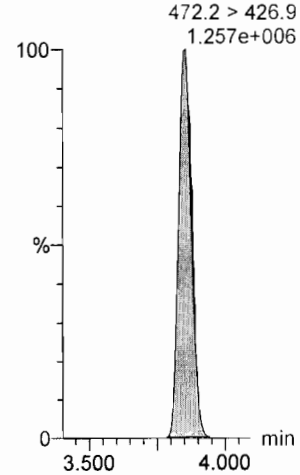

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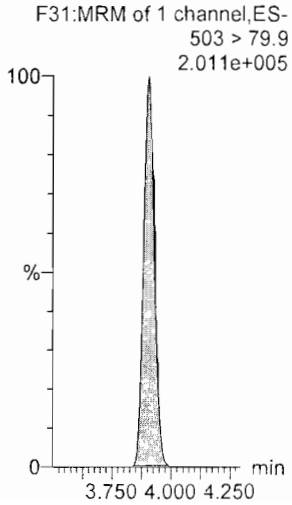
Name: 170724M1_9, Date: 24-Jul-2017, Time: 14:55:34, ID: ST170724M1-7 PFC CS4 17G2426, Description: PFC CS4 17G2426

13C4-PFOS



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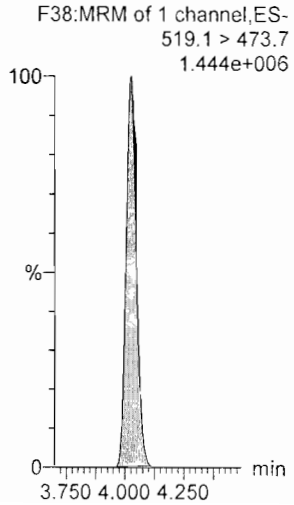

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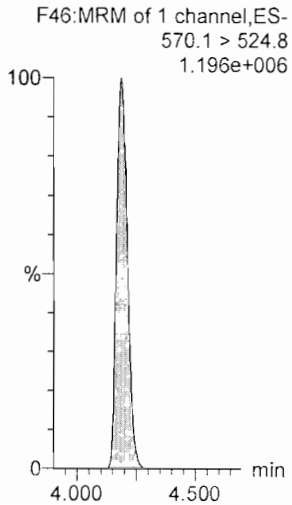

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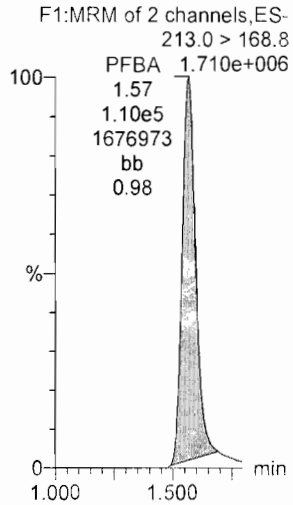

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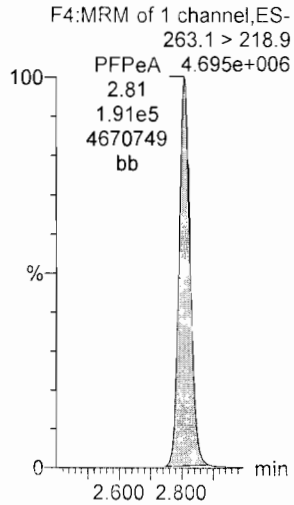

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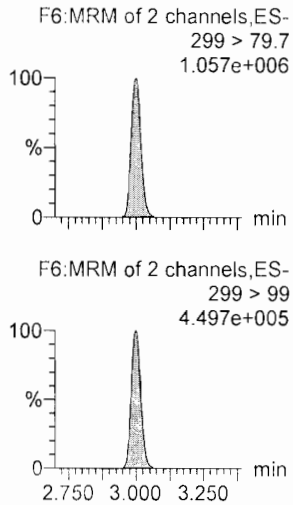

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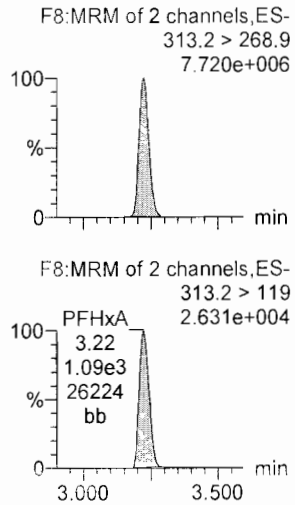

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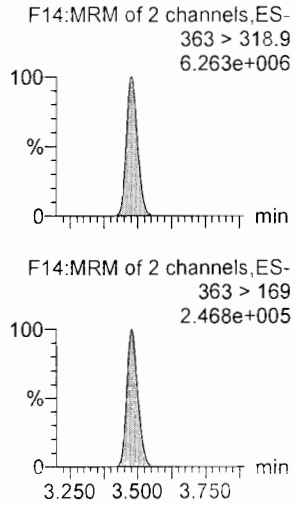

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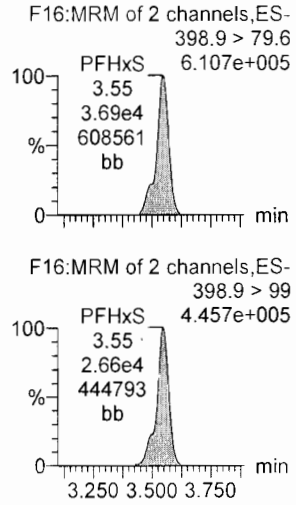

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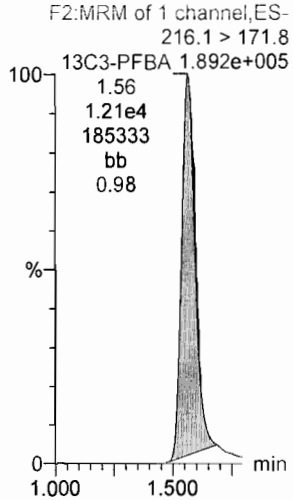

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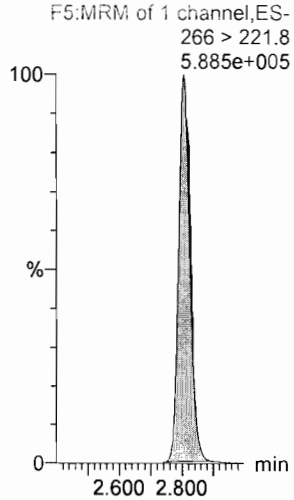

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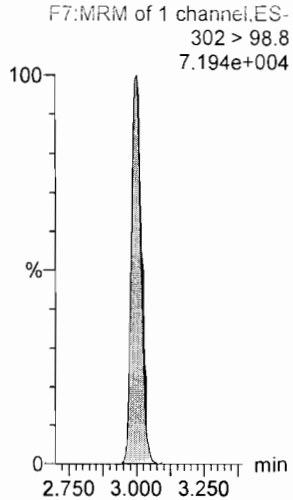

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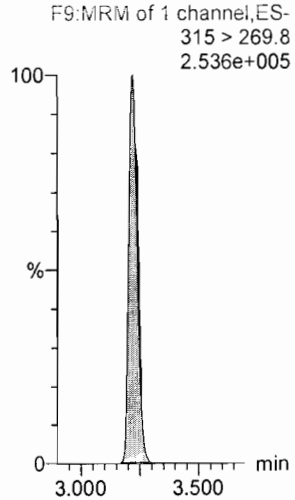

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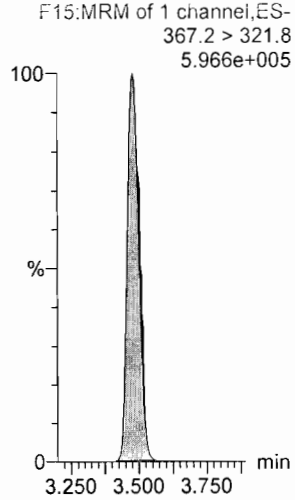
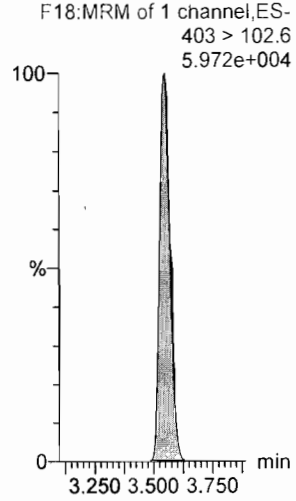


18O2-PFHxS



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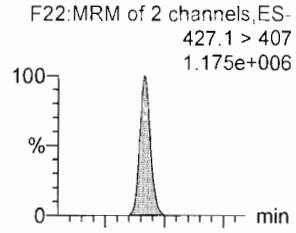
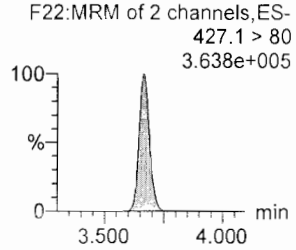
Name: 170724M1_10, Date: 24-Jul-2017, Time: 15:06:35, ID: ST170724M1-8 PFC CS5 17G2427, Description: PFC CS5 17G2427

6:2 FTS





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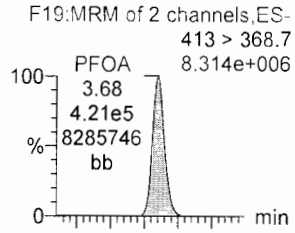

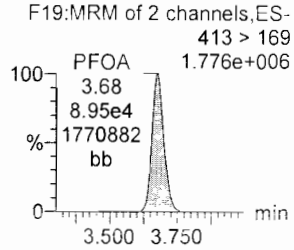

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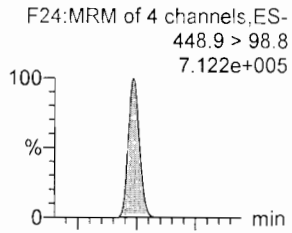

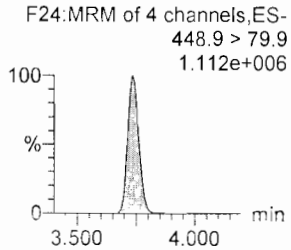

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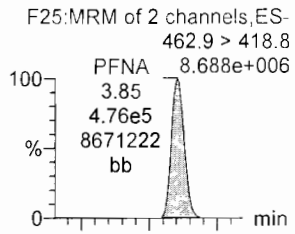

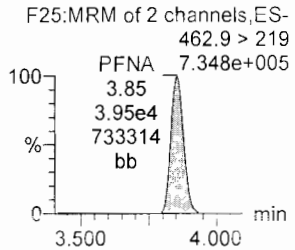

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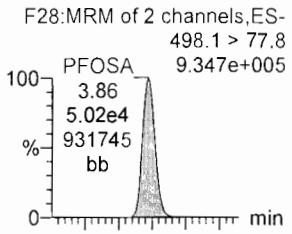

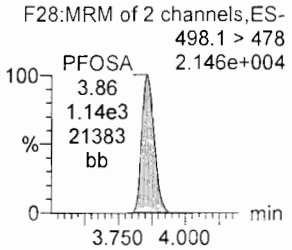

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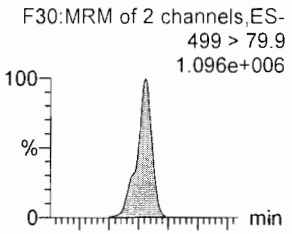

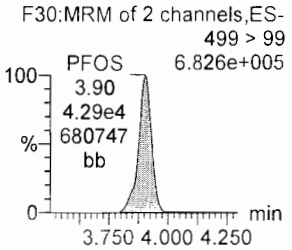

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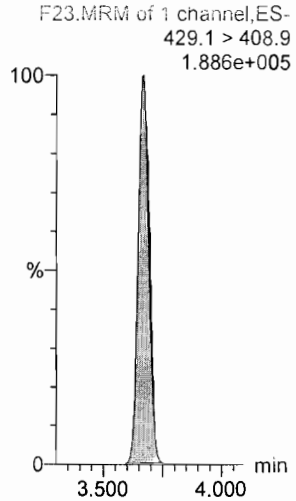
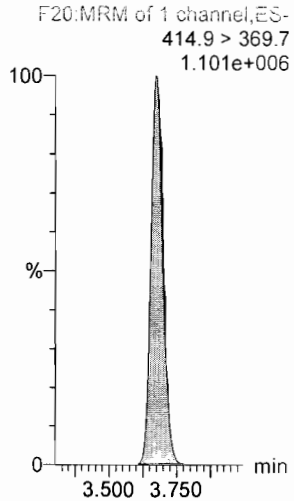


13C2-PFOA



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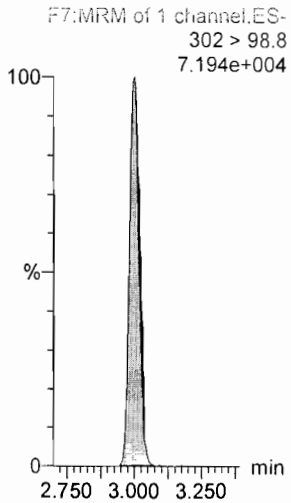

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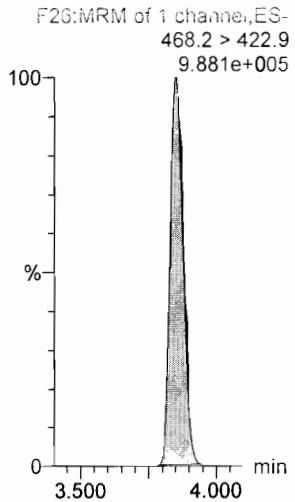

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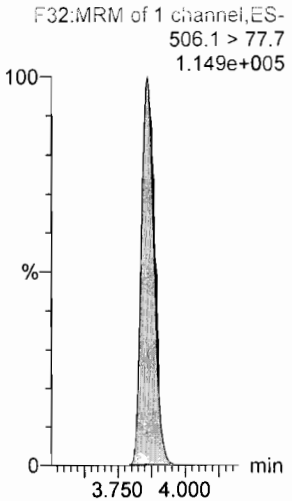

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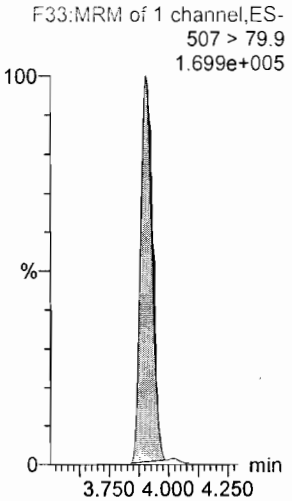

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Name: 170724M1_10, Date: 24-Jul-2017, Time: 15:06:35, ID: ST170724M1-8 PFC CS5 17G2427, Description: PFC CS5 17G2427

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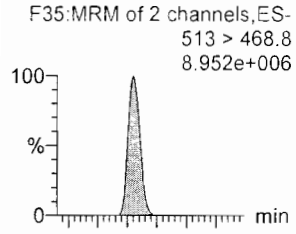
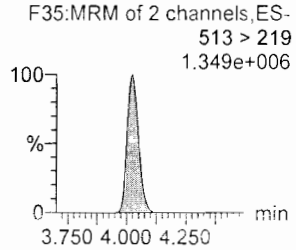
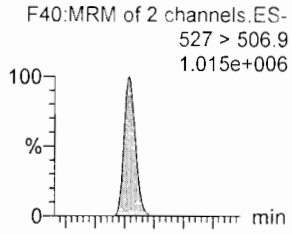
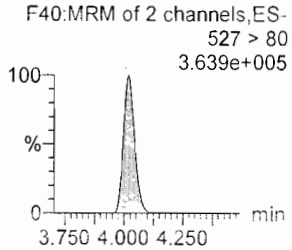




8:2 FTS





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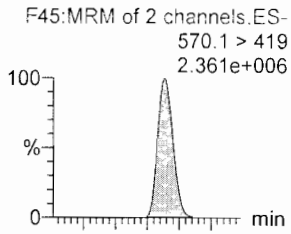

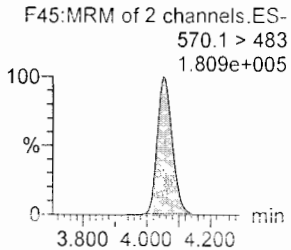

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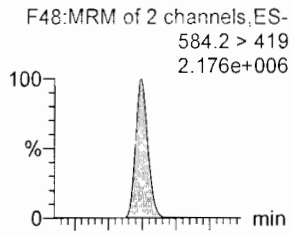

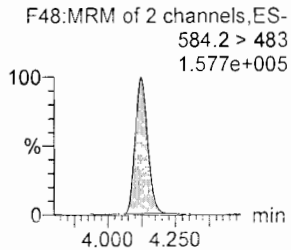

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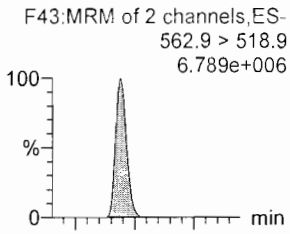

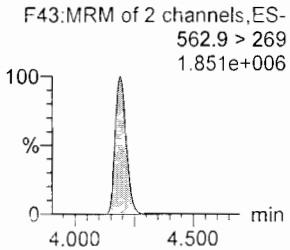

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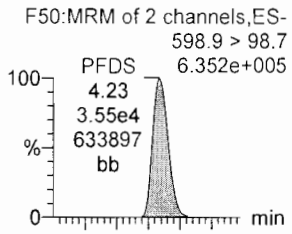

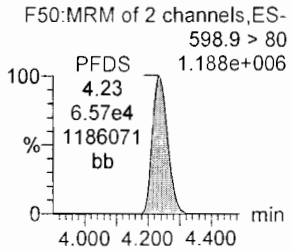

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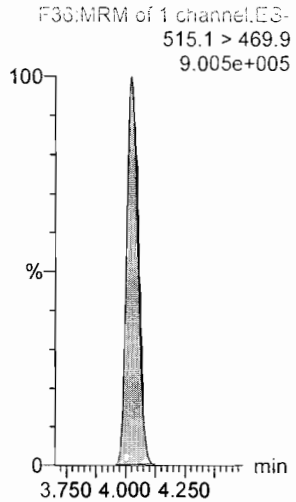

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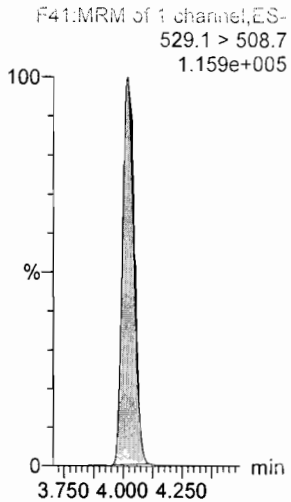

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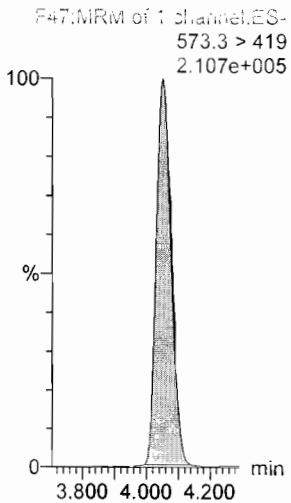

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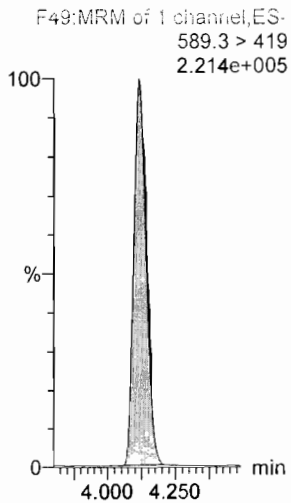

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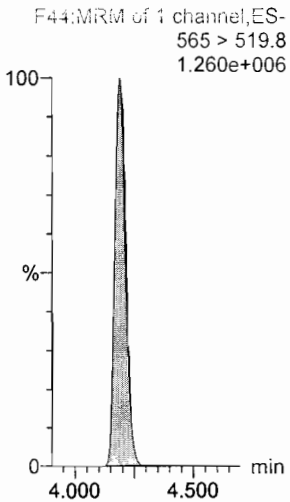

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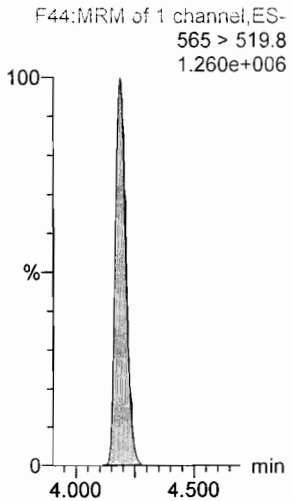

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Printed: Monday, July 24, 2017 15:36:37 Pacific Daylight Time

Name: 170724M1_10, Date: 24-Jul-2017, Time: 15:06:35, ID: ST170724M1-8 PFC CS5 17G2427, Description: PFC CS5 17G2427

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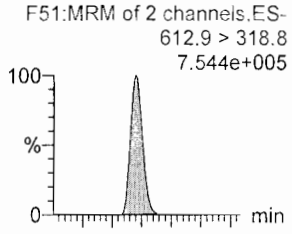

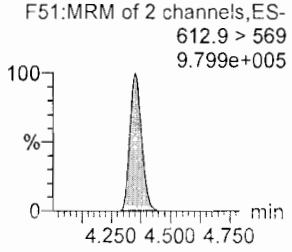

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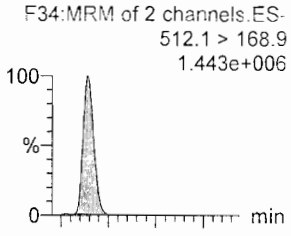

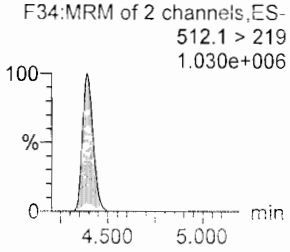

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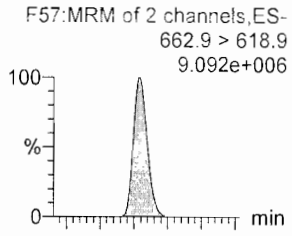

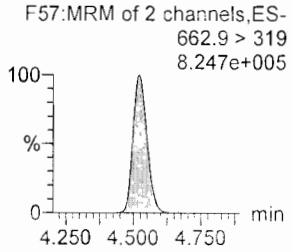

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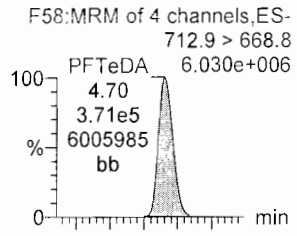

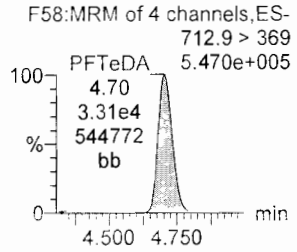

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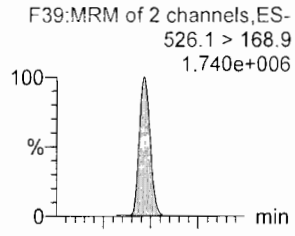

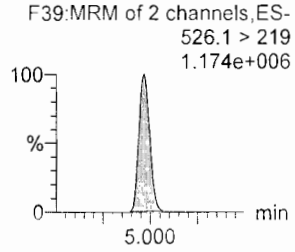

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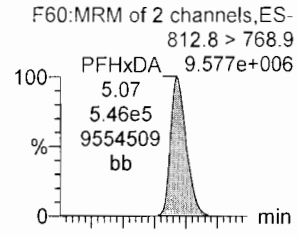

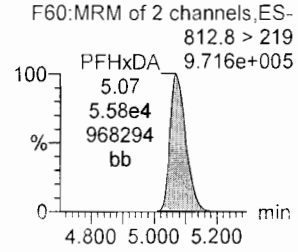

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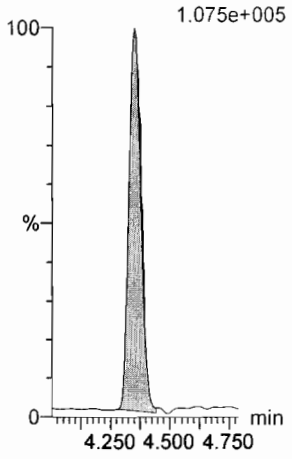

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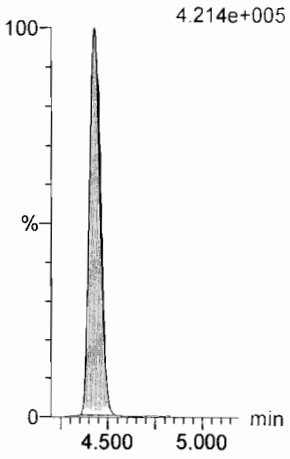

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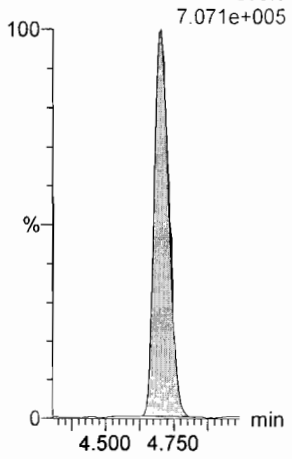

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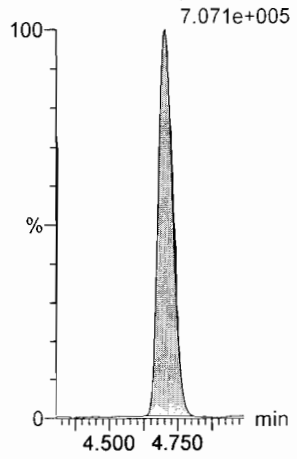

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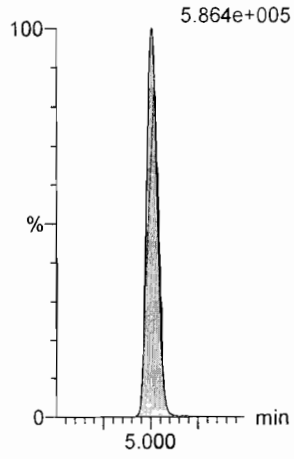

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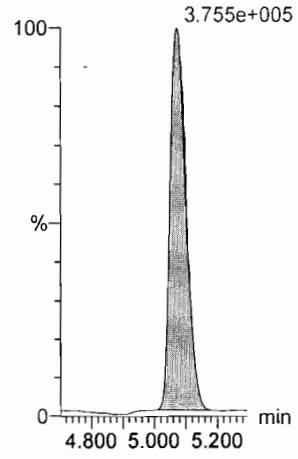

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Name: 170724M1_10, Date: 24-Jul-2017, Time: 15:06:35, ID: ST170724M1-8 PFC CS5 17G2427, Description: PFC CS5 17G2427

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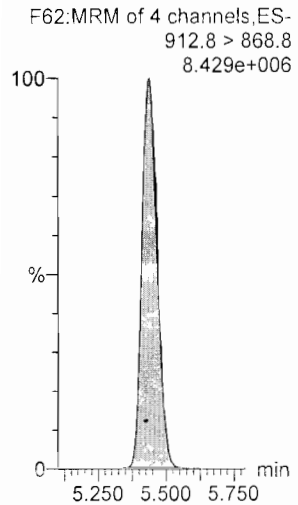

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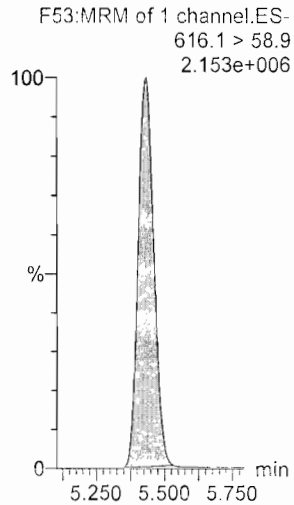

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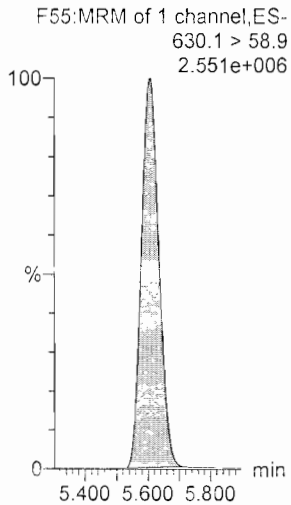

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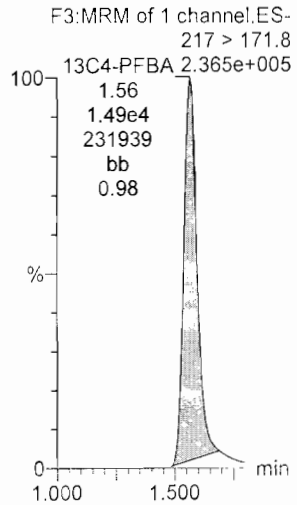

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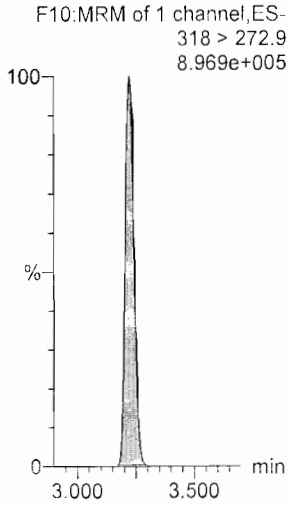

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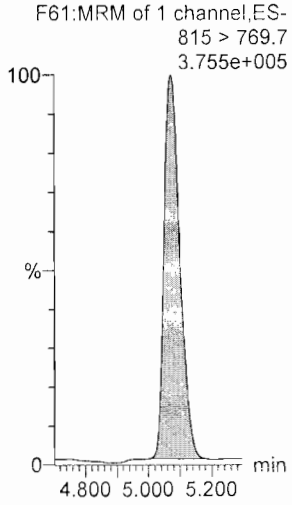

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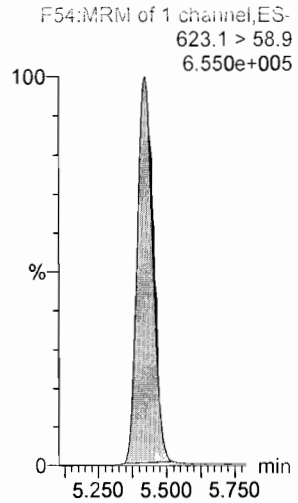

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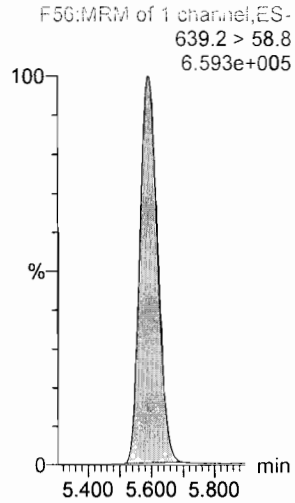

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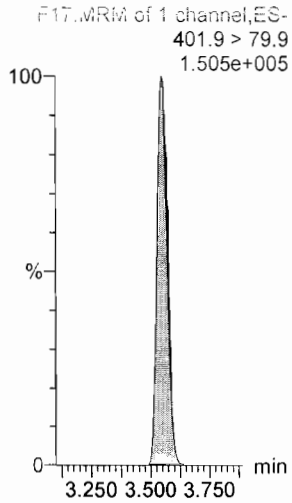

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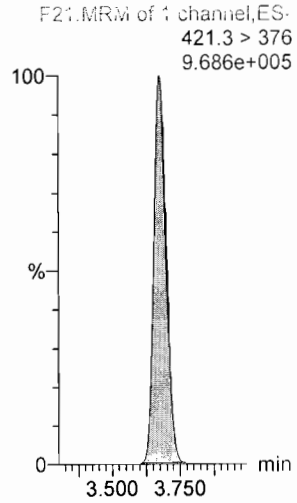

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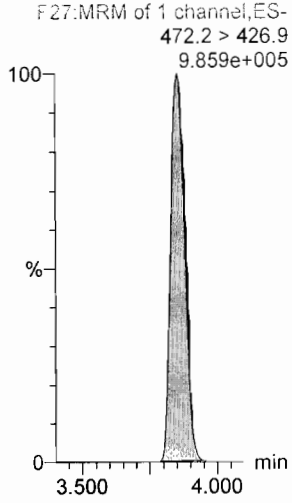

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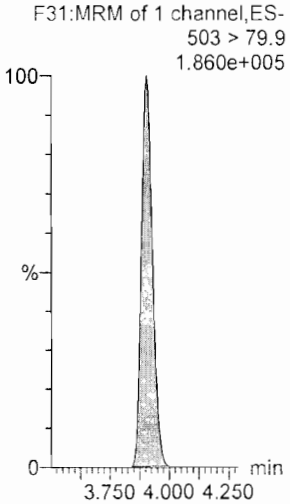
Name: 170724M1_10, Date: 24-Jul-2017, Time: 15:06:35, ID: ST170724M1-8 PFC CS5 17G2427, Description: PFC CS5 17G2427

13C4-PFOS



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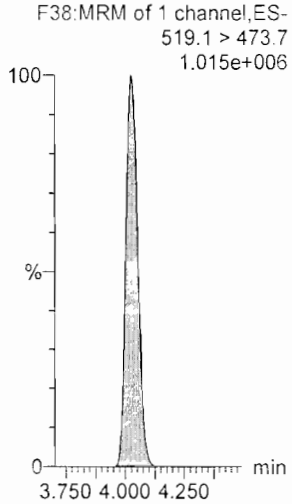

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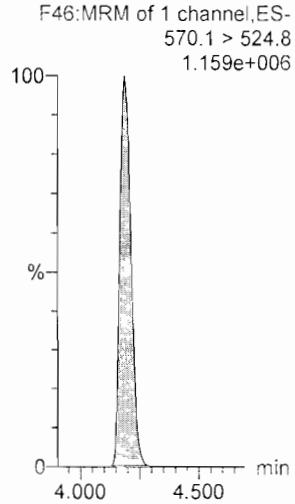

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170724M1\170724M1-12.qld

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A Not in SS.

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 24 Jul 2017 15:34:12
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-24-17-FULL.cdb 24 Jul 2017 15:32:30

Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

AC 7/24/17

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	11377.467	12073.278		1.000	1.56	10.30	103.03	70-130
2	2	PFPeA	263.1 > 218.9	19853.004	23925.629		1.000	2.81	10.35	103.50	
3	3	PFBS	299 > 79.7	4150.350	2957.477		1.000	3.00	9.43	94.30	
4	4	PFHxA	313.2 > 268.9	31616.176	10121.942		1.000	3.23	10.24	102.41	
5	5	PFHpA	363 > 318.9	29691.209	29688.498		1.000	3.48	9.91	99.12	
6	6	PFHxS	398.9 > 79.6	3522.001	2850.923		1.000	3.55	9.12	91.20	
7	7	6:2 FTS	427.1 > 407	6778.936	7715.412		1.000	3.67	10.41	104.10	
8	8	PFOA	413 > 368.7	48252.109	57527.922		1.000	3.68	10.59	105.94	
9	9	PFHpS	448.9 > 98.8	3857.262	57527.922		1.000	3.74	9.28	92.79	
10	10	PFNA	462.9 > 418.8	52020.793	55397.191		1.000	3.85	10.55	105.53	
11	11	PFOSA	498.1 > 77.8	5708.063	6500.262		1.000	3.86	10.41	104.14	
12	12	PFOS	499 > 79.9	8177.322	10272.242		1.000	3.90	8.42	84.17	
13	13	PFDA	513 > 468.8	54158.824	56205.117		1.000	4.02	9.19	91.86	
14	14	8:2 FTS	527 > 506.9	6486.744	5254.963		1.000	4.02	10.53	105.28	
15	15	N-MeFOSAA	570.1 > 419	14470.231	11971.411		1.000	4.06	9.88	98.84	
16	16	N-EtFOSAA	584.2 > 419	12443.312	12068.997		1.000	4.12	10.39	103.90	
17	17	PFUnA	562.9 > 518.9	37650.797	59926.145		1.000	4.19	8.88	88.81	
18	18	PFDS	598.9 > 98.7	3869.410	59926.145		1.000	4.24	9.05	90.53	
19	19	PFDoA	612.9 > 318.8	4450.692	5849.101		1.000	4.35	10.09	100.94	
20	20	N-MeFOSA	512.1 > 168.9	9.012	26376.414		1.000	4.39		A	
21	21	PFTrDA	662.9 > 618.9	52553.016	5849.101		1.000	4.52	10.12	101.16	70-130
22	22	PFTeDA	712.9 > 668.8	38350.820	40951.586		1.000	4.70	10.17	101.65	
23	23	N-EtFOSA	526.1 > 168.9	12.231	6321.303		1.000	4.97		A	
24	24	PFHxDA	812.8 > 768.9	616.143	19848.846		1.000	5.07			
25	25	PFODA	912.8 > 868.8	230.613	19848.846		1.000	5.44			
26	26	N-MeFOSE	616.1 > 58.9	26.252	40883.168		1.000	5.45			
27	27	N-EtFOSE	630.1 > 58.9		40456.262		1.000				
28	28	13C3-PFBA	216.1 > 171.8	12073.278	14974.247	0.820	1.000	1.55	12.28	98.27	
29	29	13C3-PFPeA	266 > 221.8	23925.629	38341.938	0.248	1.000	2.81	12.57	100.58	
30	30	13C3-PFBS	302 > 98.8	2957.477	38341.938	0.031	1.000	3.00	12.40	99.20	
31	31	13C2-PFHxA	315 > 269.8	10121.942	38341.938	0.276	1.000	3.23	4.78	95.51	

Dataset: U:\Q4.PRO\results\170724M1\170724M1-12.qld

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Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	29688.498	38341.938	0.306	1.000	3.48	12.67	101.34
33	33	18O2-PFHxS	403 > 102.6	2850.923	7151.517	0.393	1.000	3.55	12.69	101.51
34	34	13C2-6:2 FTS	429.1 > 408.9	7715.412	55193.199	0.158	1.000	3.67	11.08	88.65
35	35	13C2-PFOA	414.9 > 369.7	57527.922	55193.199	1.067	1.000	3.68	12.20	97.64
36	36	13C5-PFNA	468.2 > 422.9	55397.191	58314.438	0.852	1.000	3.85	13.94	111.48
37	37	13C8-PFOSA	506.1 > 77.7	6500.262	73602.336	0.098	1.000	3.86	11.24	89.90
38	38	13C8-PFOS	507 > 79.9	10272.242	10242.656	0.936	1.000	3.91	13.40	107.18
39	39	13C2-PFDA	515.1 > 469.9	56205.117	70397.750	0.810	1.000	4.02	12.32	98.59
40	40	13C2-8:2 FTS	529.1 > 508.7	5254.963	70397.750	0.086	1.000	4.02	10.90	87.23
41	41	d3-N-MeFOSAA	573.3 > 419	11971.411	73602.336	0.014	1.000	4.05	148.44	91.35
42	42	d5-N-EtFOSAA	589.3 > 419	12068.997	73602.336	0.014	1.000	4.12	146.98	90.45
43	43	13C2-PFUnA	565 > 519.8	59926.145	73602.336	0.962	1.000	4.19	10.58	84.63
44	44	13C2-PFDoA	615 > 569.7	5849.101	73602.336	0.094	1.000	4.35	10.52	84.16
45	45	d3-N-MeFOSA	515.2 > 168.9	26376.414	73602.336	0.034	1.000	4.43	130.17	86.78
46	46	13C2-PFTeDA	714.8 > 669.6	40951.586	73602.336	0.694	1.000	4.70	10.02	80.14
47	47	d5-N-ETFOSA	531.1 > 168.9	6321.303	73602.336	0.049	1.000	5.01	22.06	14.70
48	48	13C2-PFHxDA	815 > 769.7	19848.846	73602.336	0.843	1.000	5.07	4.00	79.97
49	49	d7-N-MeFOSE	623.1 > 58.9	40883.168	73602.336	0.055	1.000	5.42	127.09	84.73
50	50	d9-N-EtFOSE	639.2 > 58.8	40456.262	73602.336	0.053	1.000	5.59	128.61	85.74
51	51	13C4-PFBA	217 > 171.8	14974.247	14974.247	1.000	1.000	1.55	12.50	100.00
52	52	13C5-PFHxA	318 > 272.9	38341.938	38341.938	1.000	1.000	3.22	5.00	100.00
53	53	13C3-PFHxS	401.9 > 79.9	7151.517	7151.517	1.000	1.000	3.55	12.50	100.00
54	54	13C8-PFOA	421.3 > 376	55193.199	55193.199	1.000	1.000	3.68	12.50	100.00
55	55	13C9-PFNA	472.2 > 426.9	58314.438	58314.438	1.000	1.000	3.85	12.50	100.00
56	56	13C4-PFOS	503 > 79.9	10242.656	10242.656	1.000	1.000	3.91	12.50	100.00
57	57	13C6-PFDA	519.1 > 473.7	70397.750	70397.750	1.000	1.000	4.02	12.50	100.00
58	58	13C7-PFUnA	570.1 > 524.8	73602.336	73602.336	1.000	1.000	4.19	12.50	100.00

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Dataset: U:\Q4.PRO\results\170724M1\170724M1-12.qld

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Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

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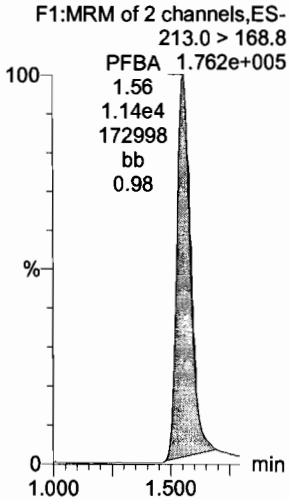

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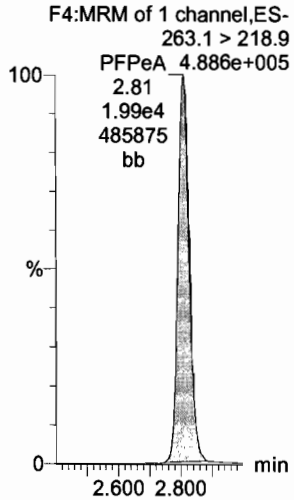

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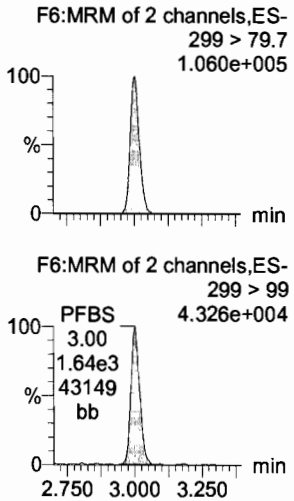

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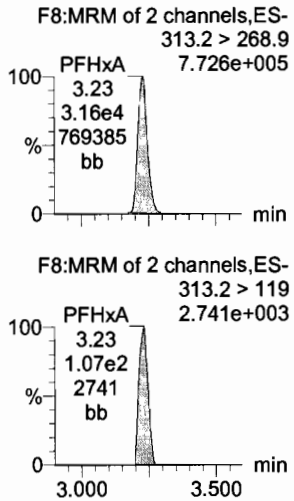

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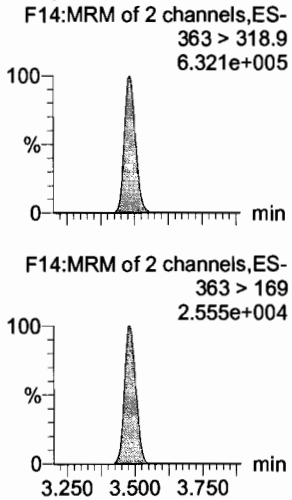

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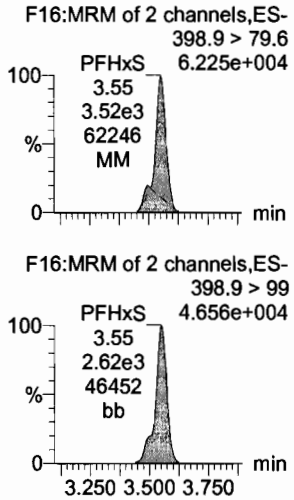

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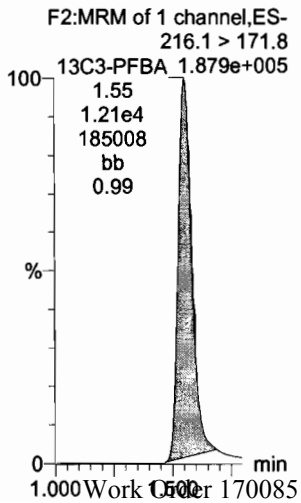

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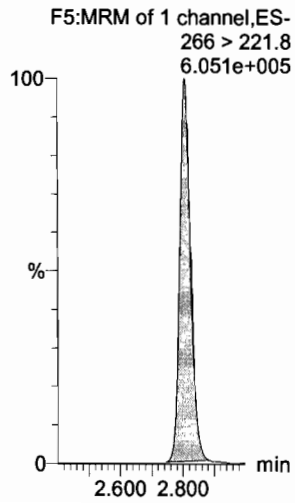

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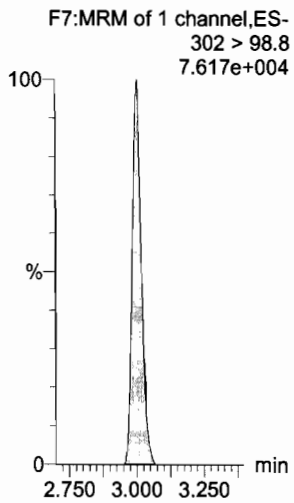

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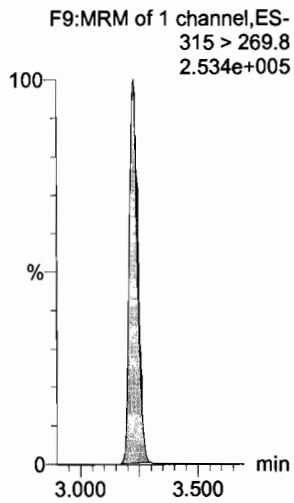

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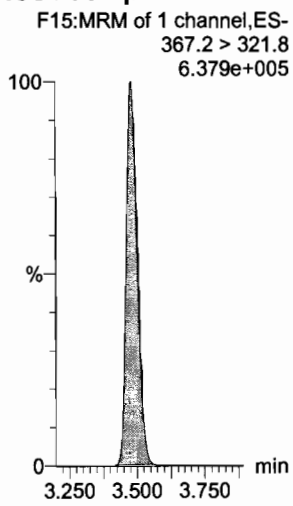

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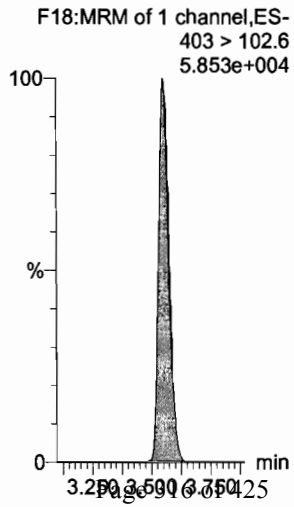

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Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

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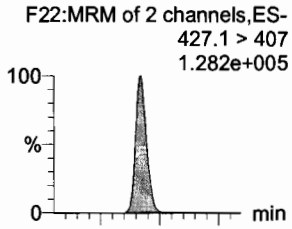

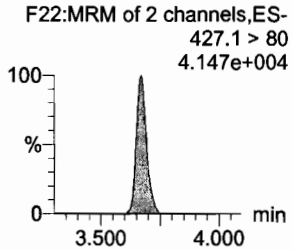

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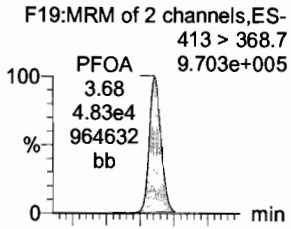

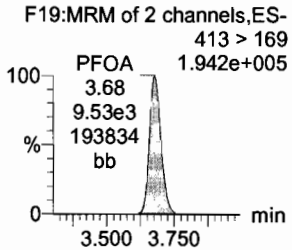

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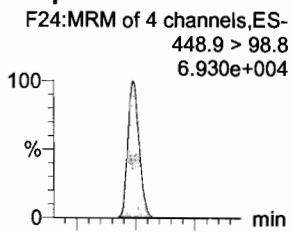

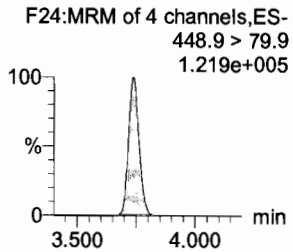

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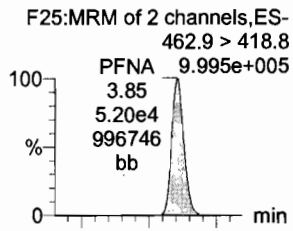

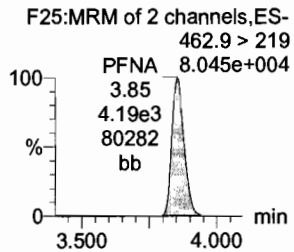

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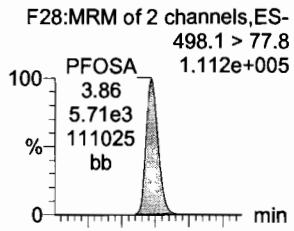

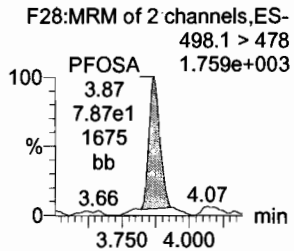

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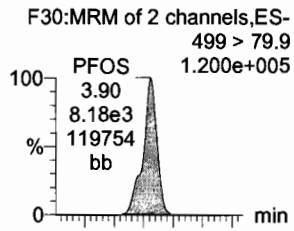

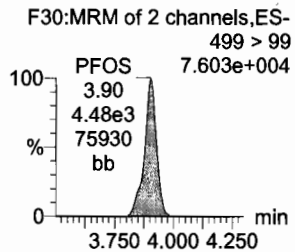

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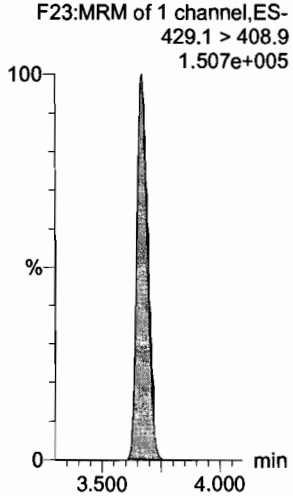

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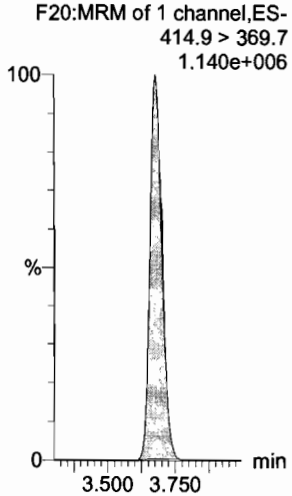

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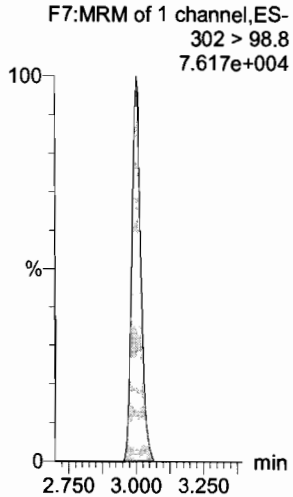

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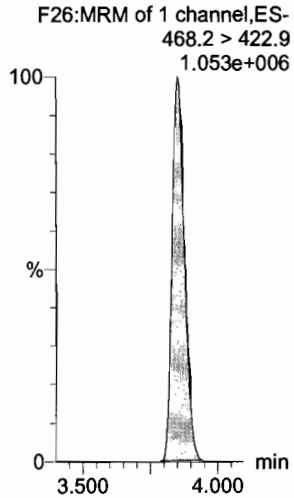

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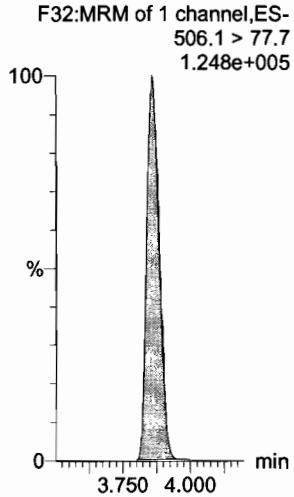

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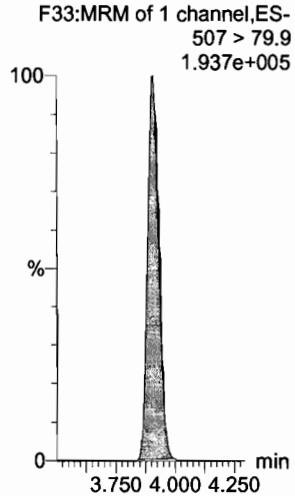

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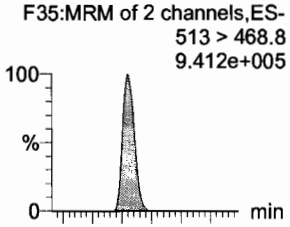
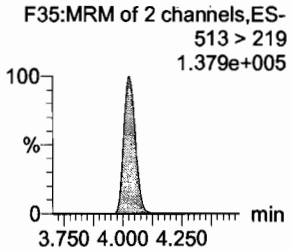
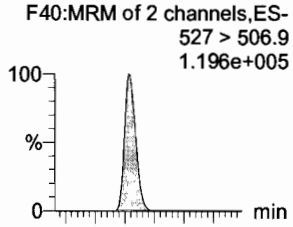
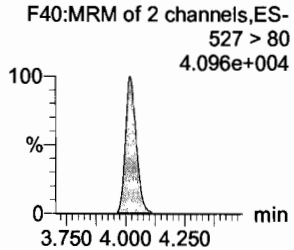


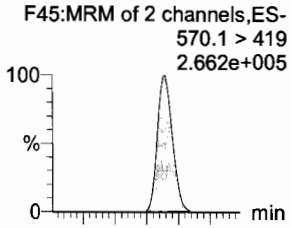


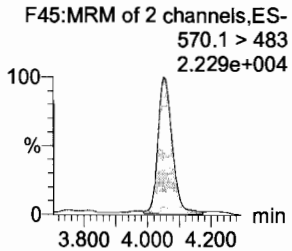
8:2 FTS



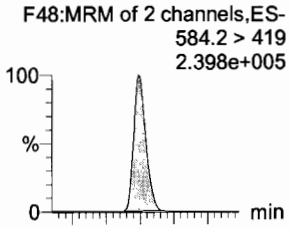


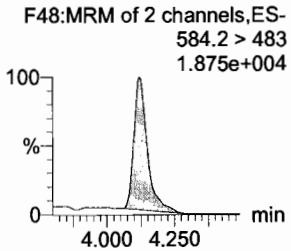
N-MeFOSAA



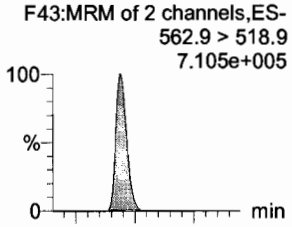


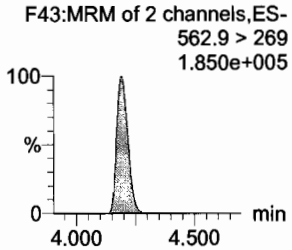
N-EtFOSAA



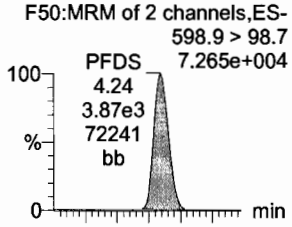


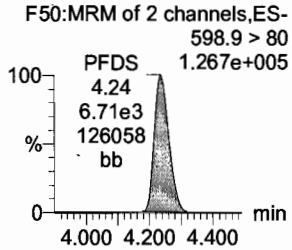
PFUnA



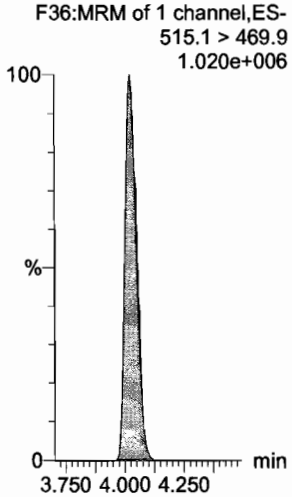


PFDS

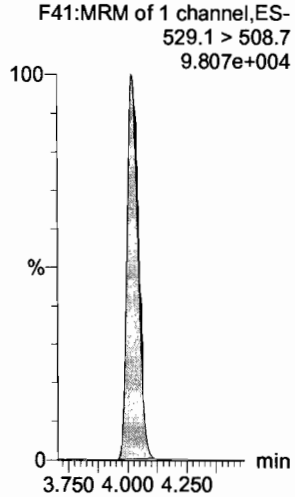




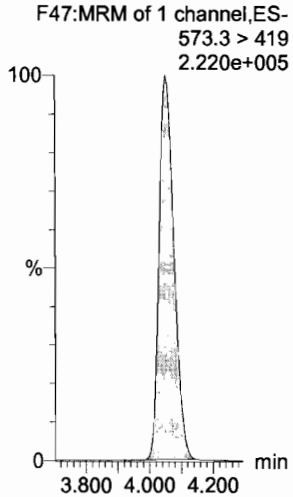
13C2-PFDA



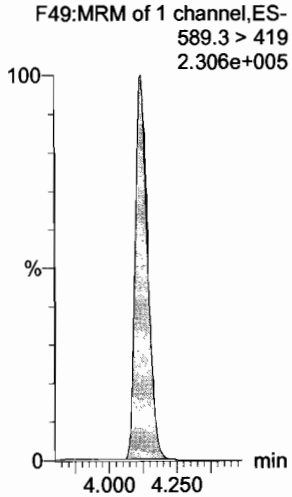
13C2-8:2 FTS



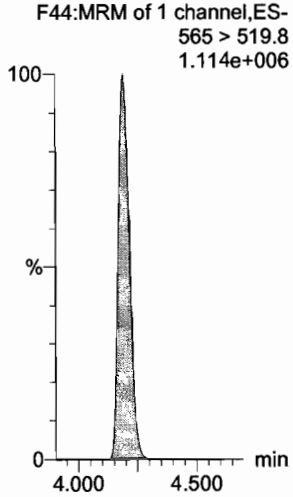
d3-N-MeFOSAA



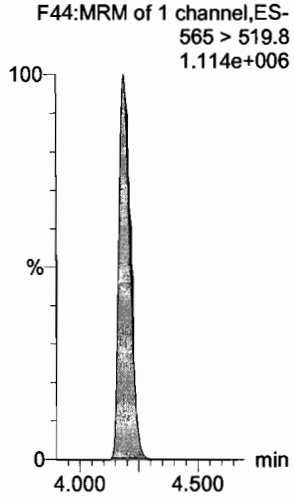
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



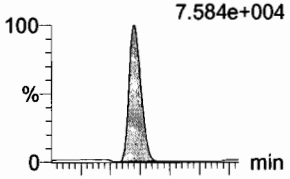
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170724M1\170724M1-12.qld

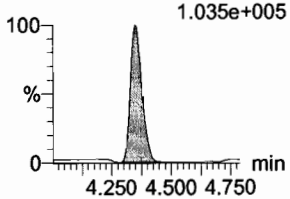
Last Altered: Monday, July 24, 2017 15:46:59 Pacific Daylight Time
Printed: Monday, July 24, 2017 15:47:38 Pacific Daylight Time

Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

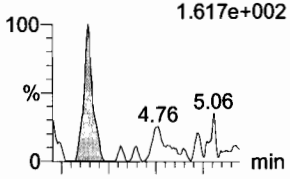
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
7.584e+004



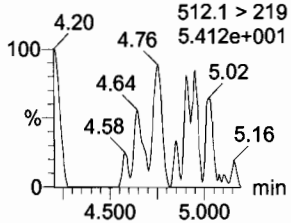
F51:MRM of 2 channels,ES-
612.9 > 569
1.035e+005



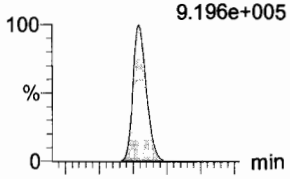
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
1.617e+002



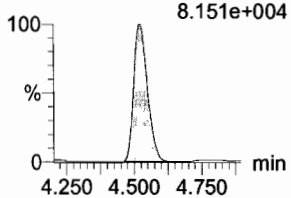
F34:MRM of 2 channels,ES-
512.1 > 219
5.412e+001



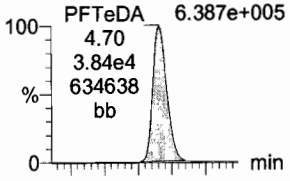
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
9.196e+005



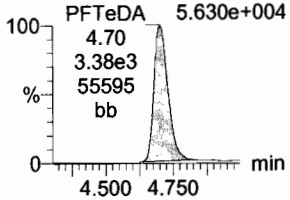
F57:MRM of 2 channels,ES-
662.9 > 319
8.151e+004



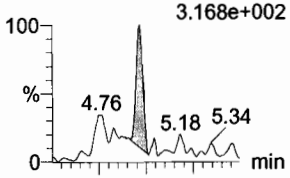
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
6.387e+005



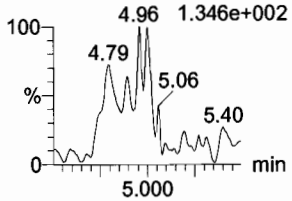
F58:MRM of 4 channels,ES-
712.9 > 369
5.630e+004



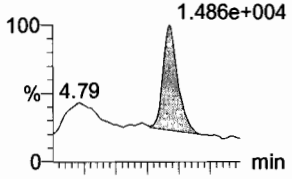
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
3.168e+002



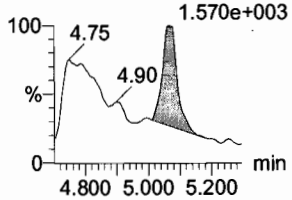
F39:MRM of 2 channels,ES-
526.1 > 219
1.346e+002



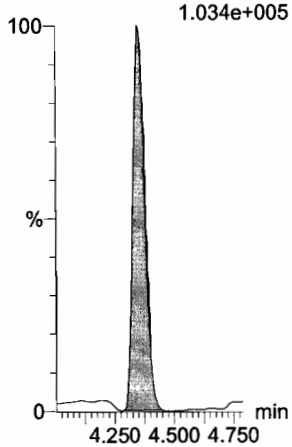
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
1.486e+004



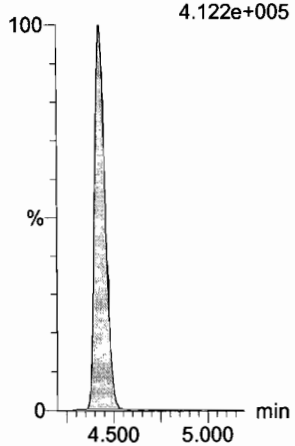
F60:MRM of 2 channels,ES-
812.8 > 219
1.570e+003



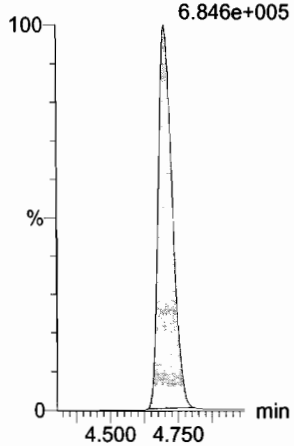
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.034e+005



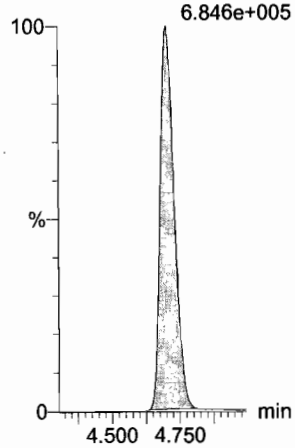
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
4.122e+005



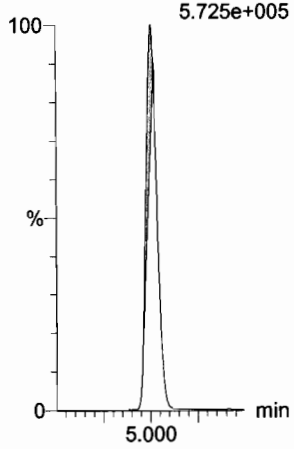
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
6.846e+005



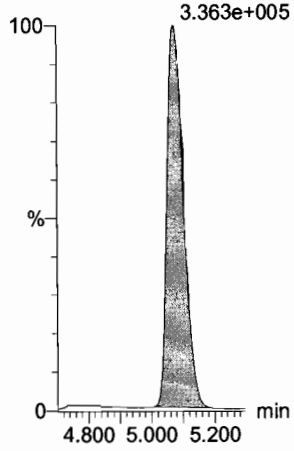
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
6.846e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
5.725e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.363e+005



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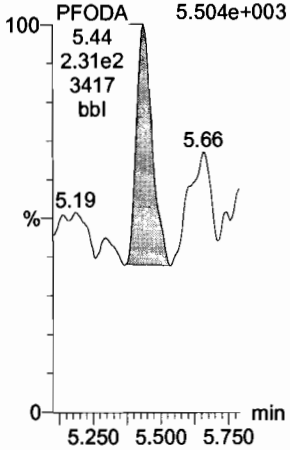
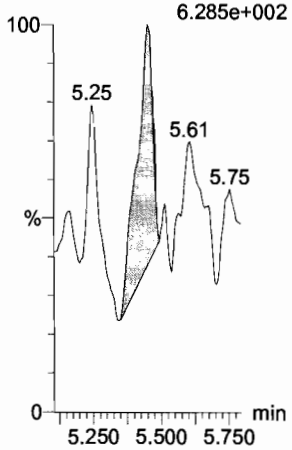
Printed: Monday, July 24, 2017 15:47:38 Pacific Daylight Time

Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

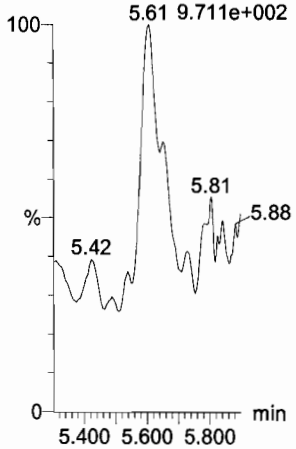
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
5.504e+003



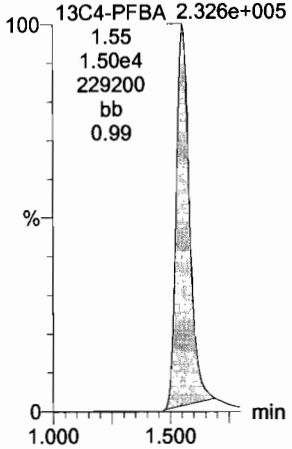
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
6.285e+002



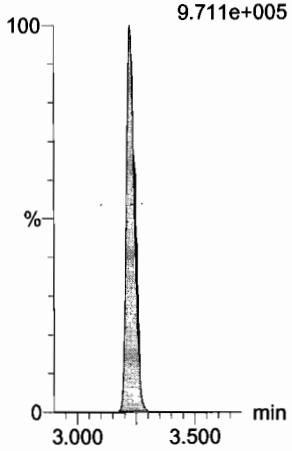
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
5.61 9.711e+002



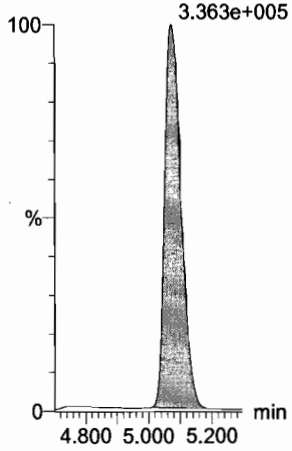
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
13C4-PFBA 2.326e+005



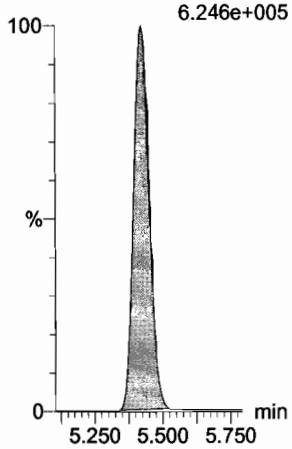
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.711e+005



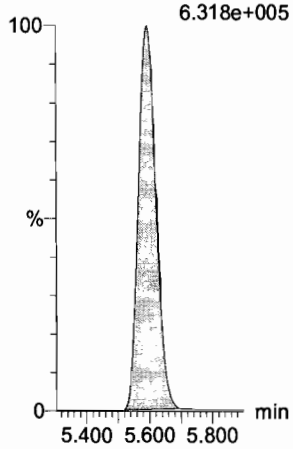
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.363e+005



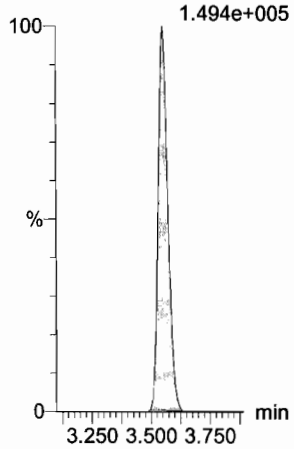
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
6.246e+005



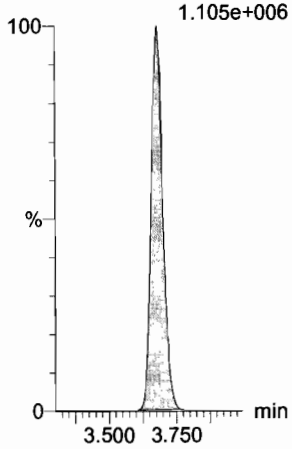
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
6.318e+005



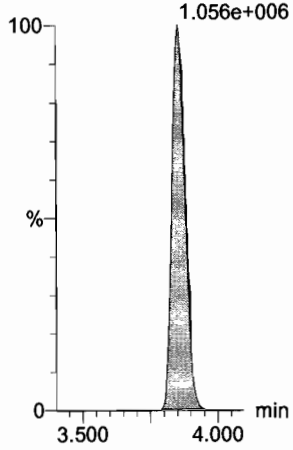
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.494e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.105e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.056e+006



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Last Altered: Monday, July 24, 2017 15:46:59 Pacific Daylight Time
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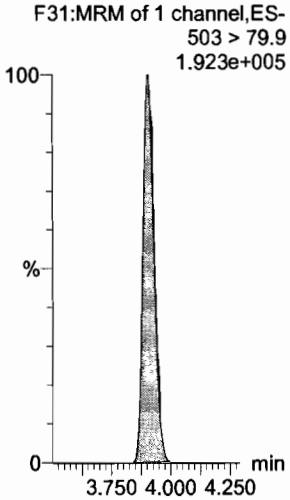
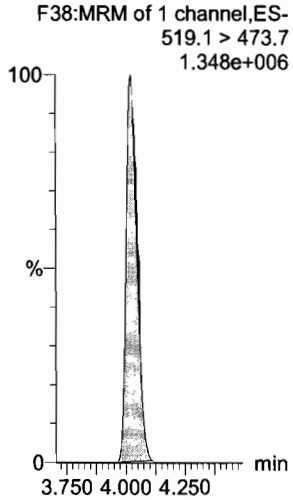
Name: 170724M1_12, Date: 24-Jul-2017, Time: 15:28:15, ID: SS170724M4-1 PFC SSS 17G2421, Description: PFC SSS 17G2421

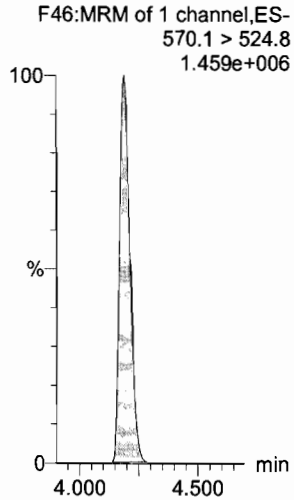
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:10:19 Pacific Daylight Time
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Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 28 Jul 2017 08:40:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

AC 7/30/17

YQu 7/31/17

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999678
Calibration curve: 0.000110804 * x^2 + 1.07999 * x + 0.11163
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	1.35	476.635	15742.173	0.378	0.2	-1.2	NO	1.000	NO	MM
2	2	170728M2_3	Standard	0.500	1.35	899.031	15139.798	0.742	0.6	16.8	NO	1.000	NO	MM
3	3	170728M2_4	Standard	1.000	1.35	1598.174	15315.615	1.304	1.1	10.4	NO	1.000	NO	MM
4	4	170728M2_5	Standard	2.000	1.35	1810.805	8684.454	2.606	2.3	15.5	NO	1.000	NO	MM
5	5	170728M2_6	Standard	5.000	1.35	6713.694	15018.660	5.588	5.1	1.4	NO	1.000	NO	MM
6	6	170728M2_7	Standard	10.000	1.35	13340.125	15259.036	10.928	10.0	0.0	NO	1.000	NO	MM
7	7	170728M2_8	Standard	50.000	1.36	66516.945	15593.523	53.321	49.0	-2.0	NO	1.000	NO	MM
8	8	170728M2_9	Standard	100.000	1.35	137534.000	15681.832	109.628	100.4	0.4	NO	1.000	NO	MM
9	9	170728M2_10	Standard	250.000	1.36	306571.531	13830.456	277.080	250.0	0.0	NO	1.000	NO	MM

Compound name: PFPeA
Correlation coefficient: r = 0.999801, r^2 = 0.999602
Calibration curve: 0.958373 * x + 0.0576289
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	2.65	679.107	29626.736	0.287	0.2	-4.5	NO	1.000	NO	MM
2	2	170728M2_3	Standard	0.500	2.66	1192.443	29534.408	0.505	0.5	-6.7	NO	1.000	NO	MM
3	3	170728M2_4	Standard	1.000	2.65	2536.703	29804.117	1.064	1.0	5.0	NO	1.000	NO	MM
4	4	170728M2_5	Standard	2.000	2.66	2849.220	16510.811	2.157	2.2	9.5	NO	1.000	NO	MM
5	5	170728M2_6	Standard	5.000	2.65	11458.210	28830.305	4.968	5.1	2.5	NO	1.000	NO	MM
6	6	170728M2_7	Standard	10.000	2.66	22812.604	30611.281	9.315	9.7	-3.4	NO	1.000	NO	MM
7	7	170728M2_8	Standard	50.000	2.66	114847.070	30216.350	47.510	49.5	-1.0	NO	1.000	NO	MM
8	8	170728M2_9	Standard	100.000	2.65	225237.328	30196.234	93.239	97.2	-2.8	NO	1.000	NO	MM
9	9	170728M2_10	Standard	250.000	2.66	522885.906	26920.408	242.793	253.3	1.3	NO	1.000	NO	MM

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

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Compound name: PFBS
Correlation coefficient: r = 0.999861, r^2 = 0.999721
Calibration curve: 1.85784 * x + -0.00404936
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	2.90	124.236	3725.665	0.417	0.2	-9.4	NO	1.000	NO	bb
2	2	170728M2_3	Standard	0.500	2.89	287.609	3680.041	0.977	0.5	5.6	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	2.90	605.269	3805.429	1.988	1.1	7.2	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	2.89	650.990	2141.663	3.800	2.0	2.4	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	2.90	2677.018	3529.564	9.481	5.1	2.1	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	2.89	5207.783	3732.698	17.440	9.4	-6.1	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	2.90	25941.150	3533.129	91.778	49.4	-1.2	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	2.90	52001.789	3559.104	182.637	98.3	-1.7	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	2.90	109519.203	2916.369	469.416	252.7	1.1	NO	1.000	NO	bb

Compound name: PFHxA
Correlation coefficient: r = 0.999860, r^2 = 0.999719
Calibration curve: 1.39516 * x + 0.138496
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.13	1292.904	14757.339	0.438	0.2	-14.1	NO	1.000	NO	bb
2	2	170728M2_3	Standard	0.500	3.14	2294.264	14439.591	0.794	0.5	-6.0	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	3.13	4831.556	14702.263	1.643	1.1	7.8	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	3.14	5353.820	8433.100	3.174	2.2	8.8	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	3.14	22186.109	14339.198	7.736	5.4	8.9	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	3.14	41042.371	15042.279	13.642	9.7	-3.2	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	3.15	200035.875	14657.946	68.235	48.8	-2.4	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	3.14	411799.281	14800.772	139.114	99.6	-0.4	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	3.14	927431.500	13222.806	350.694	251.3	0.5	NO	1.000	NO	bb

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Compound name: PFHpA
Correlation coefficient: r = 0.999957, r^2 = 0.999914
Calibration curve: 1.17847 * x + 0.0681471
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.40	1204.282	43061.438	0.350	0.2	-4.5	NO	1.000	NO	bb
2	2	170728M2_3	Standard	0.500	3.40	2014.244	38433.738	0.655	0.5	-0.4	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	3.40	3878.673	40909.711	1.185	0.9	-5.2	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	3.40	4962.255	24182.768	2.565	2.1	5.9	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	3.41	19800.123	39156.566	6.321	5.3	6.1	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	3.41	37646.004	40354.555	11.661	9.8	-1.6	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	3.41	183598.906	38873.176	59.038	50.0	0.1	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	3.41	381024.406	40612.637	117.274	99.5	-0.5	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	3.41	849145.438	35974.605	295.050	250.3	0.1	NO	1.000	NO	bb

Compound name: PFHxS
Correlation coefficient: r = 0.999604, r^2 = 0.999209
Calibration curve: 1.66642 * x + 0.0527668
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.48	173.816	3693.206	0.588	0.3	28.5	NO	0.999	NO	MM
2	2	170728M2_3	Standard	0.500	3.48	211.907	3400.828	0.779	0.4	-12.9	NO	0.999	NO	MM
3	3	170728M2_4	Standard	1.000	3.47	425.566	3811.290	1.396	0.8	-19.4	NO	0.999	NO	MM
4	4	170728M2_5	Standard	2.000	3.47	583.868	1965.832	3.713	2.2	9.8	NO	0.999	NO	bb
5	5	170728M2_6	Standard	5.000	3.47	2141.738	3173.995	8.435	5.0	0.6	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	3.48	4660.597	3599.749	16.184	9.7	-3.2	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	3.48	23173.209	3541.580	81.790	49.0	-1.9	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	3.48	46227.219	3591.229	160.903	96.5	-3.5	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	3.48	96280.008	2835.098	424.500	254.7	1.9	NO	0.999	NO	bb

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Compound name: PFOA
Correlation coefficient: r = 0.999602, r^2 = 0.999203
Calibration curve: 0.972567 * x + 0.119743
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.60	1776.834	67432.422	0.329	0.2	-13.8	NO	0.999	NO	bb
2	2	170728M2_3	Standard	0.500	3.60	3428.433	69121.398	0.620	0.5	2.9	NO	0.999	NO	bb
3	3	170728M2_4	Standard	1.000	3.60	6017.603	65175.223	1.154	1.1	6.4	NO	0.999	NO	bb
4	4	170728M2_5	Standard	2.000	3.60	6766.019	37231.426	2.272	2.2	10.6	NO	0.999	NO	bb
5	5	170728M2_6	Standard	5.000	3.61	24916.359	65033.895	4.789	4.8	-4.0	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	3.60	50878.426	65066.762	9.774	9.9	-0.7	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	3.61	258837.422	65231.879	49.599	50.9	1.8	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	3.61	477892.000	64313.508	92.883	95.4	-4.6	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	3.61	1058067.125	53563.473	246.919	253.8	1.5	NO	0.999	NO	bb

Compound name: PFHpS
Correlation coefficient: r = 0.999698, r^2 = 0.999396
Calibration curve: 0.0834866 * x + 0.000361382
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.66	129.349	67432.422	0.024	0.3	13.1	NO	0.999	NO	bb
2	2	170728M2_3	Standard	0.500	3.66	184.534	69121.398	0.033	0.4	-20.9	NO	0.999	NO	bb
3	3	170728M2_4	Standard	1.000	3.65	440.810	65175.223	0.085	1.0	0.8	NO	0.999	NO	MM
4	4	170728M2_5	Standard	2.000	3.67	446.333	37231.426	0.150	1.8	-10.5	NO	0.999	NO	bb
5	5	170728M2_6	Standard	5.000	3.66	2501.044	65033.895	0.481	5.8	15.1	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	3.67	4417.773	65066.762	0.849	10.2	1.6	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	3.67	22320.723	65231.879	4.277	51.2	2.5	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	3.67	43490.797	64313.508	8.453	101.2	1.2	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	3.67	88324.172	53563.473	20.612	246.9	-1.2	NO	0.999	NO	bb

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Compound name: PFNA
Correlation coefficient: r = 0.999774, r^2 = 0.999549
Calibration curve: 1.0688 * x + 0.0838738
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.78	1355.064	56165.996	0.302	0.2	-18.5	NO	1.000	NO	bb
2	2	170728M2_3	Standard	0.500	3.78	2871.220	57557.055	0.624	0.5	1.0	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	3.78	5715.737	60117.641	1.188	1.0	3.3	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	3.78	6187.412	32443.916	2.384	2.2	7.6	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	3.78	26880.975	59082.828	5.687	5.2	4.9	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	3.79	51086.453	55947.012	11.414	10.6	6.0	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	3.79	225656.344	55181.797	51.117	47.7	-4.5	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	3.79	479043.500	56232.570	106.487	99.6	-0.4	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	3.79	1056532.875	49074.555	269.114	251.7	0.7	NO	1.000	NO	bb

Compound name: PFOSA
Correlation coefficient: r = 0.998852, r^2 = 0.997705
Calibration curve: 1.09922 * x + 0.0380461
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.79	212.952	7534.616	0.353	0.3	14.7	NO	0.998	NO	bb
2	2	170728M2_3	Standard	0.500	3.79	402.743	7838.506	0.642	0.5	9.9	NO	0.998	NO	bb
3	3	170728M2_4	Standard	1.000	3.78	641.875	7863.147	1.020	0.9	-10.6	NO	0.998	NO	bb
4	4	170728M2_5	Standard	2.000	3.79	796.114	4067.927	2.446	2.2	9.5	NO	0.998	NO	bb
5	5	170728M2_6	Standard	5.000	3.79	3167.917	8322.412	4.758	4.3	-14.1	NO	0.998	NO	bb
6	6	170728M2_7	Standard	10.000	3.80	6695.482	7844.739	10.669	9.7	-3.3	NO	0.998	NO	bb
7	7	170728M2_8	Standard	50.000	3.80	31041.506	7294.865	53.191	48.4	-3.3	NO	0.998	NO	bb
8	8	170728M2_9	Standard	100.000	3.79	58226.086	7074.365	102.882	93.6	-6.4	NO	0.998	NO	bb
9	9	170728M2_10	Standard	250.000	3.79	126557.727	5557.022	284.680	258.9	3.6	NO	0.998	NO	bb

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Compound name: PFOS
Coefficient of Determination: R^2 = 0.999381
Calibration curve: -8.2411e-005 * x^2 + 0.991329 * x + 0.038537
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.85	185.263	10386.165	0.223	0.2	-25.6	NO	0.999	NO	MM
2	2	170728M2_3	Standard	0.500	3.83	552.121	10949.846	0.630	0.6	19.4	NO	0.999	NO	bb
3	3	170728M2_4	Standard	1.000	3.83	874.687	11038.252	0.991	1.0	-4.0	NO	0.999	NO	bb
4	4	170728M2_5	Standard	2.000	3.83	1051.018	5675.427	2.315	2.3	14.8	NO	0.999	NO	bb
5	5	170728M2_6	Standard	5.000	3.83	4488.643	10976.905	5.111	5.1	2.4	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	3.83	9036.851	10238.276	11.033	11.1	11.0	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	3.84	40832.254	10447.924	48.852	49.4	-1.1	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	3.84	80281.375	10381.430	96.665	98.3	-1.7	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	3.84	173677.109	8917.339	243.454	250.8	0.3	NO	0.999	NO	bb

Compound name: PFDA
Correlation coefficient: r = 0.999404, r^2 = 0.998807
Calibration curve: 1.20688 * x + 0.163006
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.95	1834.598	60003.141	0.382	0.2	-27.4	NO	0.999	NO	bb
2	2	170728M2_3	Standard	0.500	3.95	3284.270	55549.078	0.739	0.5	-4.5	NO	0.999	NO	bb
3	3	170728M2_4	Standard	1.000	3.95	6330.603	53618.211	1.476	1.1	8.8	NO	0.999	NO	bb
4	4	170728M2_5	Standard	2.000	3.95	6936.152	30851.922	2.810	2.2	9.7	NO	0.999	NO	bb
5	5	170728M2_6	Standard	5.000	3.95	31825.025	59808.203	6.651	5.4	7.5	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	3.96	63066.832	64638.613	12.196	10.0	-0.3	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	3.96	307105.938	58663.914	65.438	54.1	8.2	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	3.96	539413.000	55892.832	120.636	99.8	-0.2	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	3.96	1346063.625	56744.188	296.520	245.6	-1.8	NO	0.999	NO	bb

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Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999878
Calibration curve: -0.00407341 * x^2 + 19.807 * x + -0.260375
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	3.96	435.997	12883.249	5.499	0.3	16.3	NO	1.000	NO	bd
2	2	170728M2_3	Standard	0.500	3.98	741.759	12942.593	9.313	0.5	-3.3	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	3.98	1500.287	13619.269	17.901	0.9	-8.3	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	3.98	1869.939	7508.003	40.472	2.1	2.9	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	3.98	8162.221	14192.388	93.456	4.7	-5.3	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	3.98	16022.469	13644.029	190.827	9.7	-3.3	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	3.99	73798.828	12178.927	984.677	50.2	0.5	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	3.99	144718.797	12044.903	1952.428	100.7	0.7	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	3.99	311738.625	10798.391	4691.211	249.7	-0.1	NO	1.000	NO	bb

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999787
Calibration curve: -0.00107779 * x^2 + 15.2465 * x + 0.807358
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	4.04	379.553	13002.753	4.743	0.3	3.3	NO	1.000	NO	bb
2	2	170728M2_3	Standard	0.500	4.04	831.407	13332.326	10.134	0.6	22.3	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	4.04	1236.473	13734.974	14.629	0.9	-9.3	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	4.04	1479.109	7359.929	32.657	2.1	4.5	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	4.05	6354.800	13694.013	75.409	4.9	-2.1	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	4.05	12531.979	12997.170	156.684	10.2	2.3	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	4.05	60396.695	12723.811	771.346	50.7	1.4	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	4.05	113763.313	12372.299	1494.188	98.6	-1.4	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	4.05	260195.766	11272.279	3750.955	250.4	0.2	NO	1.000	NO	bb

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Compound name: PFUnA
Coefficient of Determination: R^2 = 0.999945
Calibration curve: -0.000352587 * x^2 + 0.738655 * x + 0.0923596
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	4.11	1300.977	57359.027	0.284	0.3	3.5	NO	1.000	NO	bb
2	2	170728M2_3	Standard	0.500	4.11	2222.104	62862.797	0.442	0.5	-5.3	NO	1.000	NO	bb
3	3	170728M2_4	Standard	1.000	4.11	4280.404	62925.098	0.850	1.0	2.7	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	4.11	4679.629	38112.383	1.535	2.0	-2.3	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	4.11	20068.451	65242.195	3.845	5.1	1.9	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	4.12	38402.559	64369.324	7.457	10.0	0.2	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	4.12	181049.781	63436.871	35.675	49.3	-1.3	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	4.12	354982.063	62525.133	70.968	100.8	0.8	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	4.12	806806.375	62024.961	162.597	249.8	-0.1	NO	1.000	NO	bb

Compound name: PFDS
Coefficient of Determination: R^2 = 0.999598
Calibration curve: -4.79281e-005 * x^2 + 0.0714733 * x + -0.00107069
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	4.15	96.159	57359.027	0.021	0.3	23.3	NO	1.000	NO	MM
2	2	170728M2_3	Standard	0.500	4.17	132.913	62862.797	0.026	0.4	-23.0	NO	1.000	NO	MM
3	3	170728M2_4	Standard	1.000	4.17	352.819	62925.098	0.070	1.0	-0.4	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	4.15	460.965	38112.383	0.151	2.1	6.7	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	4.16	1773.629	65242.195	0.340	4.8	-4.3	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	4.16	3496.559	64369.324	0.679	9.6	-4.2	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	4.17	18043.170	63436.871	3.555	51.5	3.1	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	4.17	32985.578	62525.133	6.594	98.8	-1.2	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	4.17	73842.891	62024.961	14.882	250.2	0.1	NO	1.000	NO	bb

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Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998624
Calibration curve: 0.000483062 * x^2 + 0.770384 * x + 0.341437
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc.	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	4.26	92.309	5962.159	0.194			NO	0.999	NO	bbXI
2	2	170728M2_3	Standard	0.500	4.28	429.801	6995.869	0.768	0.6	10.7	NO	0.999	NO	MM
3	3	170728M2_4	Standard	1.000	4.26	454.014	6271.752	0.905	0.7	-26.9	NO	0.999	NO	bb
4	4	170728M2_5	Standard	2.000	4.27	533.506	3674.716	1.815	1.9	-4.5	NO	0.999	NO	bb
5	5	170728M2_6	Standard	5.000	4.27	2461.487	6599.834	4.662	5.6	11.8	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	4.29	4687.078	6719.549	8.719	10.8	8.0	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	4.28	22330.574	6608.889	42.236	52.6	5.3	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	4.28	42539.887	6820.428	77.964	95.1	-4.9	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	4.28	104320.703	5812.105	224.361	251.2	0.5	NO	0.999	NO	bb

Compound name: PFTrDA
Correlation coefficient: r = 0.999451, r^2 = 0.998903
Calibration curve: 9.7472 * x + 1.17215
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc.	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	4.43	1587.994	5962.159	3.329	0.2	-11.5	NO	0.999	NO	bb
2	2	170728M2_3	Standard	0.500	4.43	3275.602	6995.869	5.853	0.5	-4.0	NO	0.999	NO	MM
3	3	170728M2_4	Standard	1.000	4.43	5908.142	6271.752	11.775	1.1	8.8	NO	0.999	NO	bb
4	4	170728M2_5	Standard	2.000	4.44	6200.105	3674.716	21.090	2.0	2.2	NO	0.999	NO	bd
5	5	170728M2_6	Standard	5.000	4.44	28220.949	6599.834	53.450	5.4	7.3	NO	0.999	NO	bb
6	6	170728M2_7	Standard	10.000	4.44	54049.188	6719.549	100.545	10.2	1.9	NO	0.999	NO	bb
7	7	170728M2_8	Standard	50.000	4.45	253970.109	6608.889	480.357	49.2	-1.7	NO	0.999	NO	bb
8	8	170728M2_9	Standard	100.000	4.45	504655.469	6820.428	924.897	94.8	-5.2	NO	0.999	NO	bb
9	9	170728M2_10	Standard	250.000	4.44	1158187.375	5812.105	2490.895	255.4	2.2	NO	0.999	NO	bb

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Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999781
Calibration curve: -0.000168072 * x^2 + 1.03773 * x + 0.147897
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	0.250	4.61	1104.568	41761.434	0.331	0.2	-29.6	NO	1.000	NO	MM
2	2	170728M2_3	Standard	0.500	4.61	2480.283	43223.504	0.717	0.5	9.7	NO	1.000	NO	MM
3	3	170728M2_4	Standard	1.000	4.61	4145.502	42342.496	1.224	1.0	3.7	NO	1.000	NO	bb
4	4	170728M2_5	Standard	2.000	4.61	4391.375	22739.943	2.414	2.2	9.2	NO	1.000	NO	bb
5	5	170728M2_6	Standard	5.000	4.61	19689.096	43281.676	5.686	5.3	6.8	NO	1.000	NO	bb
6	6	170728M2_7	Standard	10.000	4.62	37513.137	44255.934	10.596	10.1	0.8	NO	1.000	NO	bb
7	7	170728M2_8	Standard	50.000	4.62	178771.672	43177.305	51.755	50.1	0.3	NO	1.000	NO	bb
8	8	170728M2_9	Standard	100.000	4.62	355712.438	44024.184	100.999	98.8	-1.2	NO	1.000	NO	bb
9	9	170728M2_10	Standard	250.000	4.62	812877.375	40719.973	249.533	250.5	0.2	NO	1.000	NO	bb

Compound name: 13C3-PFBA
Response Factor: 1.06832
RRF SD: 0.0716737, Relative SD: 6.70898
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	1.34	15742.173	14679.223	13.405	12.5	0.4	NO		NO	MM
2	2	170728M2_3	Standard	12.500	1.35	15139.798	14157.839	13.367	12.5	0.1	NO		NO	MM
3	3	170728M2_4	Standard	12.500	1.35	15315.615	13901.761	13.771	12.9	3.1	NO		NO	MM
4	4	170728M2_5	Standard	12.500	1.35	8684.454	7966.370	13.627	12.8	2.0	NO		NO	MM
5	5	170728M2_6	Standard	12.500	1.35	15018.660	13542.045	13.863	13.0	3.8	NO		NO	MM
6	6	170728M2_7	Standard	12.500	1.35	15259.036	14135.810	13.493	12.6	1.0	NO		NO	MM
7	7	170728M2_8	Standard	12.500	1.35	15593.523	13890.406	14.033	13.1	5.1	NO		NO	MM
8	8	170728M2_9	Standard	12.500	1.35	15681.832	14422.259	13.592	12.7	1.8	NO		NO	MM
9	9	170728M2_10	Standard	12.500	1.36	13830.456	15665.605	11.036	10.3	-17.4	NO		NO	MM

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Compound name: 13C3-PFPeA
Response Factor: 0.27137
RRF SD: 0.0158354, Relative SD: 5.83535
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	2.65	29626.736	43858.891	3.378	12.4	-0.4	NO		NO	MM
2	2	170728M2_3	Standard	12.500	2.65	29534.408	43343.379	3.407	12.6	0.4	NO		NO	MM
3	3	170728M2_4	Standard	12.500	2.65	29804.117	42543.984	3.503	12.9	3.3	NO		NO	MM
4	4	170728M2_5	Standard	12.500	2.65	16510.811	24635.240	3.351	12.3	-1.2	NO		NO	MM
5	5	170728M2_6	Standard	12.500	2.65	28830.305	42398.152	3.400	12.5	0.2	NO		NO	MM
6	6	170728M2_7	Standard	12.500	2.65	30611.281	42712.195	3.583	13.2	5.6	NO		NO	MM
7	7	170728M2_8	Standard	12.500	2.66	30216.350	43123.621	3.503	12.9	3.3	NO		NO	MM
8	8	170728M2_9	Standard	12.500	2.65	30196.234	43136.543	3.500	12.9	3.2	NO		NO	MM
9	9	170728M2_10	Standard	12.500	2.66	26920.408	46352.453	2.904	10.7	-14.4	NO		NO	MM

Compound name: 13C3-PFBS
Response Factor: 0.0330768
RRF SD: 0.00312302, Relative SD: 9.44172
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	2.89	3725.665	43858.891	0.425	12.8	2.7	NO		NO	bb
2	2	170728M2_3	Standard	12.500	2.89	3680.041	43343.379	0.425	12.8	2.7	NO		NO	bb
3	3	170728M2_4	Standard	12.500	2.90	3805.429	42543.984	0.447	13.5	8.2	NO		NO	bb
4	4	170728M2_5	Standard	12.500	2.90	2141.663	24635.240	0.435	13.1	5.1	NO		NO	bb
5	5	170728M2_6	Standard	12.500	2.89	3529.564	42398.152	0.416	12.6	0.7	NO		NO	bb
6	6	170728M2_7	Standard	12.500	2.89	3732.698	42712.195	0.437	13.2	5.7	NO		NO	bb
7	7	170728M2_8	Standard	12.500	2.90	3533.129	43123.621	0.410	12.4	-0.9	NO		NO	bb
8	8	170728M2_9	Standard	12.500	2.90	3559.104	43136.543	0.413	12.5	-0.2	NO		NO	bb
9	9	170728M2_10	Standard	12.500	2.90	2916.369	46352.453	0.315	9.5	-23.9	NO		NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 0.335131
RRF SD: 0.0194922, Relative SD: 5.81629
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	5.000	3.13	14757.339	43858.891	1.682	5.0	0.4	NO		NO	bb
2	2	170728M2_3	Standard	5.000	3.14	14439.591	43343.379	1.666	5.0	-0.6	NO		NO	bb
3	3	170728M2_4	Standard	5.000	3.13	14702.263	42543.984	1.728	5.2	3.1	NO		NO	bb
4	4	170728M2_5	Standard	5.000	3.13	8433.100	24635.240	1.712	5.1	2.1	NO		NO	bb
5	5	170728M2_6	Standard	5.000	3.14	14339.198	42398.152	1.691	5.0	0.9	NO		NO	bb
6	6	170728M2_7	Standard	5.000	3.14	15042.279	42712.195	1.761	5.3	5.1	NO		NO	bb
7	7	170728M2_8	Standard	5.000	3.14	14657.946	43123.621	1.700	5.1	1.4	NO		NO	bb
8	8	170728M2_9	Standard	5.000	3.14	14800.772	43136.543	1.716	5.1	2.4	NO		NO	bb
9	9	170728M2_10	Standard	5.000	3.14	13222.806	46352.453	1.426	4.3	-14.9	NO		NO	bb

Compound name: 13C4-PFHpA
Response Factor: 0.368851
RRF SD: 0.0255164, Relative SD: 6.91781
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.40	43061.438	43858.891	4.909	13.3	6.5	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.40	38433.738	43343.379	4.434	12.0	-3.8	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.41	40909.711	42543.984	4.808	13.0	4.3	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.40	24182.768	24635.240	4.908	13.3	6.5	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.41	39156.566	42398.152	4.618	12.5	0.2	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.41	40354.555	42712.195	4.724	12.8	2.5	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.41	38873.176	43123.621	4.507	12.2	-2.2	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.41	40612.637	43136.543	4.707	12.8	2.1	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.41	35974.605	46352.453	3.881	10.5	-15.8	NO		NO	bb

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Compound name: 18O2-PFHxS
Response Factor: 0.460288
RRF SD: 0.0389674, Relative SD: 8.46587
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 170728M2_2	Standard	12.500	3.47	3693.206	7812.813	5.909	12.8	2.7	NO		NO	bb
2	2 170728M2_3	Standard	12.500	3.47	3400.828	7661.151	5.549	12.1	-3.6	NO		NO	bb
3	3 170728M2_4	Standard	12.500	3.47	3811.290	7158.323	6.655	14.5	15.7	NO		NO	bb
4	4 170728M2_5	Standard	12.500	3.47	1965.832	4300.112	5.714	12.4	-0.7	NO		NO	bb
5	5 170728M2_6	Standard	12.500	3.48	3173.995	6977.436	5.686	12.4	-1.2	NO		NO	bb
6	6 170728M2_7	Standard	12.500	3.47	3599.749	7970.943	5.645	12.3	-1.9	NO		NO	bb
7	7 170728M2_8	Standard	12.500	3.49	3541.580	7411.993	5.973	13.0	3.8	NO		NO	bb
8	8 170728M2_9	Standard	12.500	3.48	3591.229	7651.521	5.867	12.7	2.0	NO		NO	bb
9	9 170728M2_10	Standard	12.500	3.48	2835.098	7407.810	4.784	10.4	-16.9	NO		NO	bb

Compound name: 13C2-PFOA
Response Factor: 1.29343
RRF SD: 0.0978713, Relative SD: 7.56682
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 170728M2_2	Standard	12.500	3.60	67432.422	50353.582	16.740	12.9	3.5	NO		NO	bb
2	2 170728M2_3	Standard	12.500	3.60	69121.398	51722.332	16.705	12.9	3.3	NO		NO	bb
3	3 170728M2_4	Standard	12.500	3.60	65175.223	51349.039	15.866	12.3	-1.9	NO		NO	bb
4	4 170728M2_5	Standard	12.500	3.60	37231.426	27008.686	17.231	13.3	6.6	NO		NO	bb
5	5 170728M2_6	Standard	12.500	3.61	65033.895	47128.594	17.249	13.3	6.7	NO		NO	bb
6	6 170728M2_7	Standard	12.500	3.60	65066.762	50246.984	16.187	12.5	0.1	NO		NO	bb
7	7 170728M2_8	Standard	12.500	3.61	65231.879	50282.098	16.216	12.5	0.3	NO		NO	bb
8	8 170728M2_9	Standard	12.500	3.60	64313.508	49800.309	16.143	12.5	-0.2	NO		NO	bb
9	9 170728M2_10	Standard	12.500	3.61	53563.473	50823.395	13.174	10.2	-18.5	NO		NO	bb

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Compound name: 13C5-PFNA
Response Factor: 0.985933
RRF SD: 0.0816002, Relative SD: 8.27645
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.78	56165.996	55554.719	12.638	12.8	2.5	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.78	57557.055	59404.484	12.111	12.3	-1.7	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.78	60117.641	56554.453	13.288	13.5	7.8	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.78	32443.916	30540.498	13.279	13.5	7.7	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.78	59082.828	60275.895	12.253	12.4	-0.6	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.78	55947.012	55392.355	12.625	12.8	2.4	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.79	55181.797	55075.922	12.524	12.7	1.6	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.79	56232.570	56839.453	12.367	12.5	0.3	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.79	49074.555	62380.453	9.834	10.0	-20.2	NO		NO	bb

Compound name: 13C8-PFOSA
Response Factor: 0.132492
RRF SD: 0.0168341, Relative SD: 12.7057
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.79	7534.616	55026.387	1.712	12.9	3.3	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.79	7838.506	57174.012	1.714	12.9	3.5	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.78	7863.147	56604.801	1.736	13.1	4.8	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.79	4067.927	32976.875	1.542	11.6	-6.9	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.79	8322.412	54183.844	1.920	14.5	15.9	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.79	7844.739	56154.422	1.746	13.2	5.4	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.79	7294.865	54787.105	1.664	12.6	0.5	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.79	7074.365	51641.449	1.712	12.9	3.4	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.79	5557.022	59947.359	1.159	8.7	-30.0	NO		NO	bb

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Compound name: 13C8-PFOS
Response Factor: 1.18433
RRF SD: 0.0947906, Relative SD: 8.00375
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.83	10386.165	8684.470	14.949	12.6	1.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.83	10949.846	8914.332	15.354	13.0	3.7	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.83	11038.252	8566.251	16.107	13.6	8.8	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.83	5675.427	5073.126	13.984	11.8	-5.5	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.83	10976.905	9069.241	15.129	12.8	2.2	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.83	10238.276	9441.893	13.554	11.4	-8.4	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.84	10447.924	8412.276	15.525	13.1	4.9	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.84	10381.430	8094.951	16.031	13.5	8.3	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.84	8917.339	8844.576	12.603	10.6	-14.9	NO		NO	bb

Compound name: 13C2-PFDA
Response Factor: 0.997715
RRF SD: 0.0821401, Relative SD: 8.23282
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.95	60003.141	60101.680	12.480	12.5	0.1	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.95	55549.078	61783.742	11.239	11.3	-9.9	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.95	53618.211	49093.789	13.652	13.7	9.5	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.95	30851.922	30032.572	12.841	12.9	3.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.95	59808.203	63988.594	11.683	11.7	-6.3	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.95	64638.613	57573.766	14.034	14.1	12.5	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.96	58663.914	57140.258	12.833	12.9	2.9	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.96	55892.832	55938.863	12.490	12.5	0.1	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.96	56744.188	64531.480	10.992	11.0	-11.9	NO		NO	bb

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Compound name: d3-N-MeFOSAA
Response Factor: 0.0176867
RRF SD: 0.0016968, Relative SD: 9.59363
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	162.500	3.97	12883.249	55026.387	2.927	165.5	1.8	NO		NO	bb
2	2	170728M2_3	Standard	162.500	3.98	12942.593	57174.012	2.830	160.0	-1.5	NO		NO	bb
3	3	170728M2_4	Standard	162.500	3.97	13619.269	56604.801	3.008	170.0	4.6	NO		NO	bb
4	4	170728M2_5	Standard	162.500	3.98	7508.003	32976.875	2.846	160.9	-1.0	NO		NO	bb
5	5	170728M2_6	Standard	162.500	3.98	14192.388	54183.844	3.274	185.1	13.9	NO		NO	bb
6	6	170728M2_7	Standard	162.500	3.98	13644.029	56154.422	3.037	171.7	5.7	NO		NO	bb
7	7	170728M2_8	Standard	162.500	3.99	12178.927	54787.105	2.779	157.1	-3.3	NO		NO	bb
8	8	170728M2_9	Standard	162.500	3.99	12044.903	51641.449	2.916	164.8	1.4	NO		NO	bb
9	9	170728M2_10	Standard	162.500	3.98	10798.391	59947.359	2.252	127.3	-21.7	NO		NO	bb

Compound name: d5-N-EtFOSAA
Response Factor: 0.0177723
RRF SD: 0.00139291, Relative SD: 7.83752
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	162.500	4.04	13002.753	55026.387	2.954	166.2	2.3	NO		NO	bb
2	2	170728M2_3	Standard	162.500	4.04	13332.326	57174.012	2.915	164.0	0.9	NO		NO	bb
3	3	170728M2_4	Standard	162.500	4.04	13734.974	56604.801	3.033	170.7	5.0	NO		NO	bb
4	4	170728M2_5	Standard	162.500	4.04	7359.929	32976.875	2.790	157.0	-3.4	NO		NO	bb
5	5	170728M2_6	Standard	162.500	4.04	13694.013	54183.844	3.159	177.8	9.4	NO		NO	bb
6	6	170728M2_7	Standard	162.500	4.05	12997.170	56154.422	2.893	162.8	0.2	NO		NO	bb
7	7	170728M2_8	Standard	162.500	4.05	12723.811	54787.105	2.903	163.3	0.5	NO		NO	bb
8	8	170728M2_9	Standard	162.500	4.05	12372.299	51641.449	2.995	168.5	3.7	NO		NO	bb
9	9	170728M2_10	Standard	162.500	4.05	11272.279	59947.359	2.350	132.3	-18.6	NO		NO	bb

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Compound name: 13C2-PFUnA
Response Factor: 1.12922
RRF SD: 0.0629902, Relative SD: 5.57822
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	4.11	57359.027	55026.387	13.030	11.5	-7.7	NO		NO	bb
2	2	170728M2_3	Standard	12.500	4.12	62862.797	57174.012	13.744	12.2	-2.6	NO		NO	bb
3	3	170728M2_4	Standard	12.500	4.11	62925.098	56604.801	13.896	12.3	-1.6	NO		NO	bb
4	4	170728M2_5	Standard	12.500	4.11	38112.383	32976.875	14.447	12.8	2.3	NO		NO	bb
5	5	170728M2_6	Standard	12.500	4.12	65242.195	54183.844	15.051	13.3	6.6	NO		NO	bb
6	6	170728M2_7	Standard	12.500	4.12	64369.324	56154.422	14.329	12.7	1.5	NO		NO	bb
7	7	170728M2_8	Standard	12.500	4.12	63436.871	54787.105	14.473	12.8	2.5	NO		NO	bb
8	8	170728M2_9	Standard	12.500	4.12	62525.133	51641.449	15.134	13.4	7.2	NO		NO	bb
9	9	170728M2_10	Standard	12.500	4.12	62024.961	59947.359	12.933	11.5	-8.4	NO		NO	bb

Compound name: 13C2-PFDoA
Response Factor: 0.116007
RRF SD: 0.0102256, Relative SD: 8.81464
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	4.27	5962.159	55026.387	1.354	11.7	-6.6	NO		NO	bb
2	2	170728M2_3	Standard	12.500	4.27	6995.869	57174.012	1.530	13.2	5.5	NO		NO	bd
3	3	170728M2_4	Standard	12.500	4.27	6271.752	56604.801	1.385	11.9	-4.5	NO		NO	bb
4	4	170728M2_5	Standard	12.500	4.27	3674.716	32976.875	1.393	12.0	-3.9	NO		NO	bb
5	5	170728M2_6	Standard	12.500	4.27	6599.834	54183.844	1.523	13.1	5.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	4.28	6719.549	56154.422	1.496	12.9	3.2	NO		NO	bb
7	7	170728M2_8	Standard	12.500	4.28	6608.889	54787.105	1.508	13.0	4.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	4.28	6820.428	51641.449	1.651	14.2	13.8	NO		NO	bb
9	9	170728M2_10	Standard	12.500	4.28	5812.105	59947.359	1.212	10.4	-16.4	NO		NO	bb

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Compound name: 13C2-PFTeDA
Response Factor: 0.762144
RRF SD: 0.0538952, Relative SD: 7.07152
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	4.60	41761.434	55026.387	9.487	12.4	-0.4	NO		NO	bb
2	2	170728M2_3	Standard	12.500	4.61	43223.504	57174.012	9.450	12.4	-0.8	NO		NO	bb
3	3	170728M2_4	Standard	12.500	4.61	42342.496	56604.801	9.350	12.3	-1.9	NO		NO	bb
4	4	170728M2_5	Standard	12.500	4.61	22739.943	32976.875	8.620	11.3	-9.5	NO		NO	bb
5	5	170728M2_6	Standard	12.500	4.62	43281.676	54183.844	9.985	13.1	4.8	NO		NO	bb
6	6	170728M2_7	Standard	12.500	4.62	44255.934	56154.422	9.851	12.9	3.4	NO		NO	bb
7	7	170728M2_8	Standard	12.500	4.63	43177.305	54787.105	9.851	12.9	3.4	NO		NO	bb
8	8	170728M2_9	Standard	12.500	4.63	44024.184	51641.449	10.656	14.0	11.9	NO		NO	bb
9	9	170728M2_10	Standard	12.500	4.62	40719.973	59947.359	8.491	11.1	-10.9	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 1.30185e-016, Relative SD: 1.30185e-014
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	1.34	14679.223	14679.223	12.500	12.5	0.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	1.35	14157.839	14157.839	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	1.35	13901.761	13901.761	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	1.35	7966.370	7966.370	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	1.36	13542.045	13542.045	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	1.36	14135.810	14135.810	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	1.36	13890.406	13890.406	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	1.35	14422.259	14422.259	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	1.36	15665.605	15665.605	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	5.000	3.13	43858.891	43858.891	5.000	5.0	0.0	NO		NO	bb
2	2	170728M2_3	Standard	5.000	3.14	43343.379	43343.379	5.000	5.0	0.0	NO		NO	bb
3	3	170728M2_4	Standard	5.000	3.13	42543.984	42543.984	5.000	5.0	0.0	NO		NO	bb
4	4	170728M2_5	Standard	5.000	3.14	24635.240	24635.240	5.000	5.0	0.0	NO		NO	bb
5	5	170728M2_6	Standard	5.000	3.14	42398.152	42398.152	5.000	5.0	0.0	NO		NO	bb
6	6	170728M2_7	Standard	5.000	3.14	42712.195	42712.195	5.000	5.0	0.0	NO		NO	bb
7	7	170728M2_8	Standard	5.000	3.14	43123.621	43123.621	5.000	5.0	0.0	NO		NO	bb
8	8	170728M2_9	Standard	5.000	3.14	43136.543	43136.543	5.000	5.0	0.0	NO		NO	bb
9	9	170728M2_10	Standard	5.000	3.14	46352.453	46352.453	5.000	5.0	0.0	NO		NO	bb

Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 3.92523e-017, Relative SD: 3.92523e-015
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.47	7812.813	7812.813	12.500	12.5	0.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.47	7661.151	7661.151	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.48	7158.323	7158.323	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.47	4300.112	4300.112	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.48	6977.436	6977.436	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.48	7970.943	7970.943	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.48	7411.993	7411.993	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.48	7651.521	7651.521	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.49	7407.810	7407.810	12.500	12.5	0.0	NO		NO	bb

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:10:19 Pacific Daylight Time
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Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.60	50353.582	50353.582	12.500	12.5	0.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.60	51722.332	51722.332	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.60	51349.039	51349.039	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.60	27008.686	27008.686	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.60	47128.594	47128.594	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.61	50246.984	50246.984	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.61	50282.098	50282.098	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.60	49800.309	49800.309	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.61	50823.395	50823.395	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 1.30185e-016, Relative SD: 1.30185e-014
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.78	55554.719	55554.719	12.500	12.5	0.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.78	59404.484	59404.484	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.78	56554.453	56554.453	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.78	30540.498	30540.498	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.78	60275.895	60275.895	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.79	55392.355	55392.355	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.79	55075.922	55075.922	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.79	56839.453	56839.453	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.78	62380.453	62380.453	12.500	12.5	0.0	NO		NO	bb

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:10:19 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:11:02 Pacific Daylight Time

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.83	8684.470	8684.470	12.500	12.5	0.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.83	8914.332	8914.332	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.83	8566.251	8566.251	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.83	5073.126	5073.126	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.83	9069.241	9069.241	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.84	9441.893	9441.893	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.84	8412.276	8412.276	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.84	8094.951	8094.951	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.84	8844.576	8844.576	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 8.77708e-017, Relative SD: 8.77708e-015
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	3.95	60101.680	60101.680	12.500	12.5	0.0	NO		NO	bb
2	2	170728M2_3	Standard	12.500	3.95	61783.742	61783.742	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	3.94	49093.789	49093.789	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	3.95	30032.572	30032.572	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	3.95	63988.594	63988.594	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	3.95	57573.766	57573.766	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	3.95	57140.258	57140.258	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	3.96	55938.863	55938.863	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	3.95	64531.480	64531.480	12.500	12.5	0.0	NO		NO	bb

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

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Compound name: 13C7-PFUnA
Response Factor: 1
RRF SD: 3.92523e-017, Relative SD: 3.92523e-015
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc.	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170728M2_2	Standard	12.500	4.11	55026.387	55026.387	12.500	12.5	0.0	NO		NO	MM
2	2	170728M2_3	Standard	12.500	4.12	57174.012	57174.012	12.500	12.5	0.0	NO		NO	bb
3	3	170728M2_4	Standard	12.500	4.11	56604.801	56604.801	12.500	12.5	0.0	NO		NO	bb
4	4	170728M2_5	Standard	12.500	4.11	32976.875	32976.875	12.500	12.5	0.0	NO		NO	bb
5	5	170728M2_6	Standard	12.500	4.12	54183.844	54183.844	12.500	12.5	0.0	NO		NO	bb
6	6	170728M2_7	Standard	12.500	4.12	56154.422	56154.422	12.500	12.5	0.0	NO		NO	bb
7	7	170728M2_8	Standard	12.500	4.12	54787.105	54787.105	12.500	12.5	0.0	NO		NO	bb
8	8	170728M2_9	Standard	12.500	4.12	51641.449	51641.449	12.500	12.5	0.0	NO		NO	bb
9	9	170728M2_10	Standard	12.500	4.12	59947.359	59947.359	12.500	12.5	0.0	NO		NO	bb

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 31, 2017 08:41:44 Pacific Daylight Time
Printed: Monday, July 31, 2017 08:42:20 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170728M2_1	IPA	28-Jul-17	16:09:52
2	170728M2_2	ST170728M2-1 PFC CS-2 17G2824	28-Jul-17	16:20:47
3	170728M2_3	ST170728M2-2 PFC CS-1 17G2825	28-Jul-17	16:31:32
4	170728M2_4	ST170728M2-3 PFC CS0 17G2826	28-Jul-17	16:42:11
5	170728M2_5	ST170728M2-4 PFC CS1 17G2827	28-Jul-17	16:52:57
6	170728M2_6	ST170728M2-5 PFC CS2 17G2828	28-Jul-17	17:03:36
7	170728M2_7	ST170728M2-6 PFC CS3 17G2829	28-Jul-17	17:14:14
8	170728M2_8	ST170728M2-7 PFC CS4 17G2830	28-Jul-17	17:24:53
9	170728M2_9	ST170728M2-8 PFC CS5 17G2831	28-Jul-17	17:35:31
10	170728M2_10	ST170728M2-9 PFC CS6 17G2801	28-Jul-17	17:46:09
11	170728M2_11	ST170728M2-10 PFC CS7 17G2802	28-Jul-17	17:56:56
12	170728M2_12	IPA	28-Jul-17	18:07:42
13	170728M2_13	SS170728M2-1 PFC SSS 17G2823	28-Jul-17	18:18:40
14	170728M2_14	IPA	28-Jul-17	18:29:24

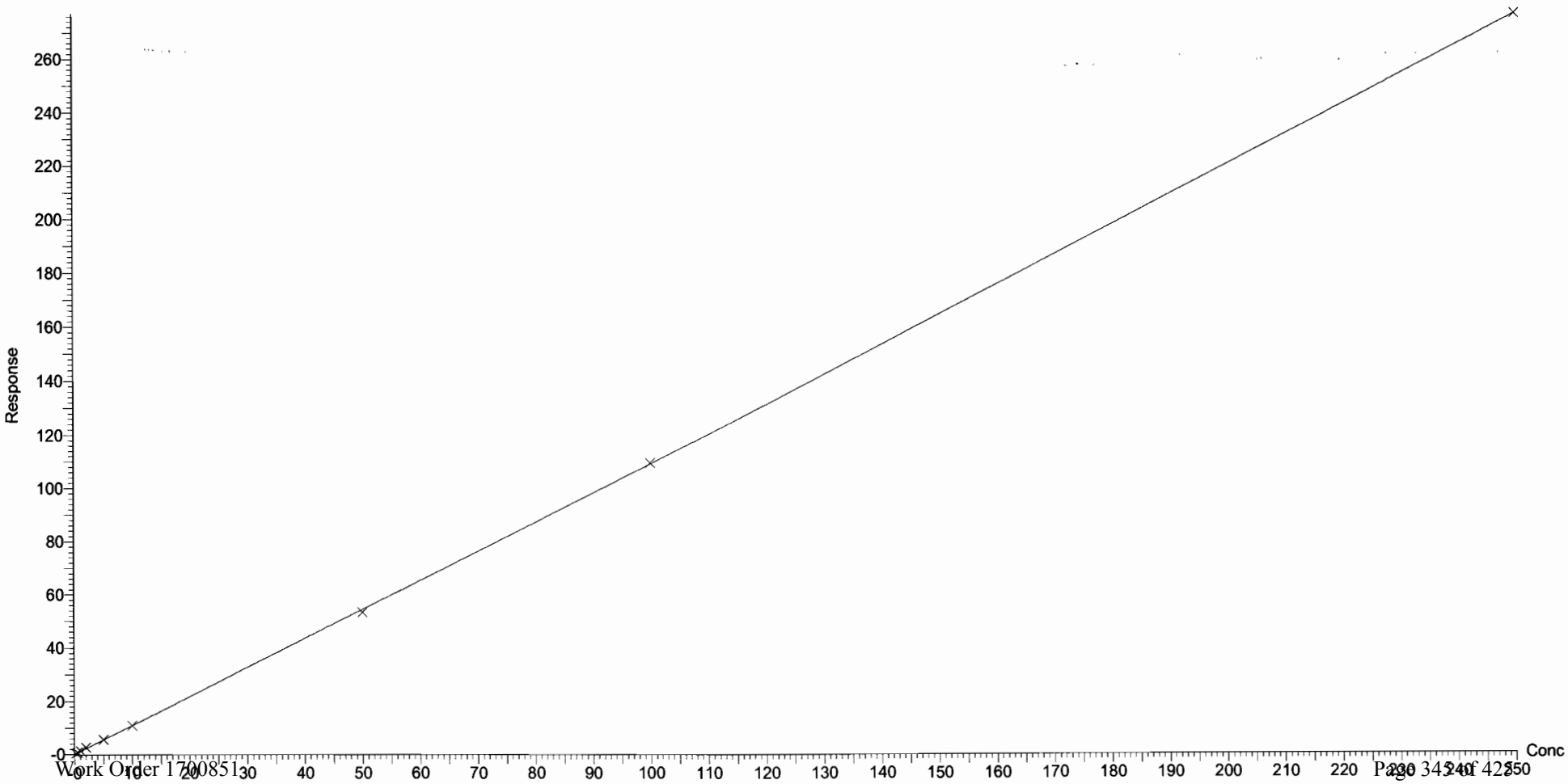
Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 28 Jul 2017 08:40:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:05:03

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999678
Calibration curve: 0.000110804 * x^2 + 1.07999 * x + 0.11163
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

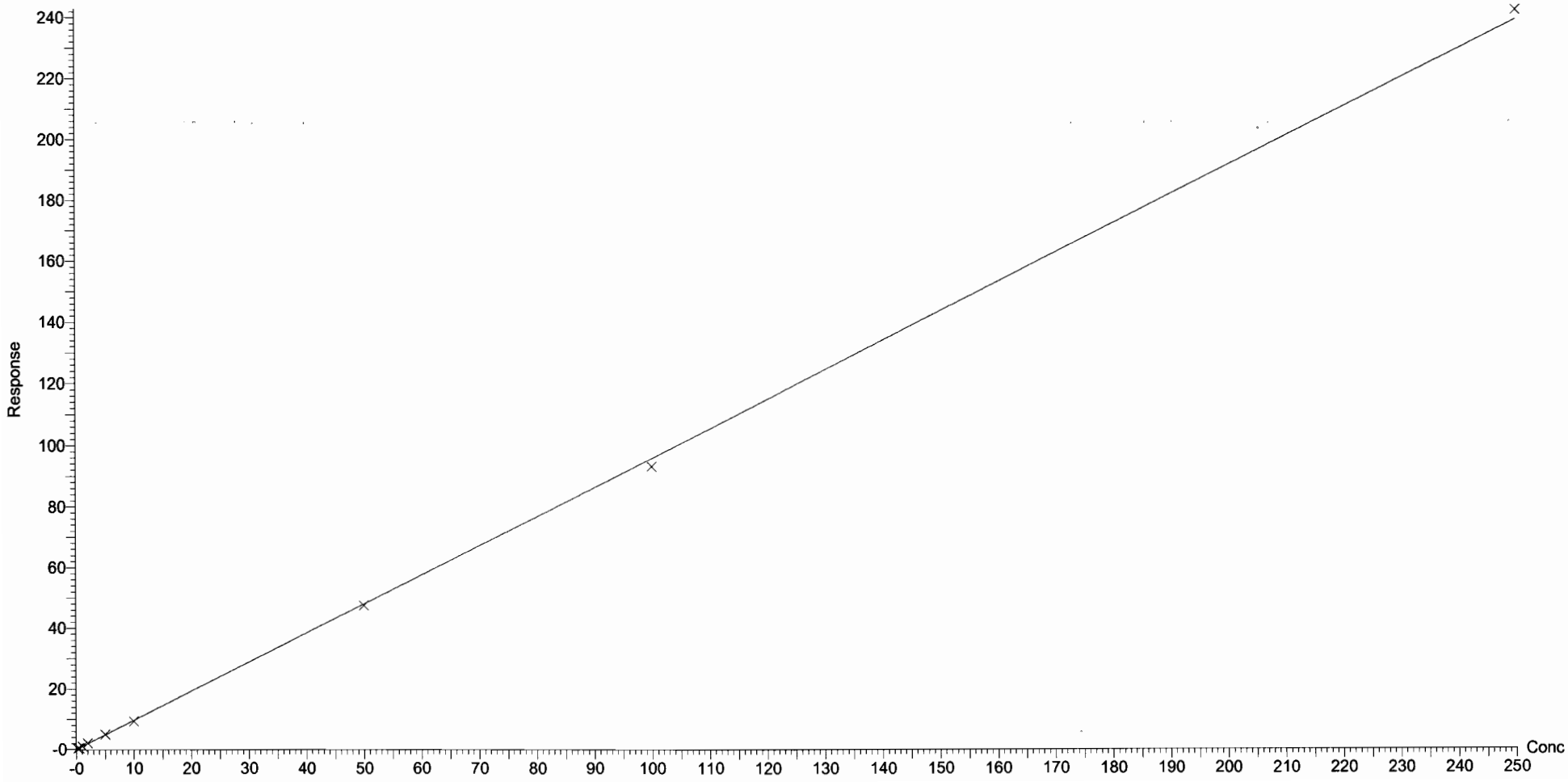


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

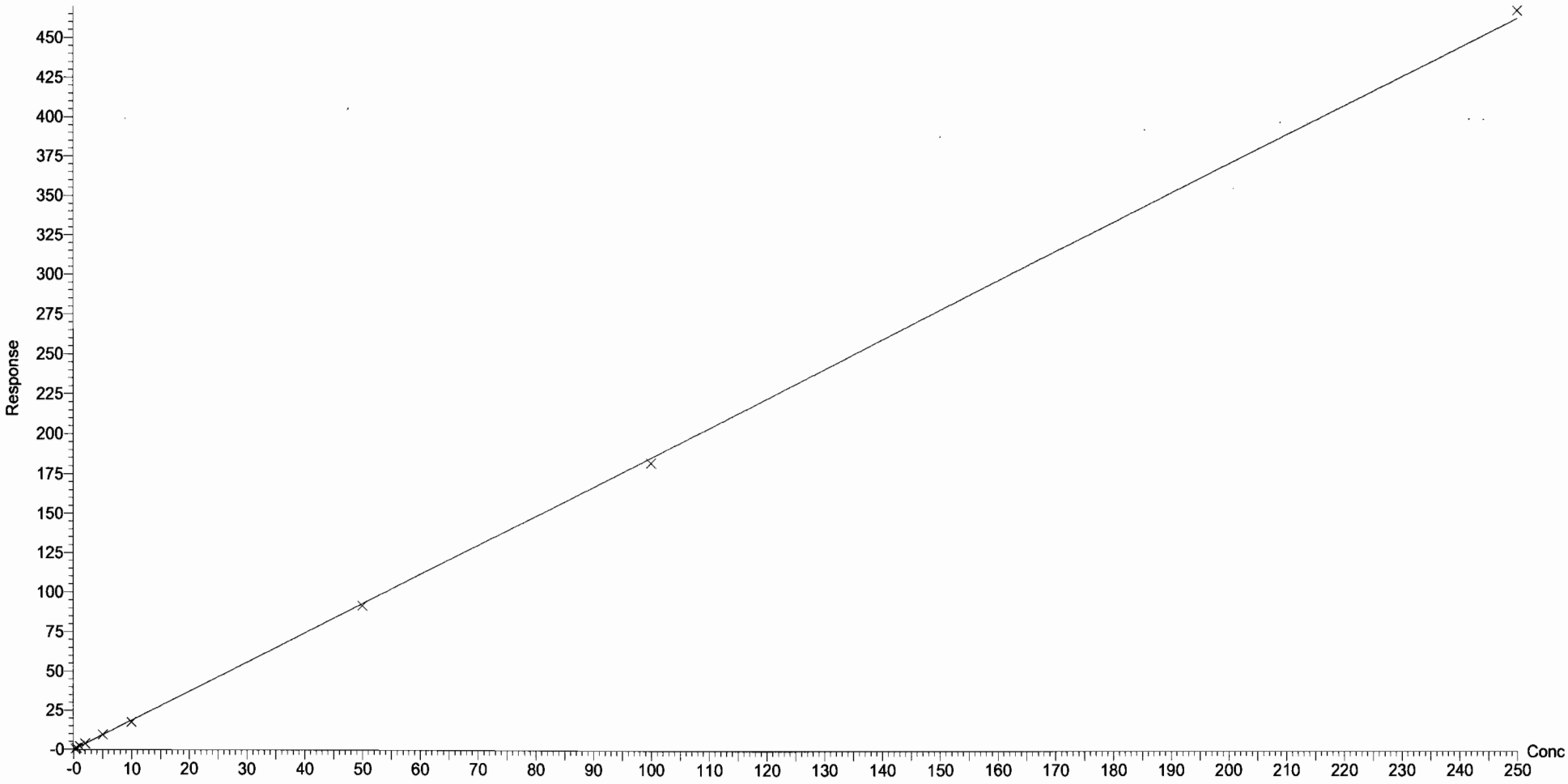
Compound name: PFPeA
Correlation coefficient: r = 0.999801, r^2 = 0.999602
Calibration curve: 0.958373 * x + 0.0576289
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

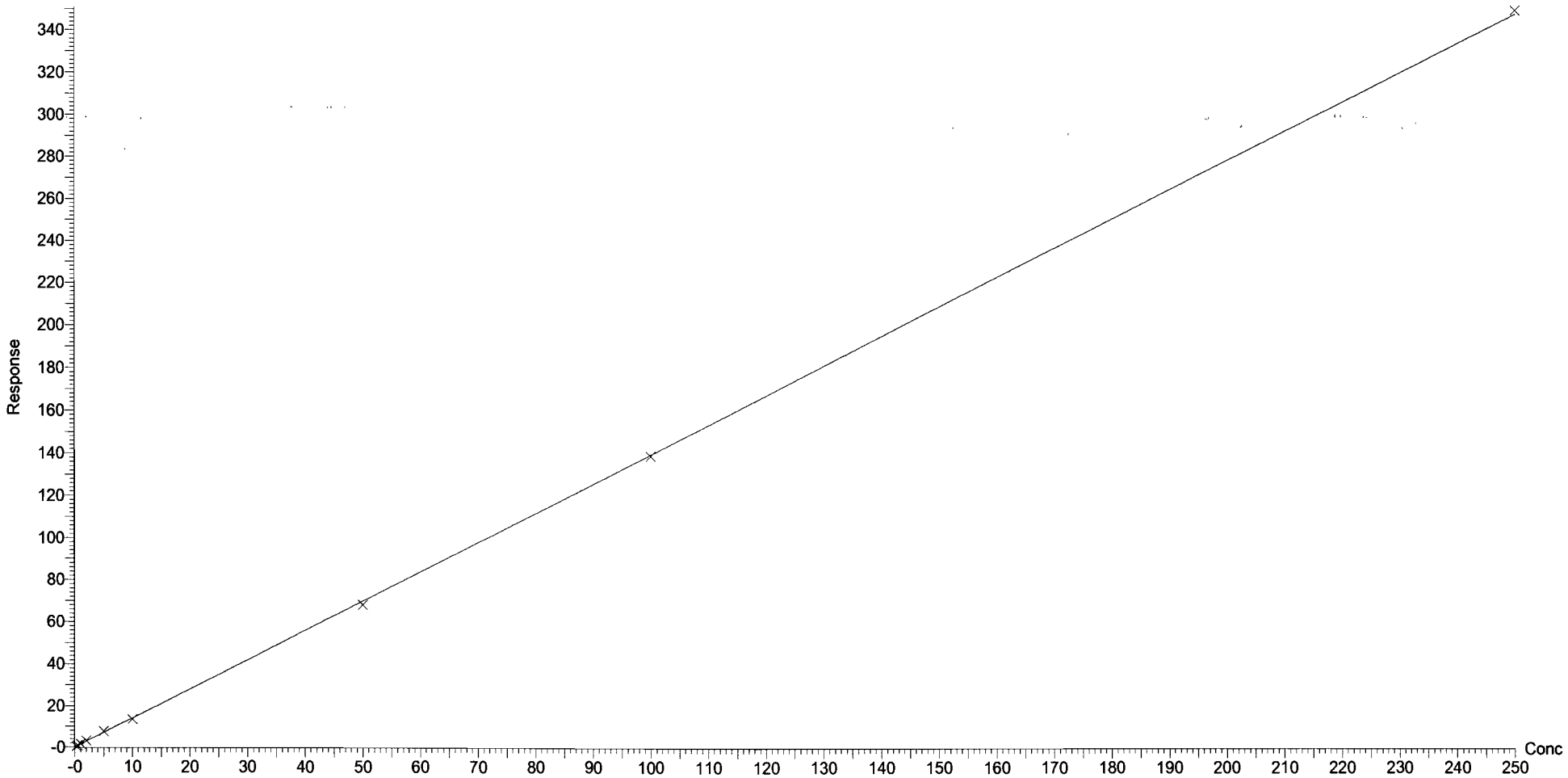
Compound name: PFBS
Correlation coefficient: r = 0.999861, r^2 = 0.999721
Calibration curve: 1.85784 * x + -0.00404936
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

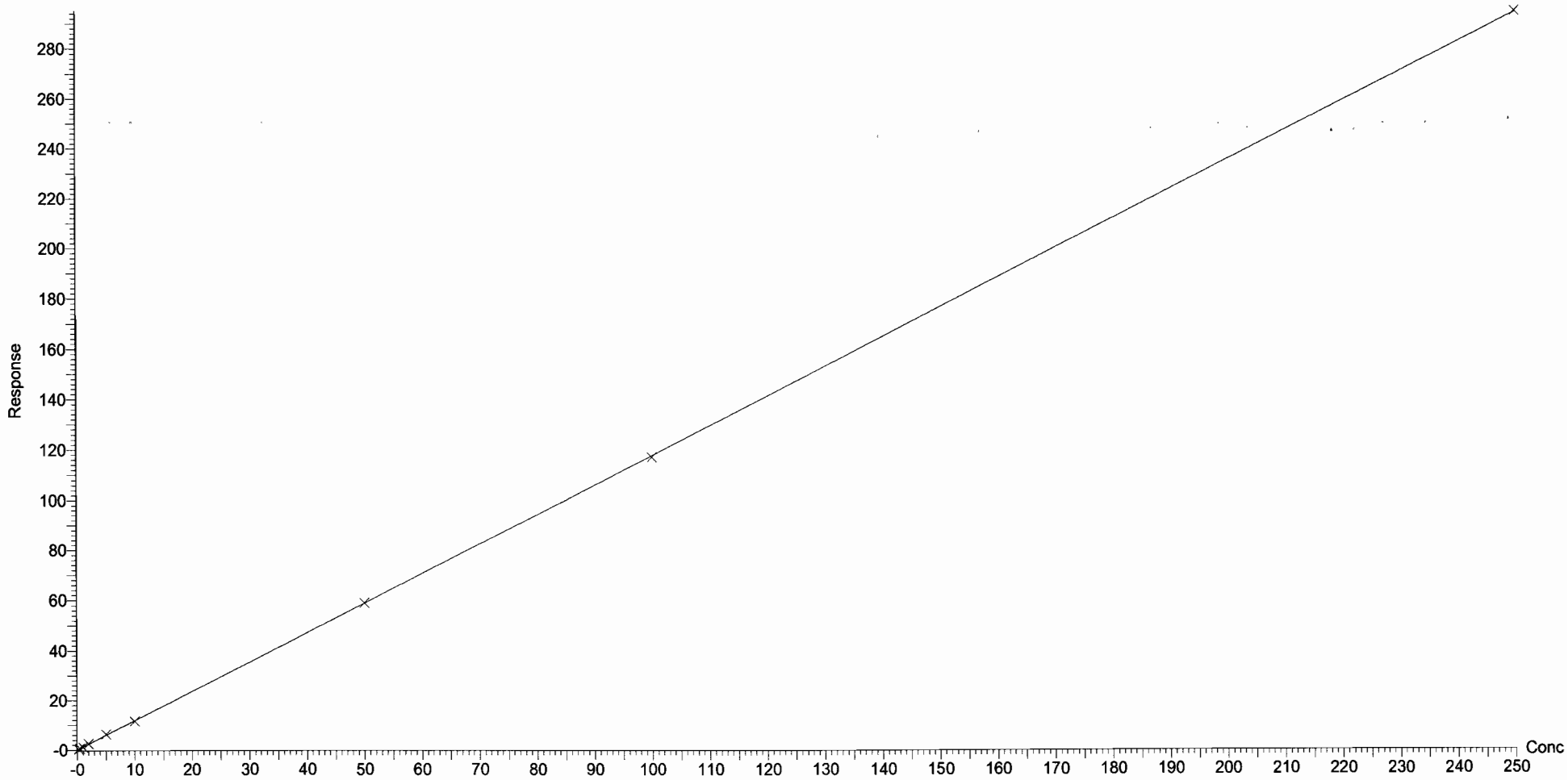
Compound name: PFHxA
Correlation coefficient: r = 0.999860, r^2 = 0.999719
Calibration curve: 1.39516 * x + 0.138496
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

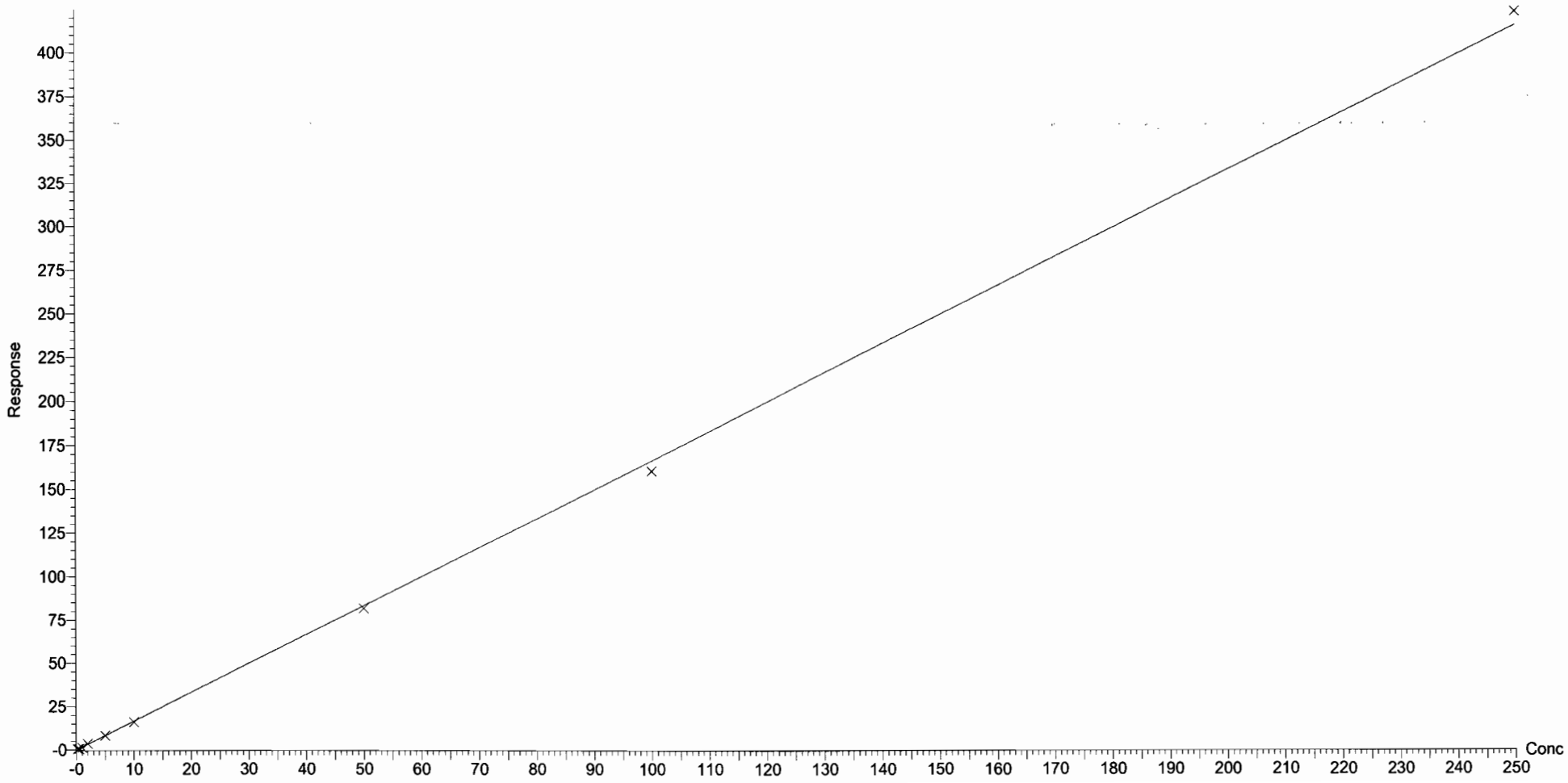
Compound name: PFHpA
Correlation coefficient: r = 0.999957, r^2 = 0.999914
Calibration curve: 1.17847 * x + 0.0681471
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

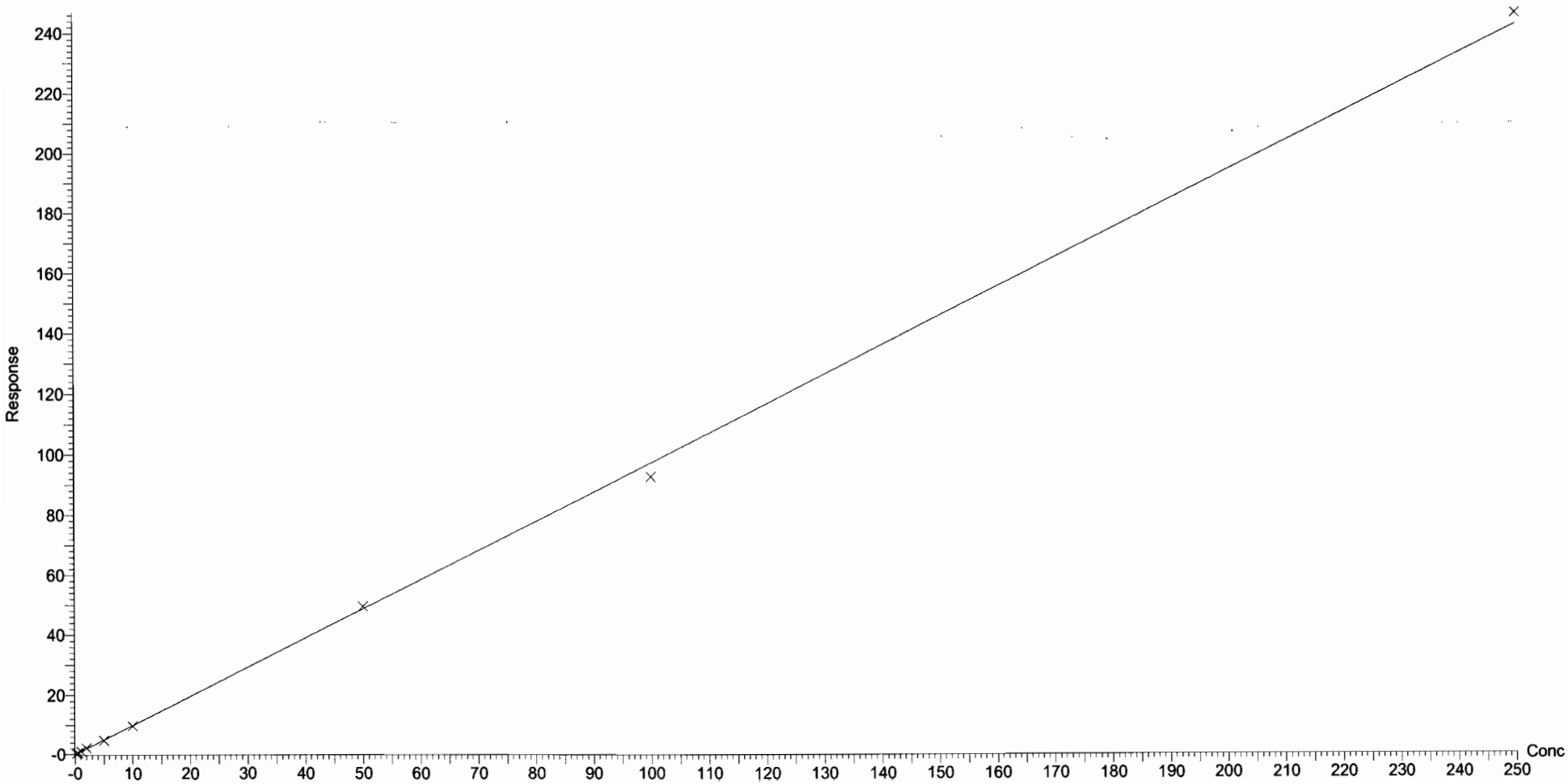
Compound name: PFHxS
Correlation coefficient: r = 0.999604, r^2 = 0.999209
Calibration curve: 1.66642 * x + 0.0527668
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

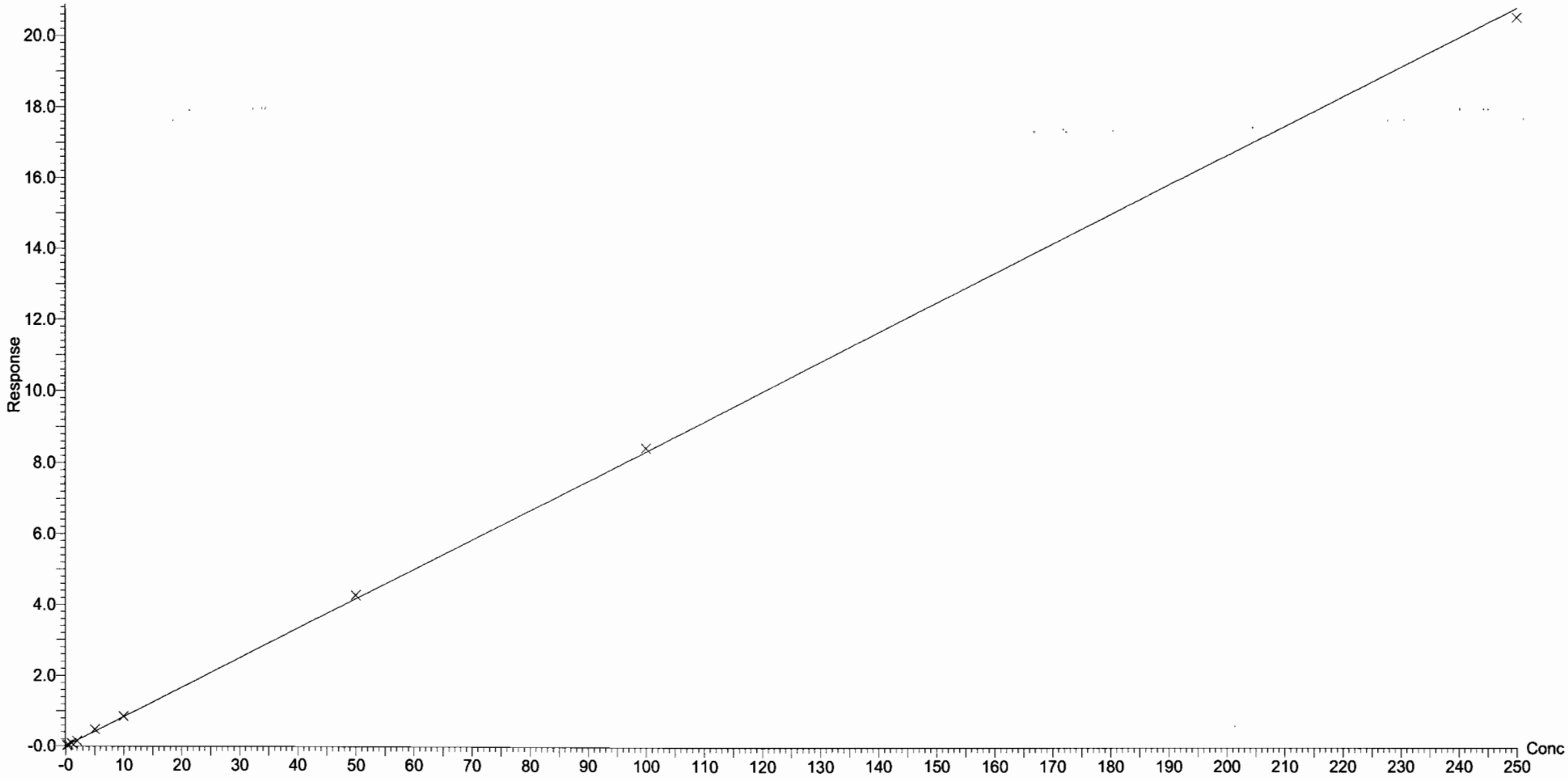
Compound name: PFOA
Correlation coefficient: r = 0.999602, r^2 = 0.999203
Calibration curve: 0.972567 * x + 0.119743
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

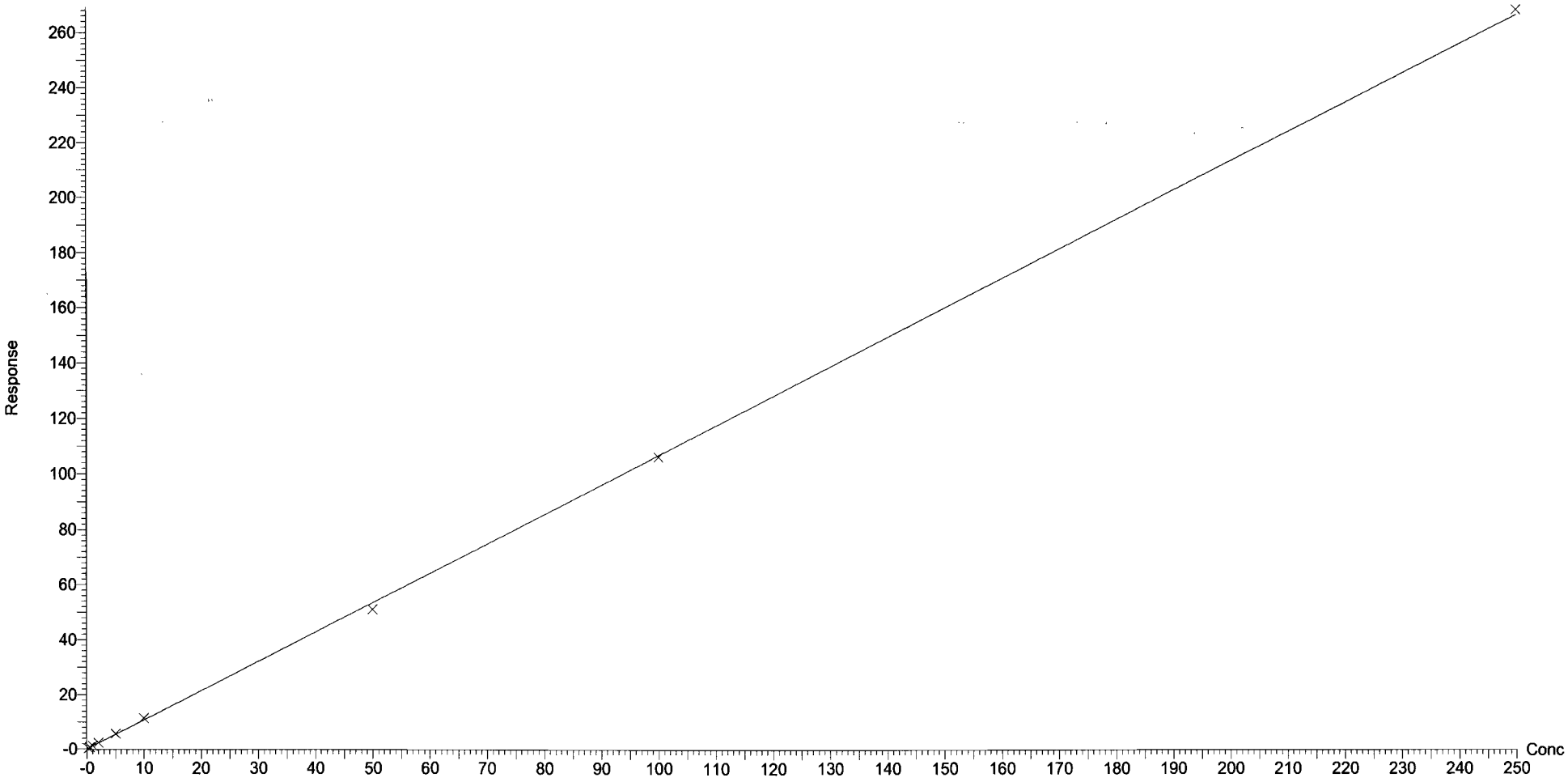
Compound name: PFHpS
Correlation coefficient: r = 0.999698, r^2 = 0.999396
Calibration curve: 0.0834866 * x + 0.000361382
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

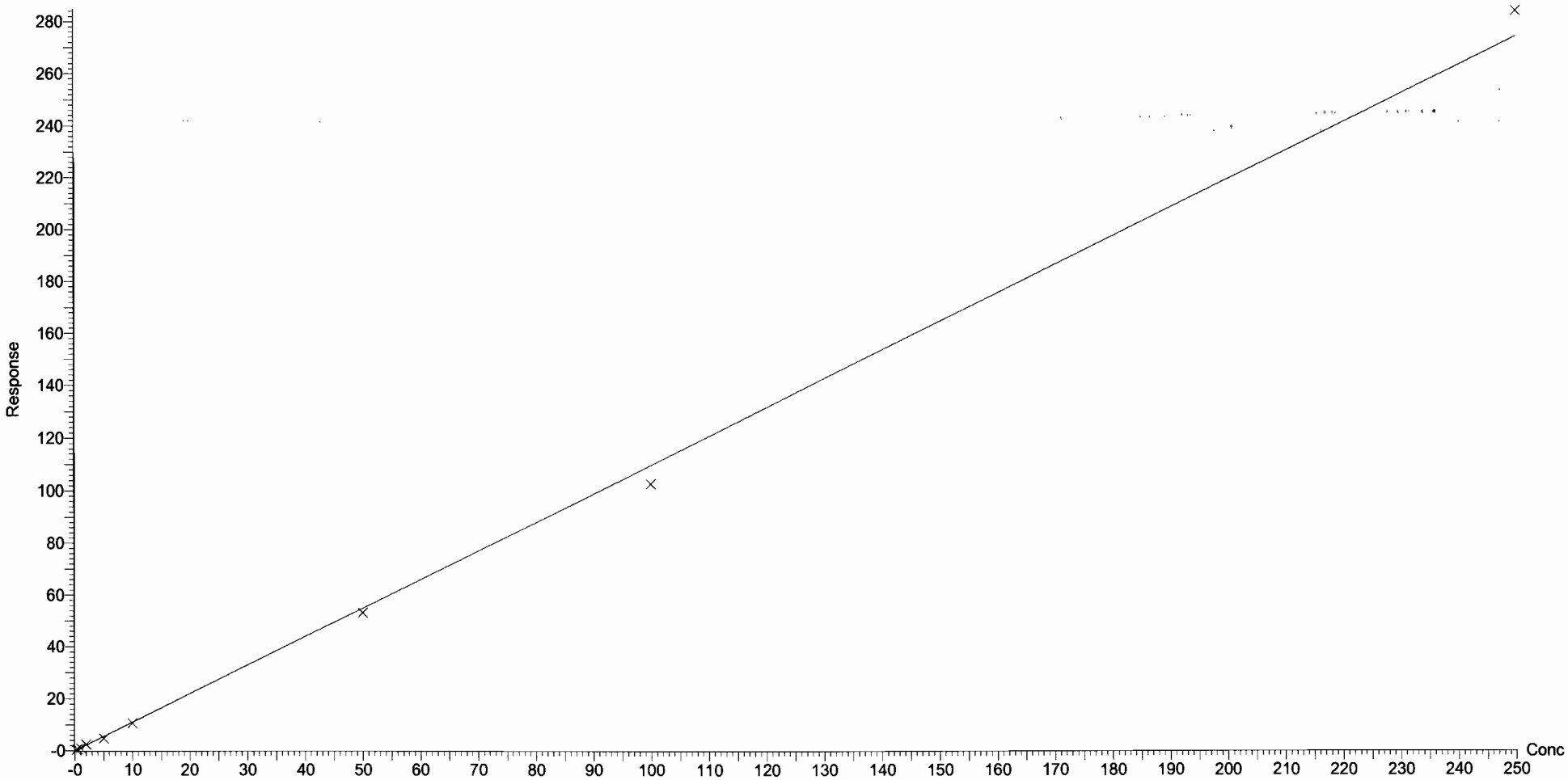
Compound name: PFNA
Correlation coefficient: r = 0.999774, r^2 = 0.999549
Calibration curve: 1.0688 * x + 0.0838738
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

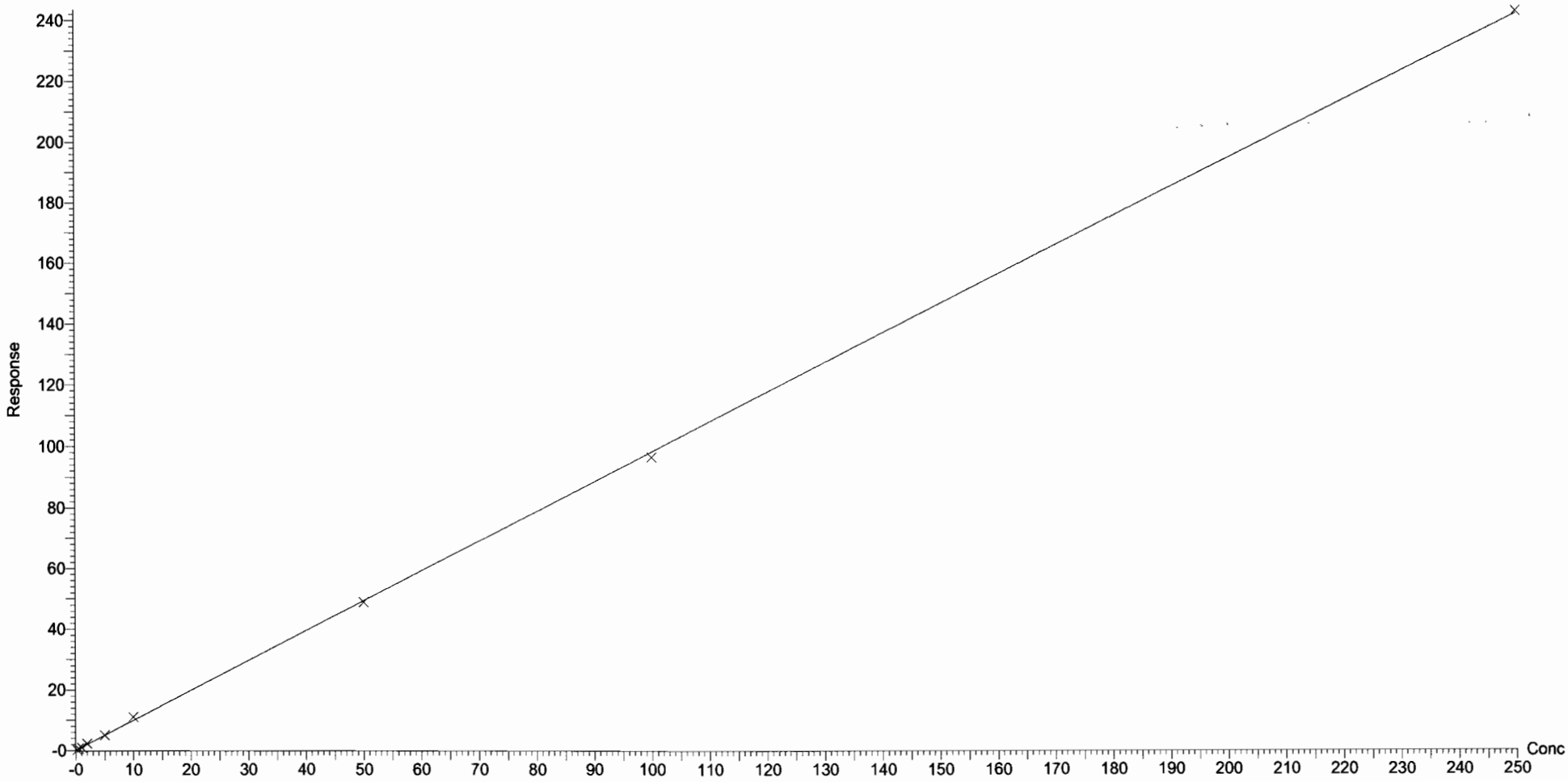
Compound name: PFOSA
Correlation coefficient: r = 0.998852, r^2 = 0.997705
Calibration curve: 1.09922 * x + 0.0380461
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

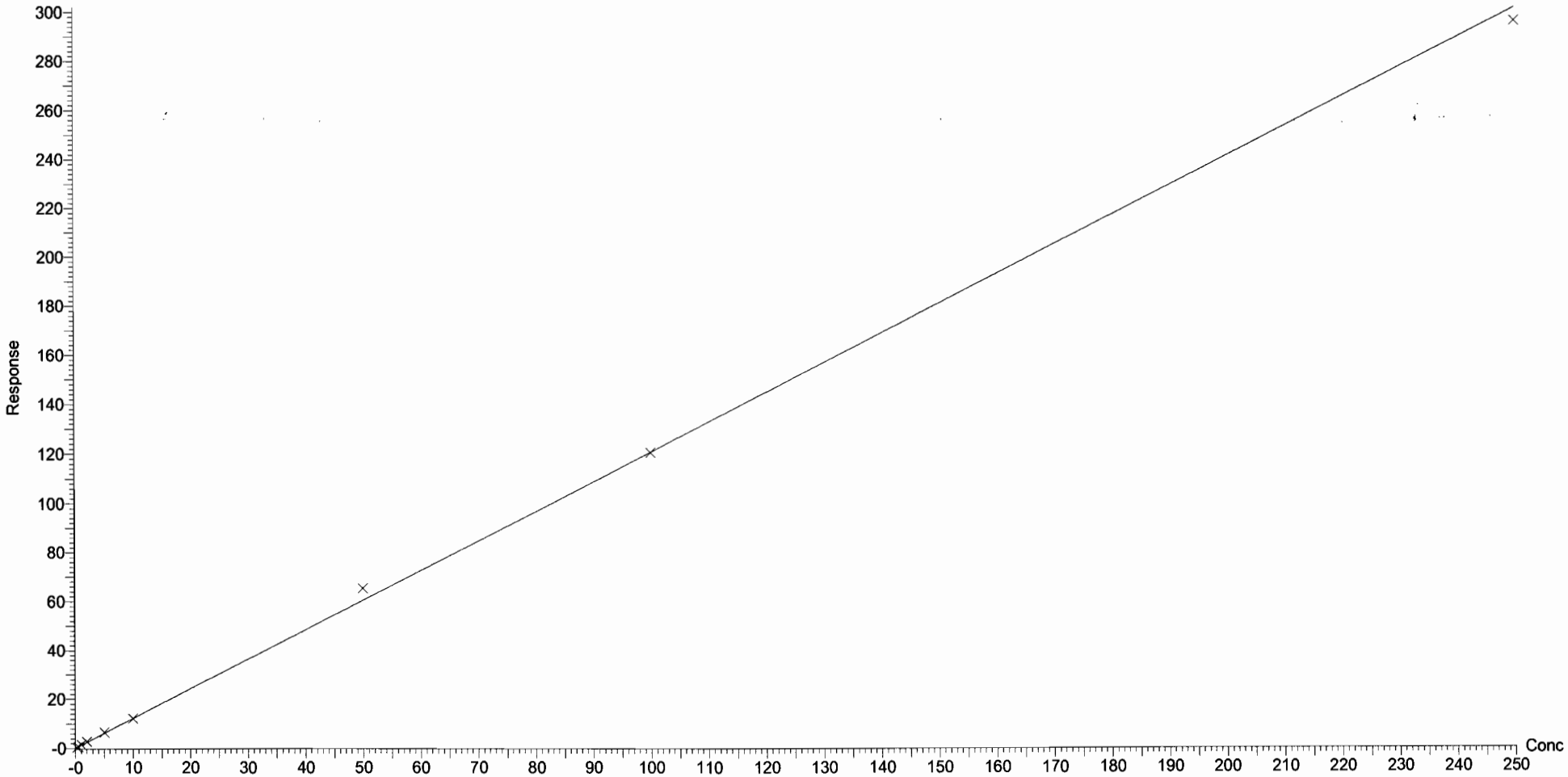
Compound name: PFOS
Coefficient of Determination: R^2 = 0.999381
Calibration curve: -8.2411e-005 * x^2 + 0.991329 * x + 0.038537
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

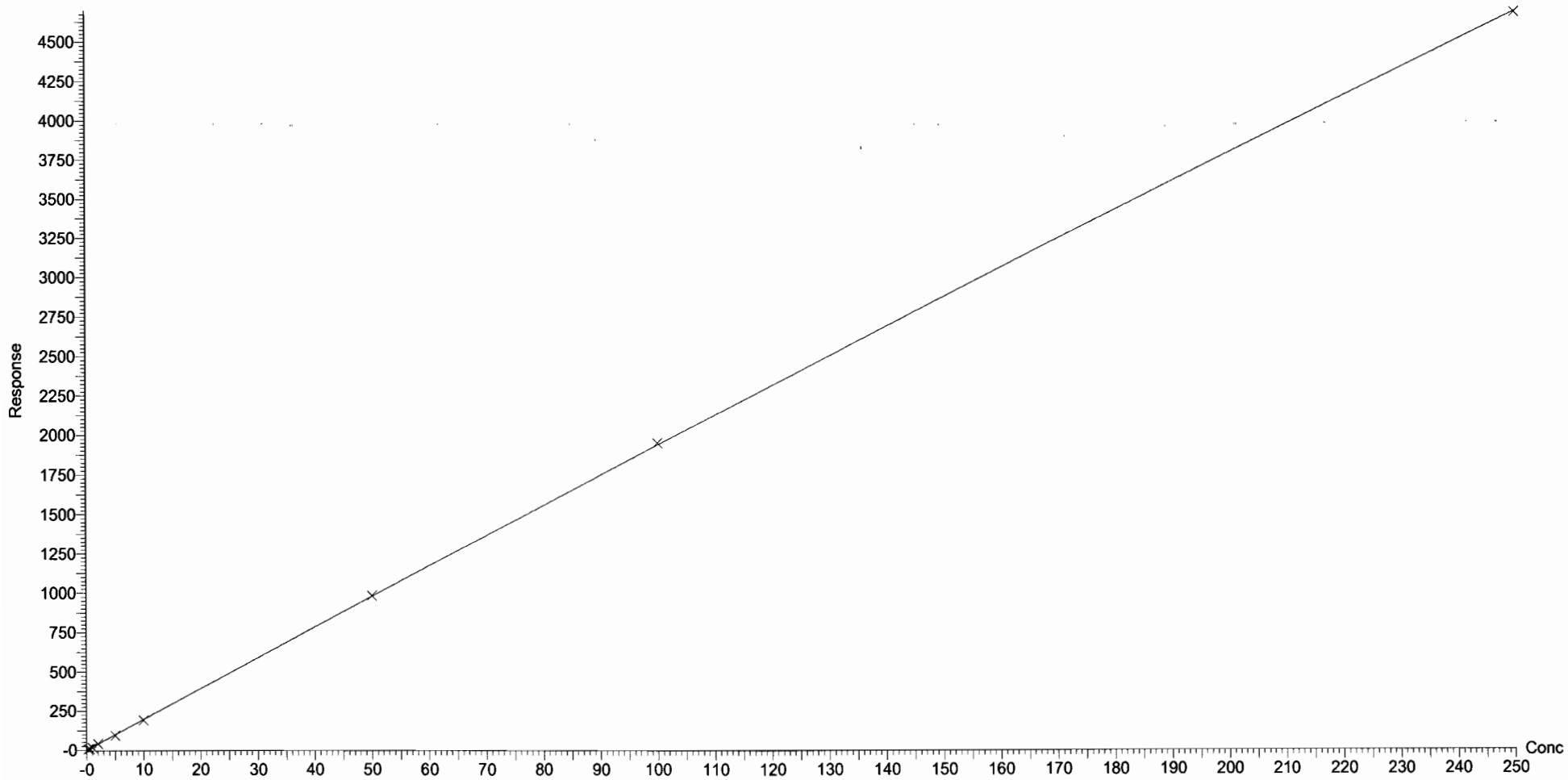
Compound name: PFDA
Correlation coefficient: r = 0.999404, r^2 = 0.998807
Calibration curve: 1.20688 * x + 0.163006
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

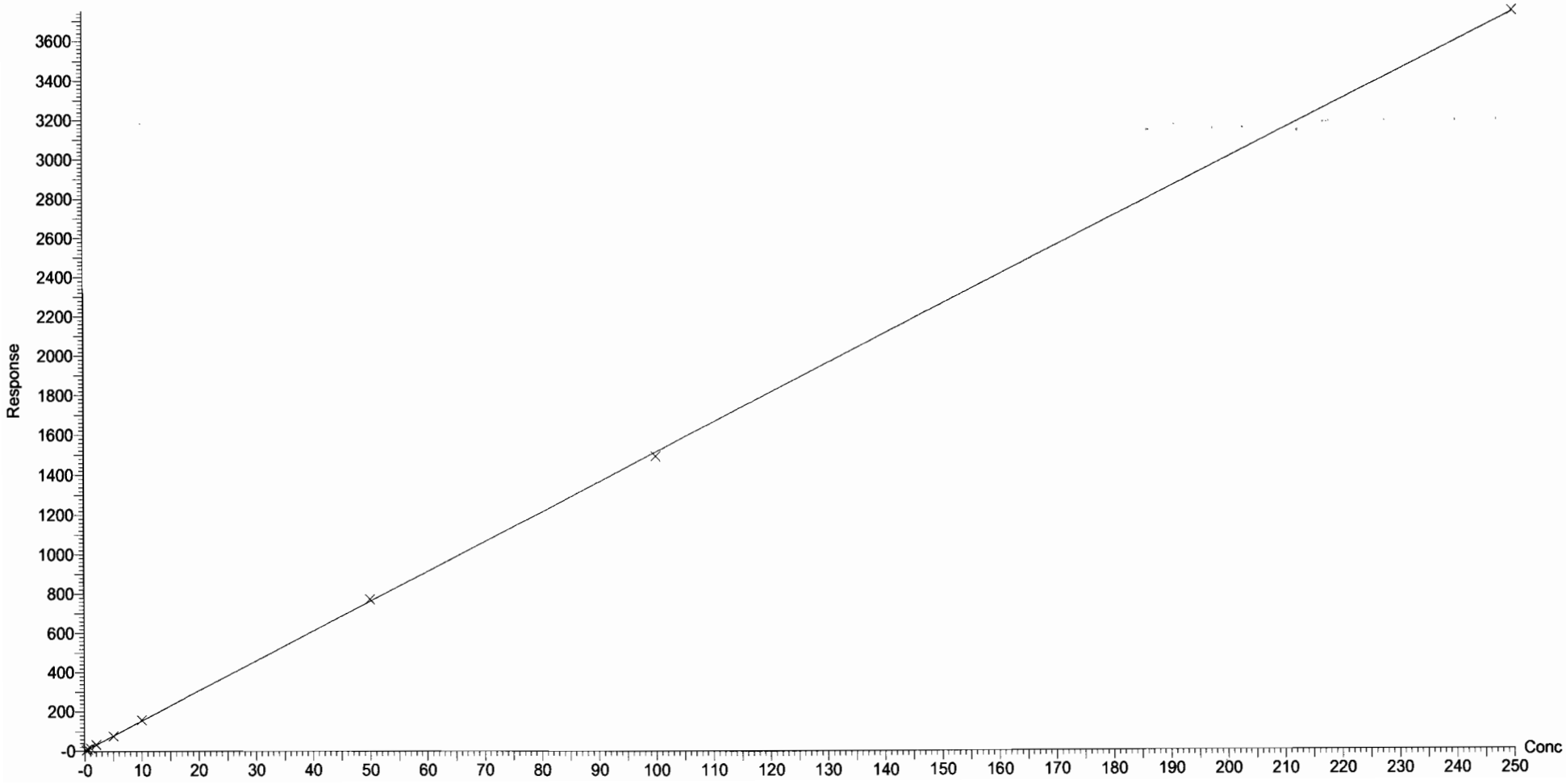
Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999878
Calibration curve: -0.00407341 * x^2 + 19.807 * x + -0.260375
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

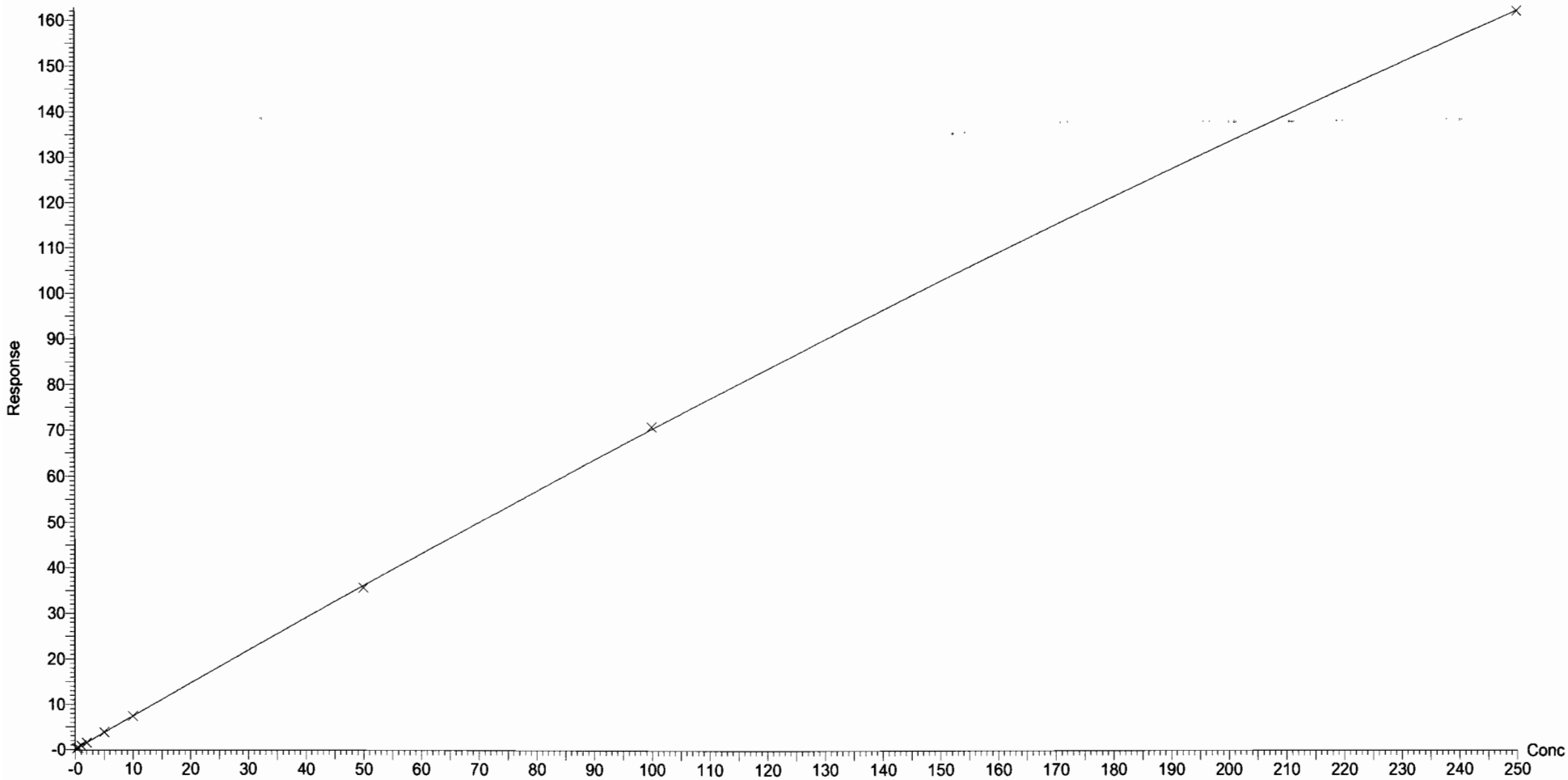
Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999787
Calibration curve: -0.00107779 * x^2 + 15.2465 * x + 0.807358
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

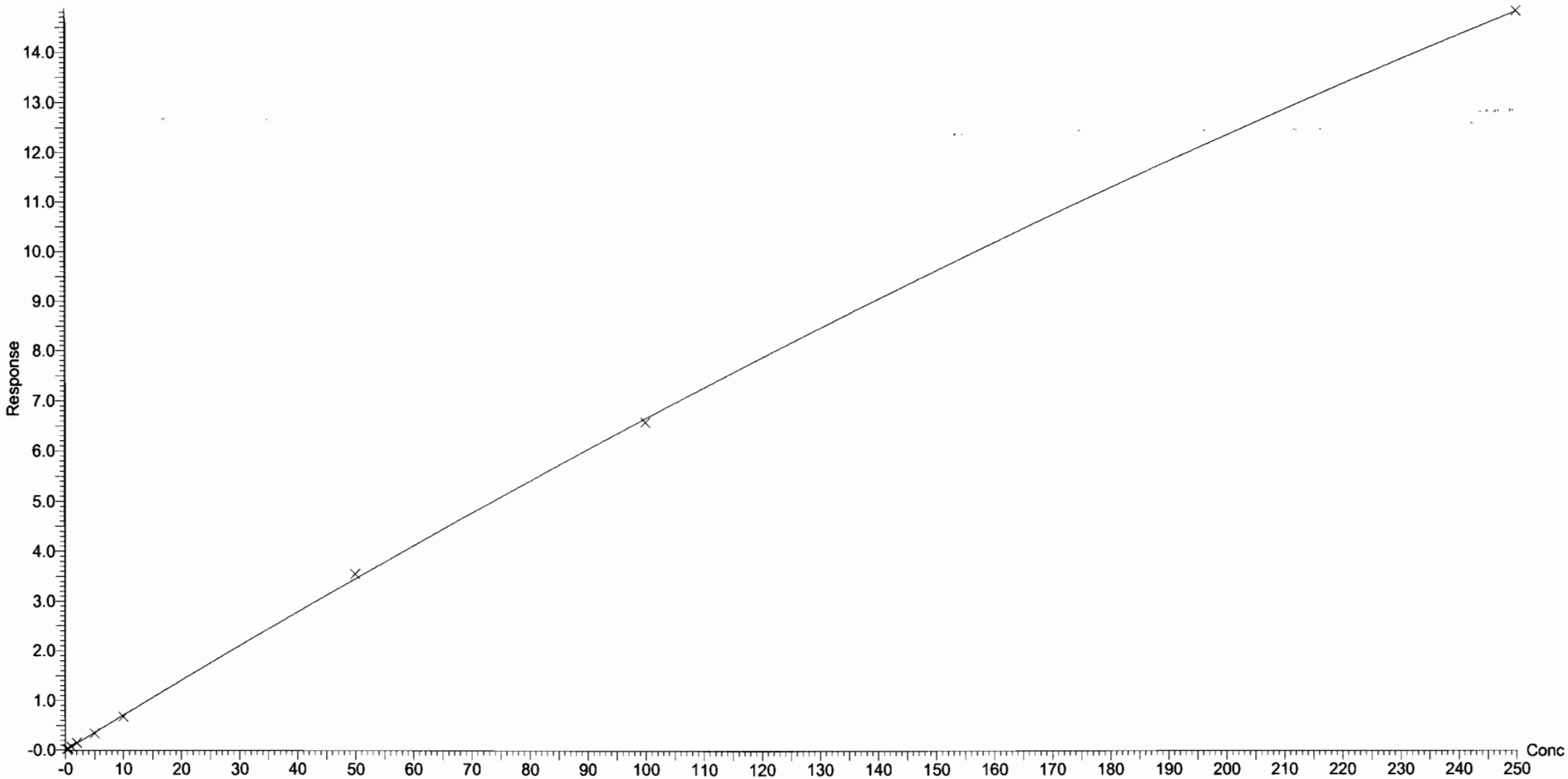
Compound name: PFUnA
Coefficient of Determination: R^2 = 0.999945
Calibration curve: -0.000352587 * x^2 + 0.738655 * x + 0.0923596
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

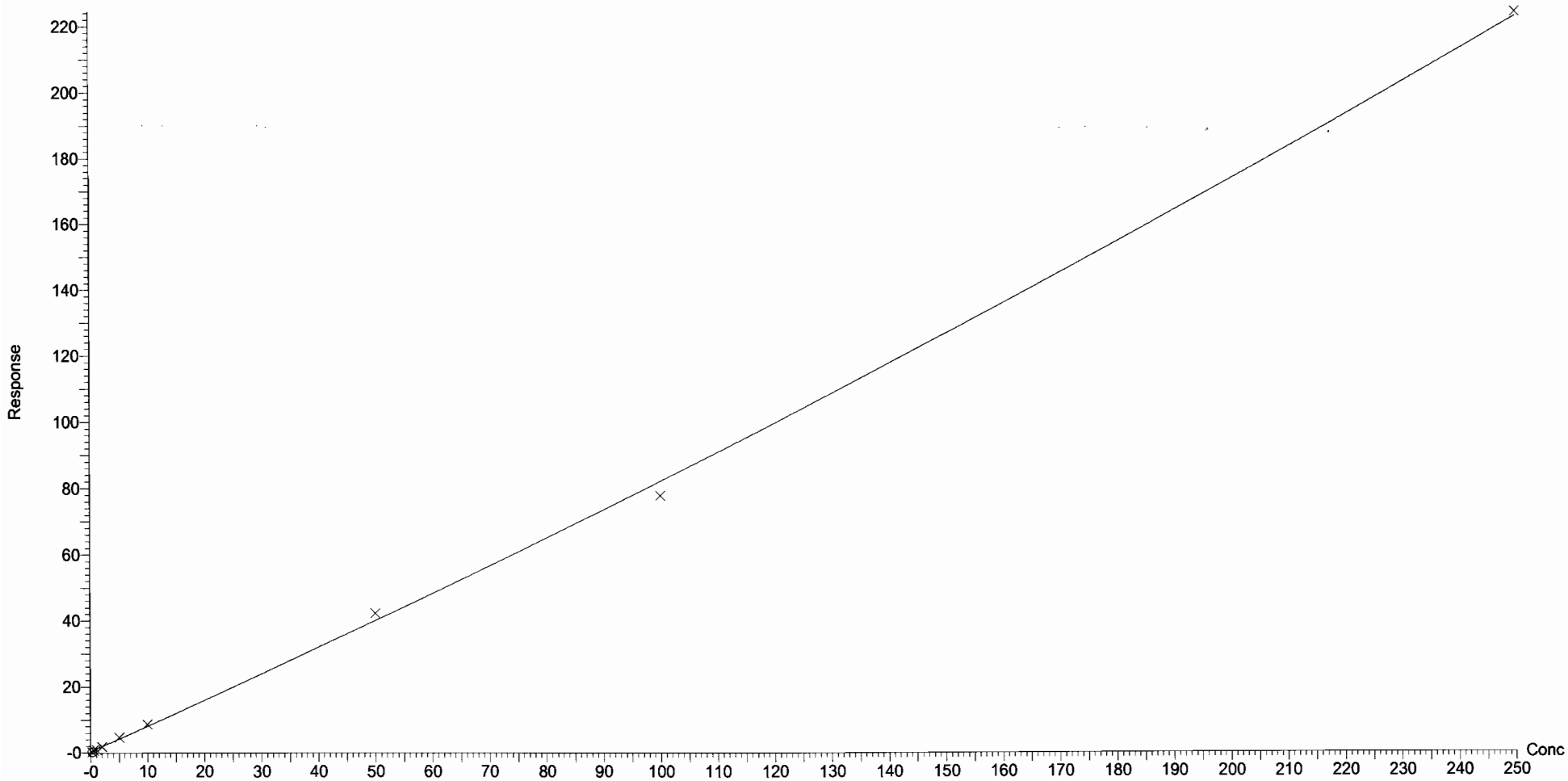
Compound name: PFDS
Coefficient of Determination: R^2 = 0.999598
Calibration curve: -4.79281e-005 * x^2 + 0.0714733 * x + -0.00107069
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998624
Calibration curve: 0.000483062 * x^2 + 0.770384 * x + 0.341437
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

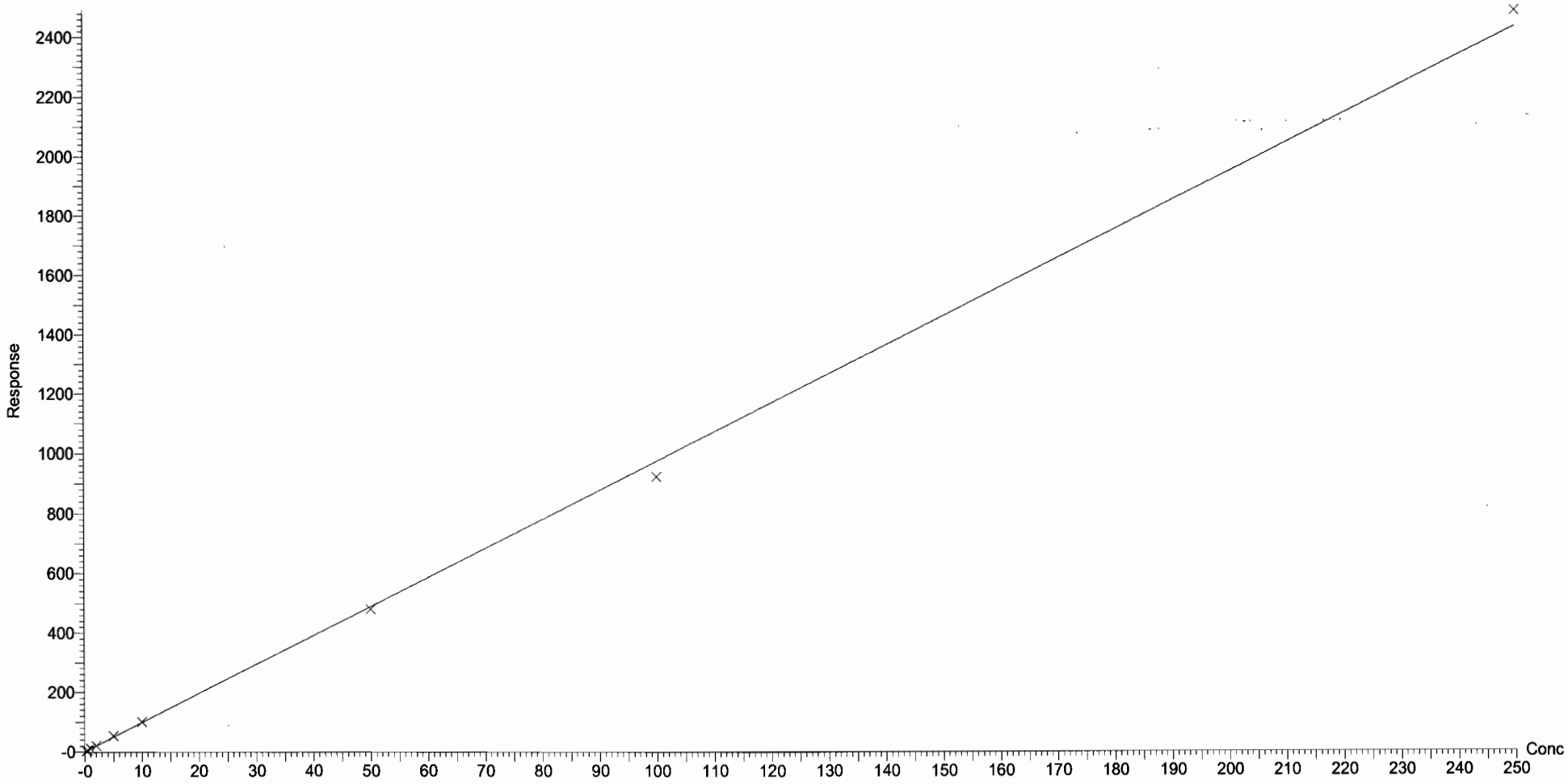


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

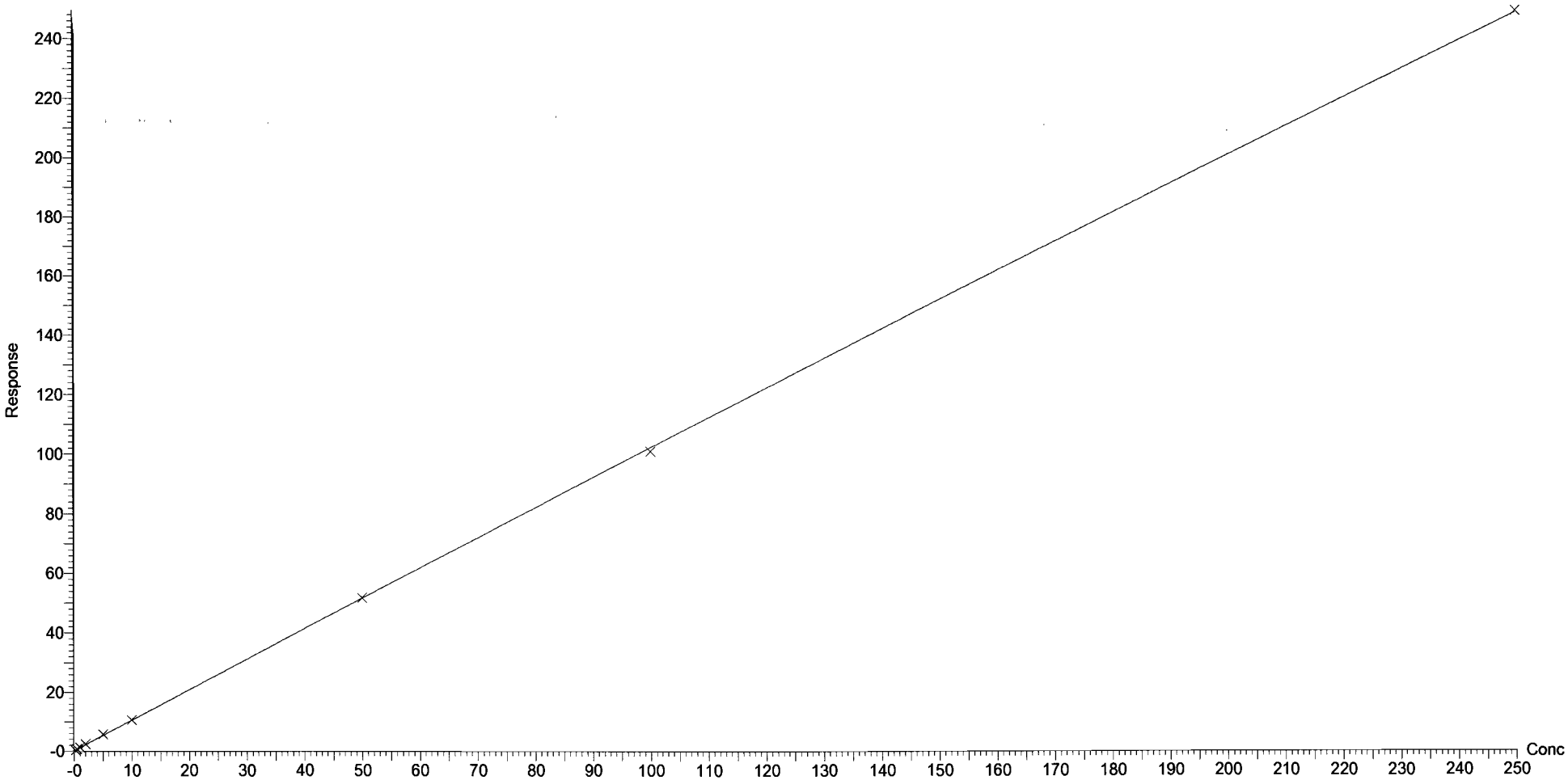
Compound name: PFTrDA
Correlation coefficient: r = 0.999451, r^2 = 0.998903
Calibration curve: 9.7472 * x + 1.17215
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:06:31 Pacific Daylight Time

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999741
Calibration curve: -0.000171677 * x^2 + 1.03861 * x + 0.13428
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory

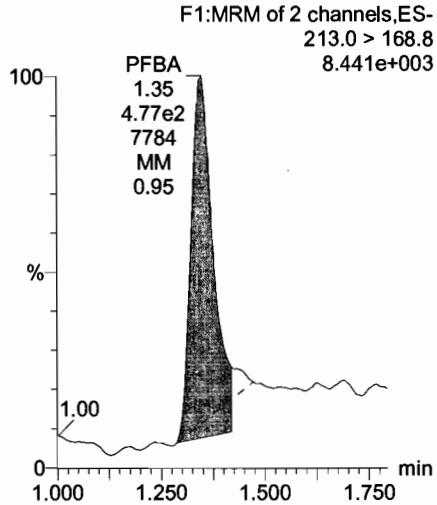
Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

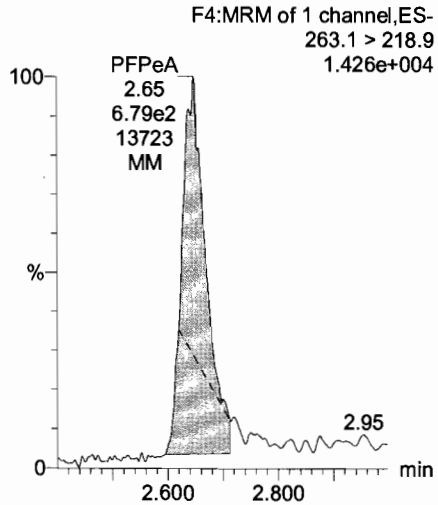
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 28 Jul 2017 08:40:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:05:03

Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

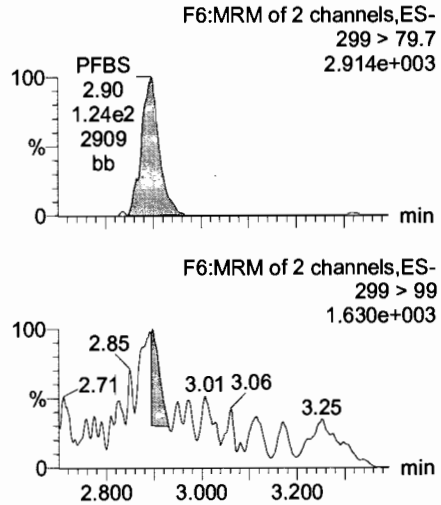
PFBA



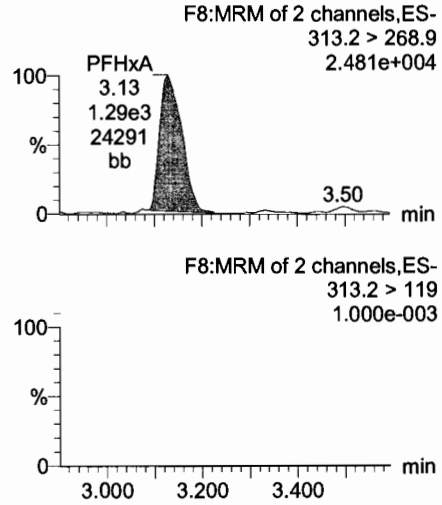
PFPeA



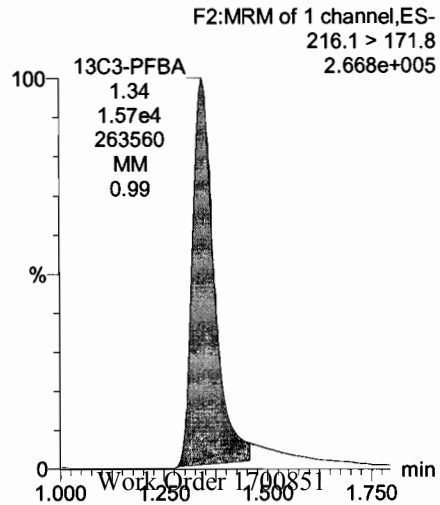
PFBS



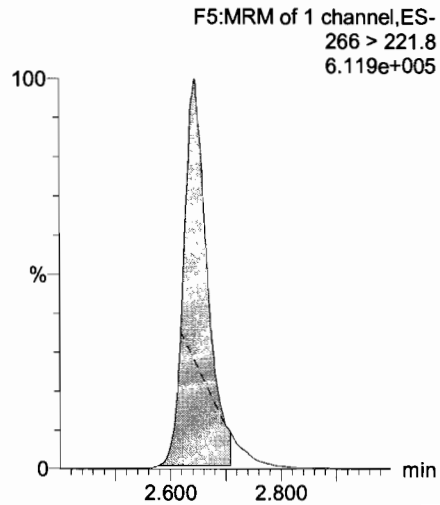
PFHxA



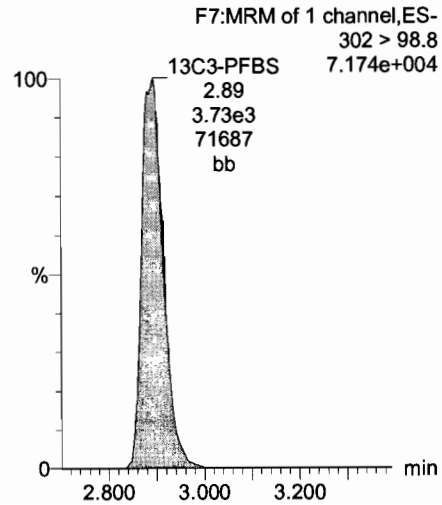
13C3-PFBA



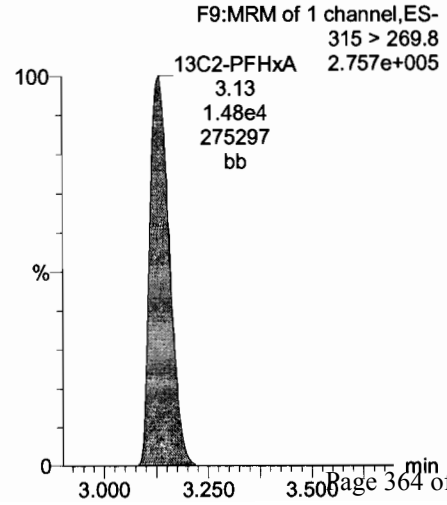
13C3-PFPeA



13C3-PFBS



13C2-PFHxA

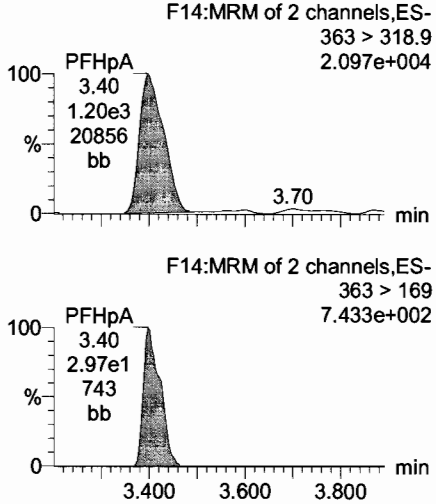


Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

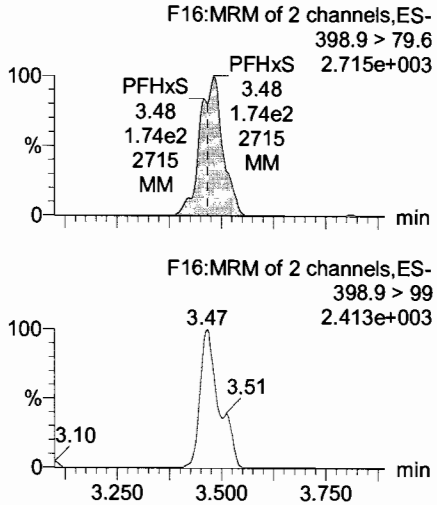
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

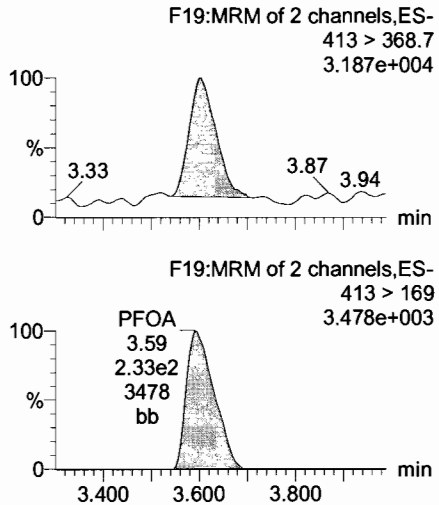
PFHpA



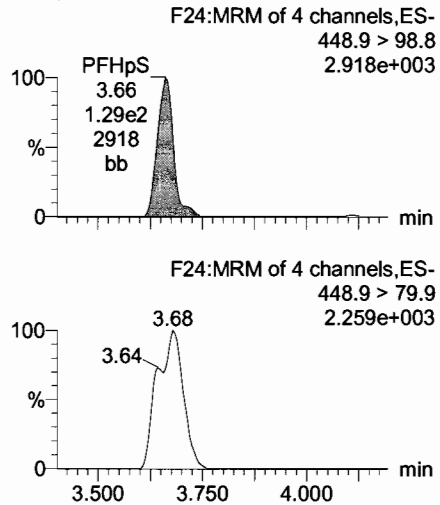
Total PFHxS



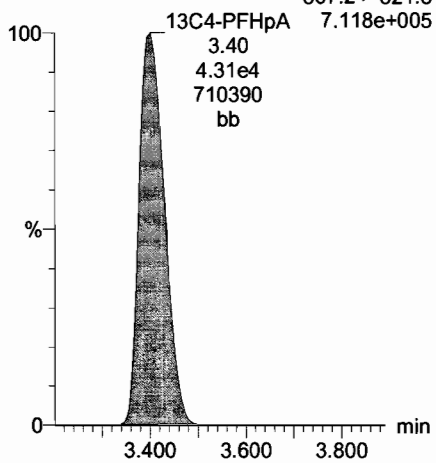
Total PFOA



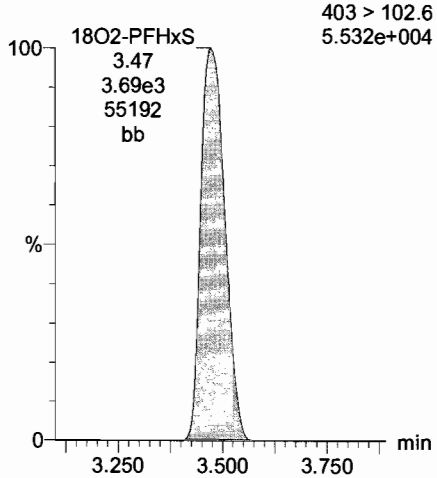
PFHpS



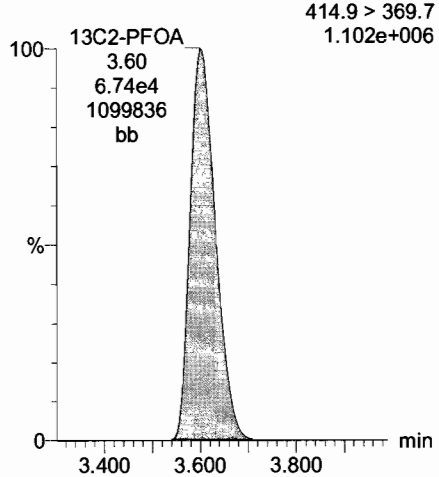
13C4-PFHpA



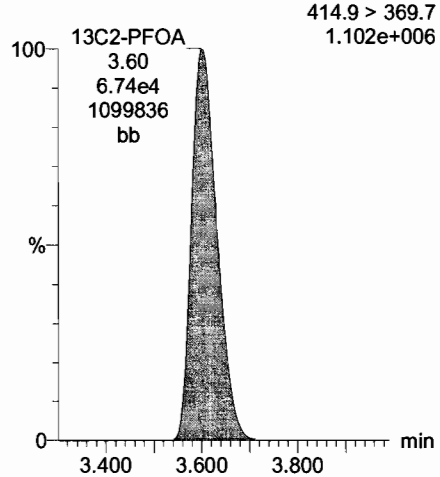
18O2-PFHxS



13C2-PFOA



13C2-PFOA

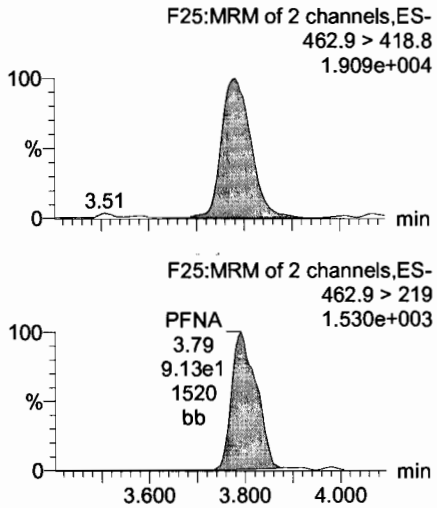


Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

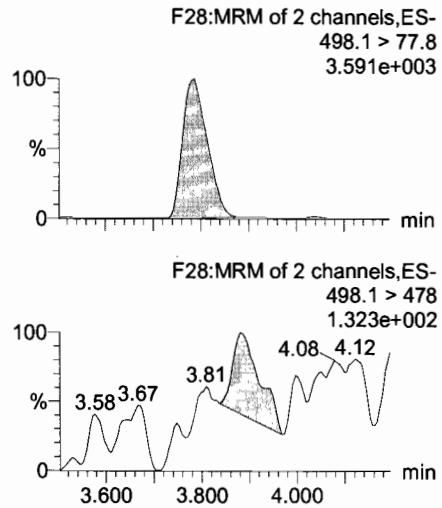
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

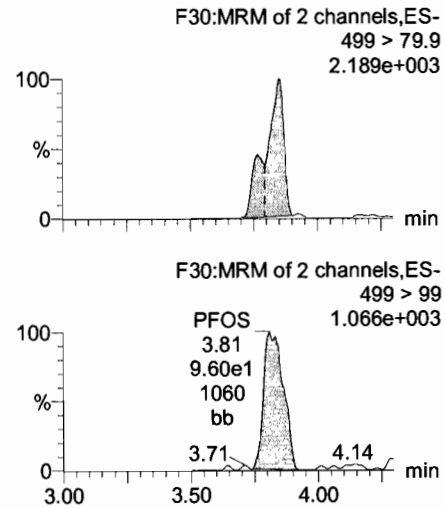
PFNA



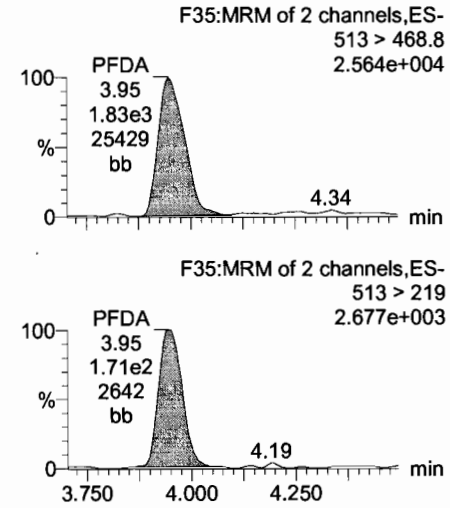
PFOSA



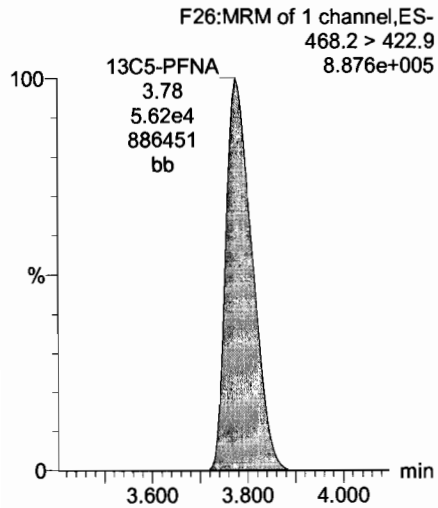
Total PFOS



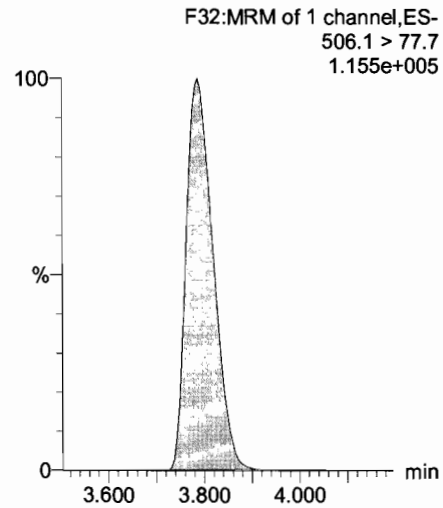
PFDA



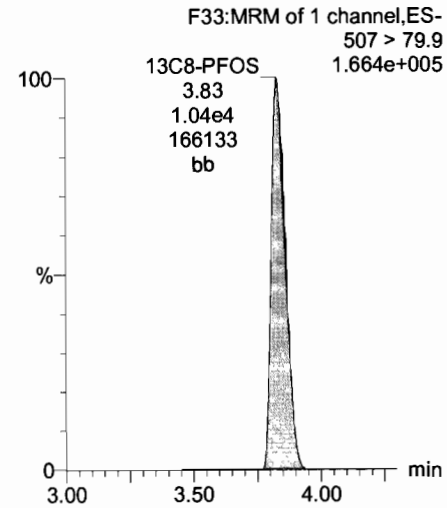
13C5-PFNA



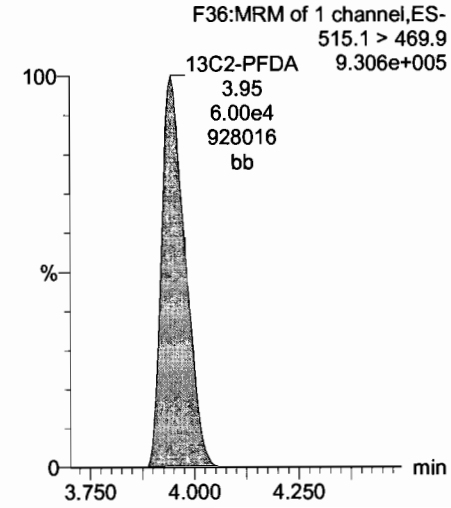
13C8-PFOSA



13C8-PFOS



13C2-PFDA

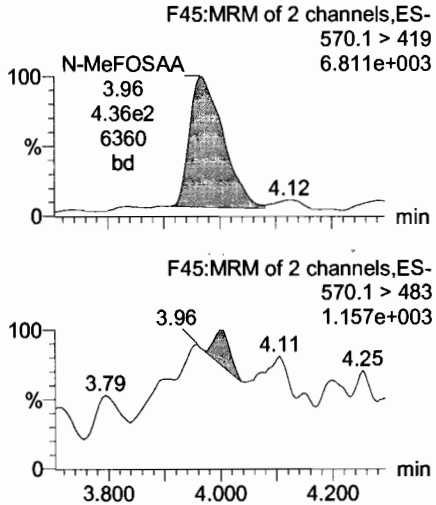


Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

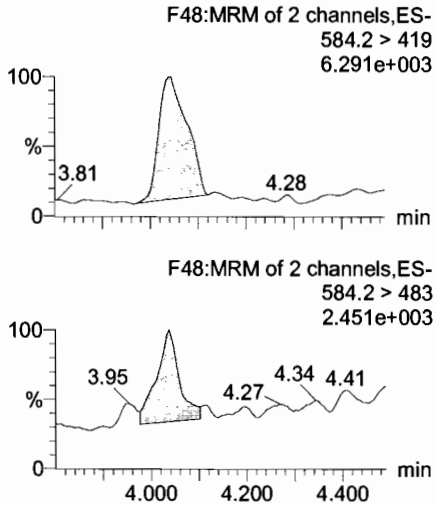
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

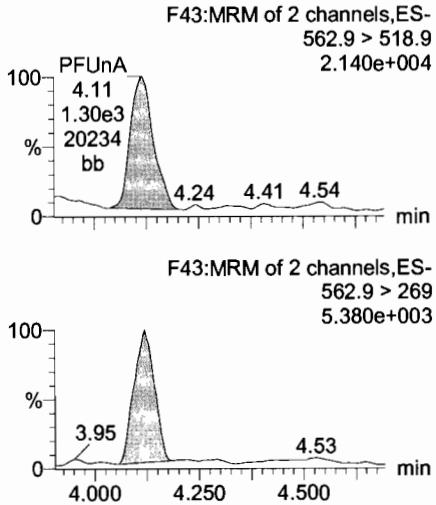
N-MeFOSAA



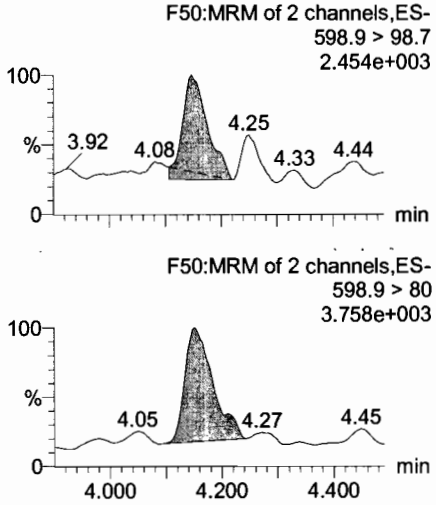
N-EtFOSAA



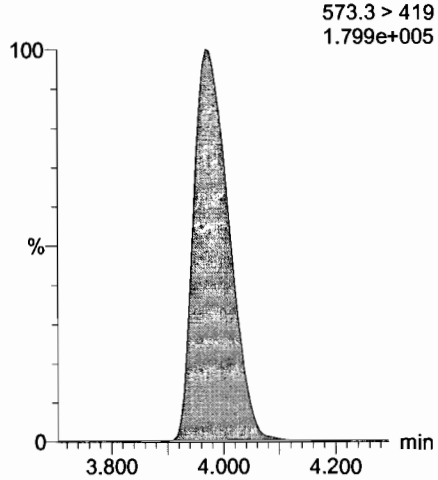
PFUnA



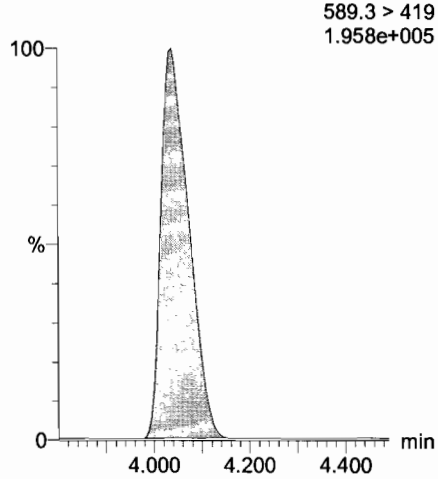
PFDS



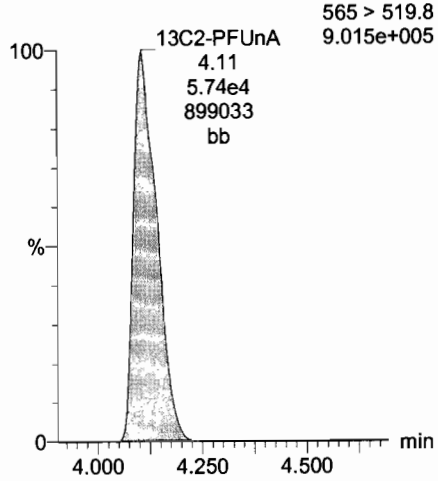
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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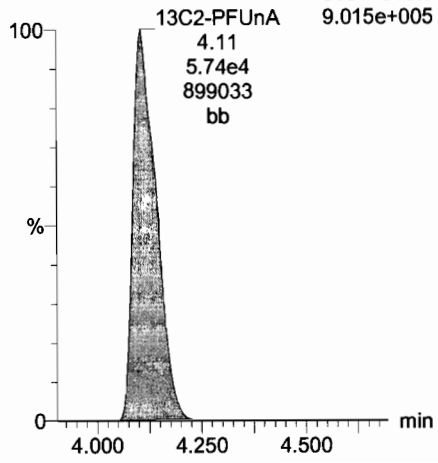

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

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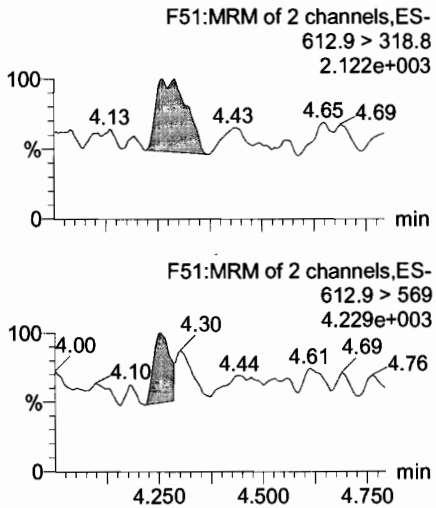

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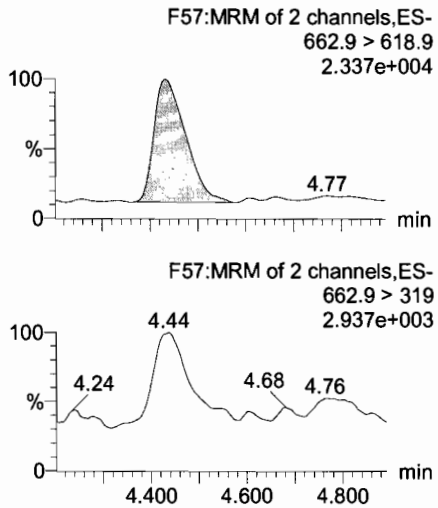

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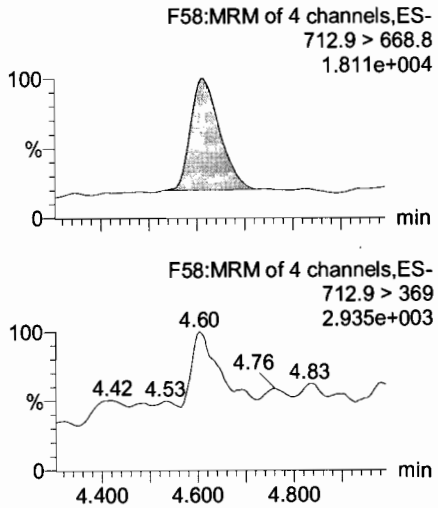

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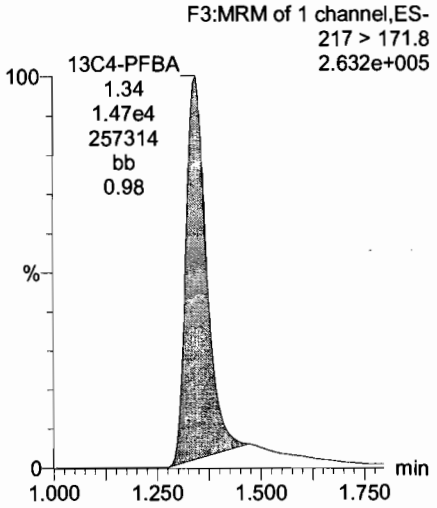

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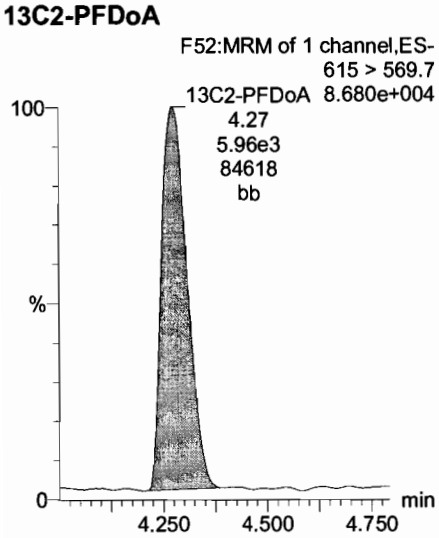

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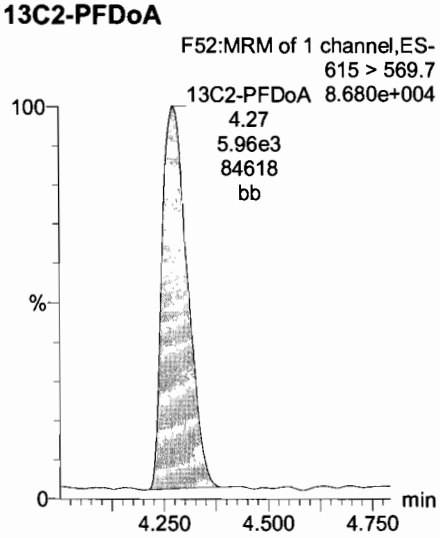

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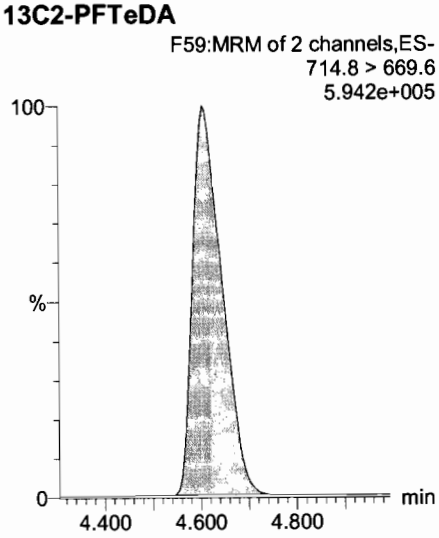
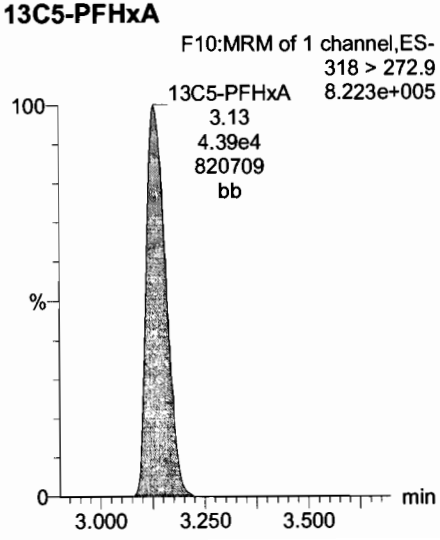


13C5-PFHxA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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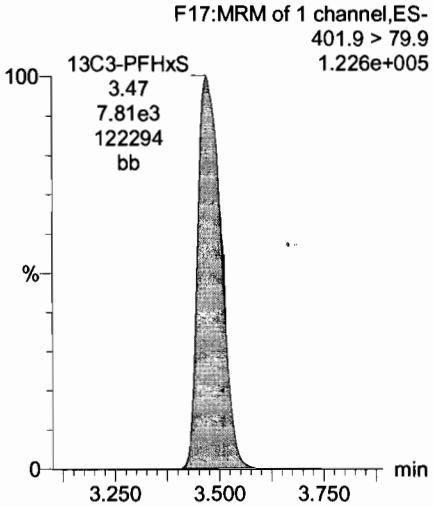
Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

13C3-PFHxS



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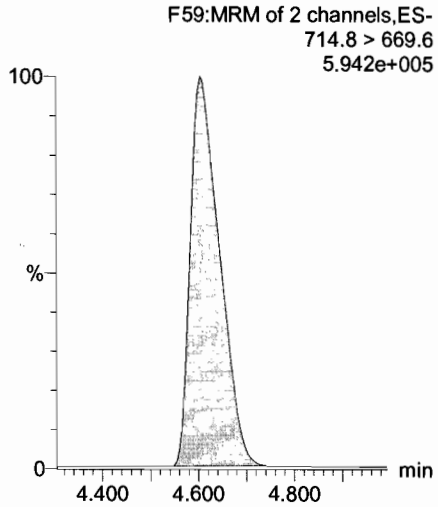
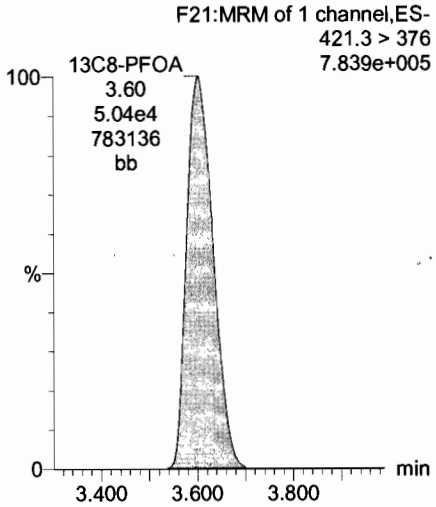
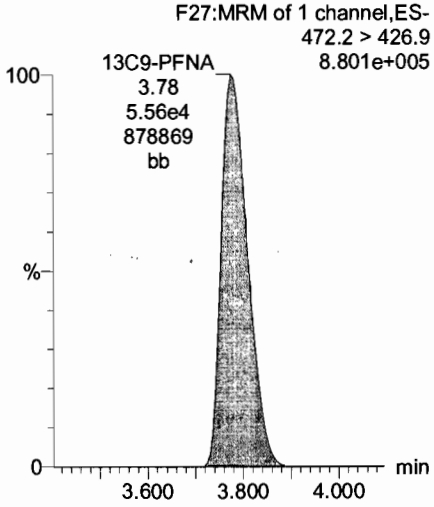


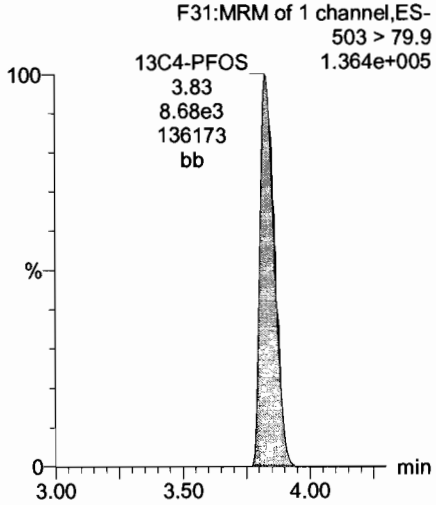
13C8-PFOA



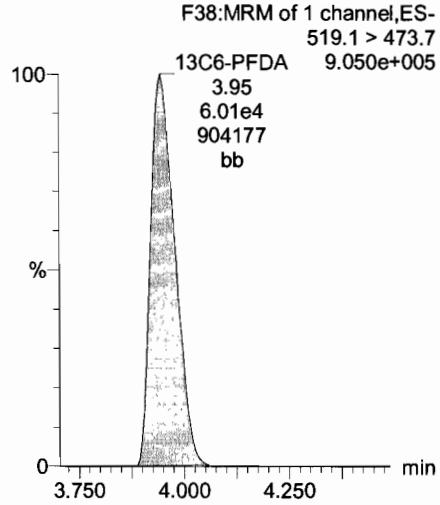
13C9-PFNA



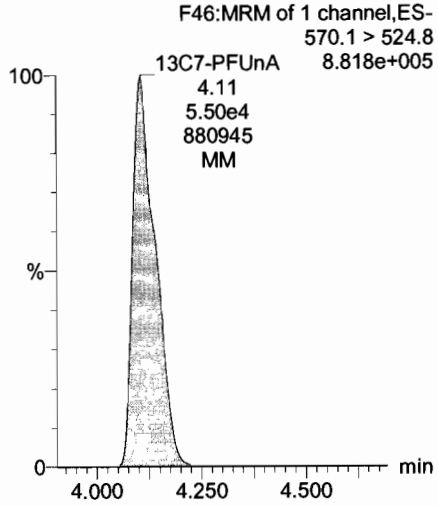
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

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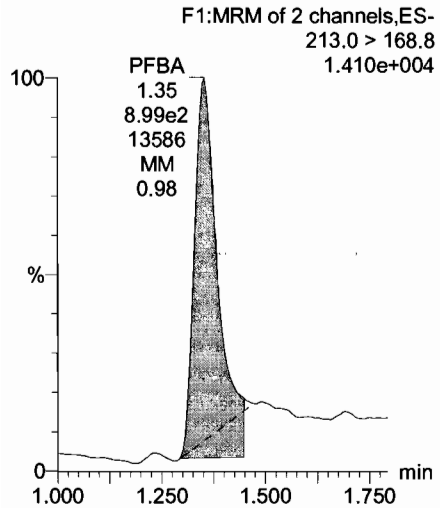

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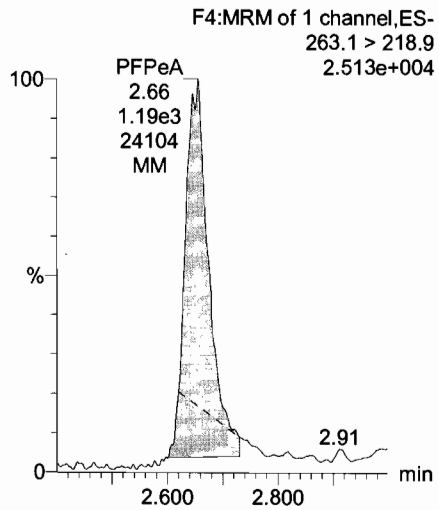

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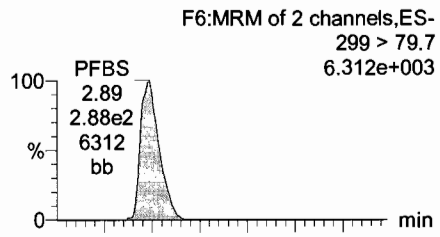

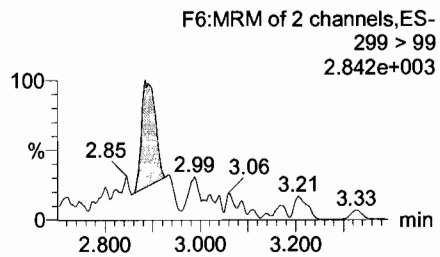

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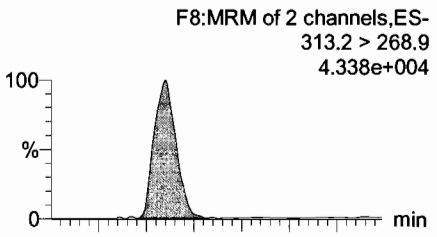

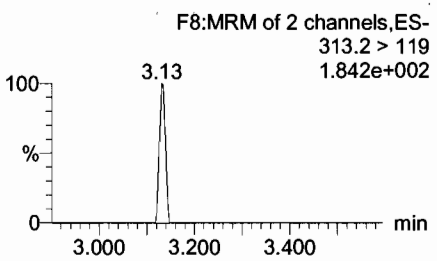

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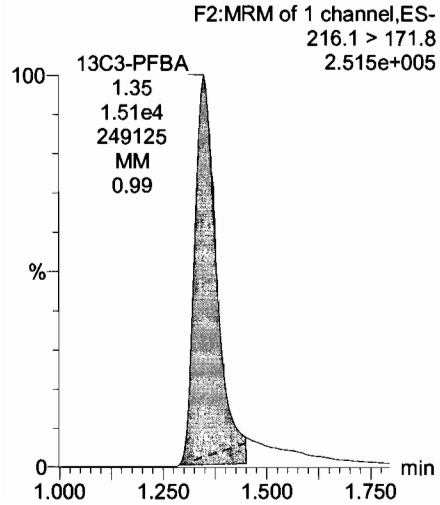

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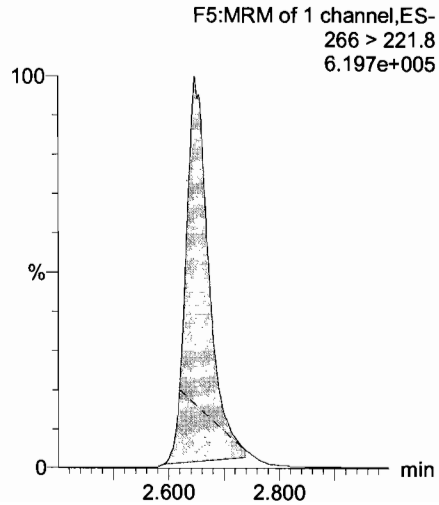

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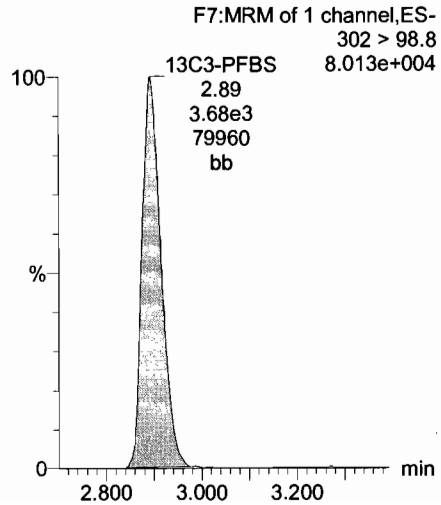

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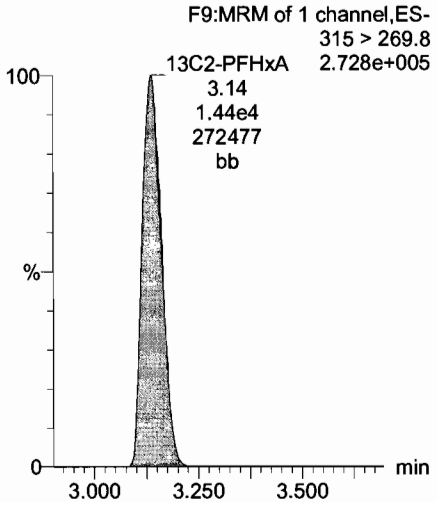

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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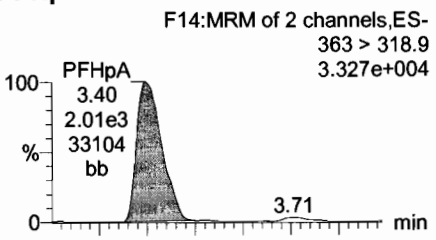
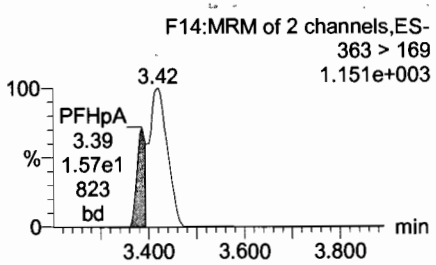
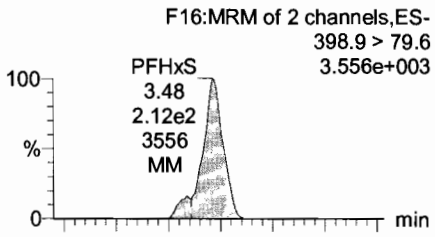
Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

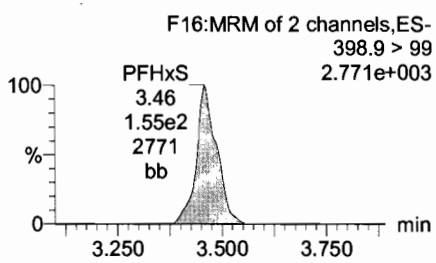
PFHpA



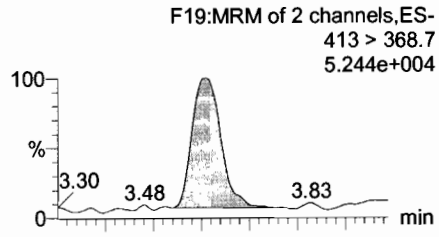


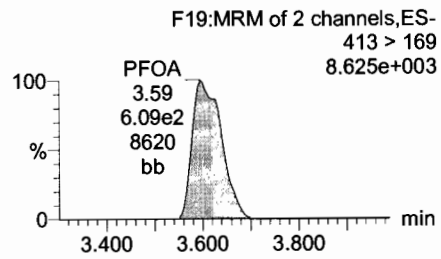
Total PFHxS





Total PFOA





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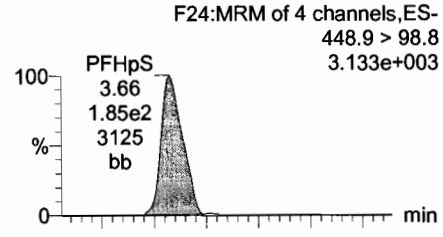
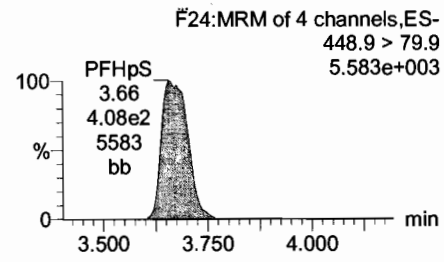
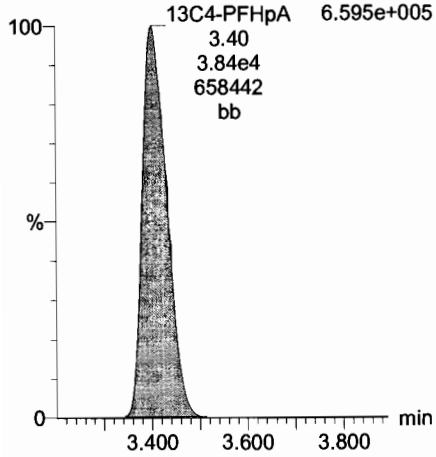
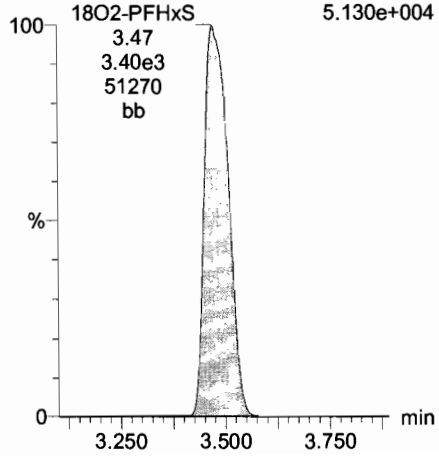




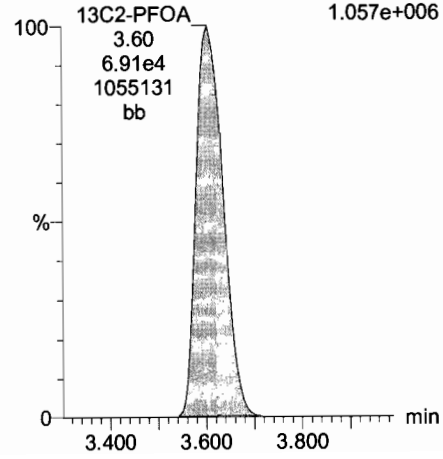
13C4-PFHpA



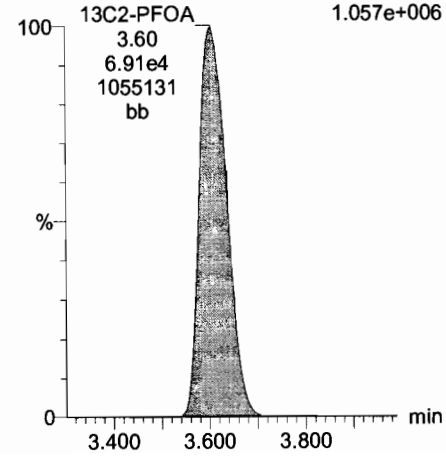
18O2-PFHxS



13C2-PFOA



13C2-PFOA



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Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

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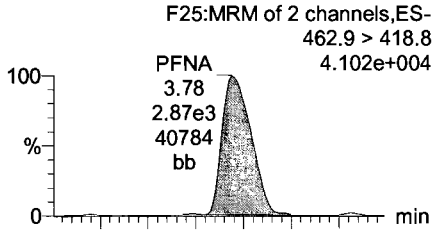
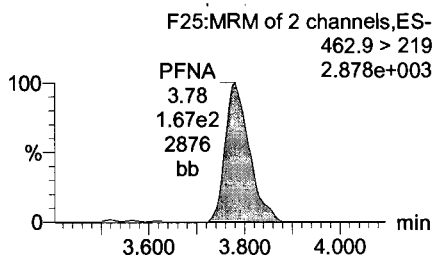
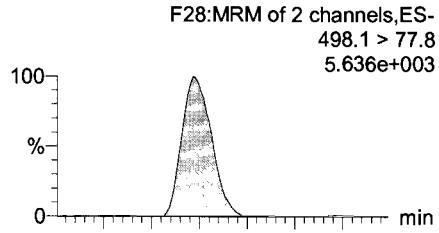
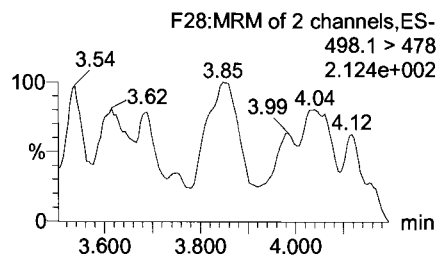




PFOSA





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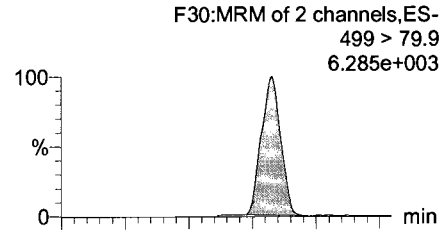

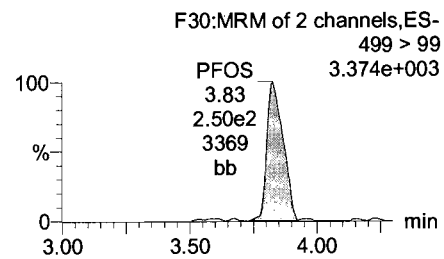

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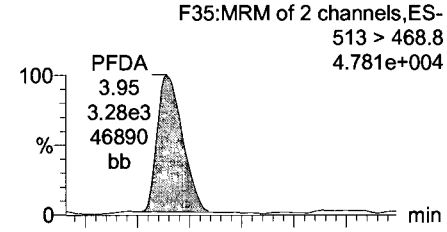
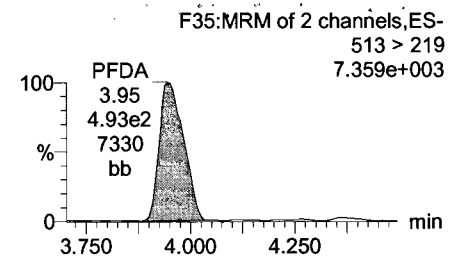
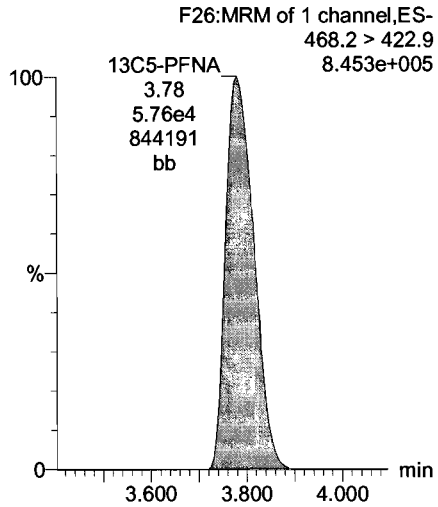
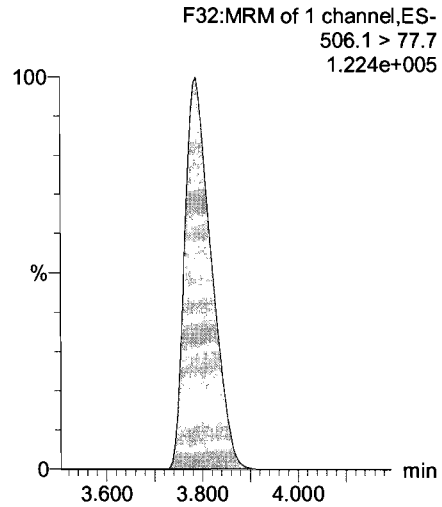




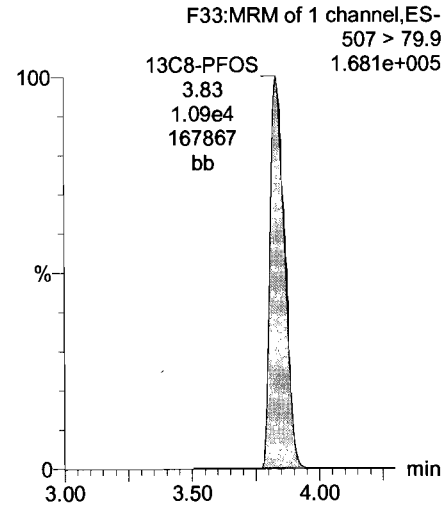
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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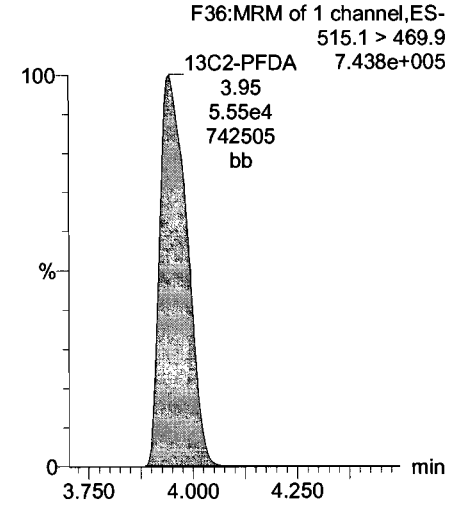

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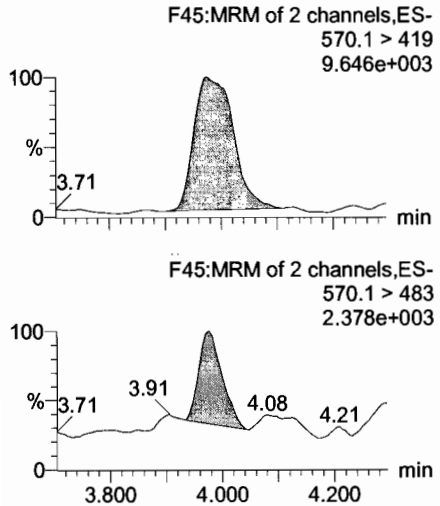
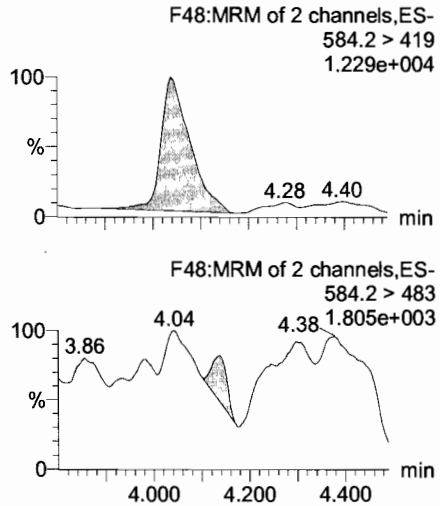
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

N-MeFOSAA



N-EtFOSAA



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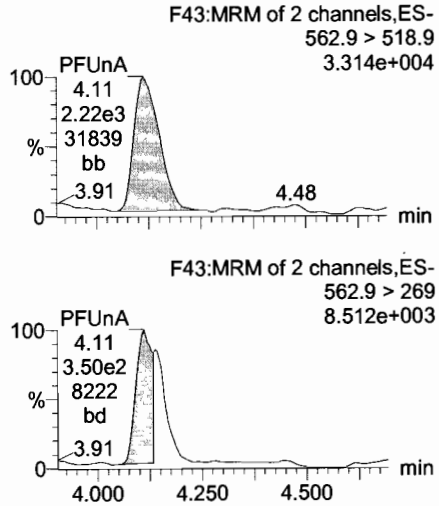

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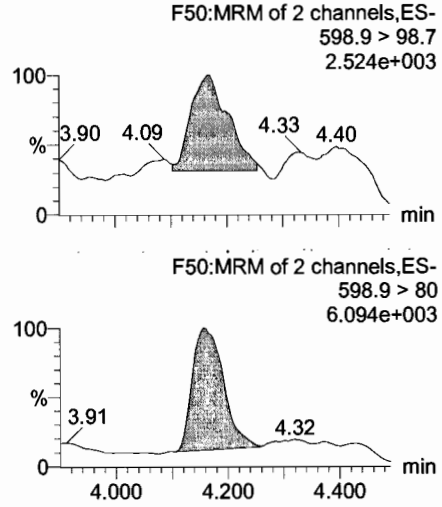

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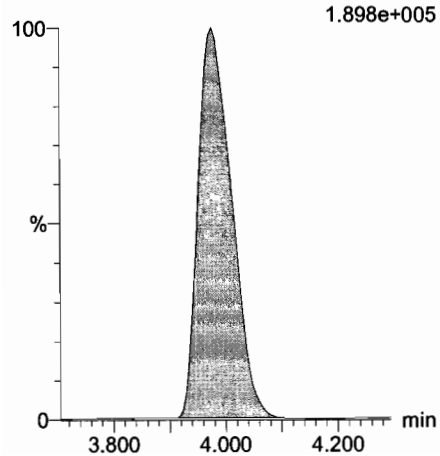

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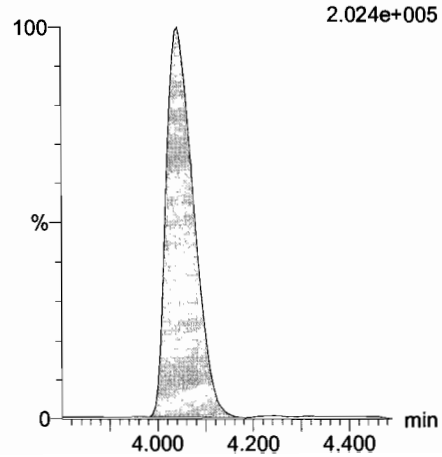

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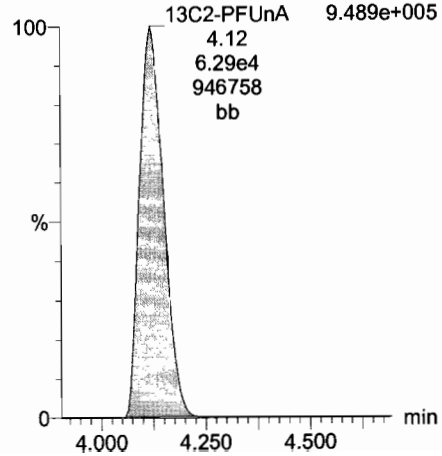

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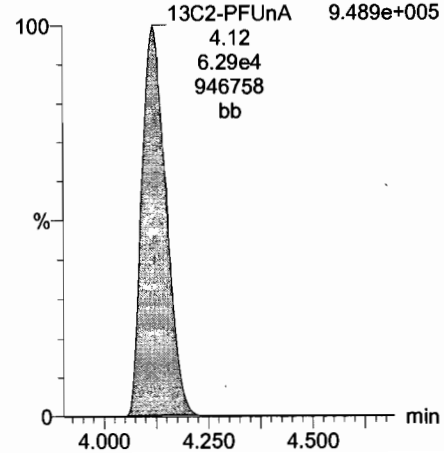

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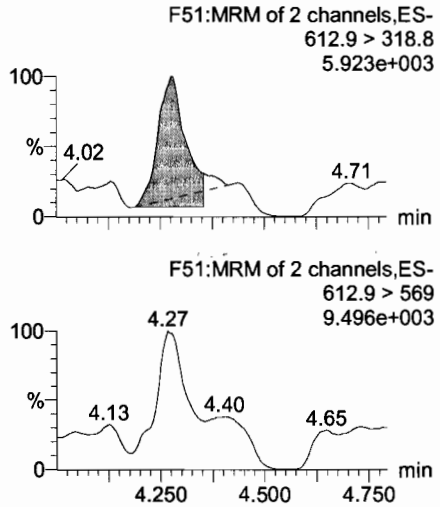
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

PFDoA



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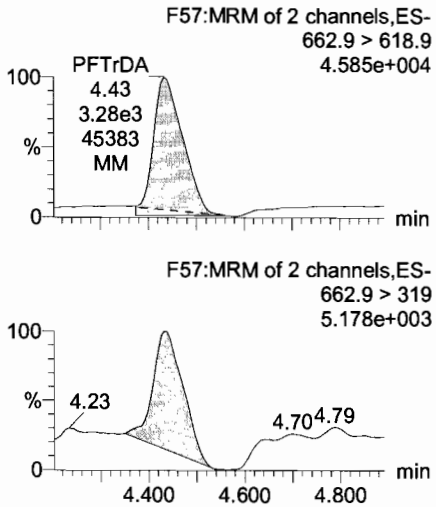

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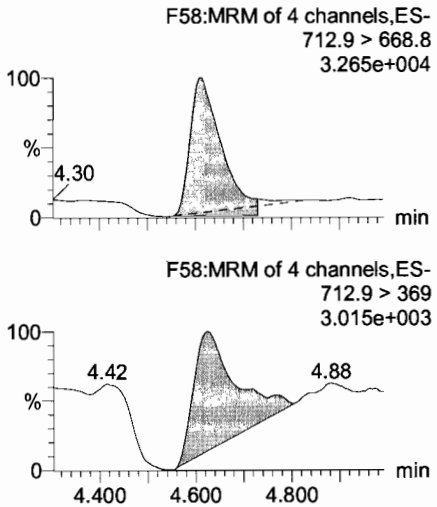

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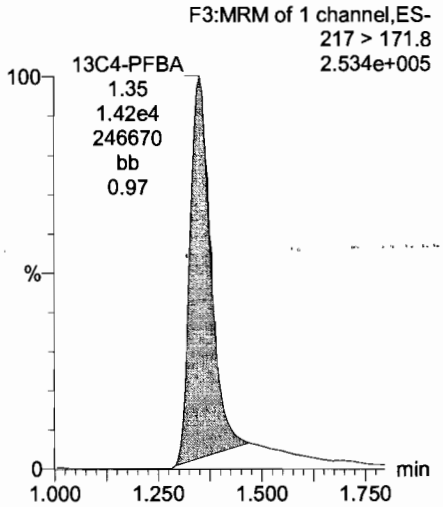

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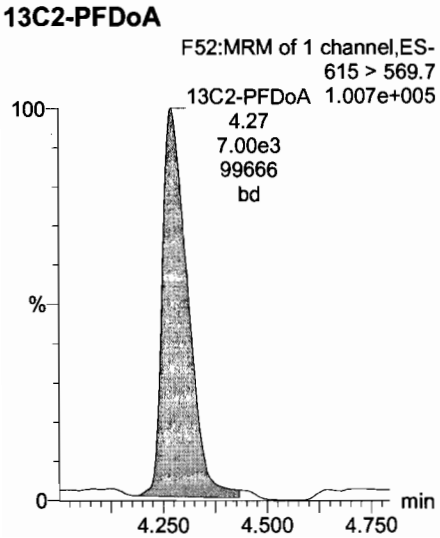

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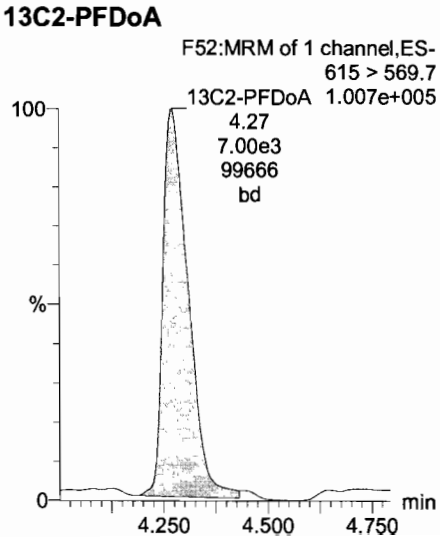

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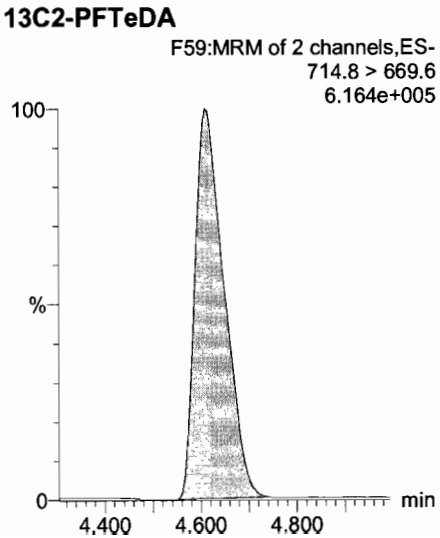
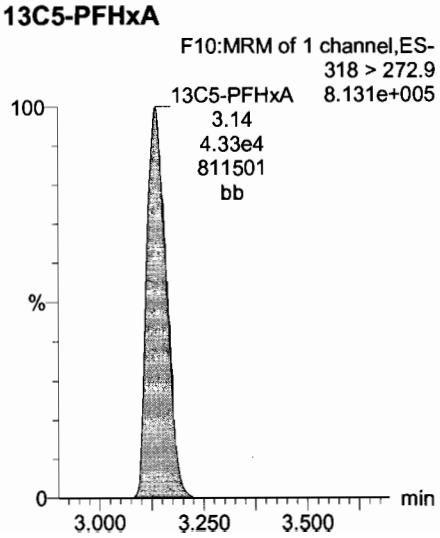


13C5-PFHxA



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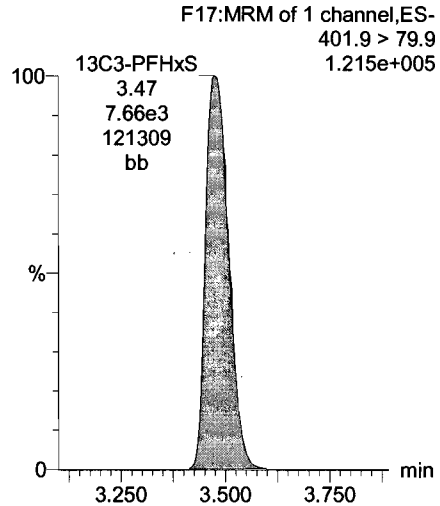
Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

13C3-PFHxS



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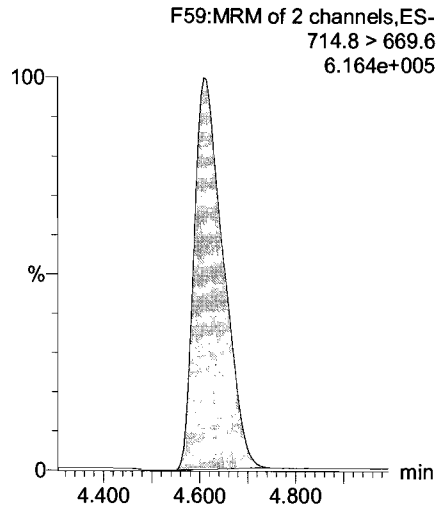

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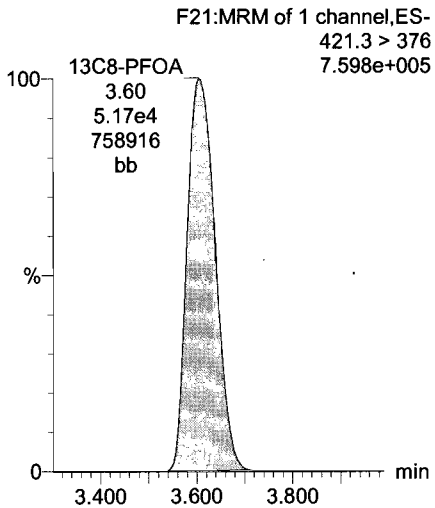

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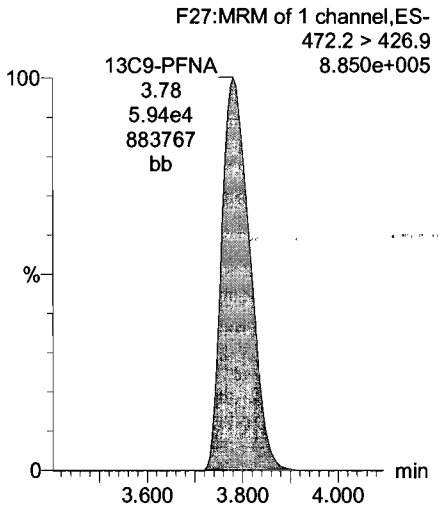

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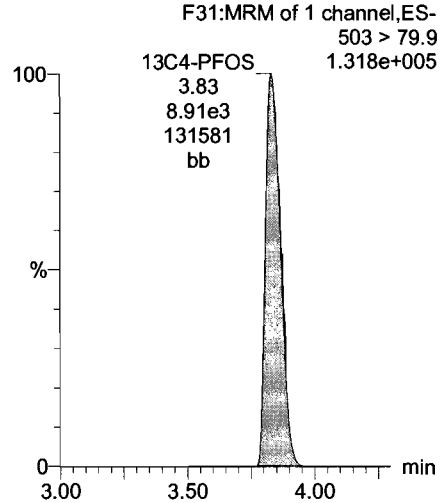

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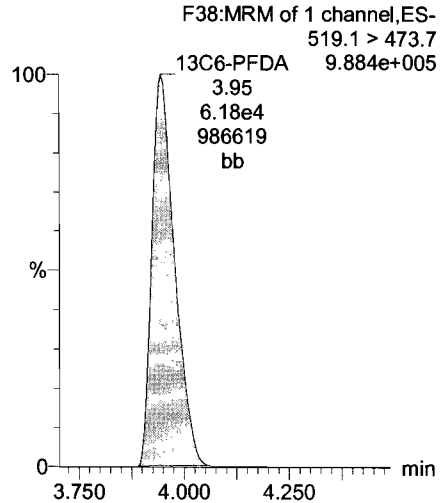

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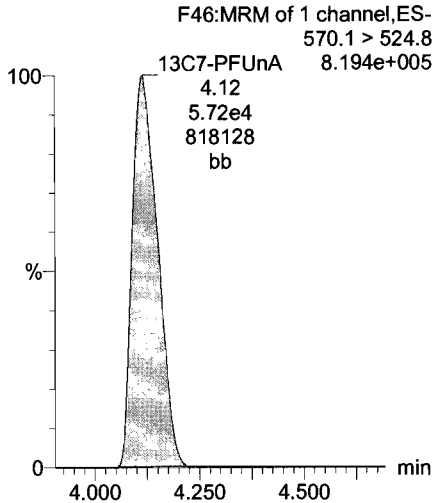

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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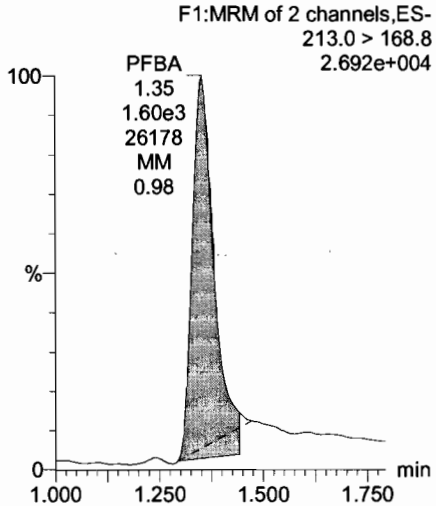

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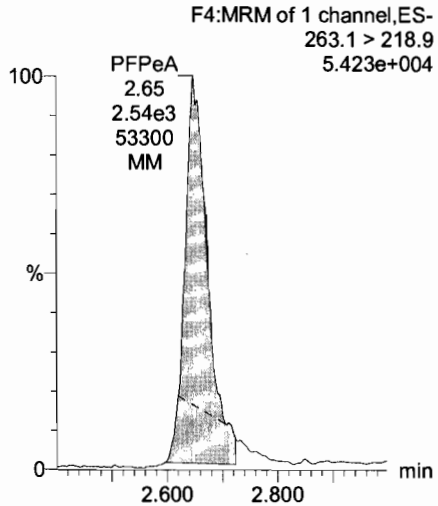

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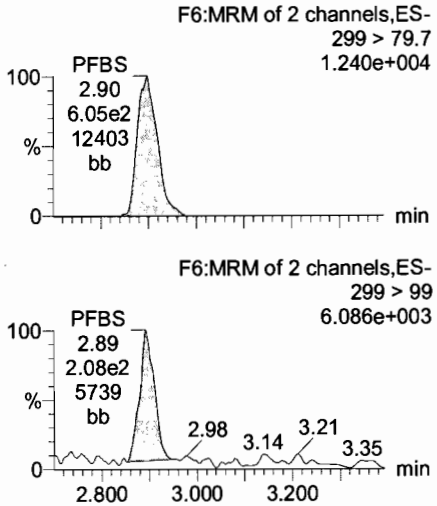

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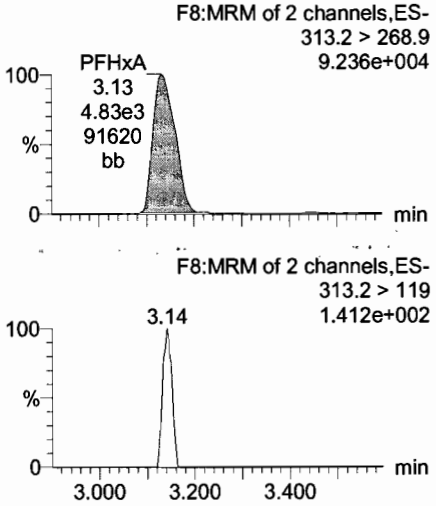

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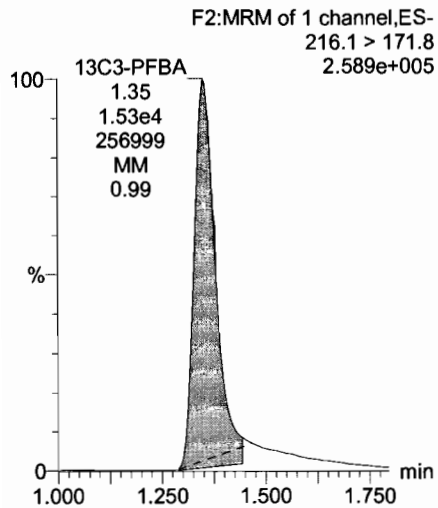

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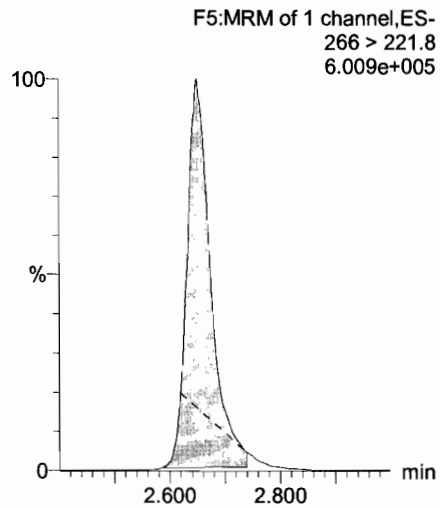

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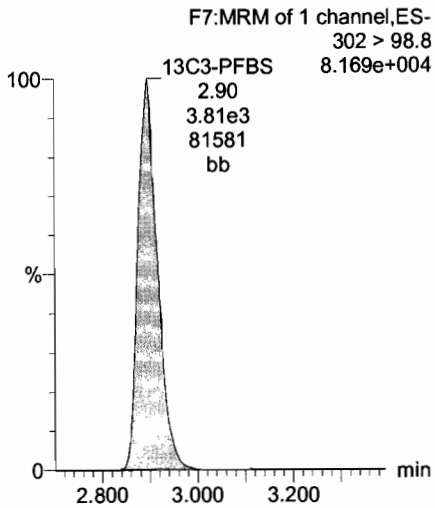
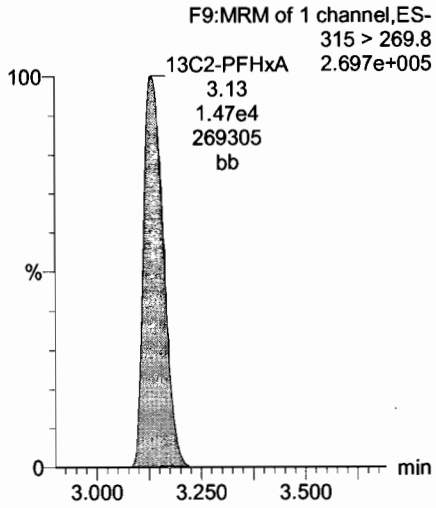


13C2-PFHxA



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Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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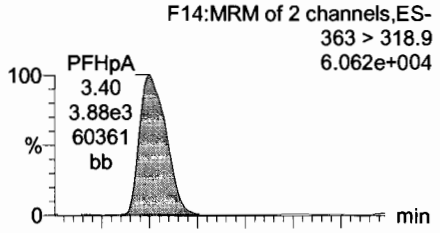

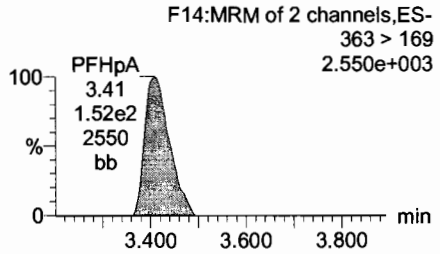

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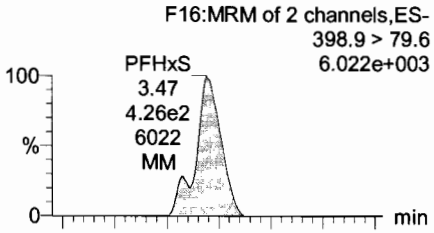
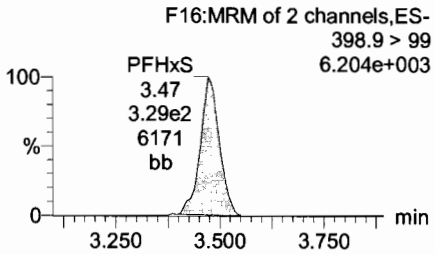
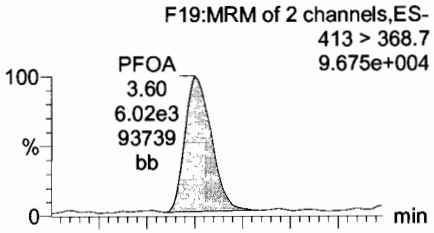
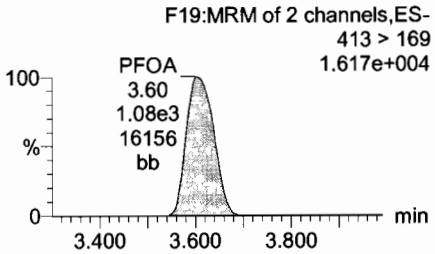




Total PFOA





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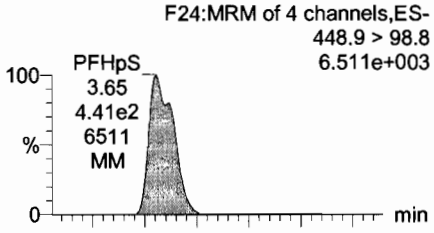

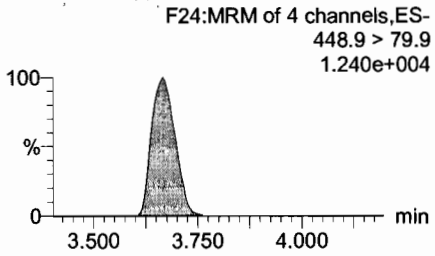

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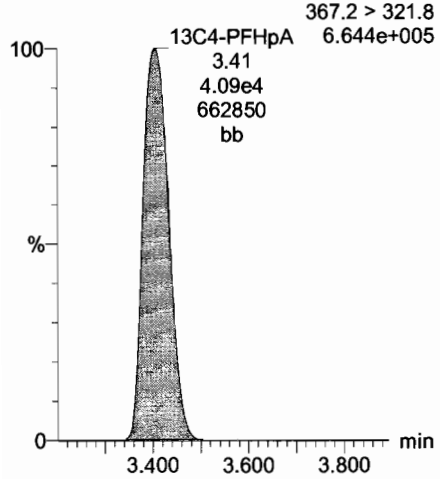
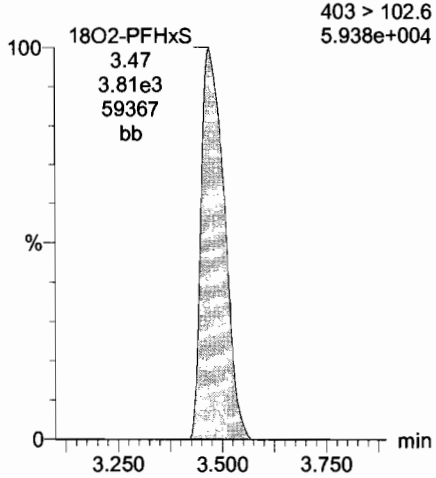


18O2-PFHxS



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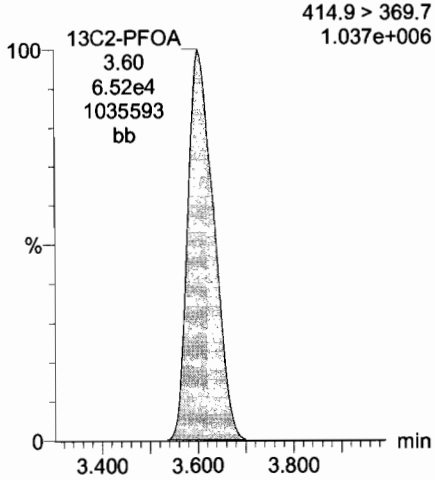

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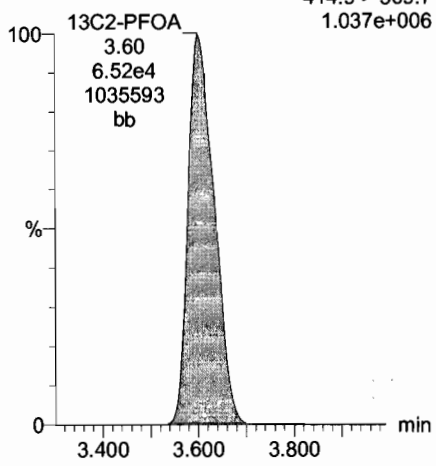

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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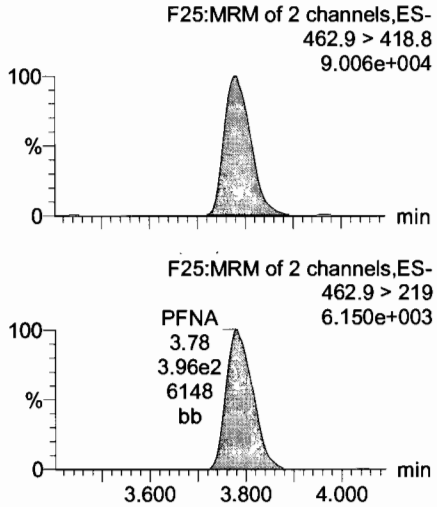

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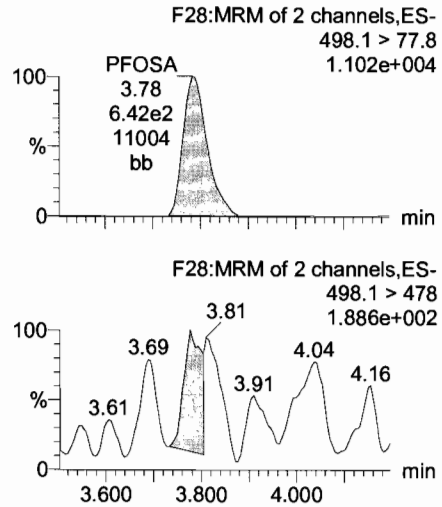
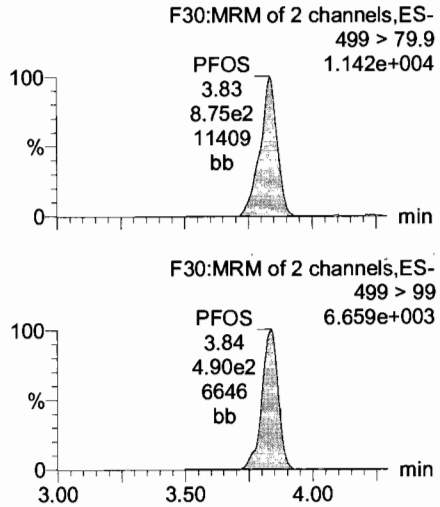
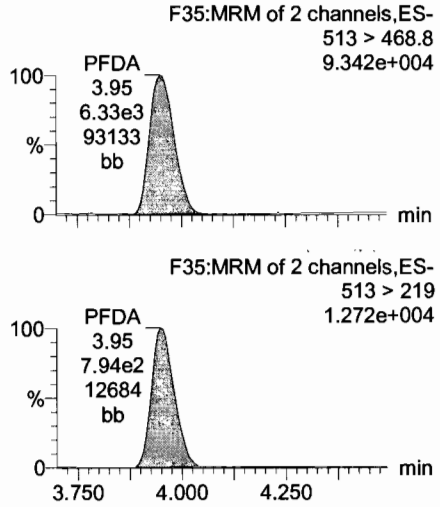


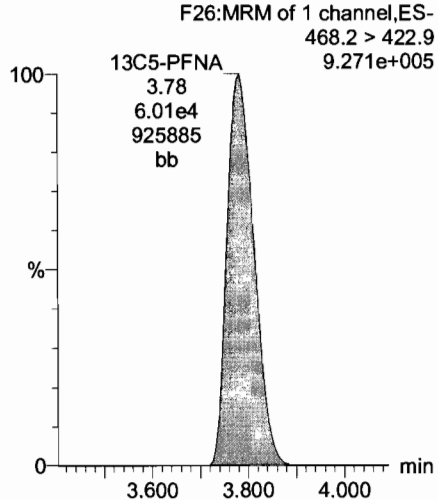
Total PFOS



PFDA



13C5-PFNA



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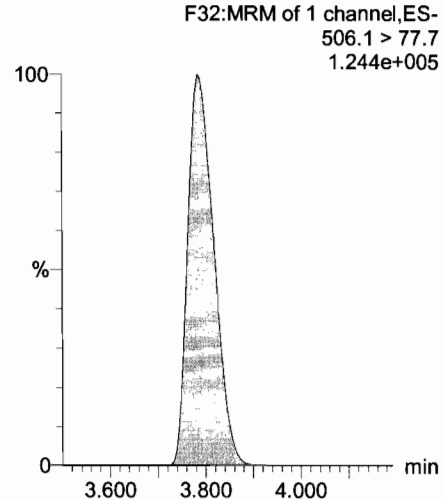

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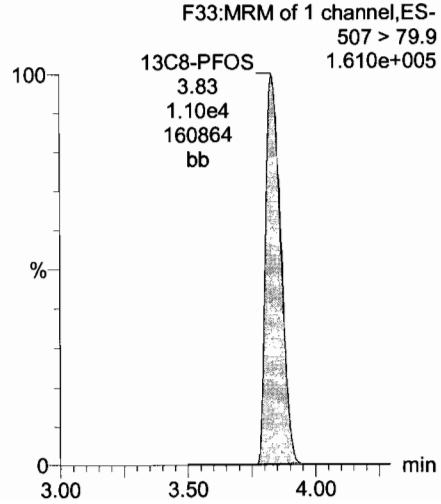

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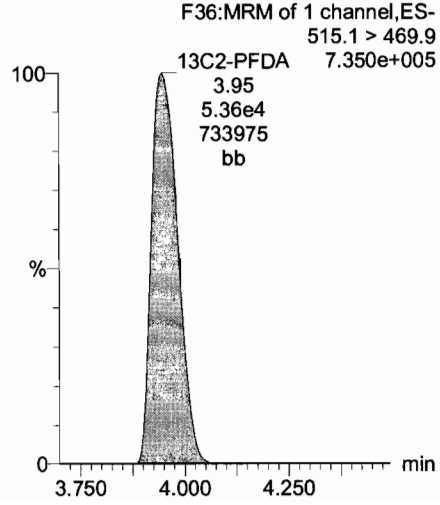

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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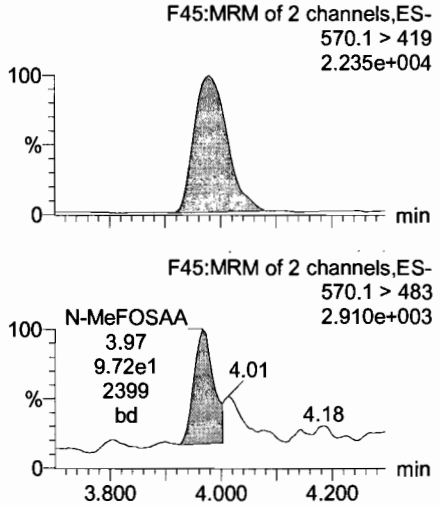

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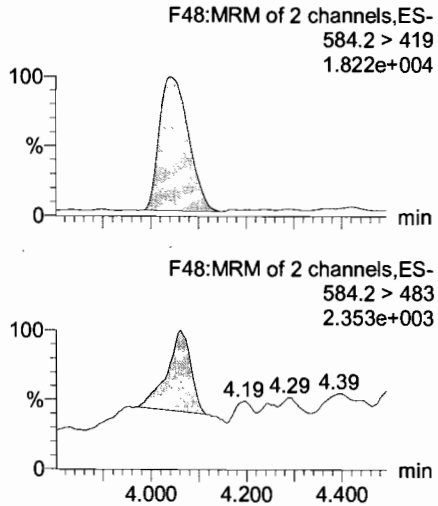

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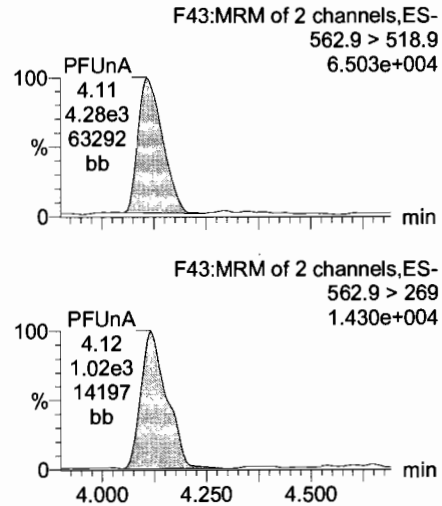

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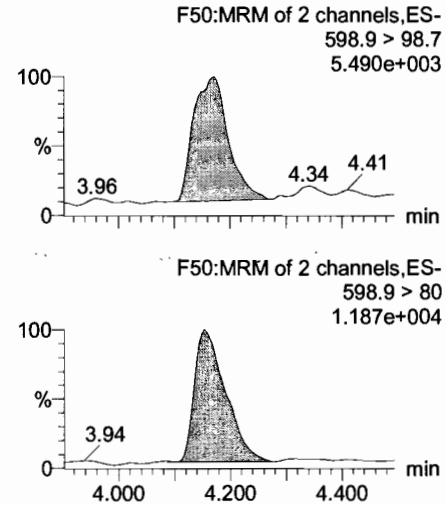

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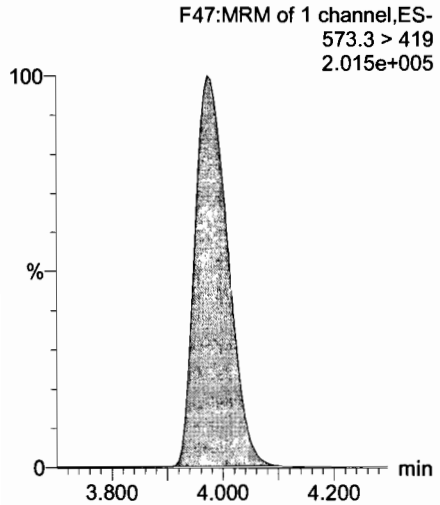

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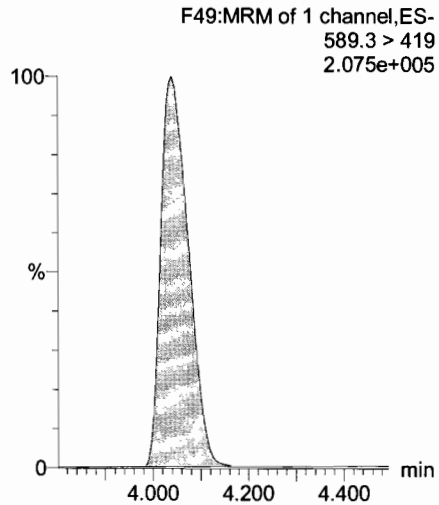

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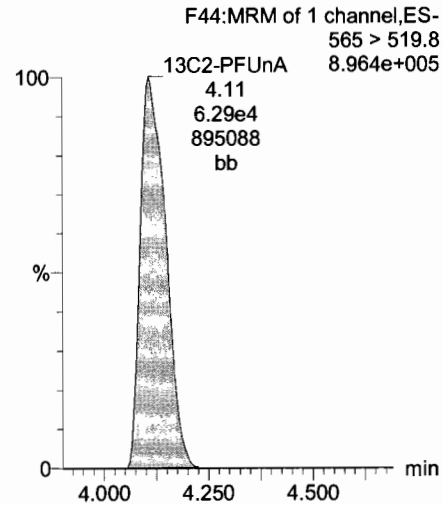

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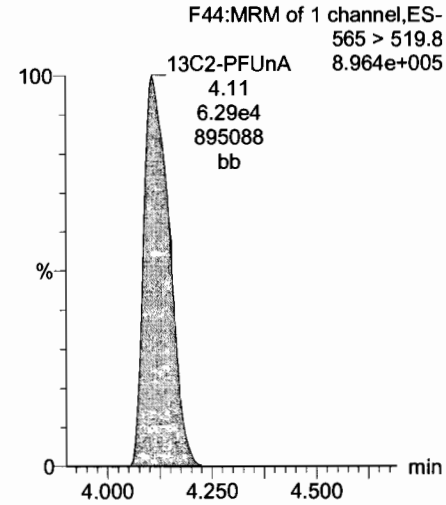

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Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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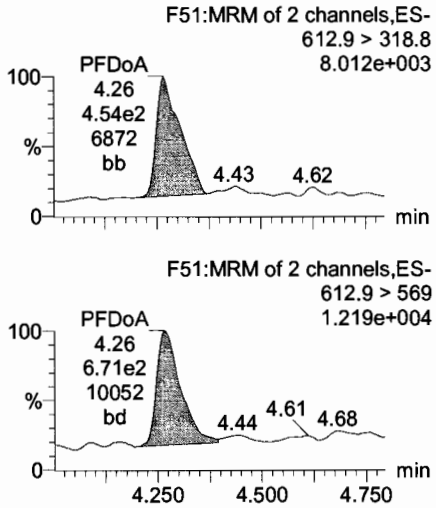

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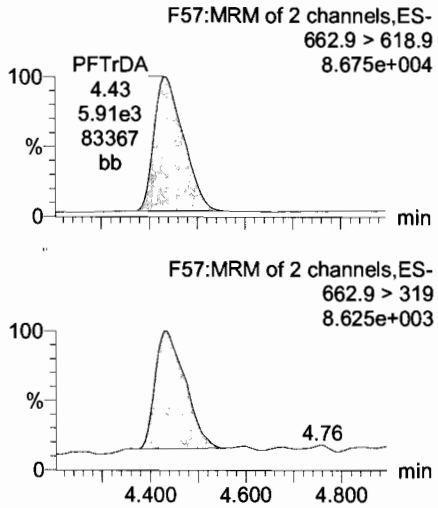

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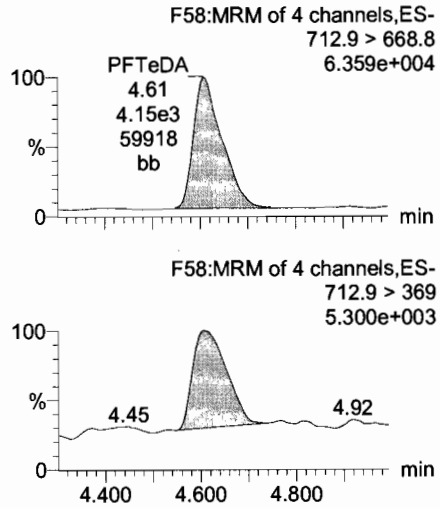

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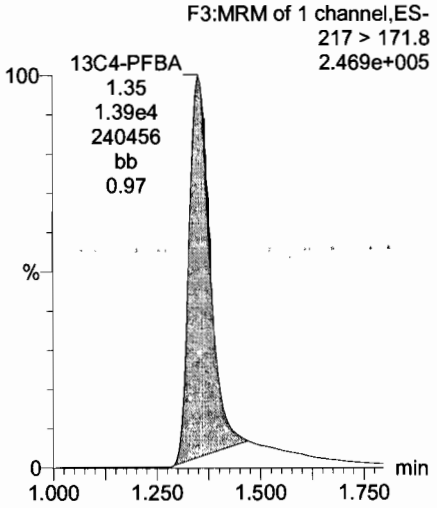

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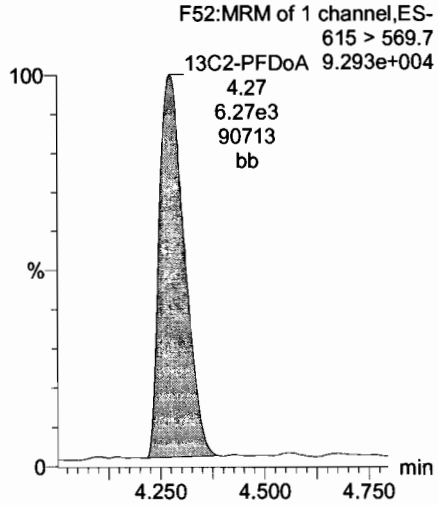

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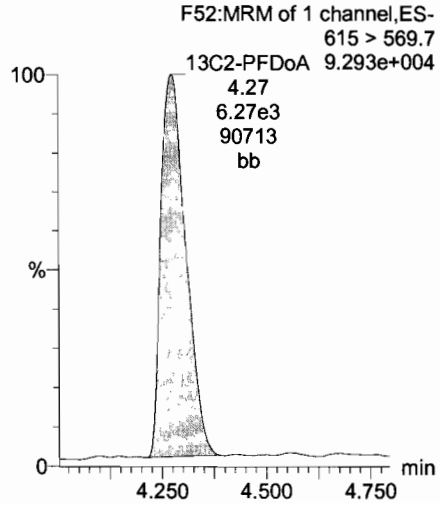

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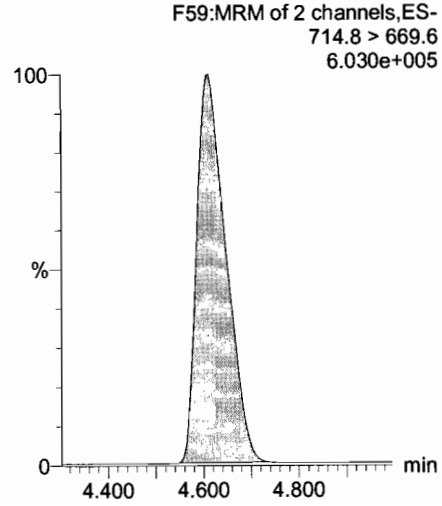
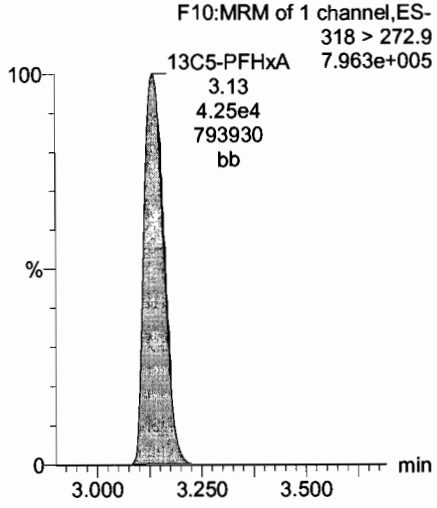


13C5-PFHxA



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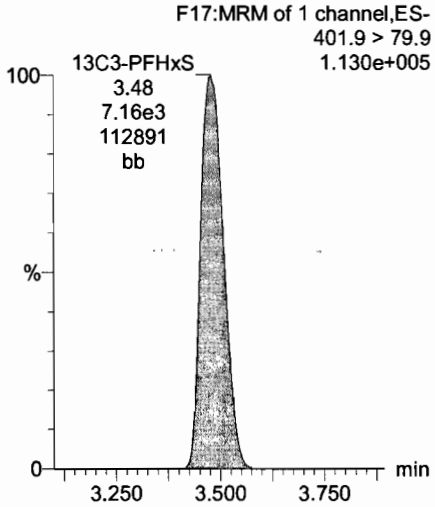
Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

13C3-PFHxS



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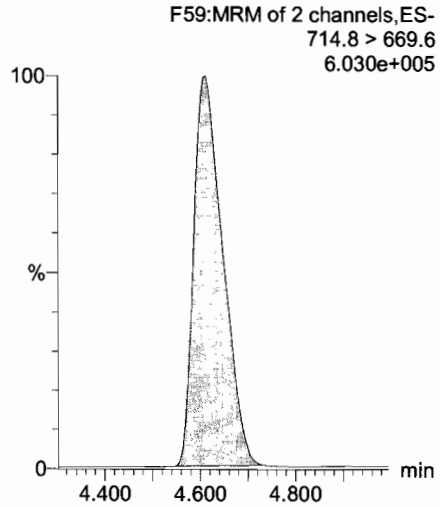

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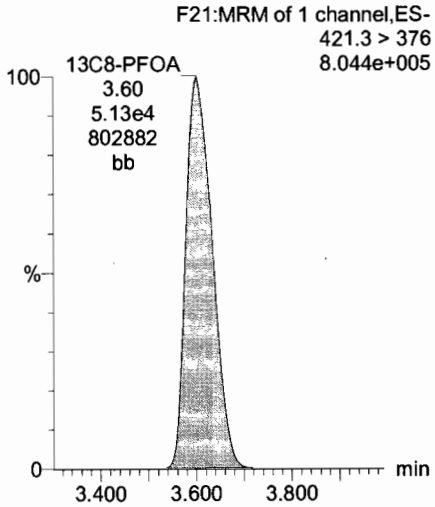

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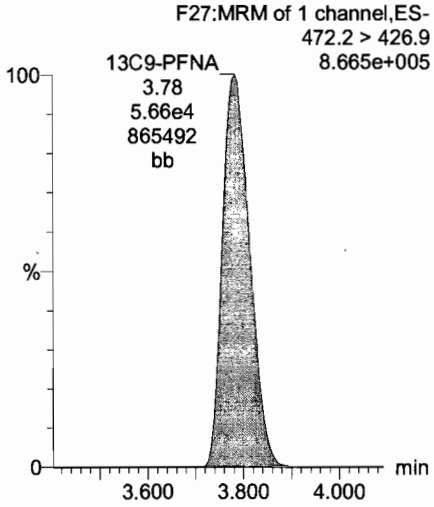

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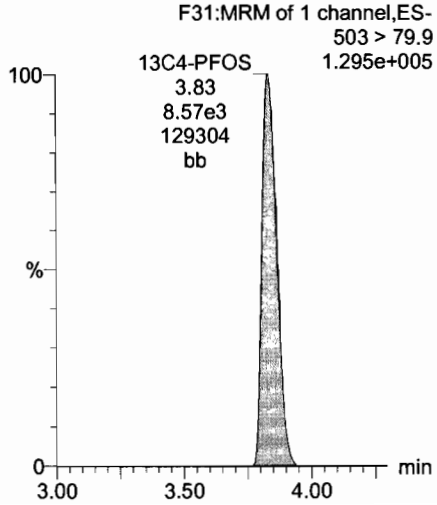

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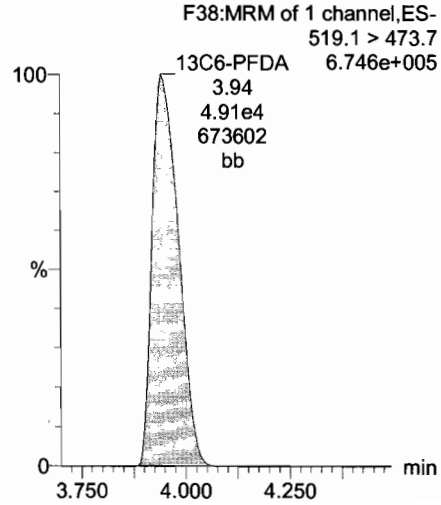
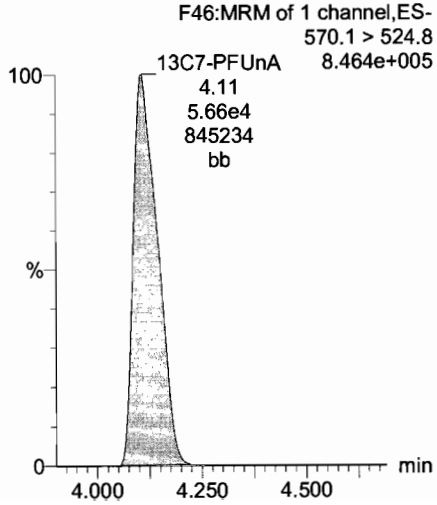


13C7-PFUnA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

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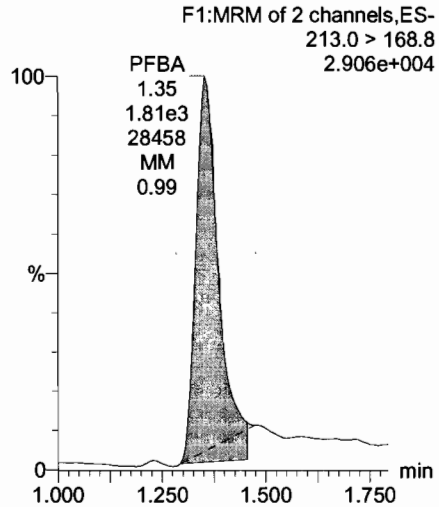

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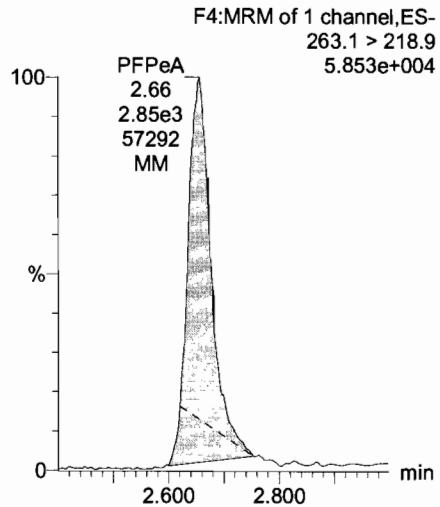

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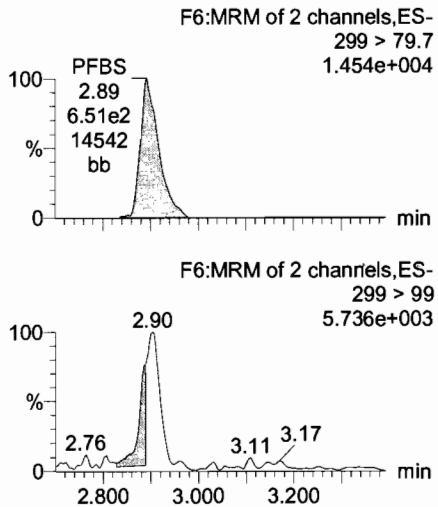

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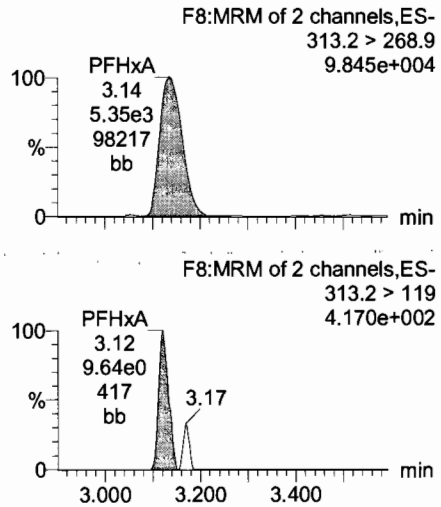

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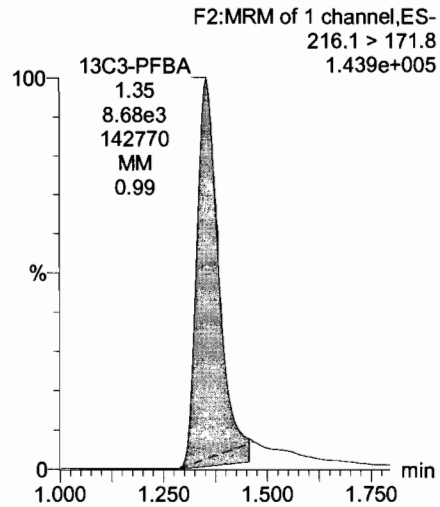

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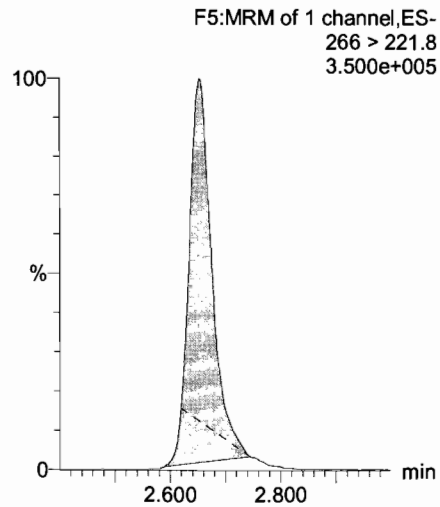
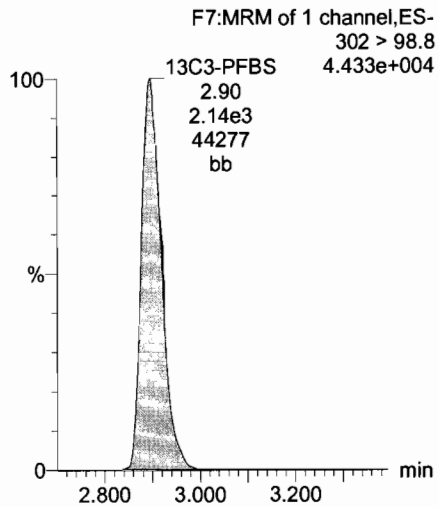


13C3-PFBS



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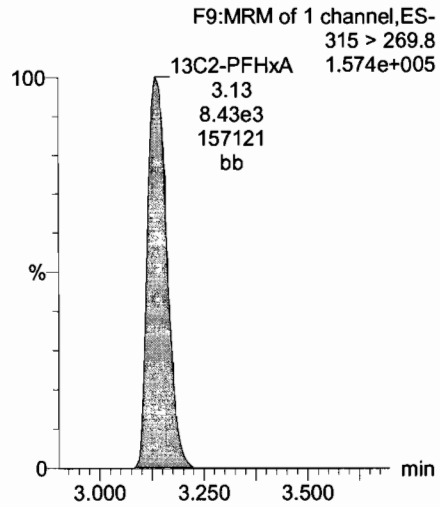

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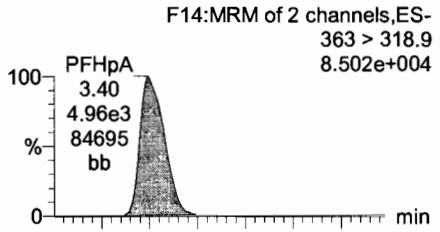
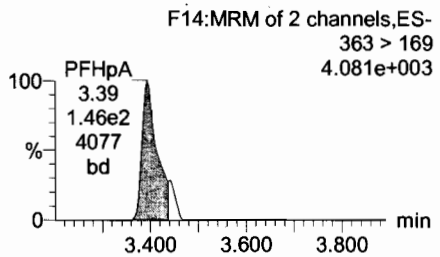
Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

PFHpA





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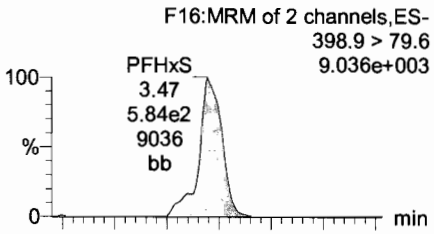
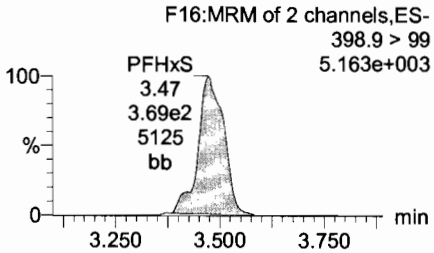
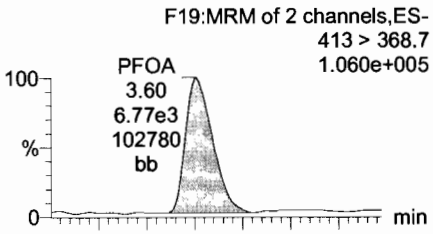
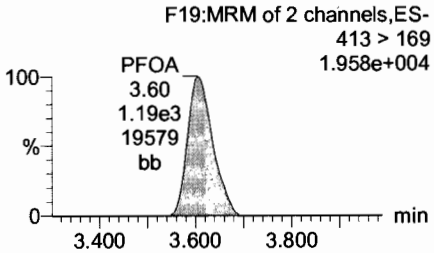




Total PFOA





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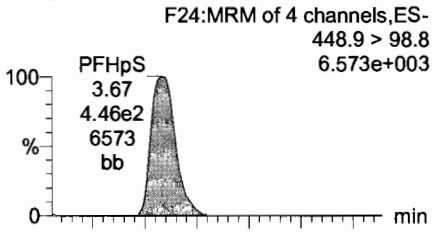

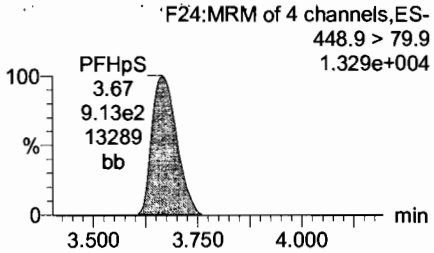

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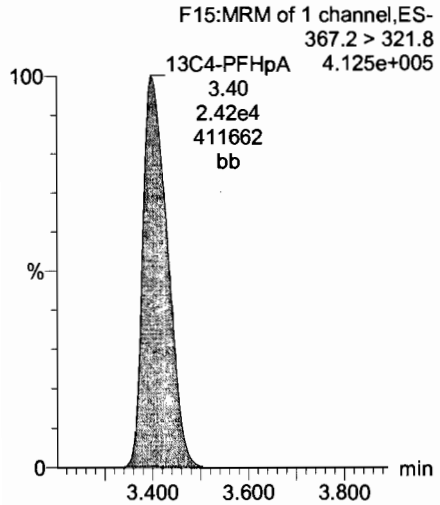
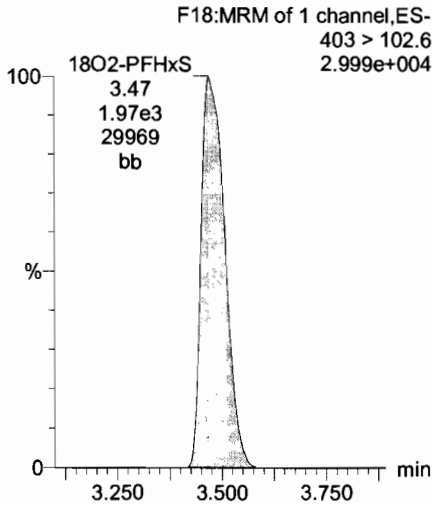


18O2-PFHxS



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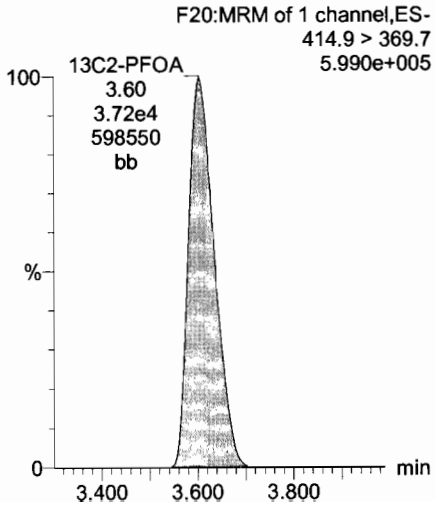

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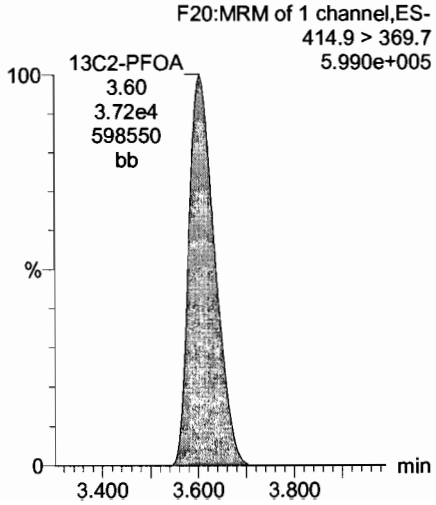

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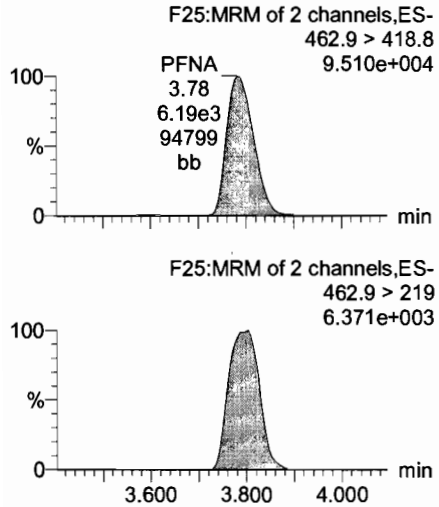
Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

PFNA



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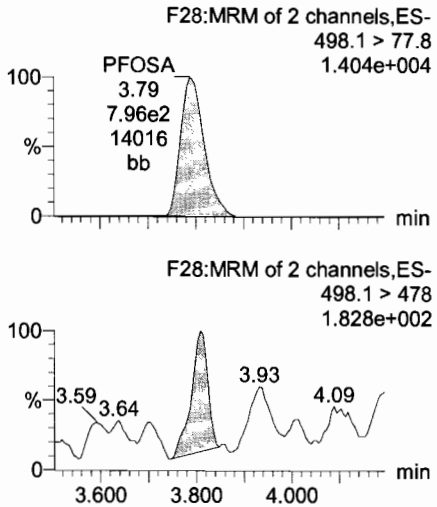

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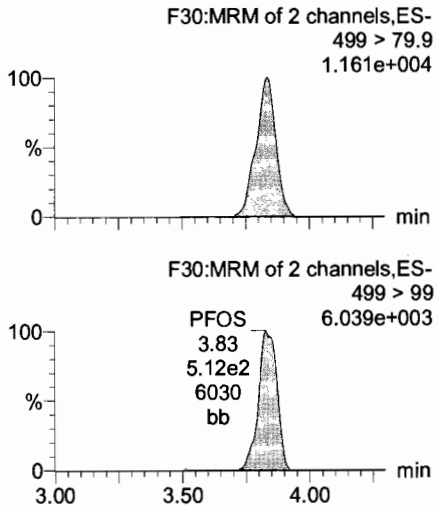

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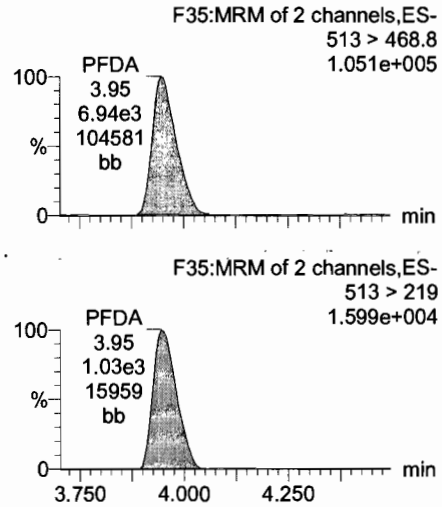
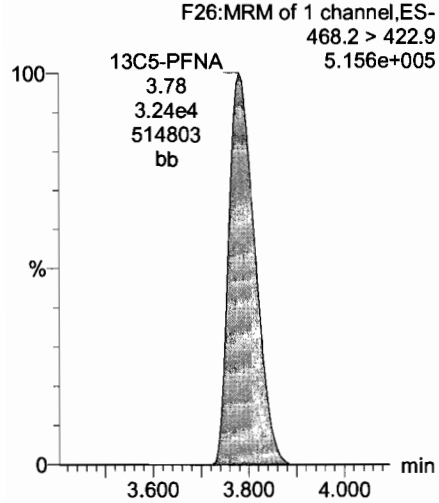
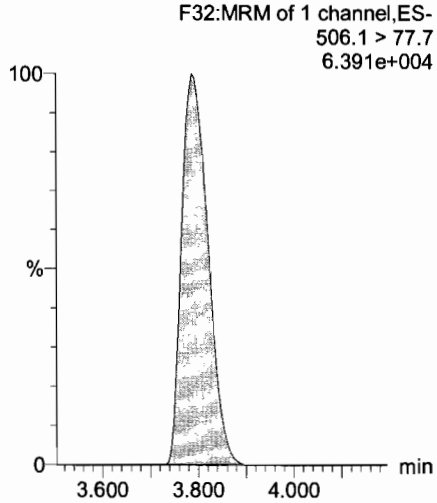


13C5-PFNA



13C8-PFOSA



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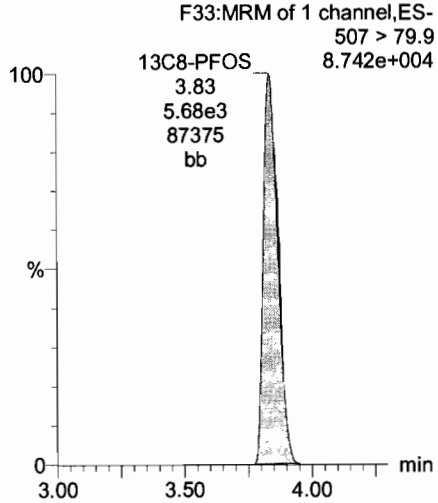

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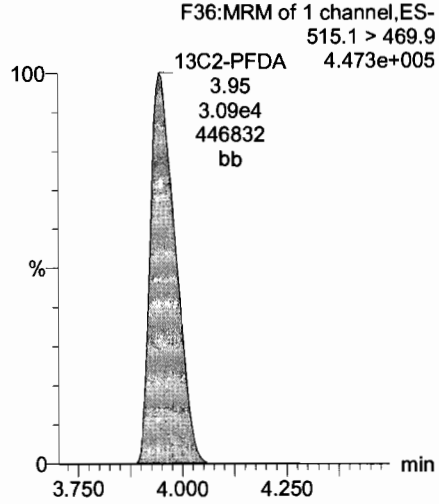

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Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

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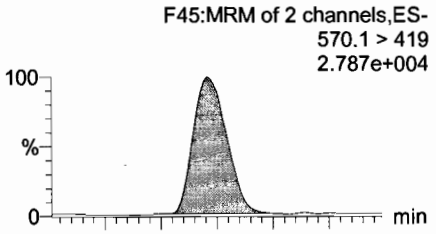

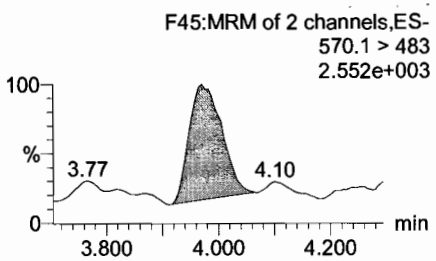

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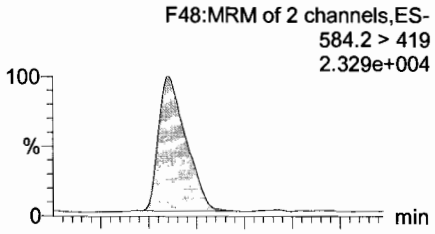

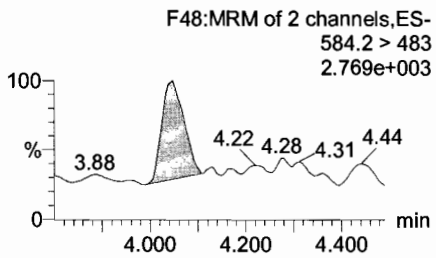

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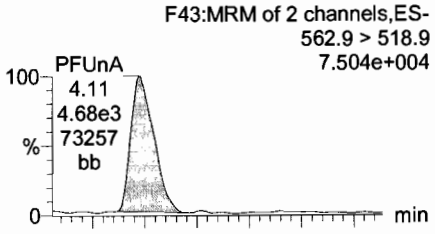

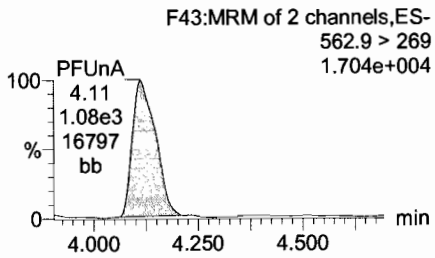

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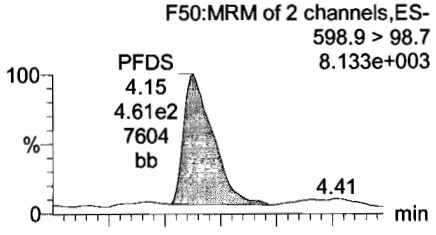

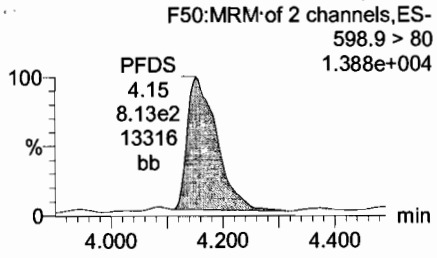

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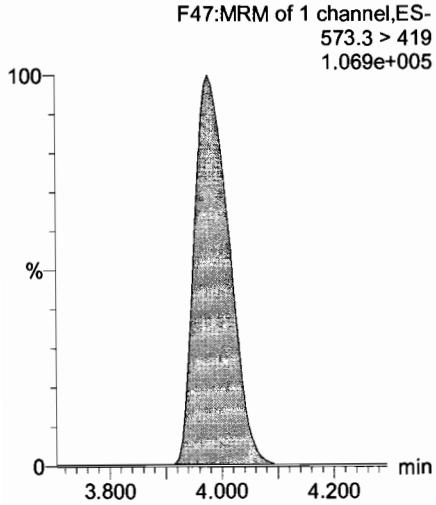

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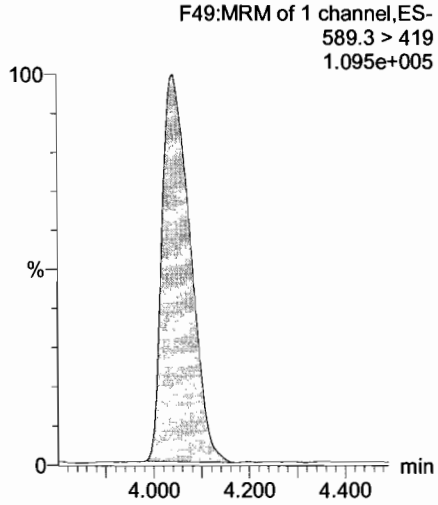
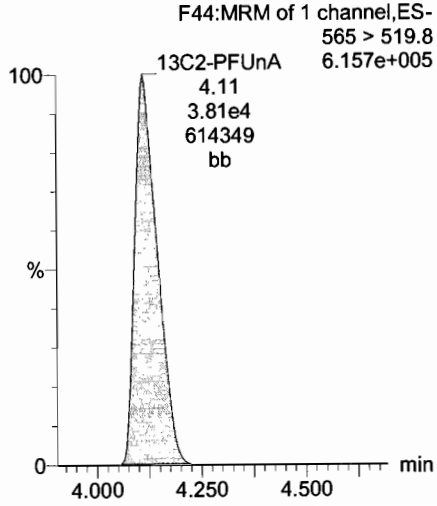


13C2-PFUnA



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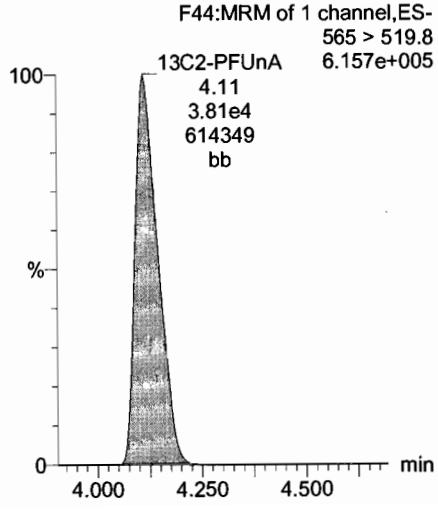

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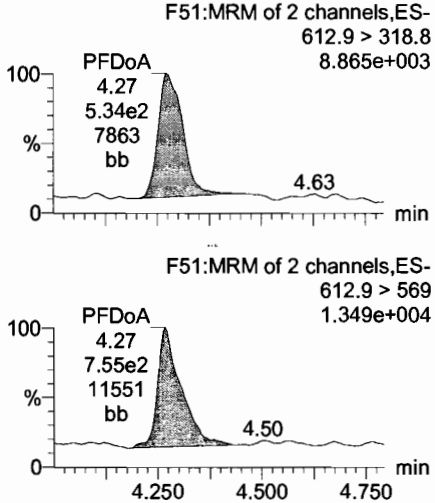
Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

PFDoA



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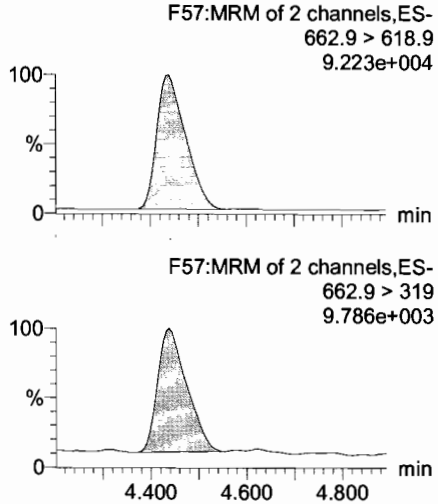

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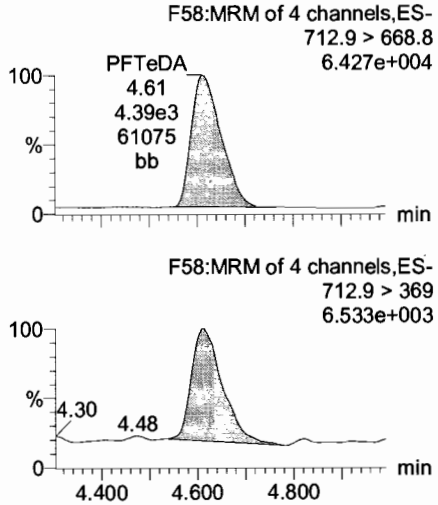

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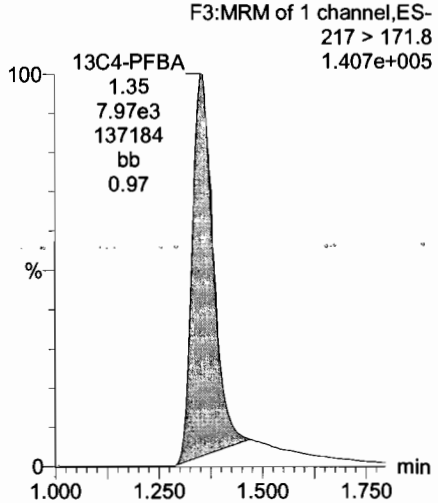

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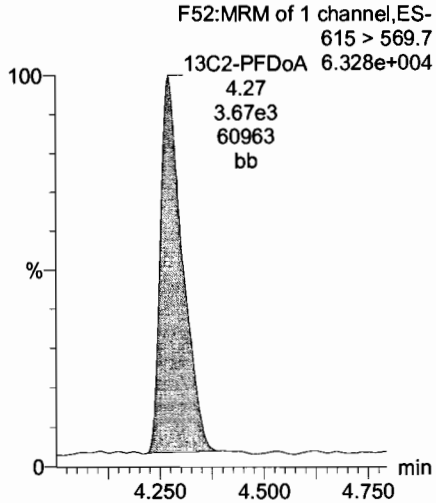

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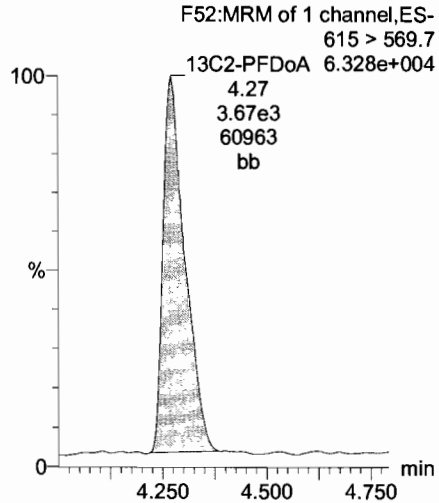

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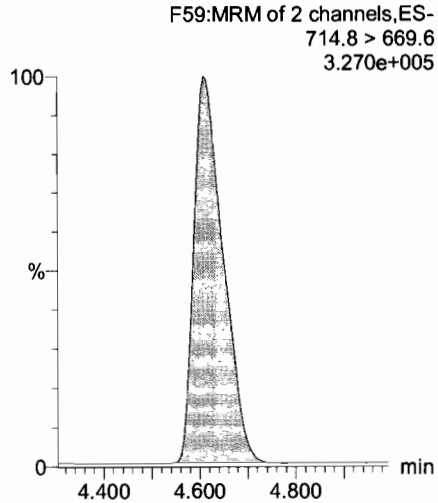

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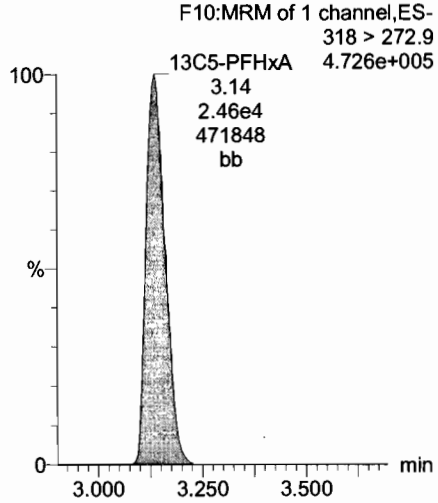

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

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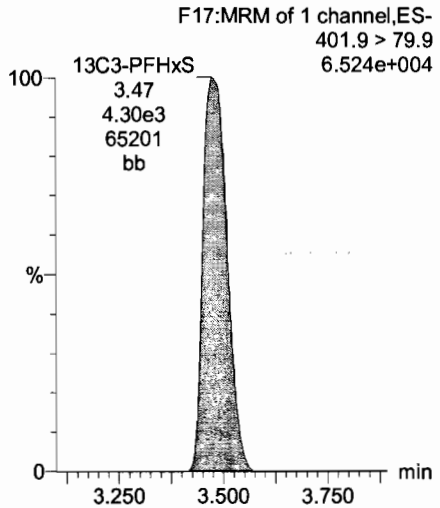

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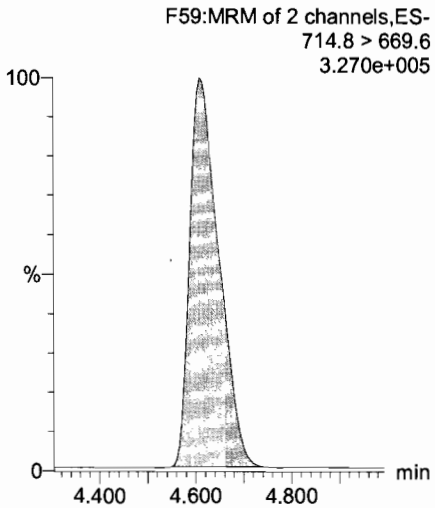

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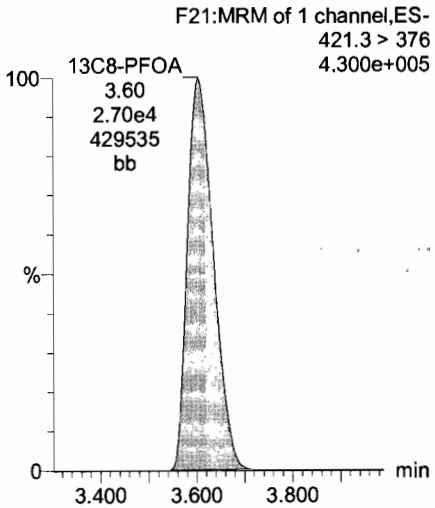

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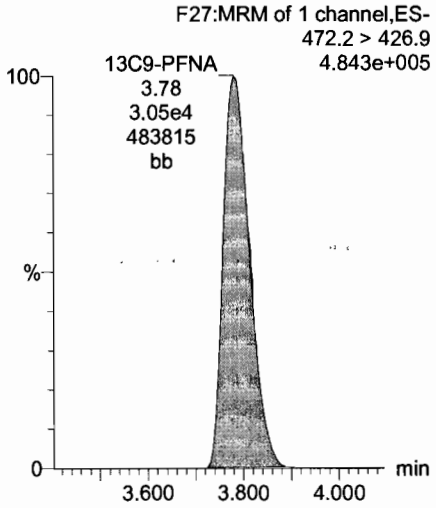
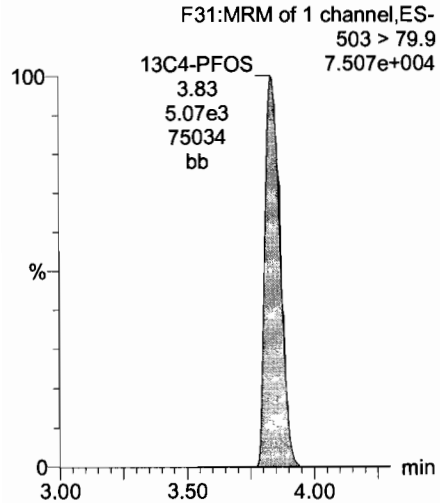
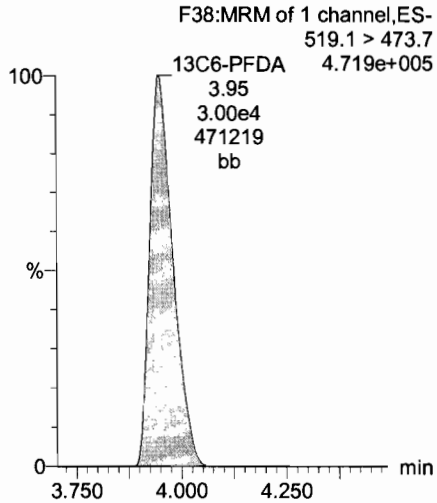


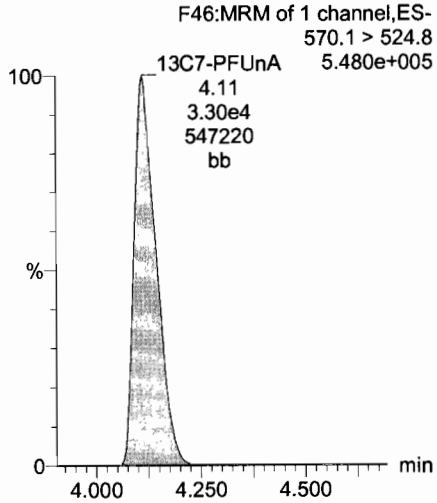
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

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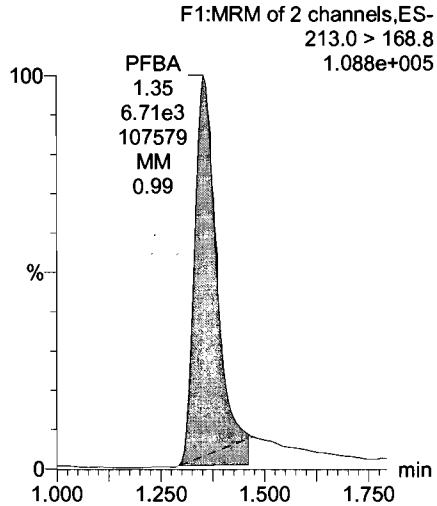

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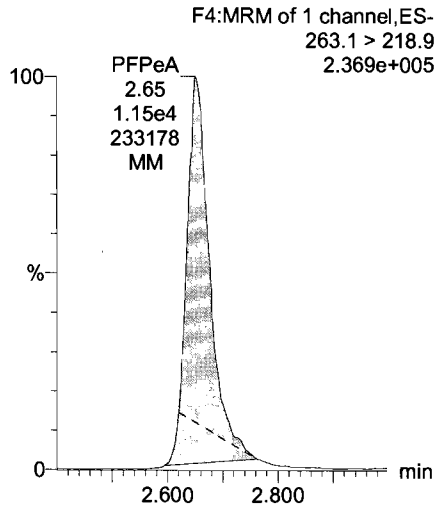

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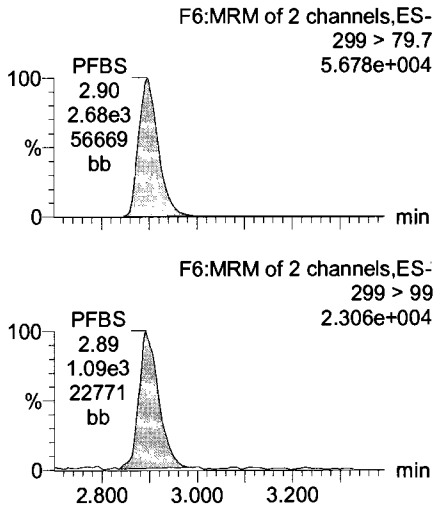

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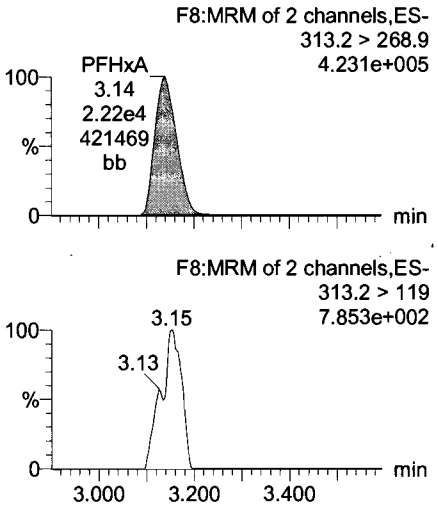

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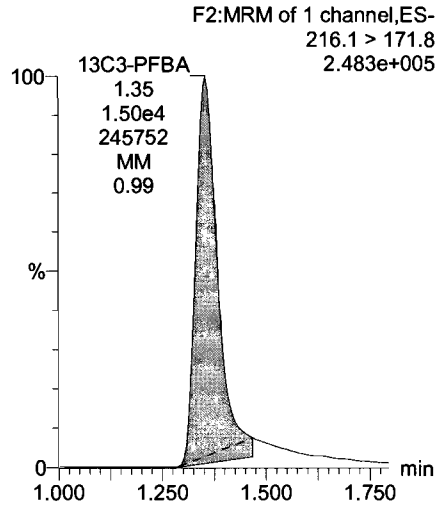

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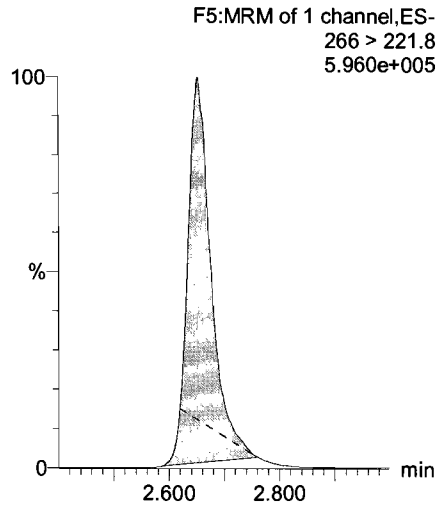

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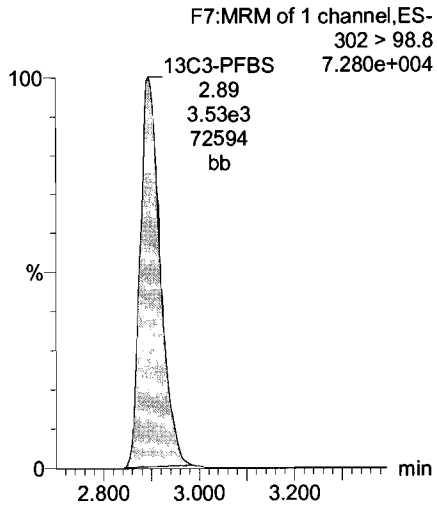

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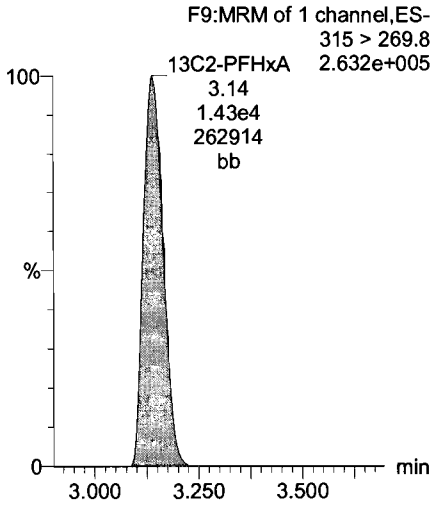

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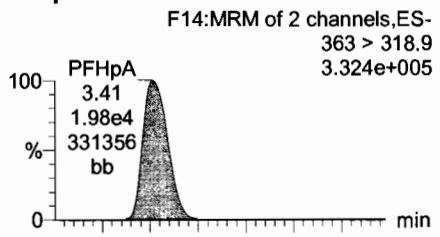
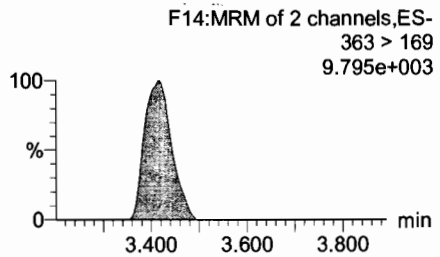
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

PFHpA





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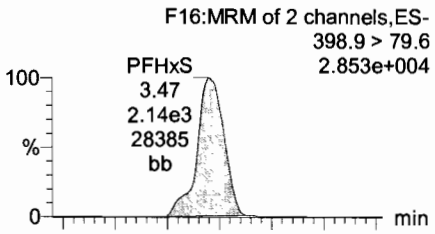
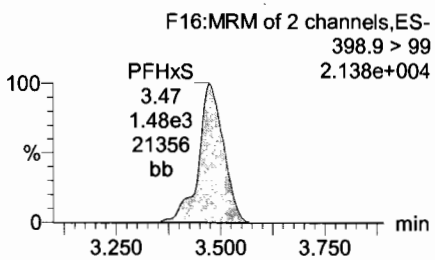
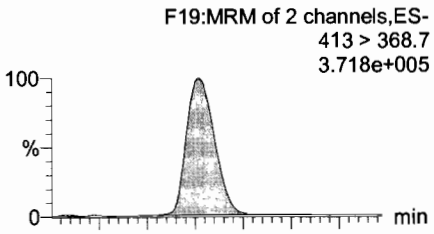
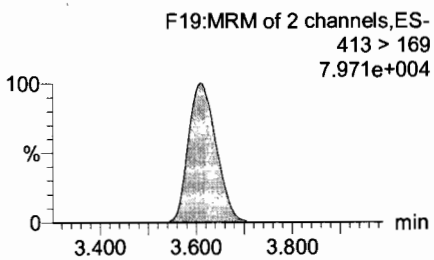




Total PFOA





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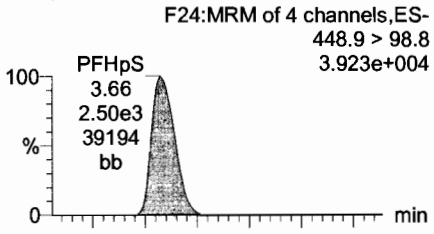
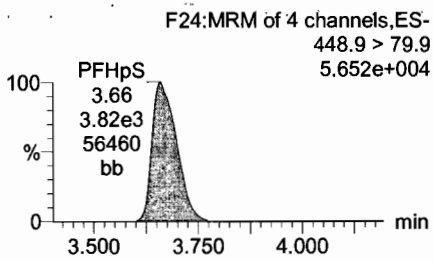
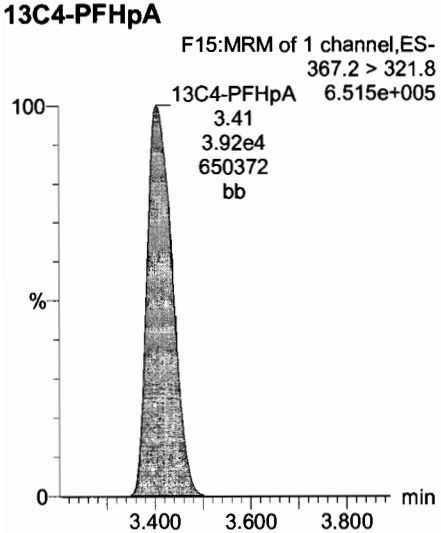
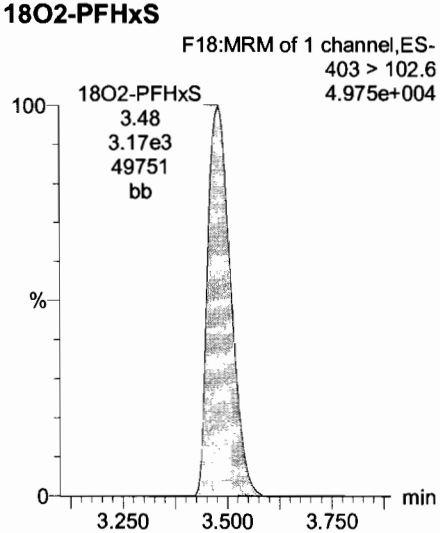




13C4-PFHpA



18O2-PFHxS



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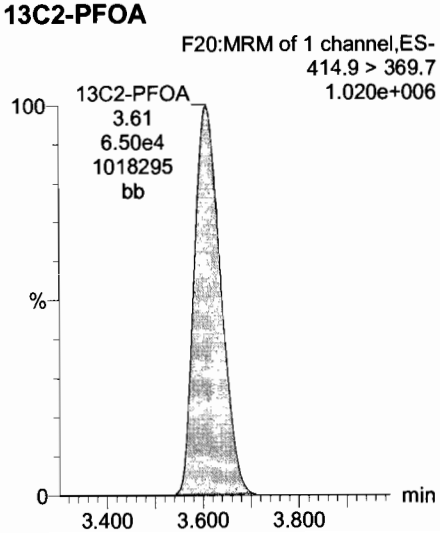

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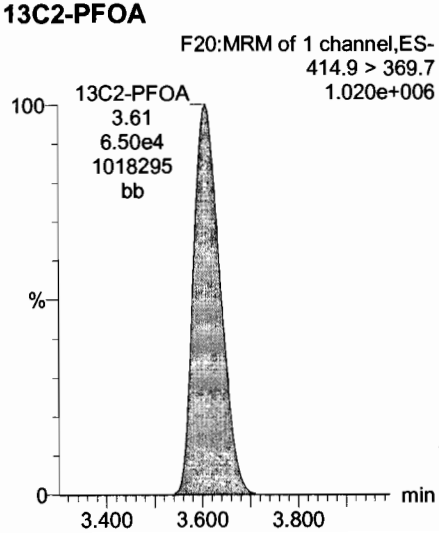

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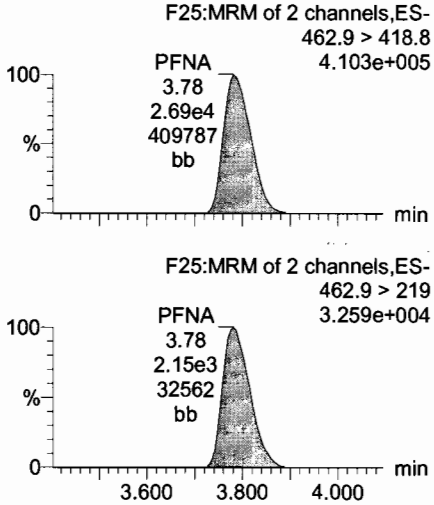
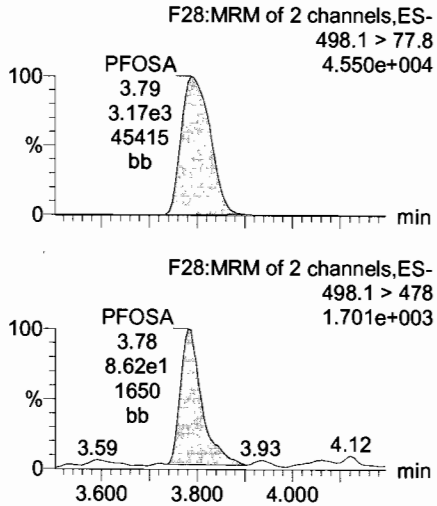
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

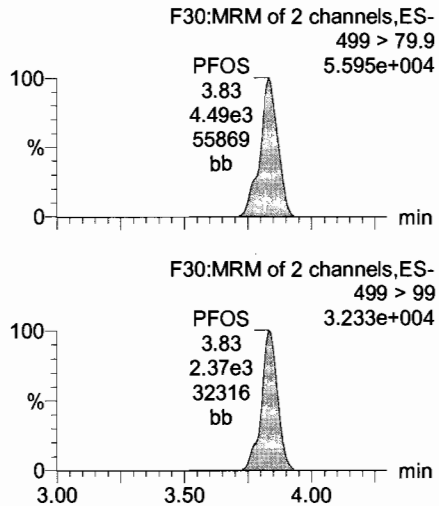
PFNA



PFOSA



Total PFOS



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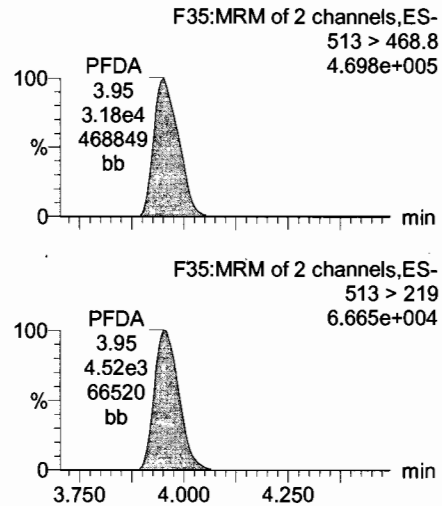
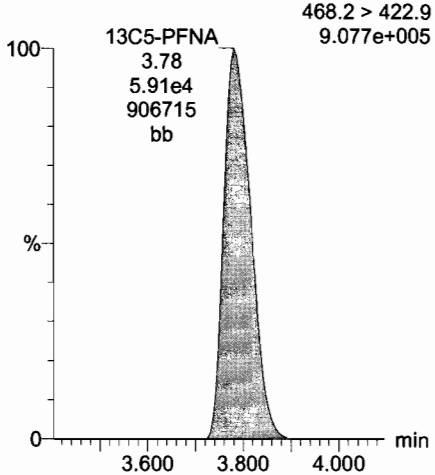


13C5-PFNA



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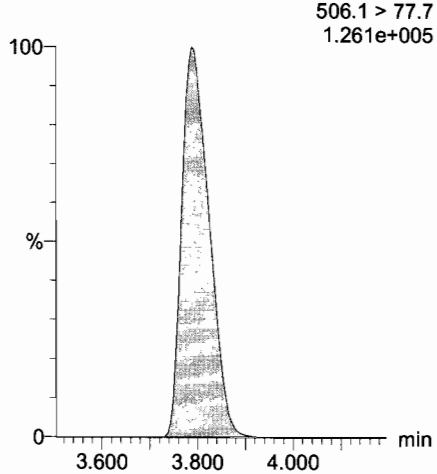
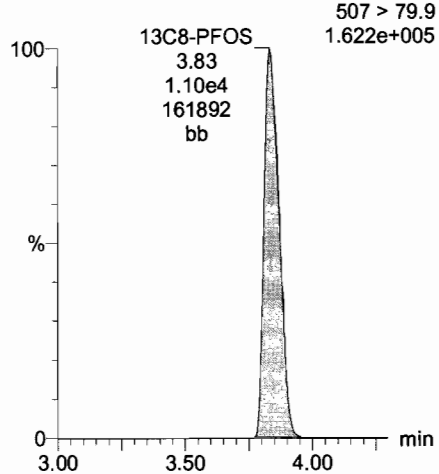


13C8-PFOS



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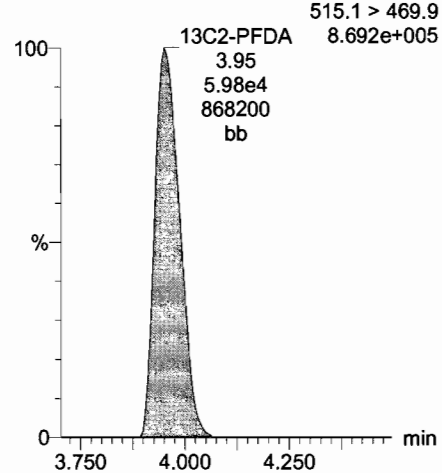

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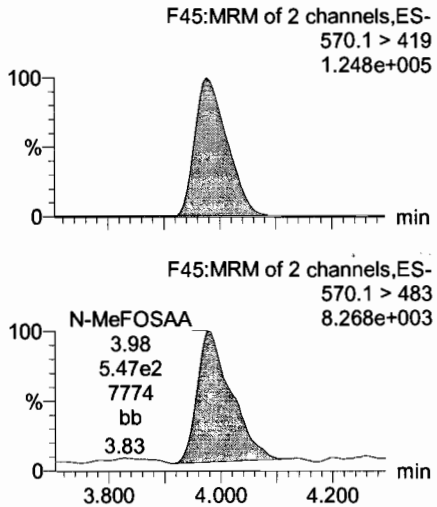
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

N-MeFOSAA



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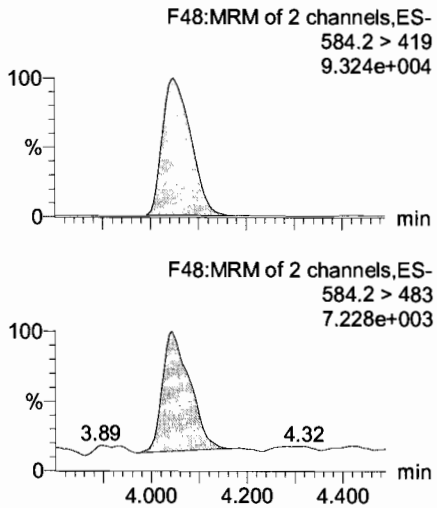

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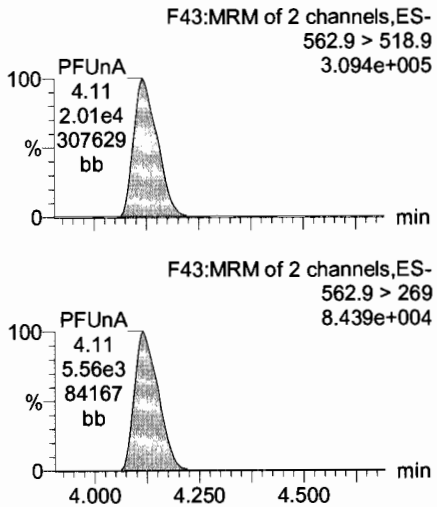
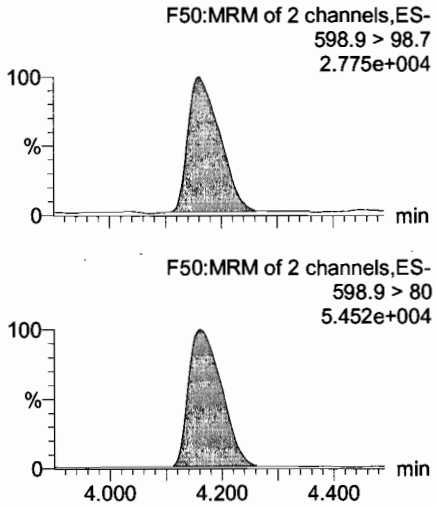


PFDS



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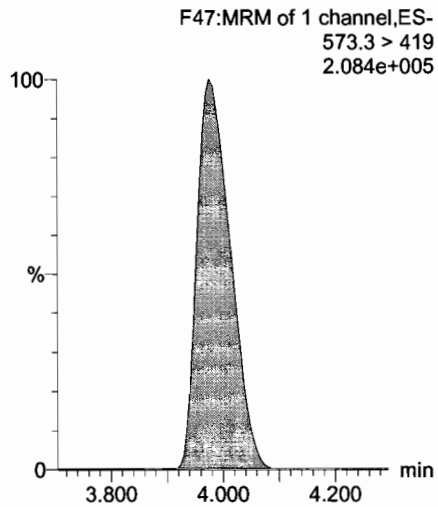

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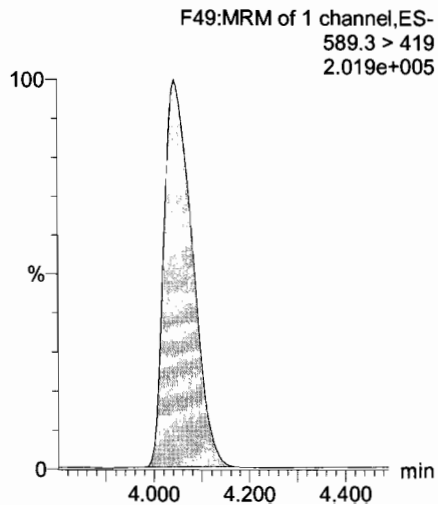

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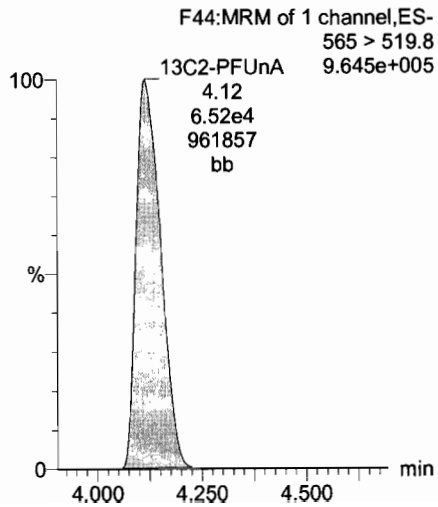

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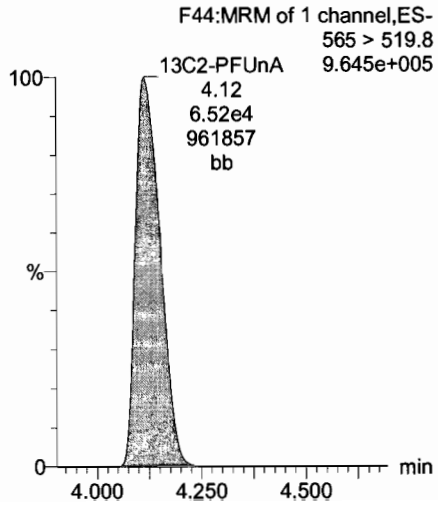

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

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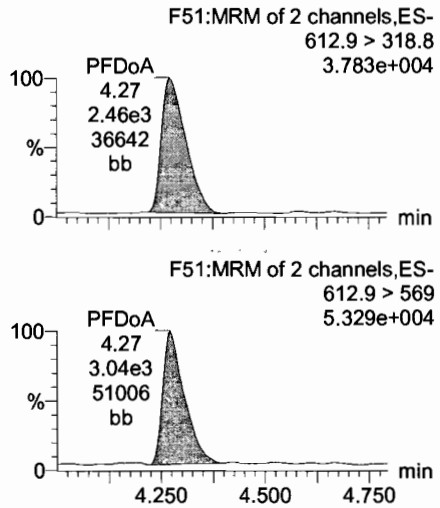

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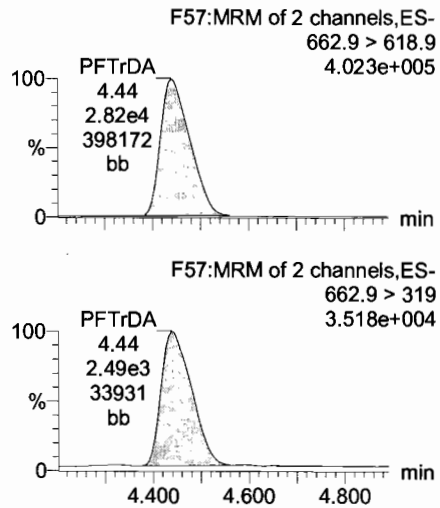

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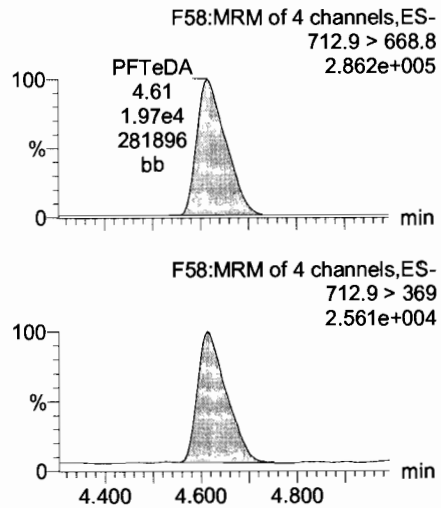

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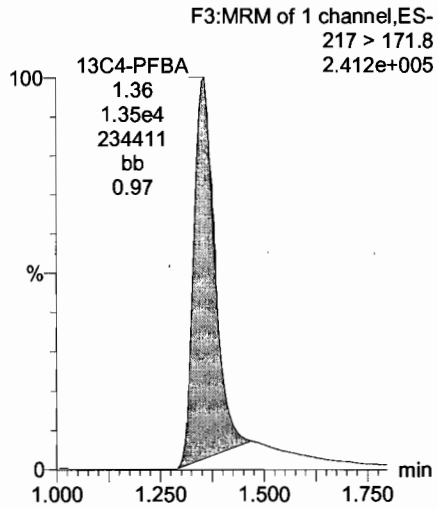

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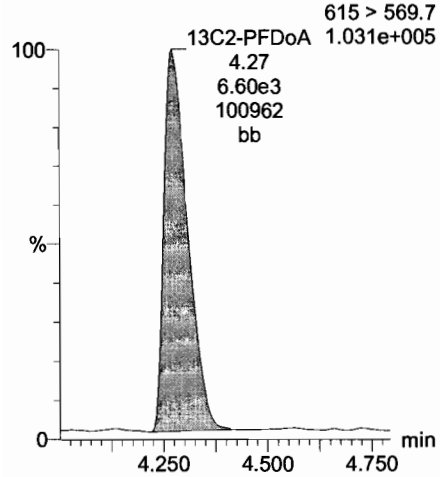

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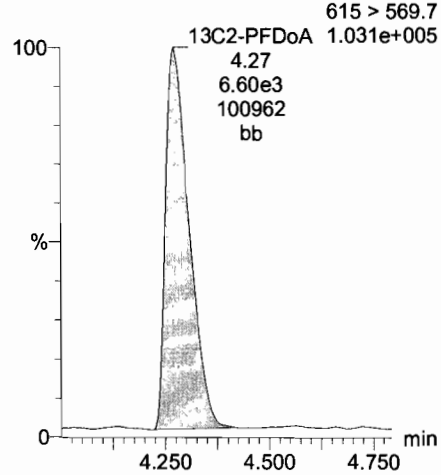

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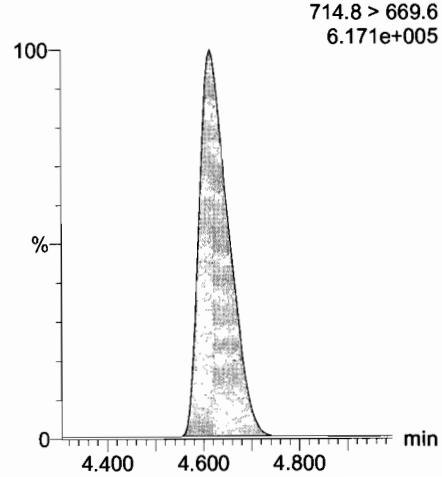
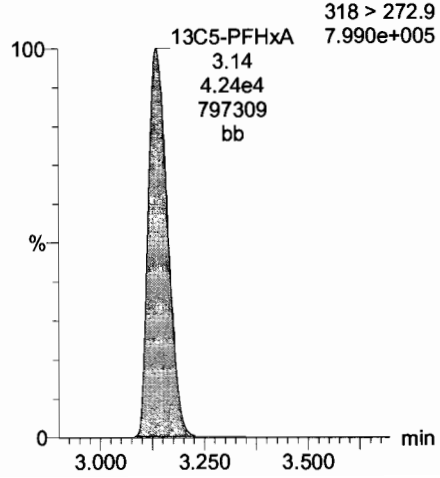


13C5-PFHxA



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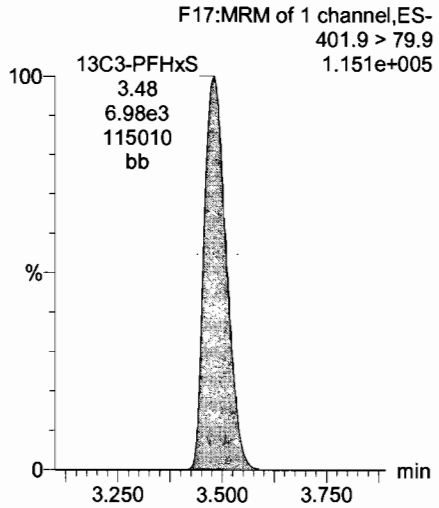
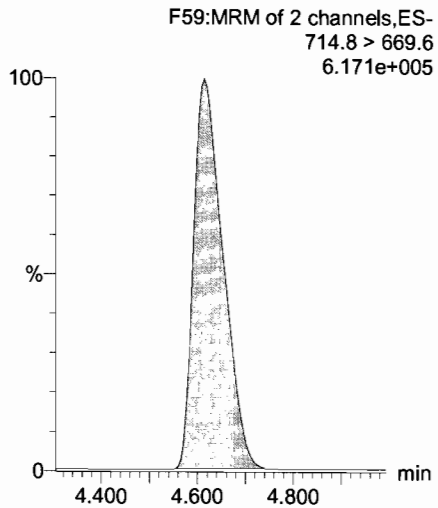
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

13C3-PFHxS



13C2-PFTeDA



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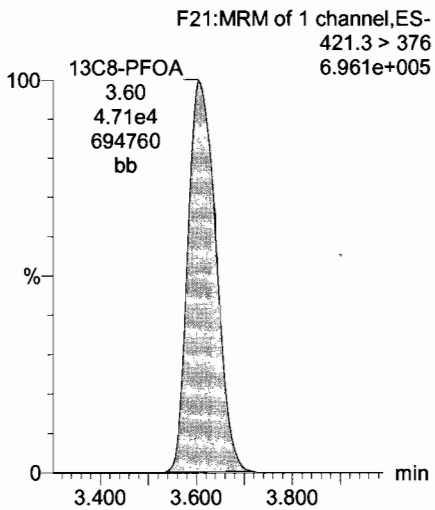
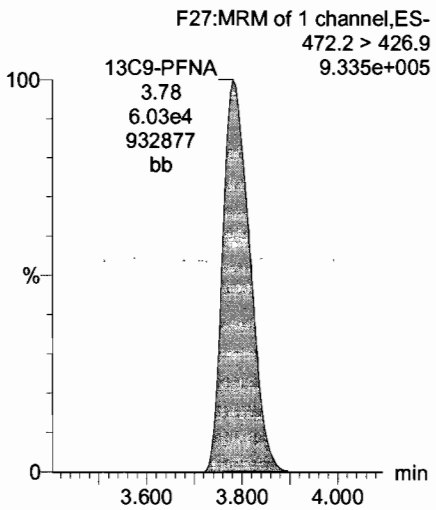
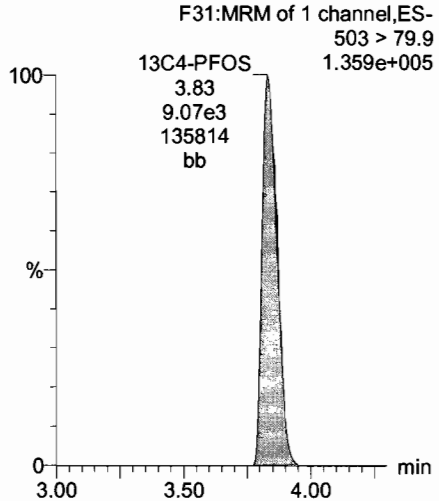


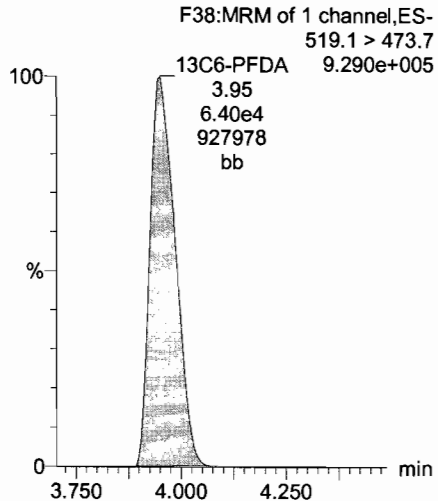
13C9-PFNA



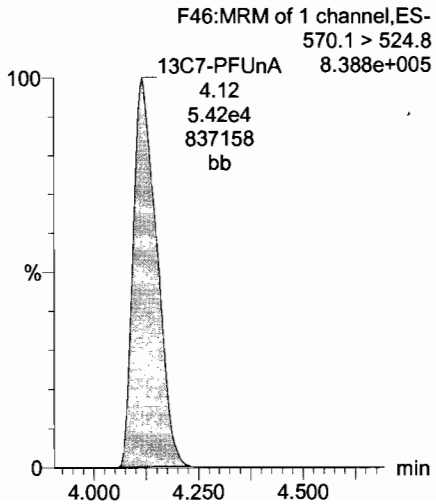
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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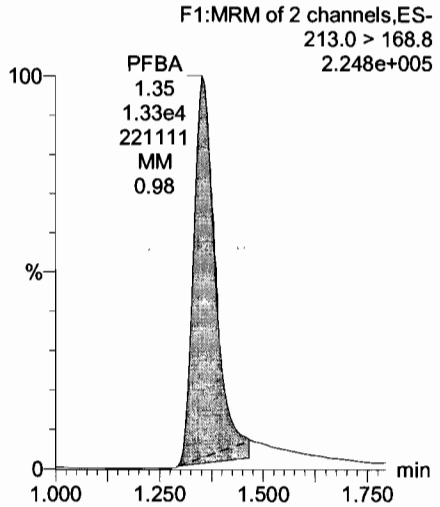
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

PFBA



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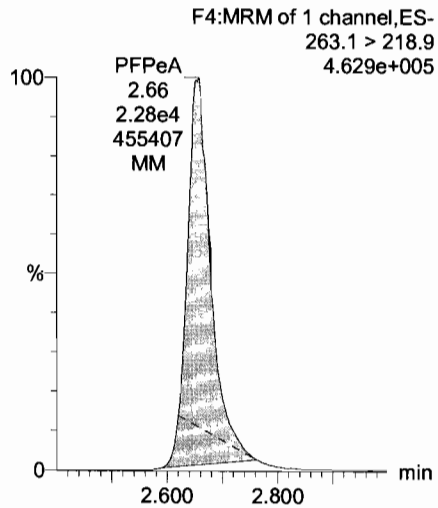

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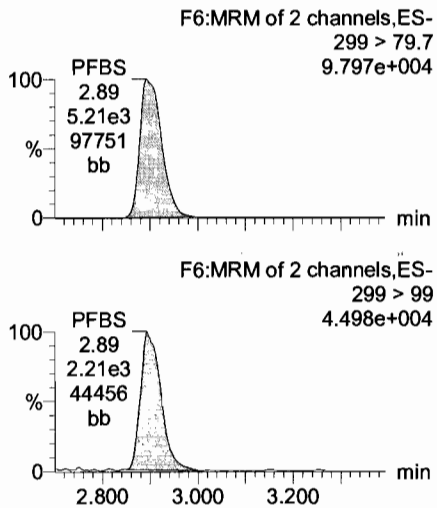
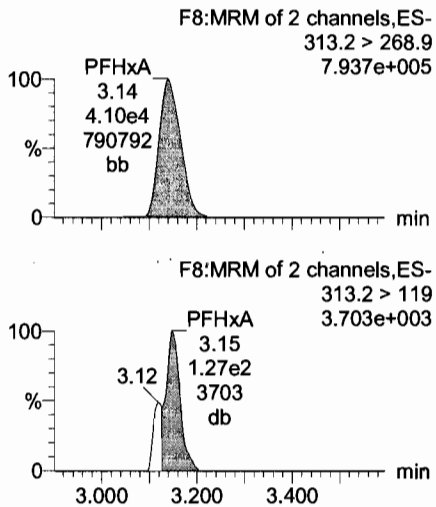


PFHxA



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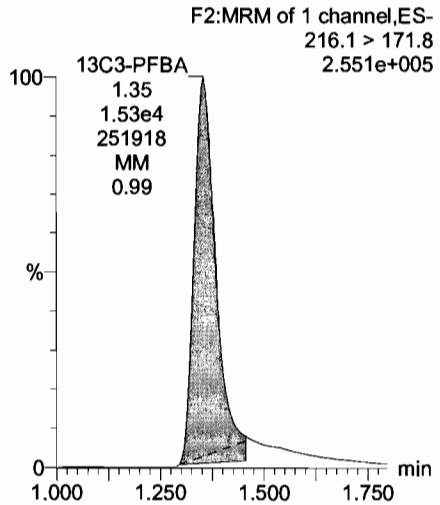

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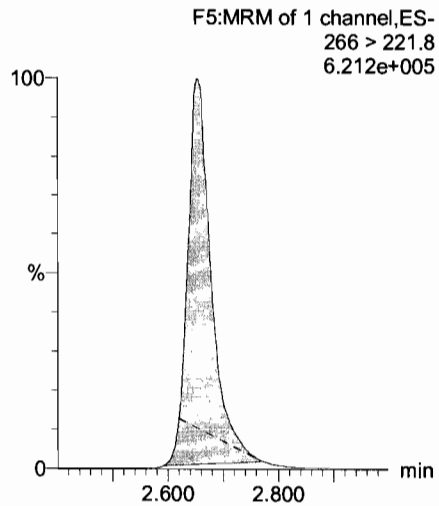
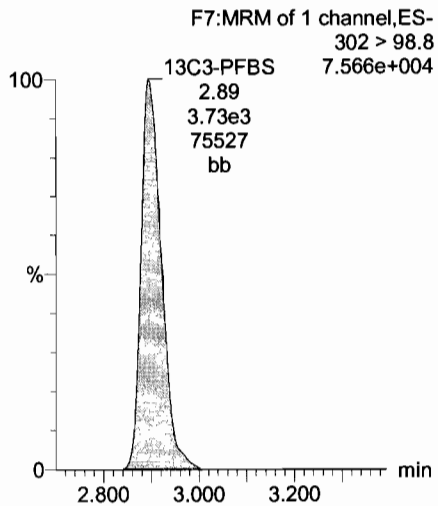
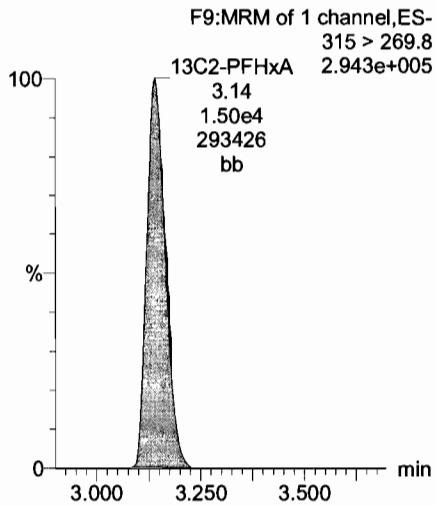


13C3-PFBS



13C2-PFHxA



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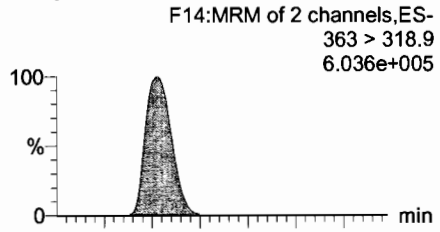
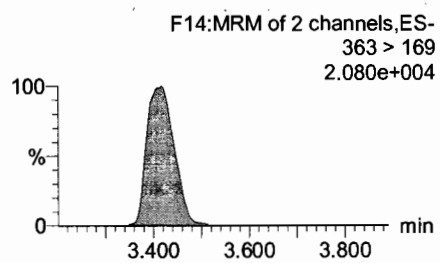
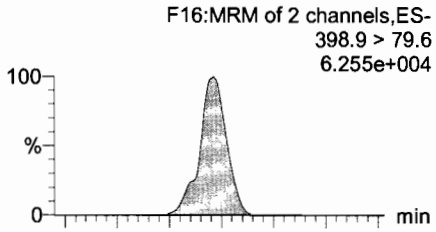
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

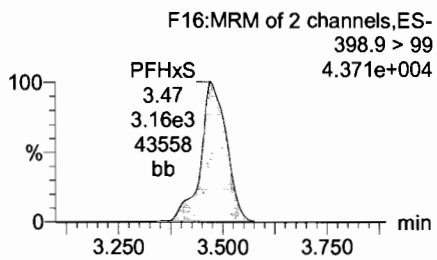
PFHpA



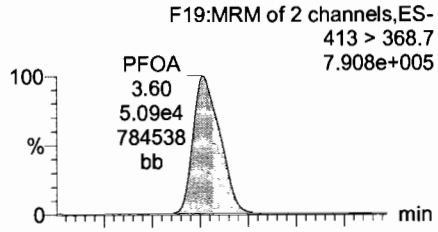


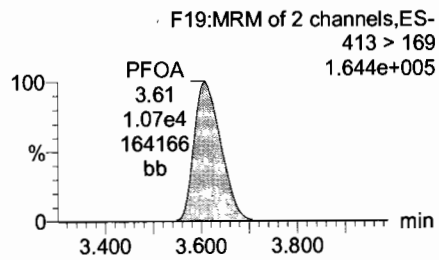
Total PFHxS



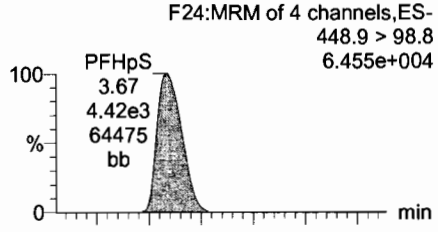


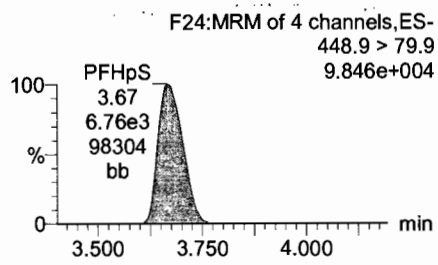
Total PFOA



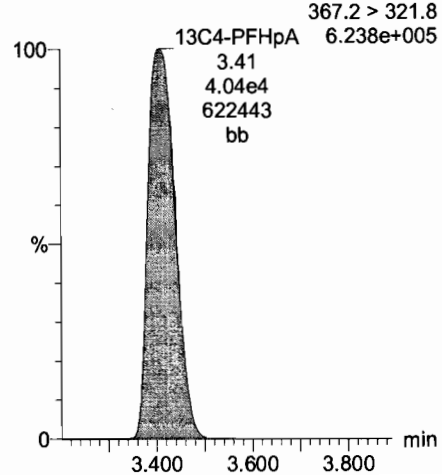


PFHpS

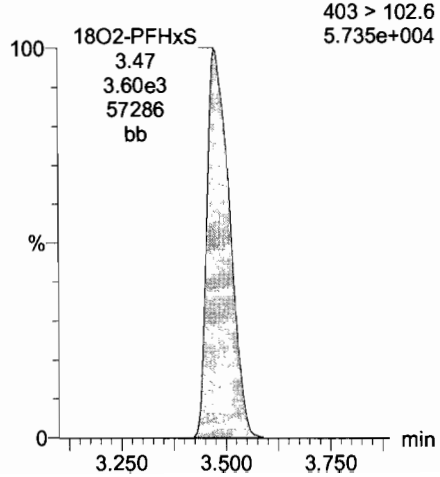




13C4-PFHpA



18O2-PFHxS



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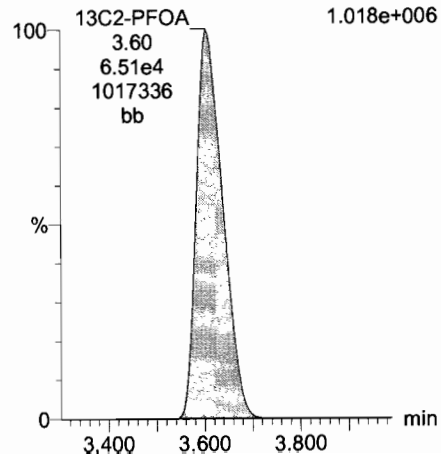

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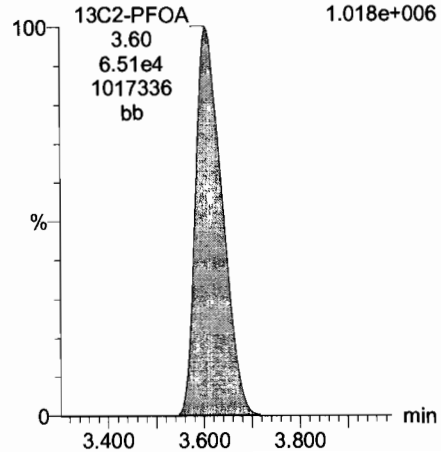

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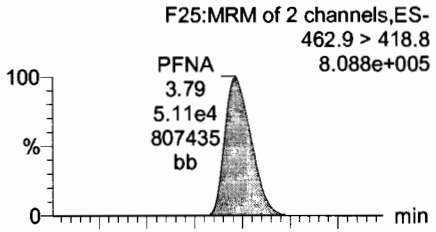
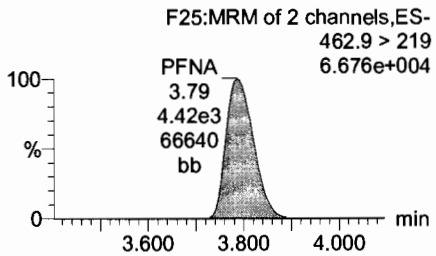
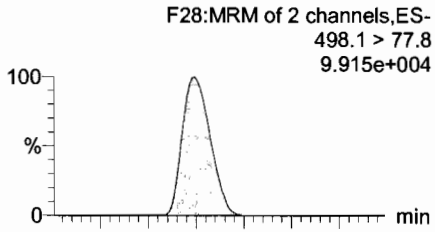
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

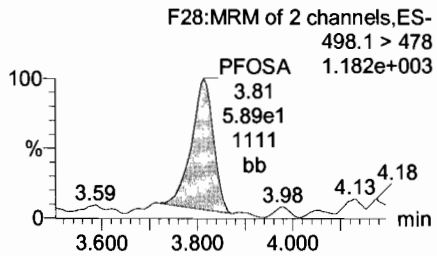
PFNA



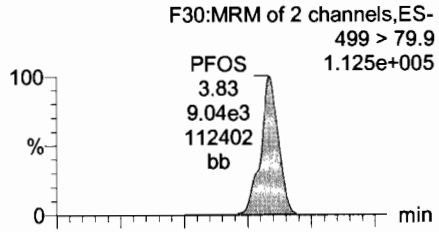


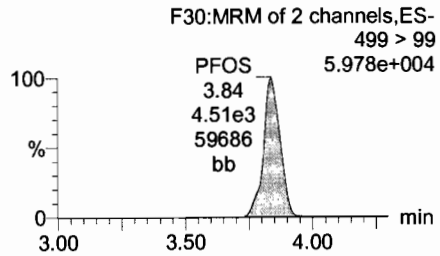
PFOSA



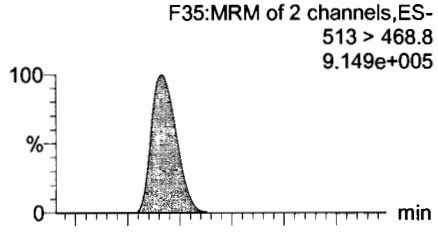


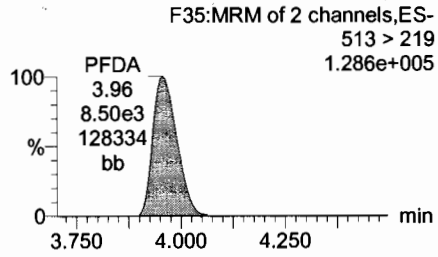
Total PFOS



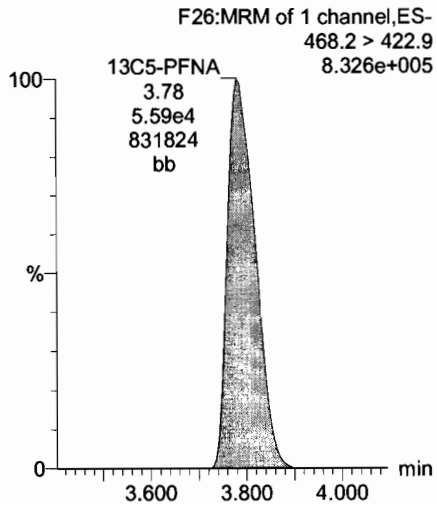


PFDA

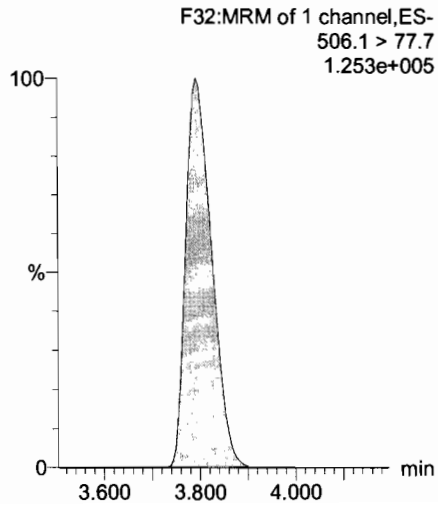




13C5-PFNA



13C8-PFOSA



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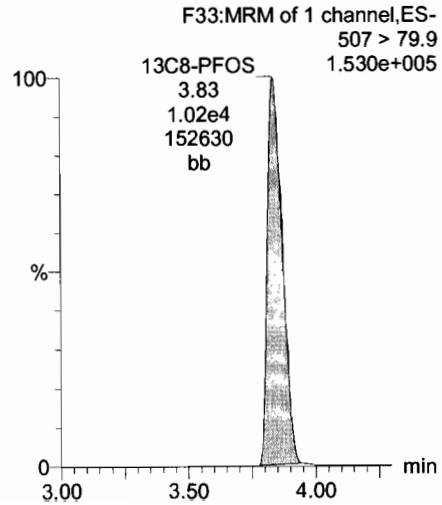
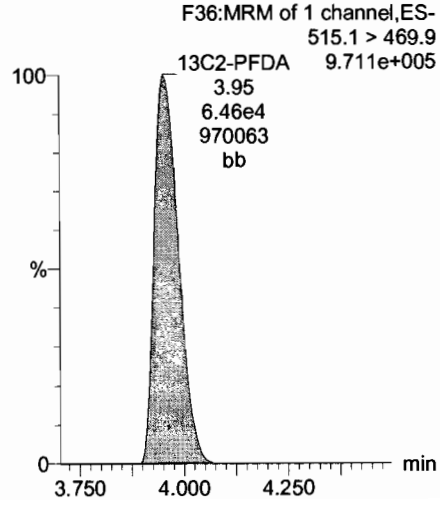


13C2-PFDA



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Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

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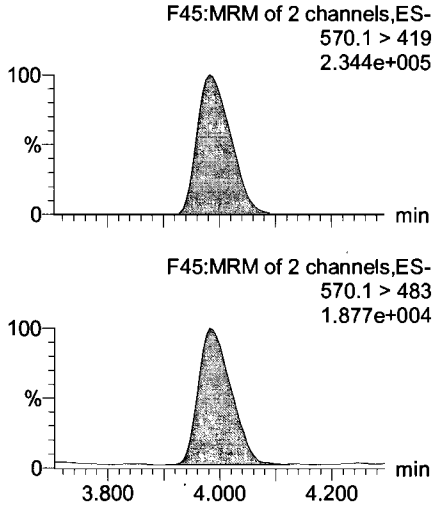

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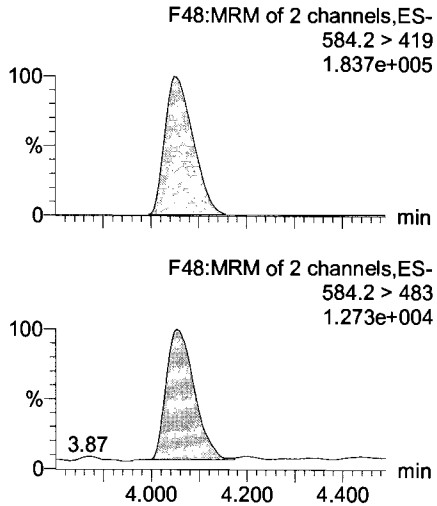

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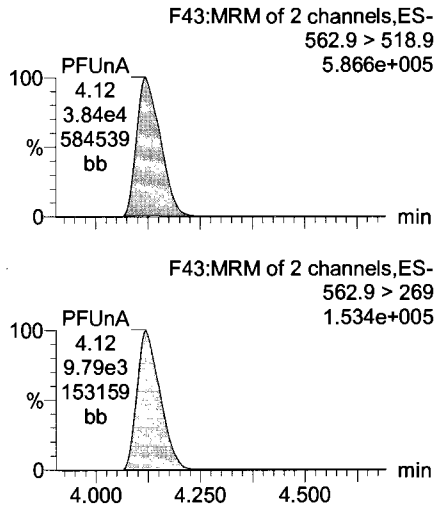

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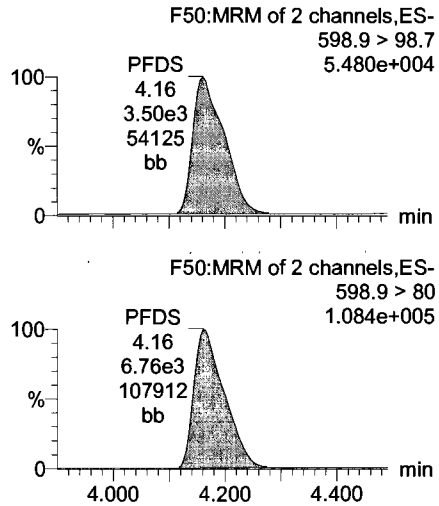

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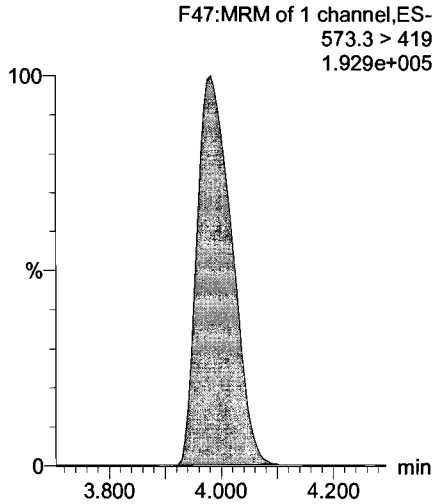

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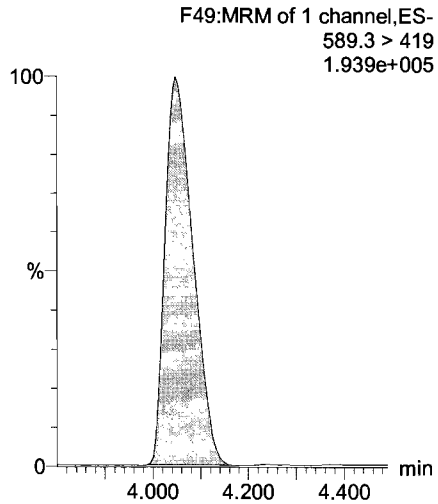

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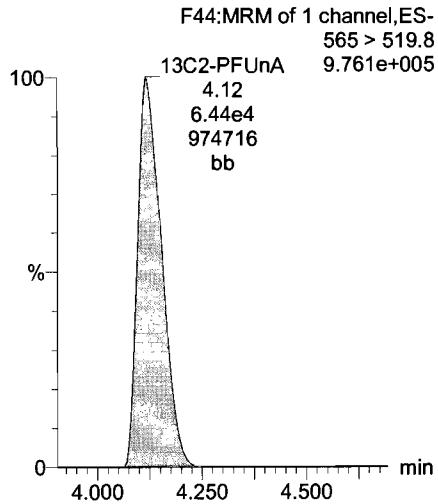

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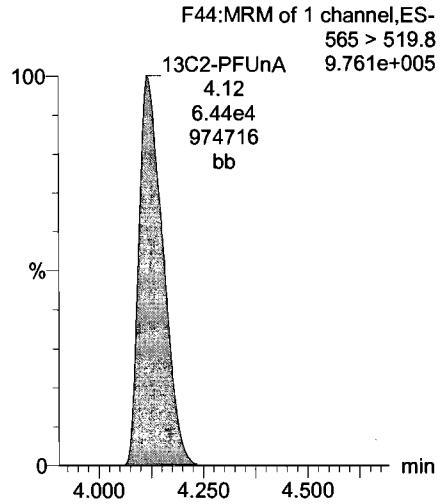

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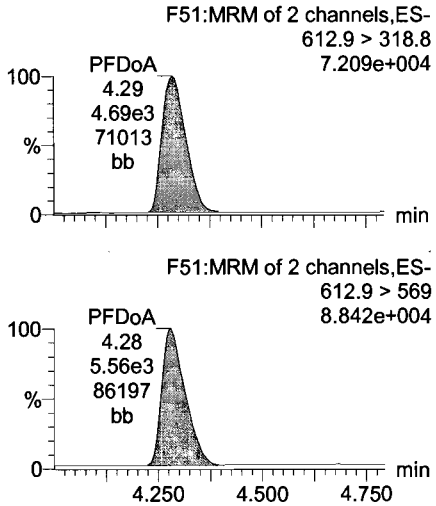
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

PFDoA



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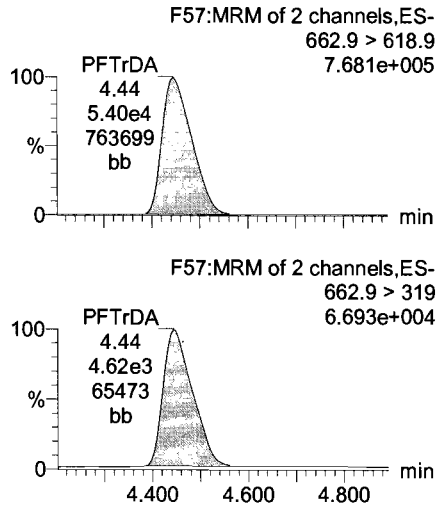

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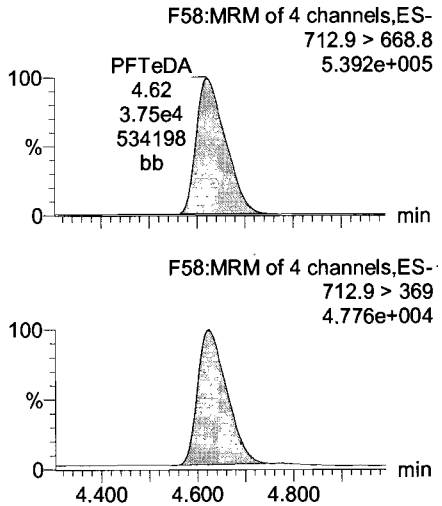
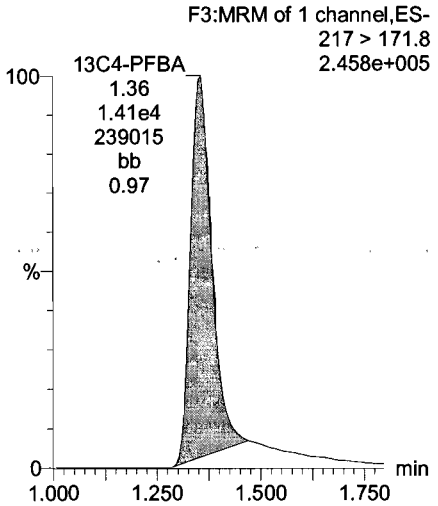


13C4-PFBA



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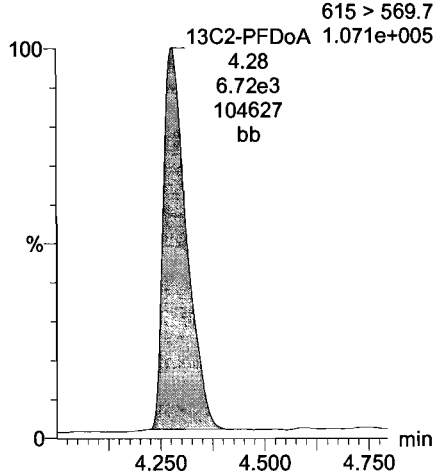

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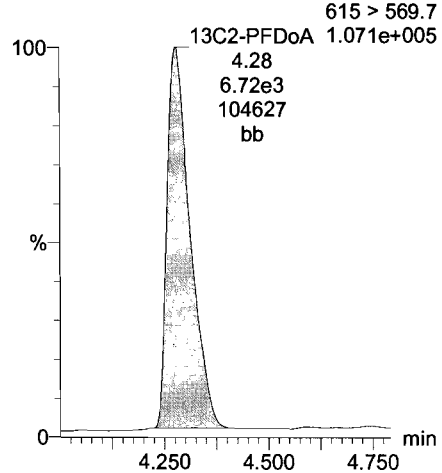

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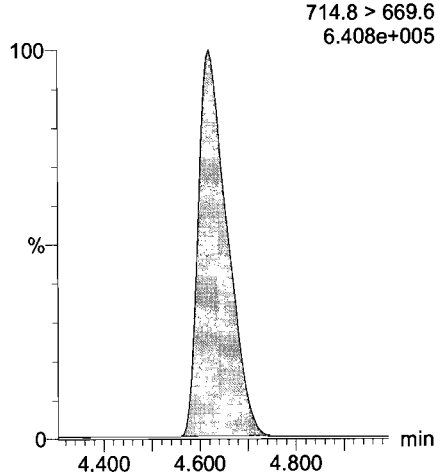
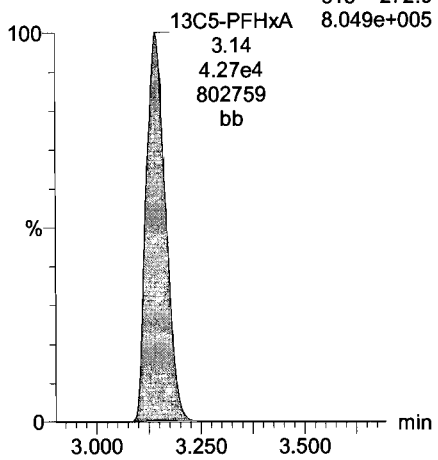


13C5-PFHxA



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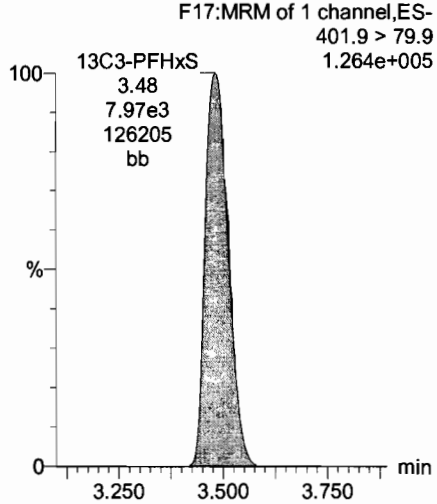
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

13C3-PFHxS



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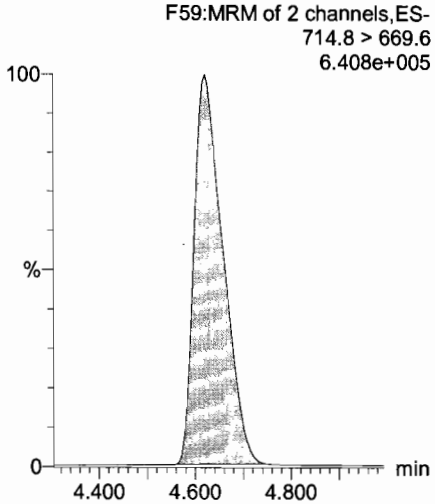

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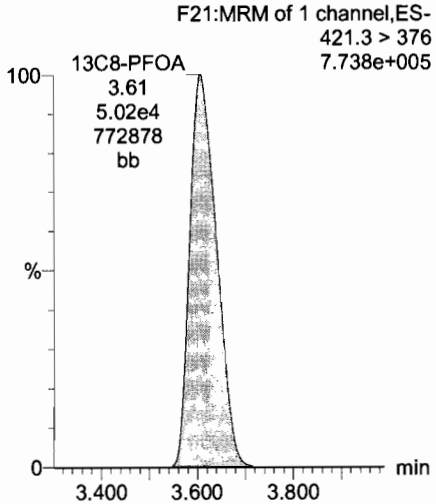

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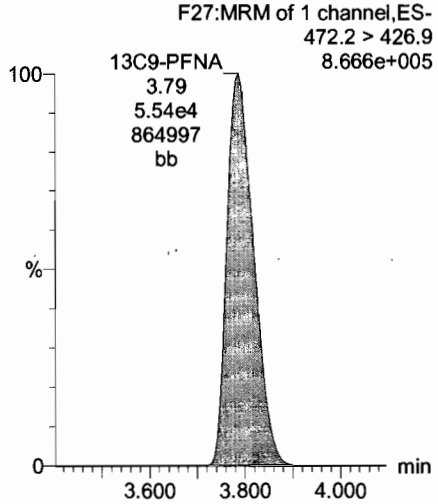
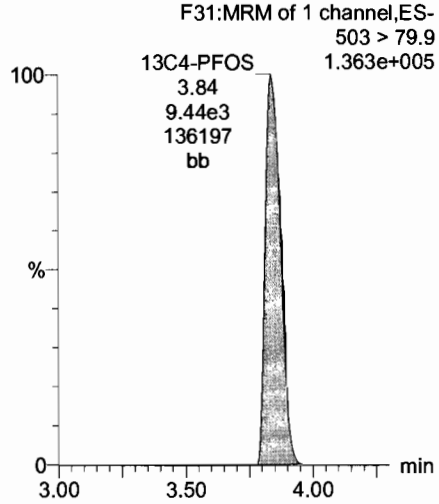
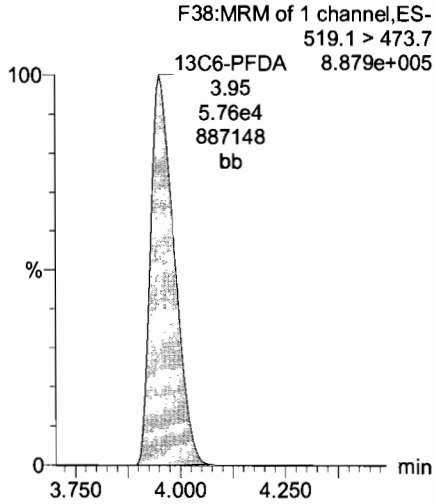


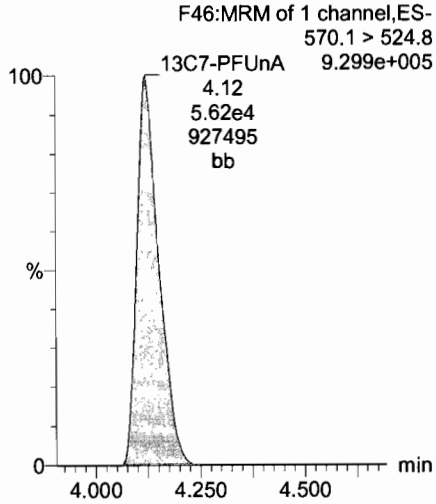
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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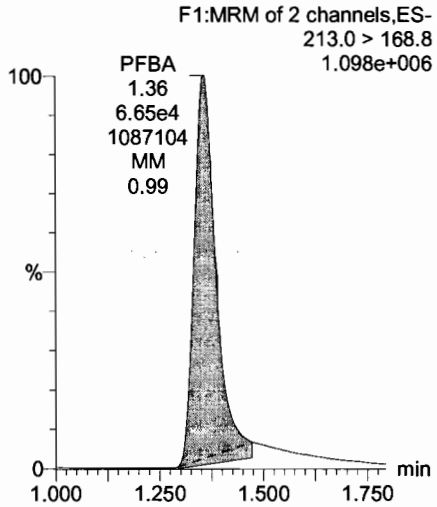
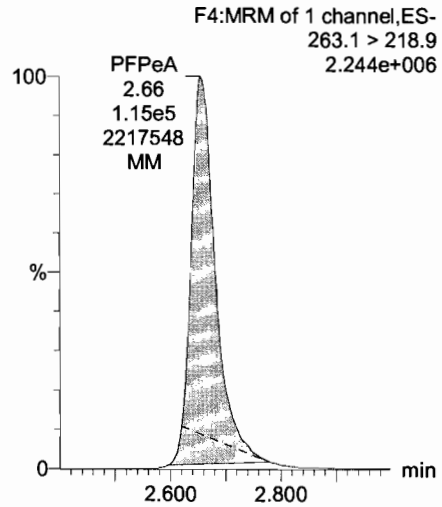
Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

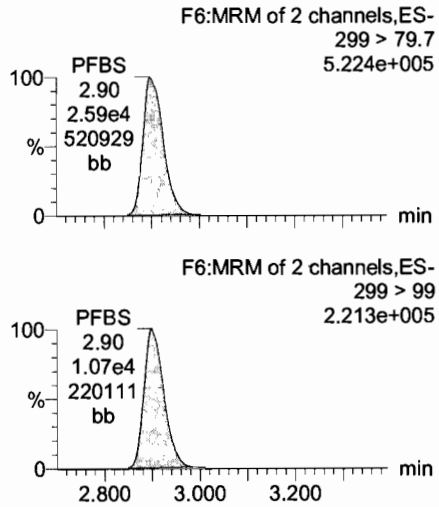
PFBA



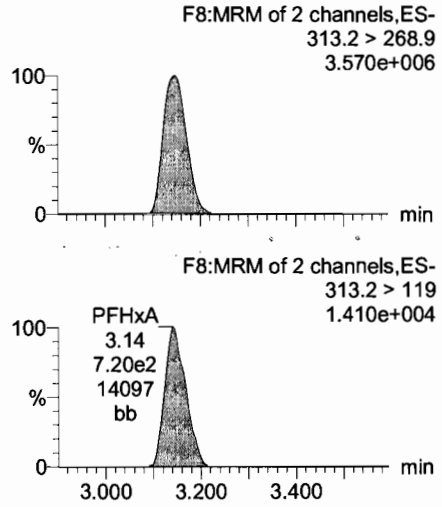
PFPeA



PFBS



PFHxA



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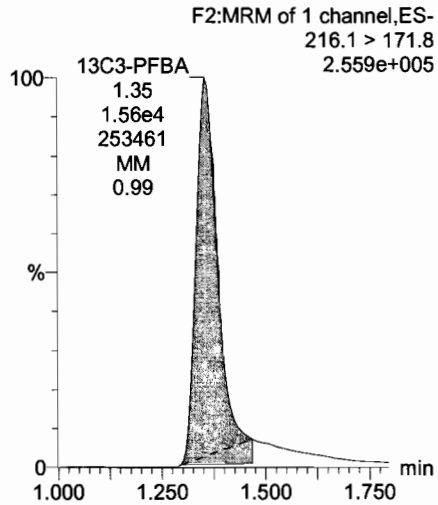

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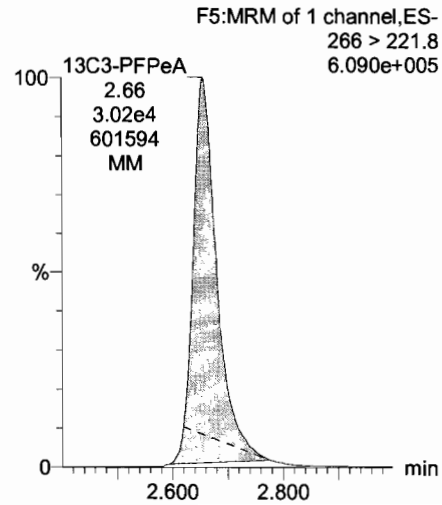
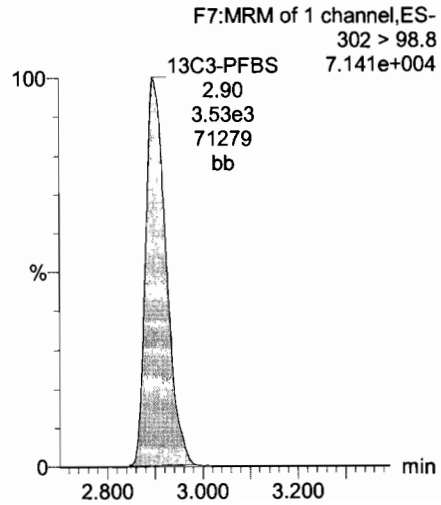
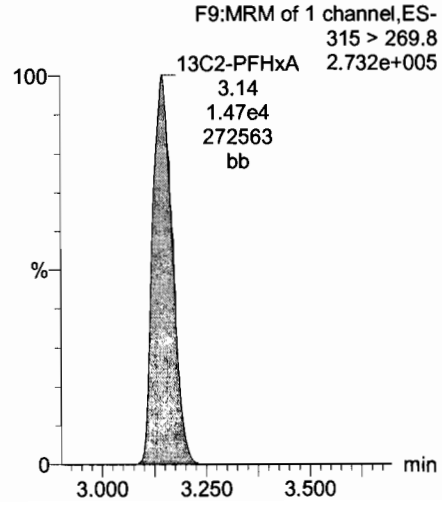


13C3-PFBS



13C2-PFHxA



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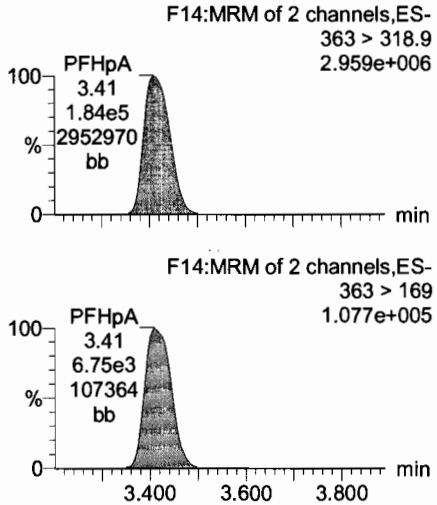
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

PFHpA



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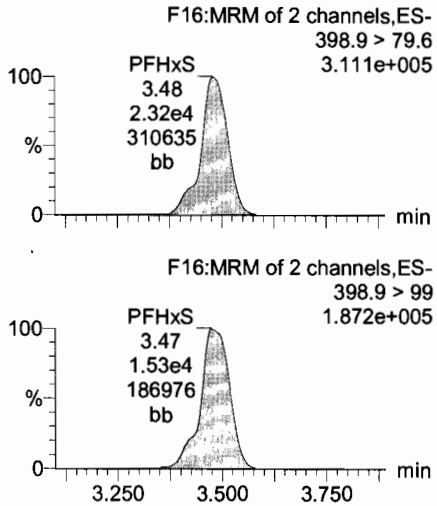

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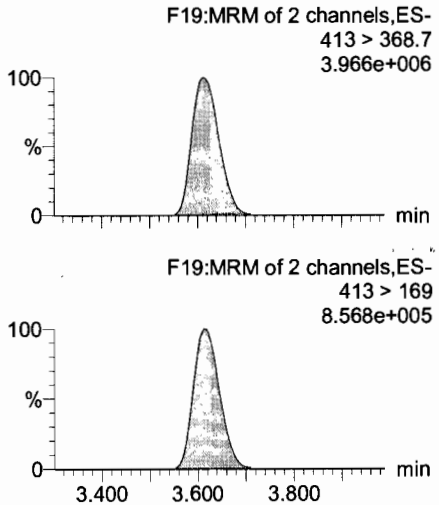
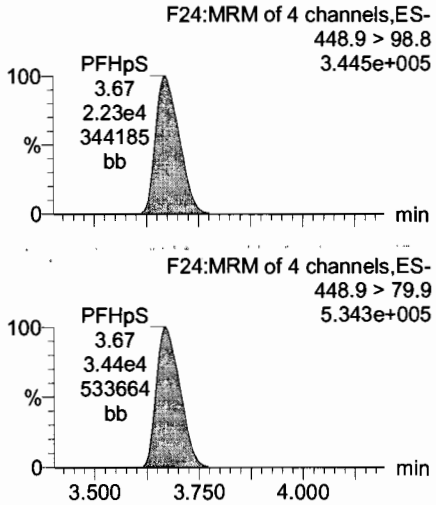
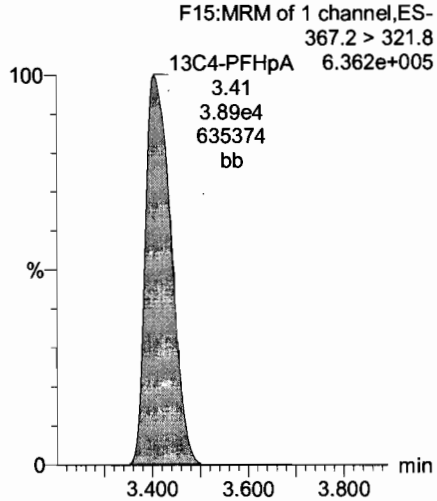


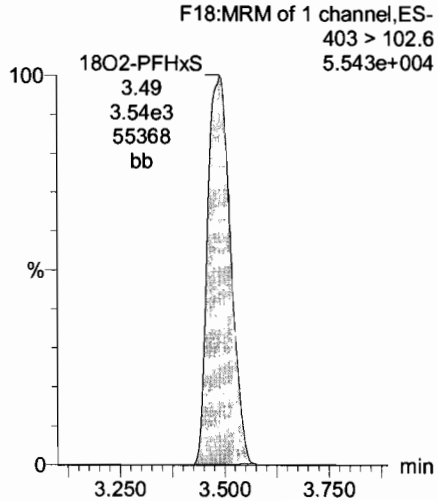
PFHpS



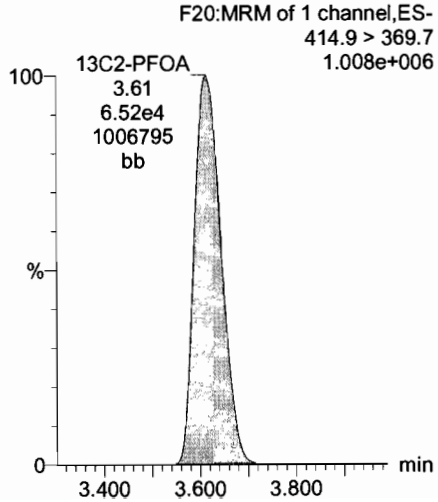
13C4-PFHpA



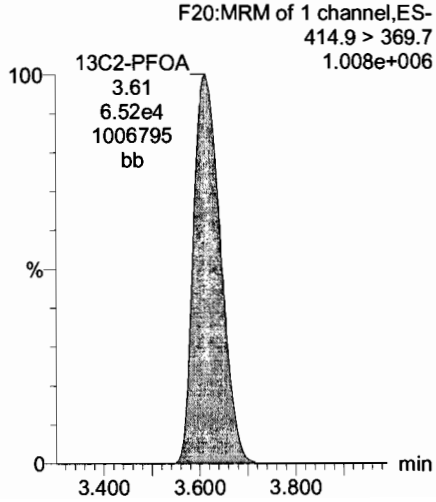
18O2-PFHxS



13C2-PFOA



13C2-PFOA



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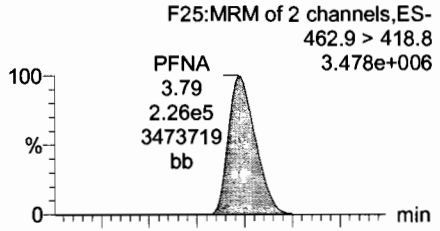
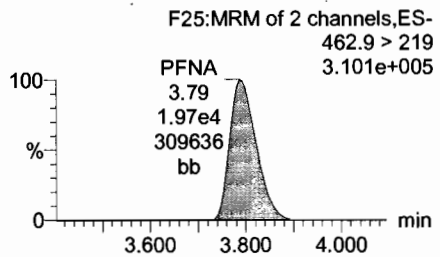
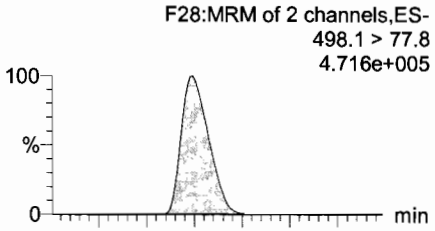
Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

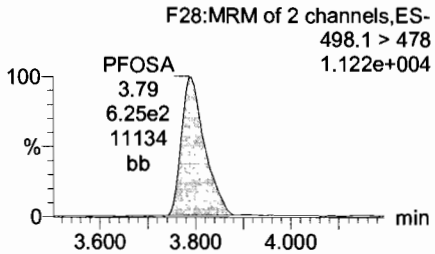
PFNA





PFOSA





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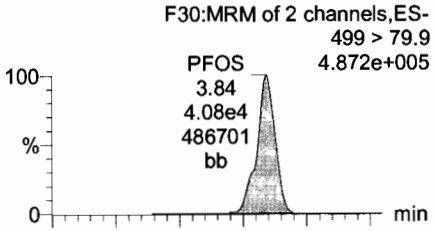

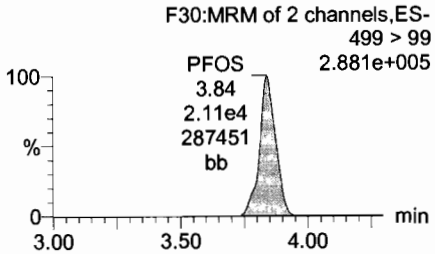

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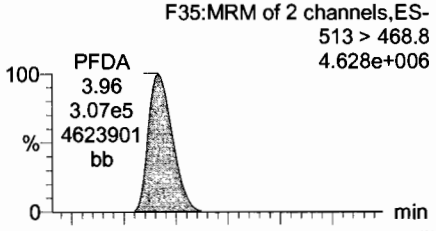
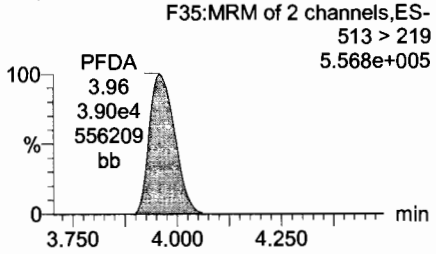
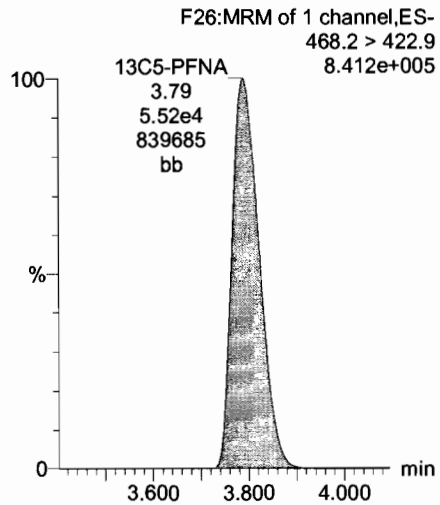
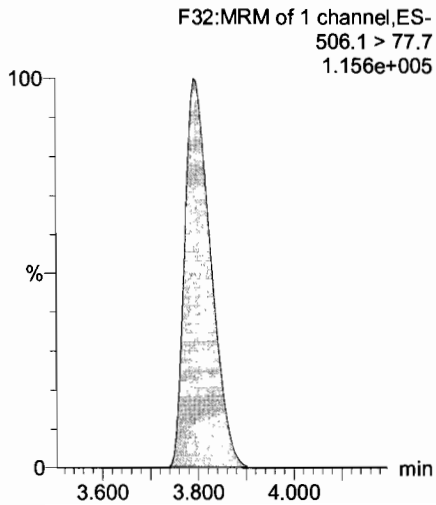




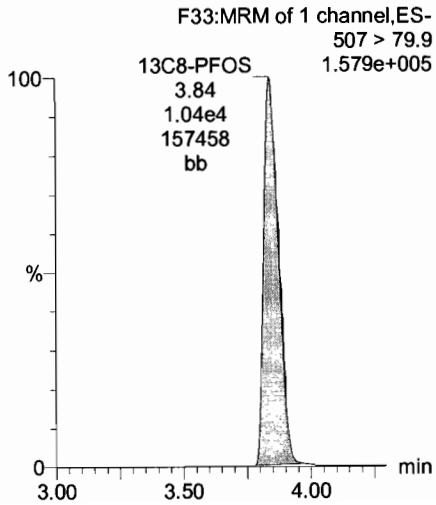
13C5-PFNA



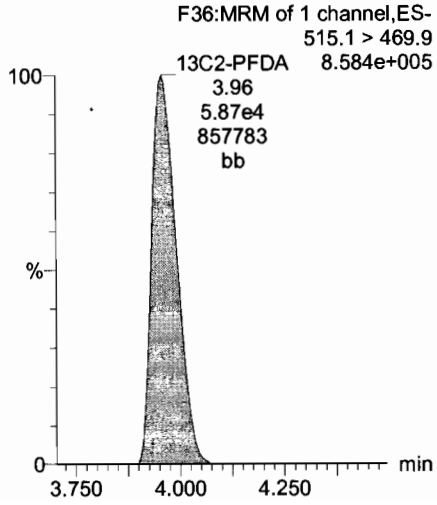
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

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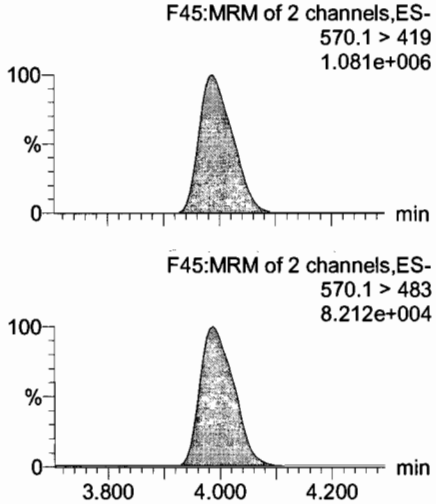

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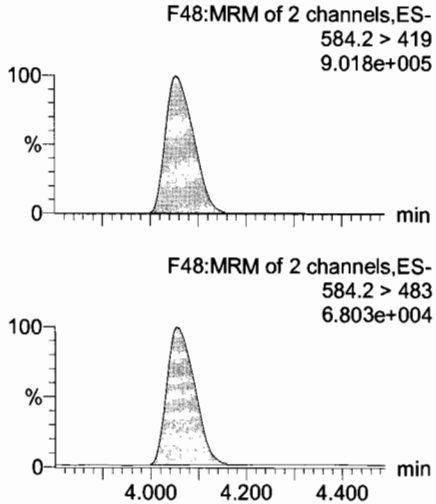

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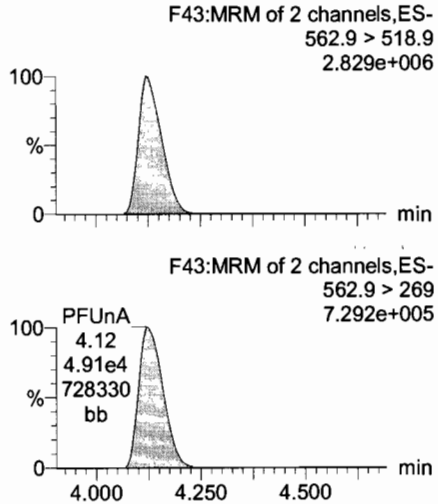

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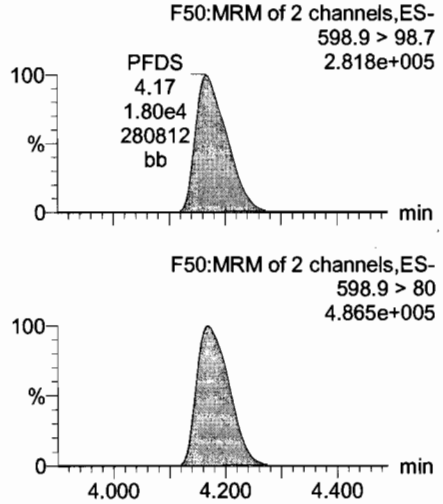

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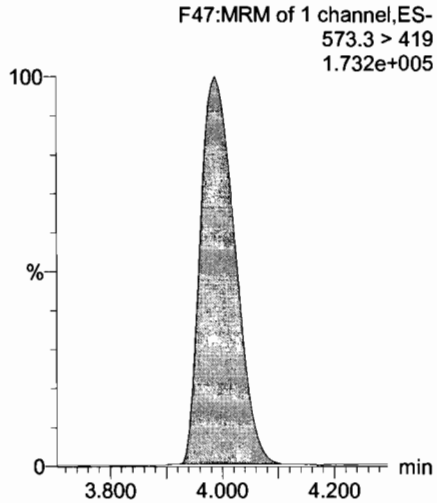

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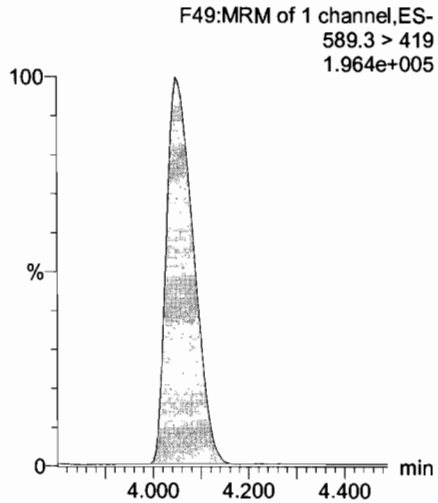

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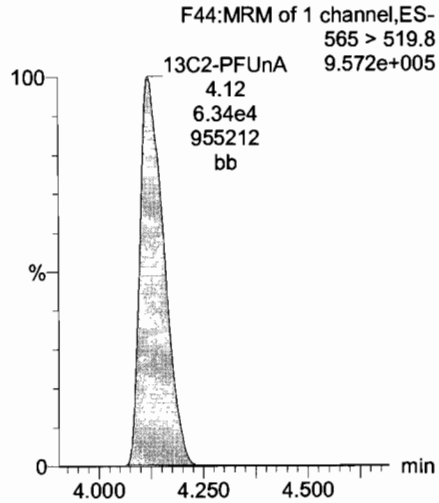

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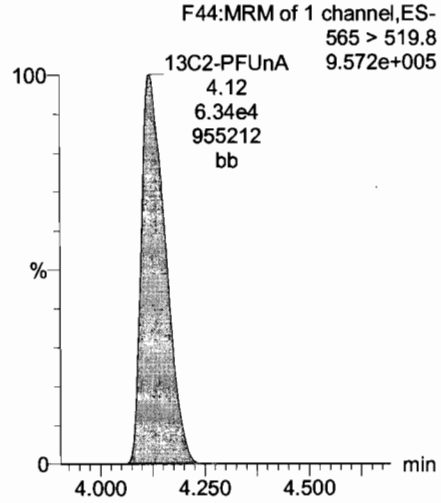

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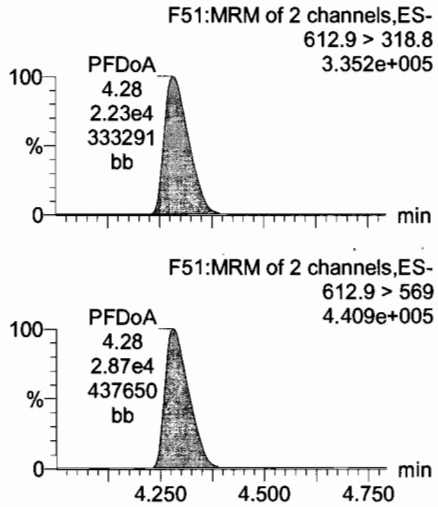
Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

PFDoA



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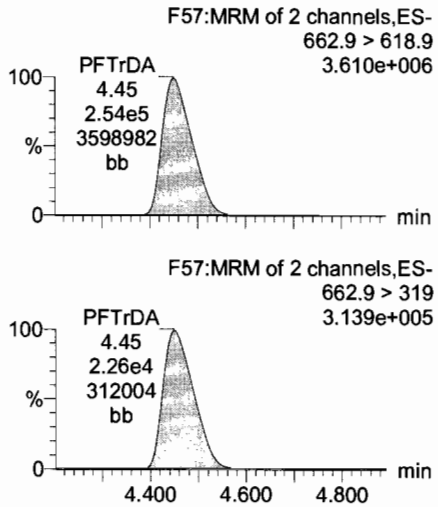

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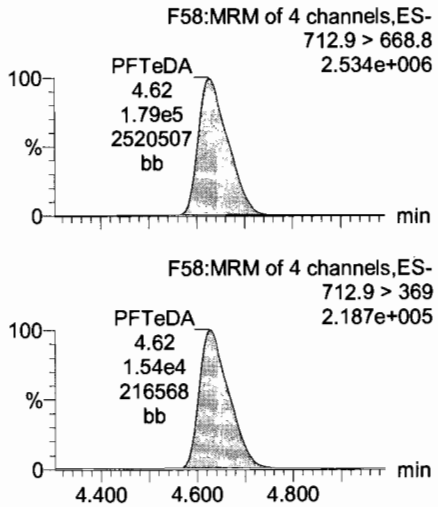
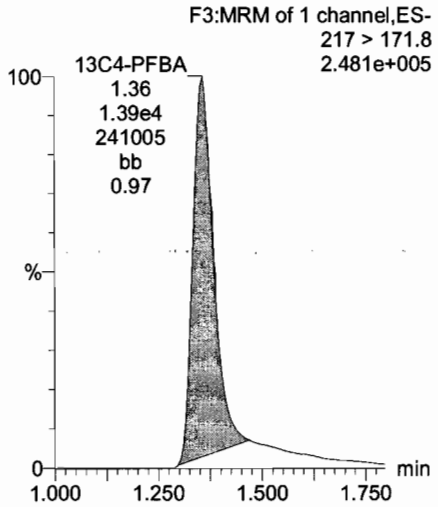


13C4-PFBA



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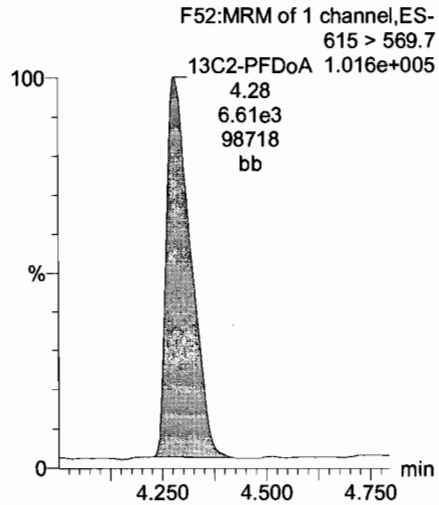

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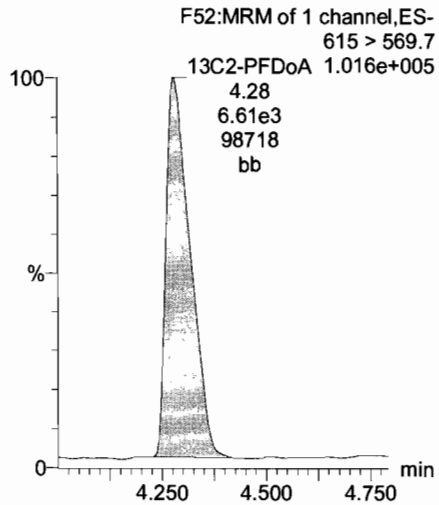

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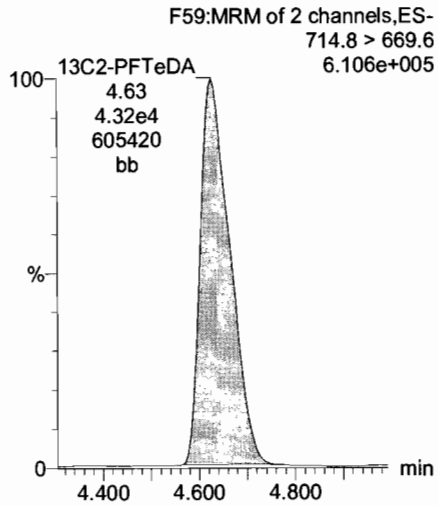
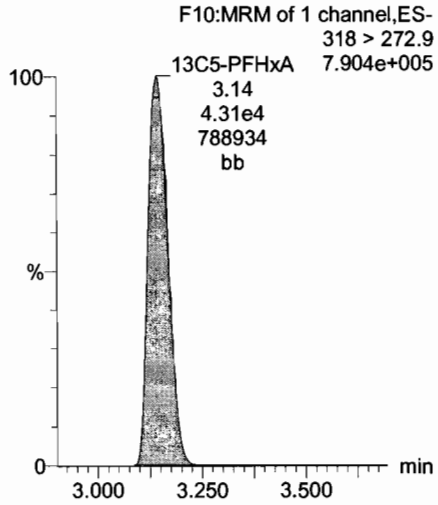


13C5-PFHxA



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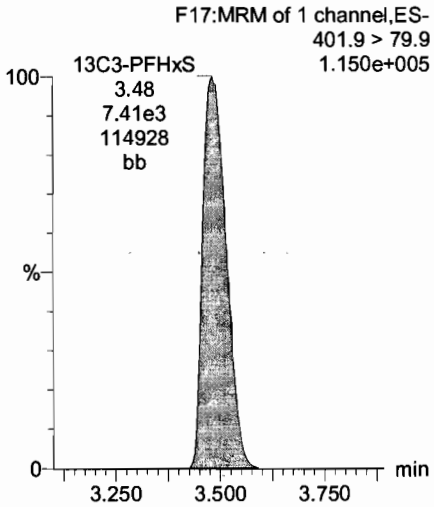
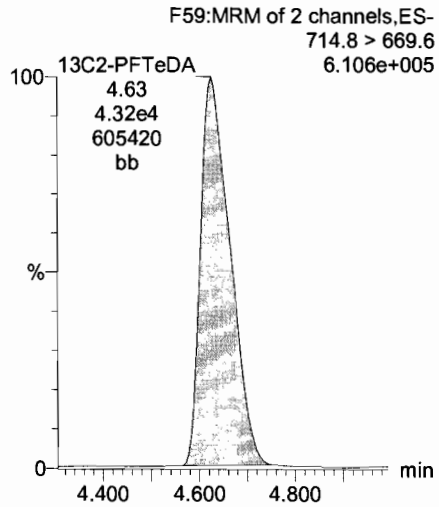
Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

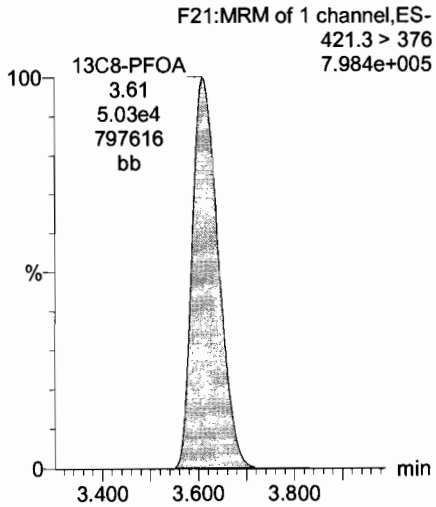
13C3-PFHxS



13C2-PFTeDA



13C8-PFOA



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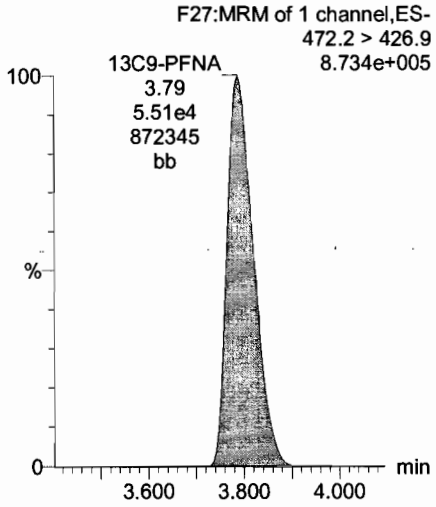

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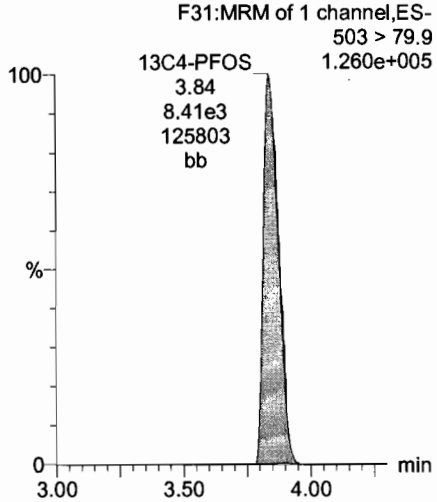
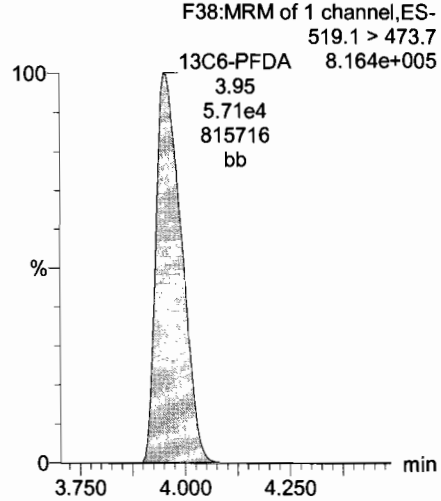
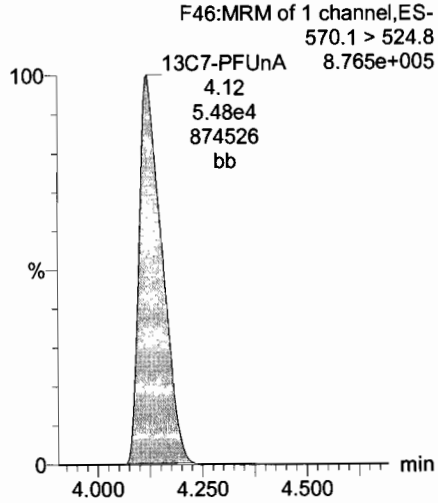


13C6-PFDA



13C7-PFUnA



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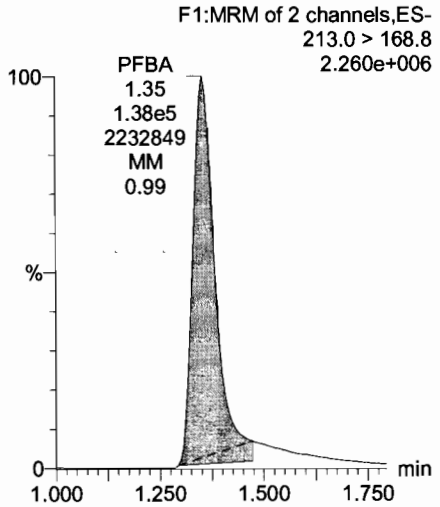
Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

PFBA



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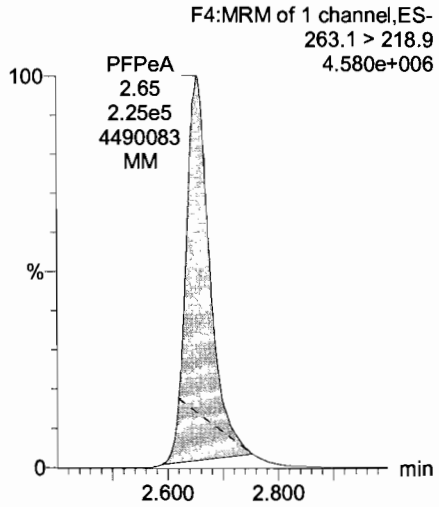

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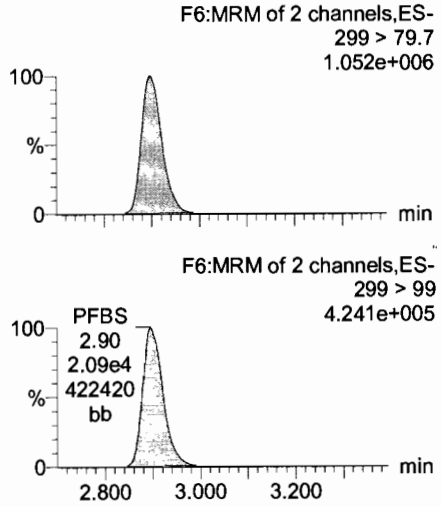

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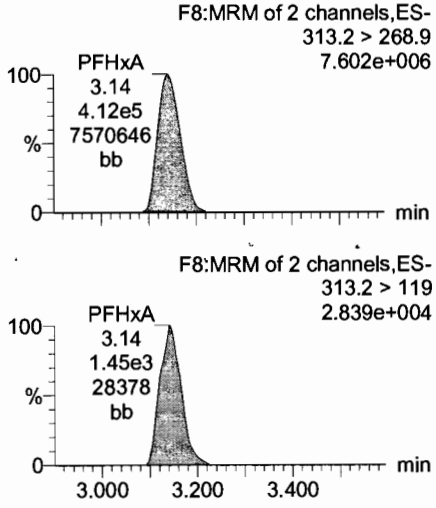
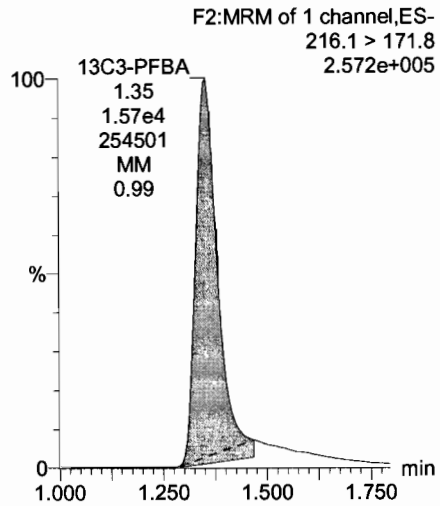


13C3-PFBA



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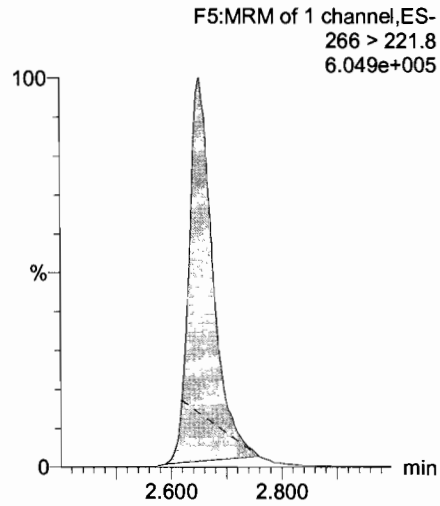

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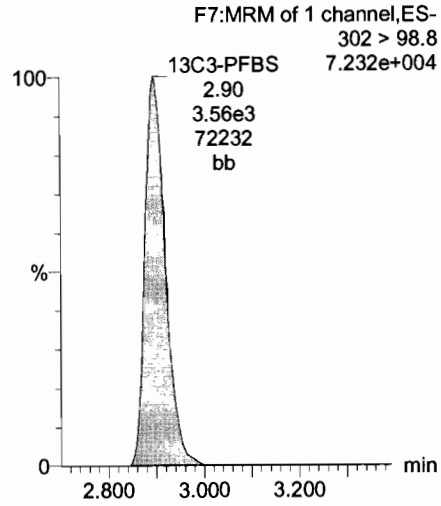

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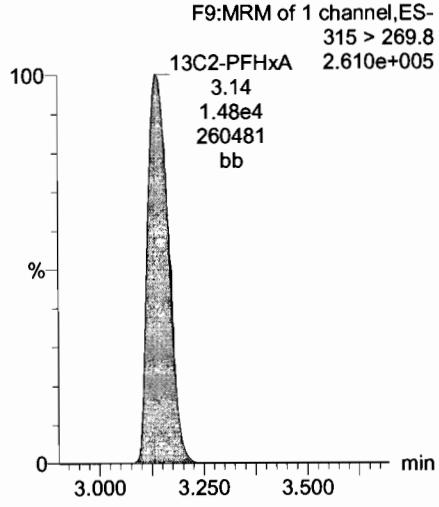

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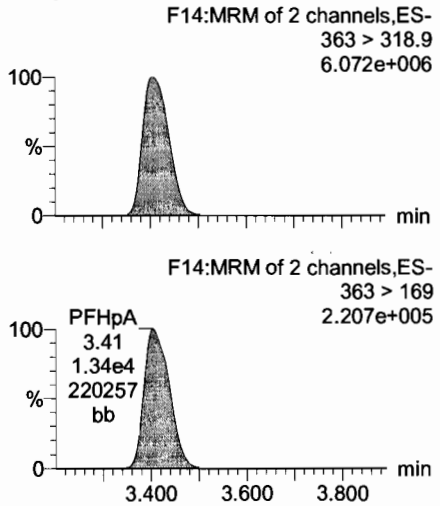
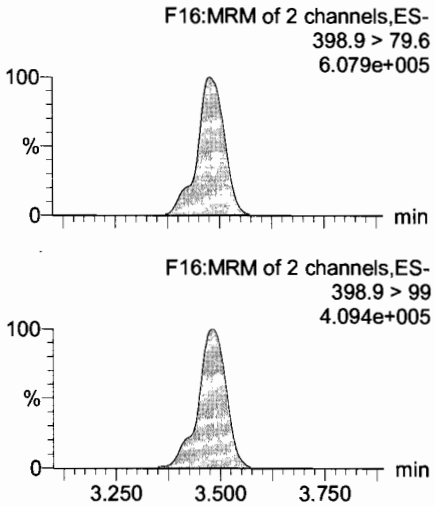
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

PFHpA



Total PFHxS



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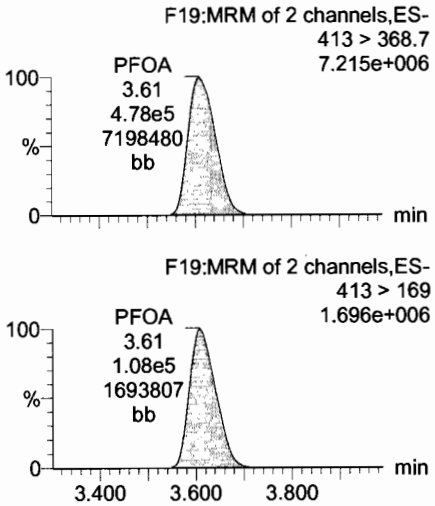

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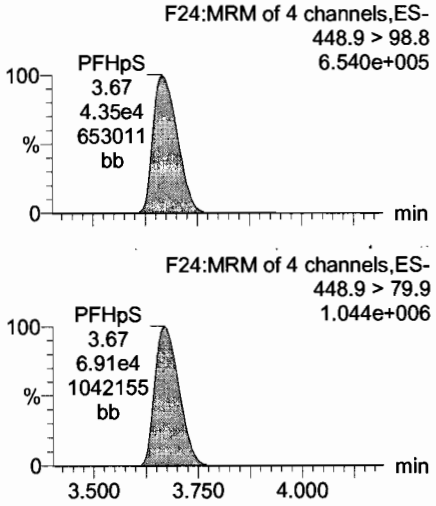

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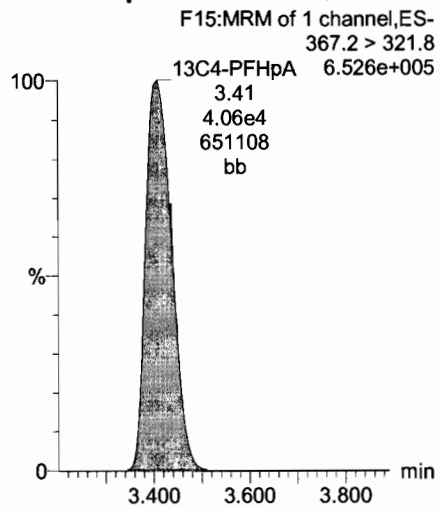

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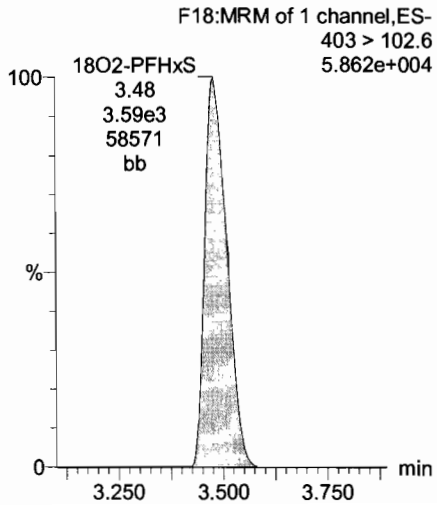

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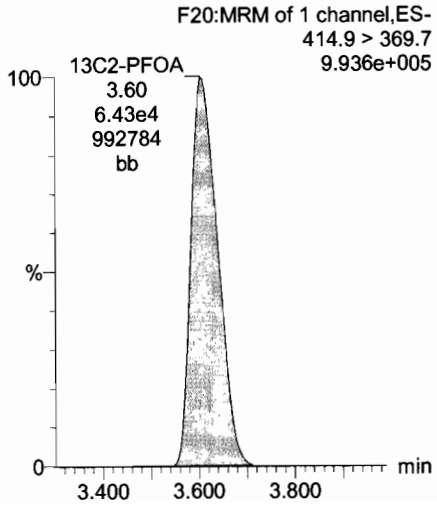

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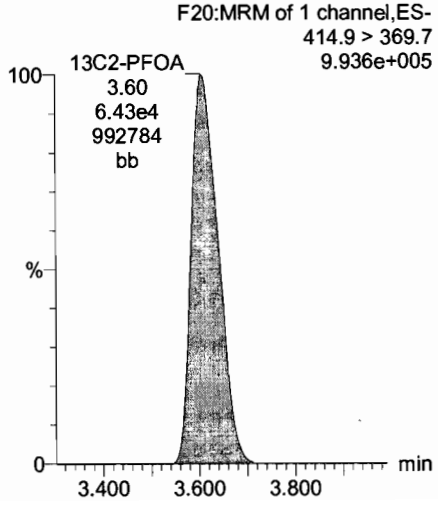

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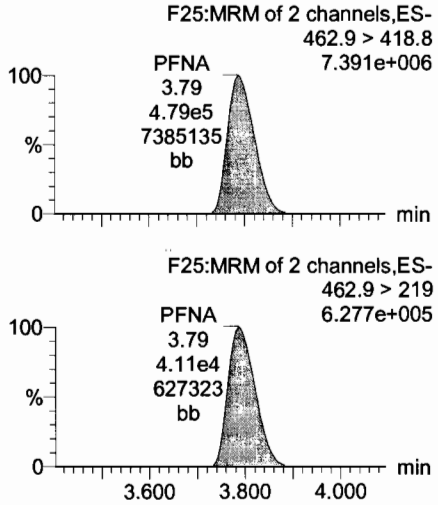
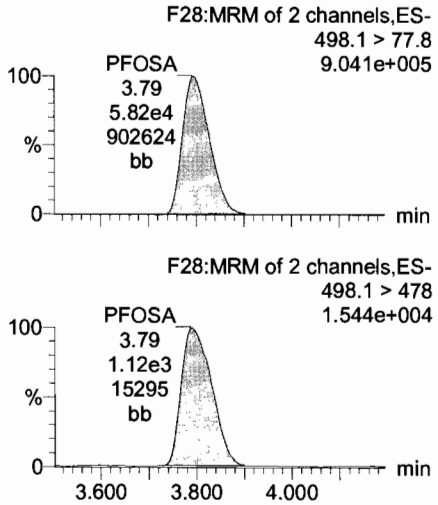
Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

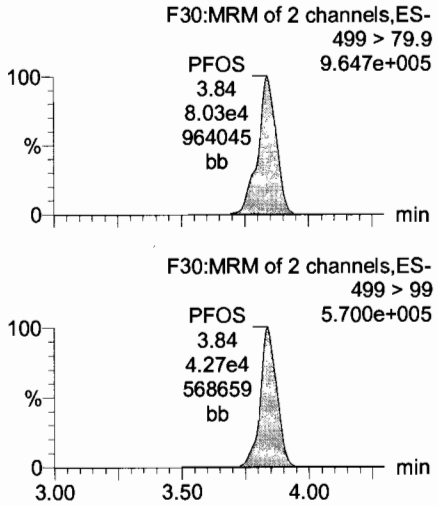
PFNA



PFOSA



Total PFOS



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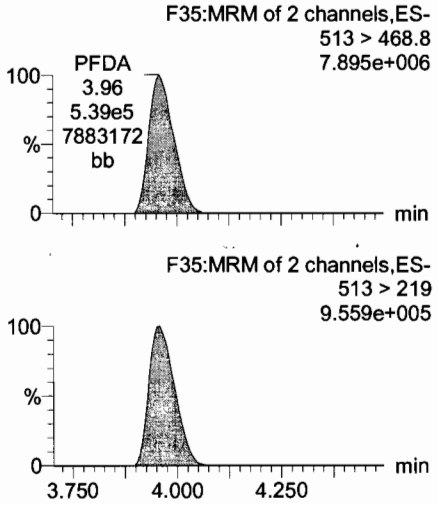

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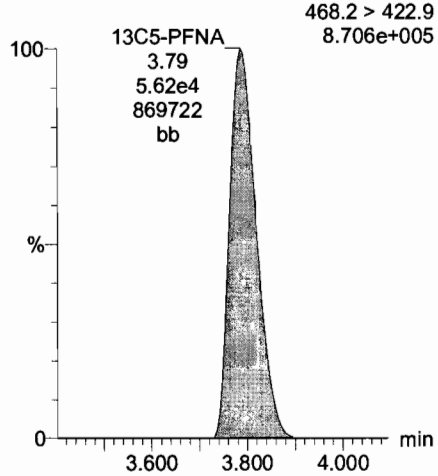

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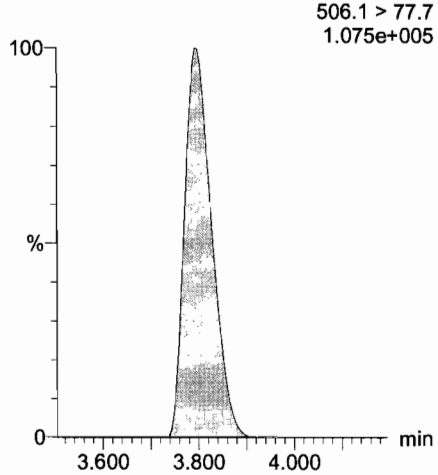

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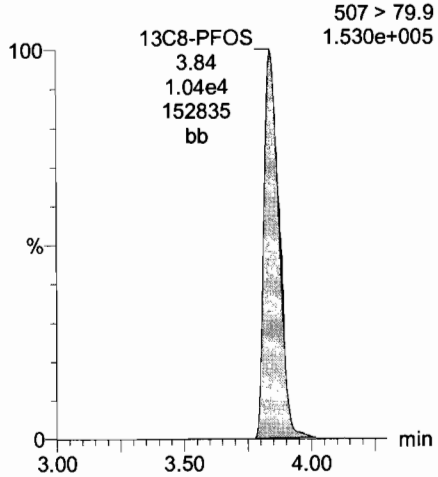

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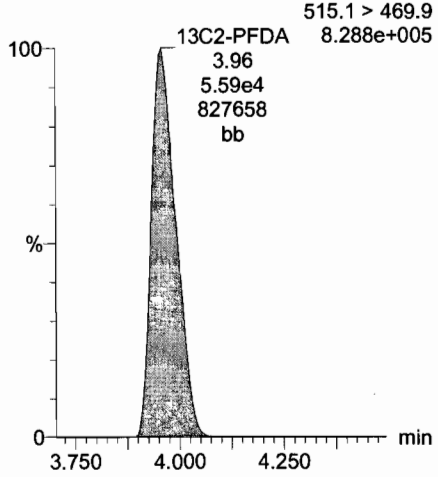

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Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

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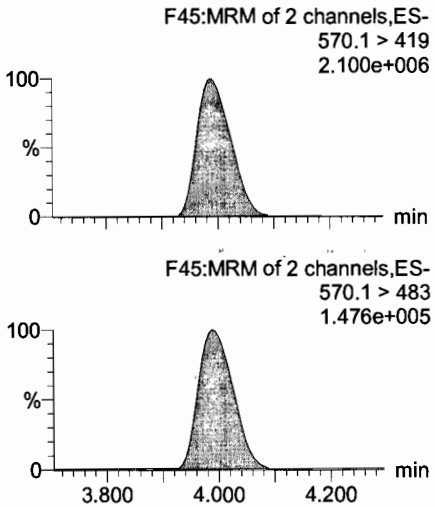

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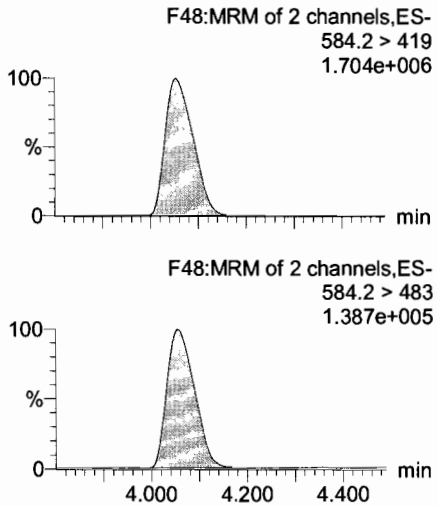

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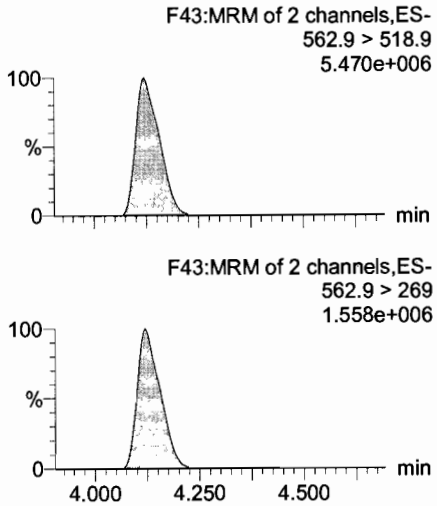

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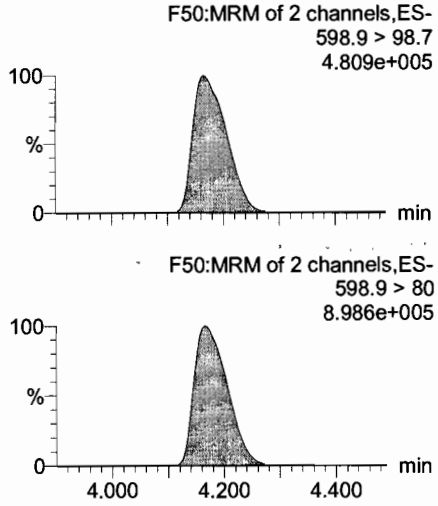

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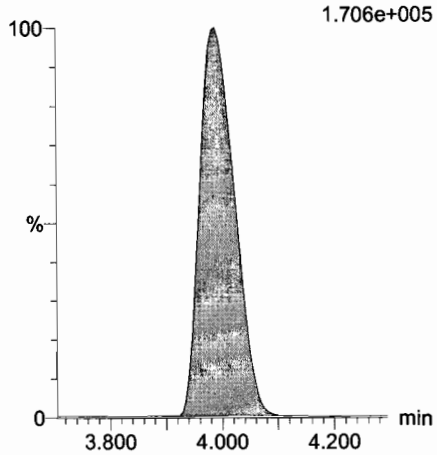

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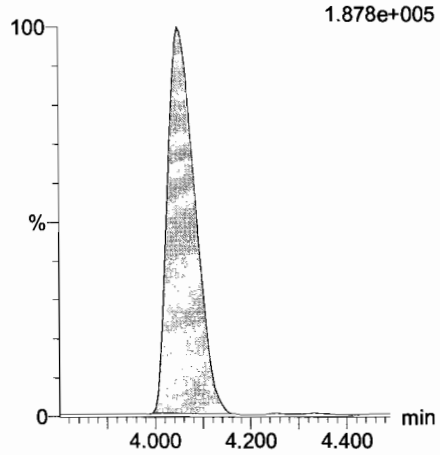

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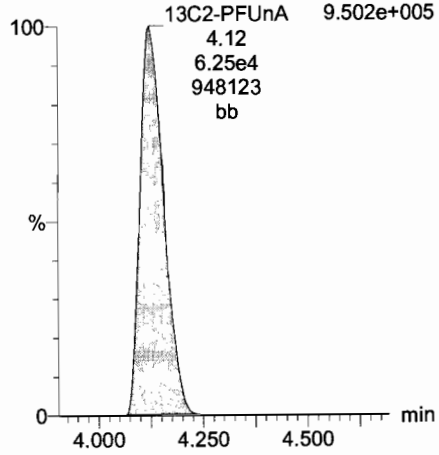
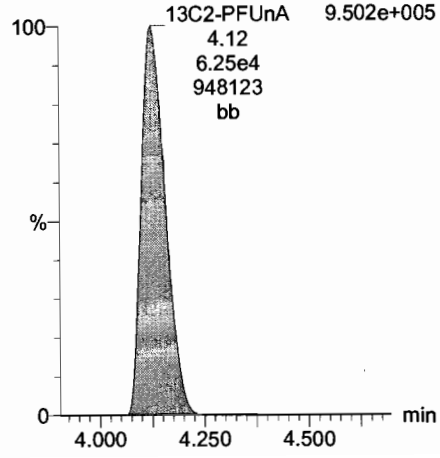


13C2-PFUnA



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Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

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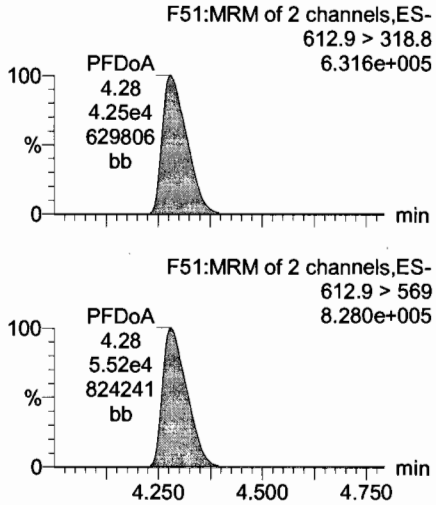

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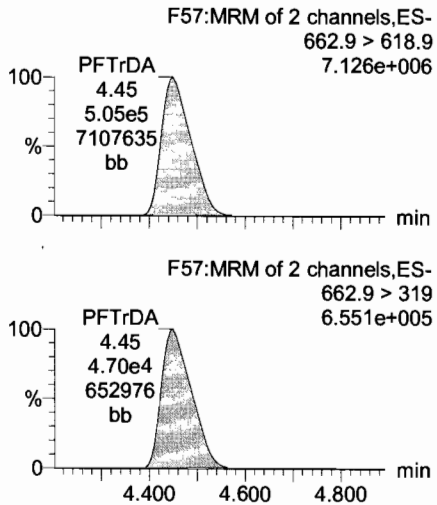

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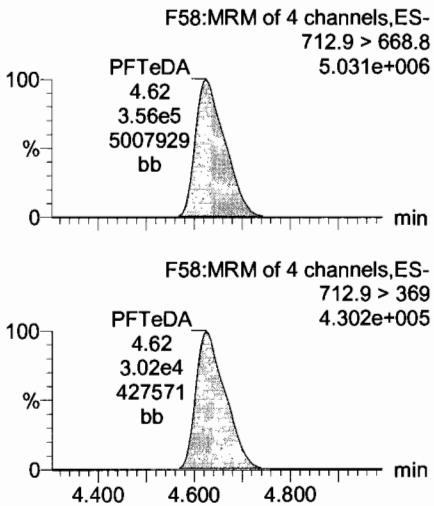
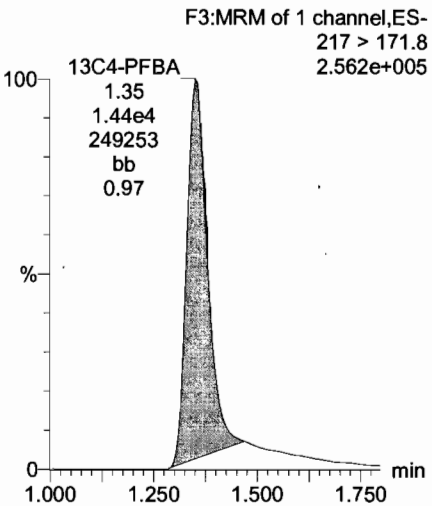


13C4-PFBA



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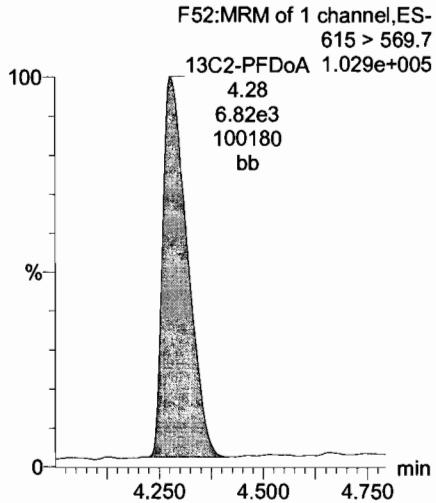

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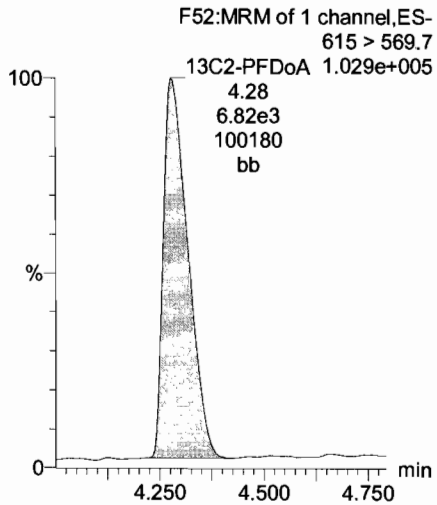

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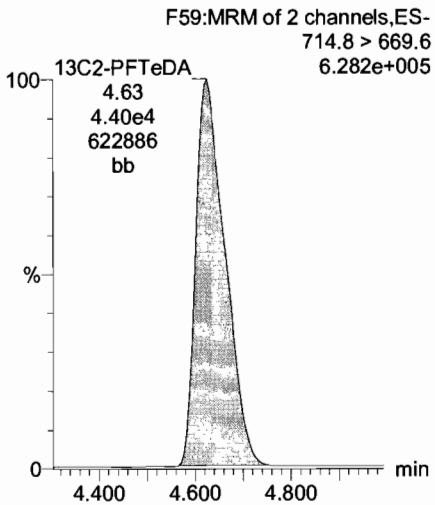
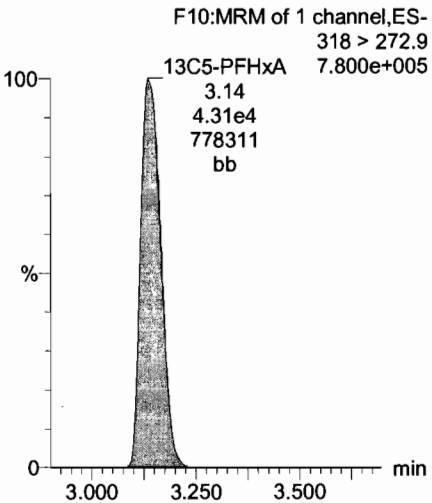


13C5-PFHxA



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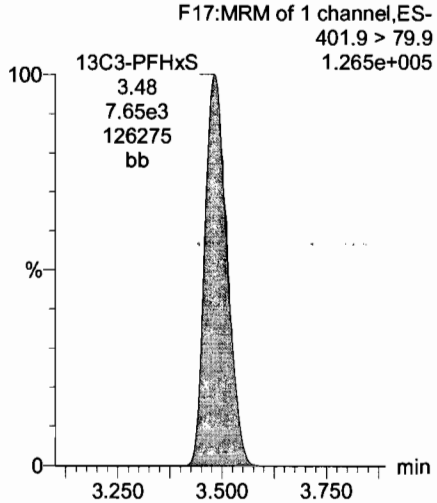
Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

13C3-PFHxS



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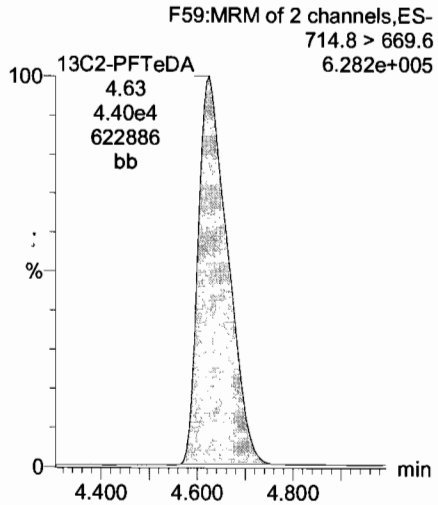

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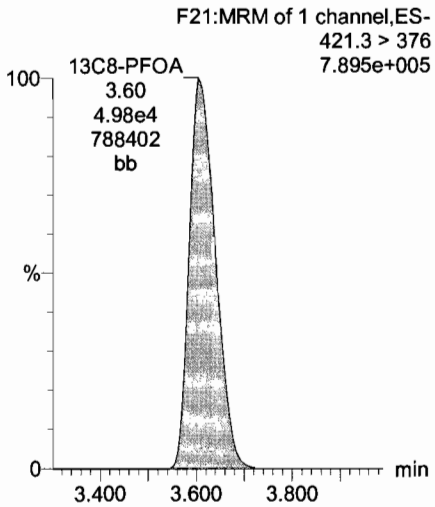

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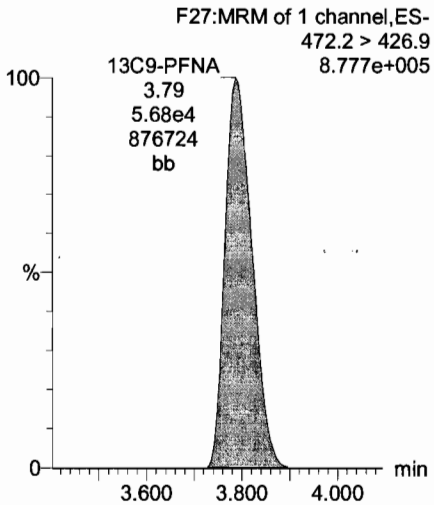

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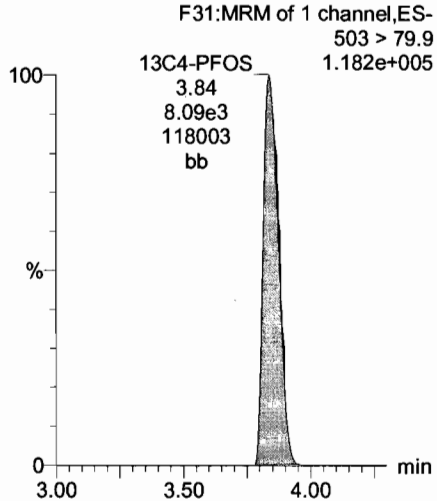
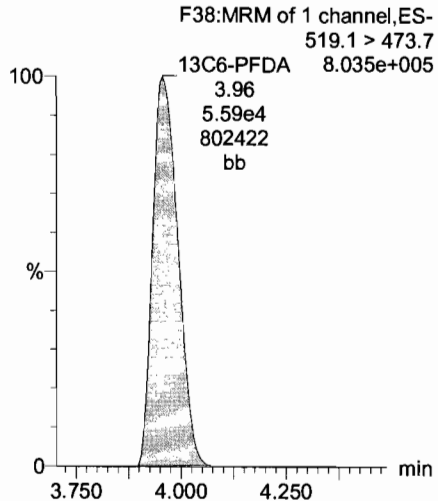


13C6-PFDA



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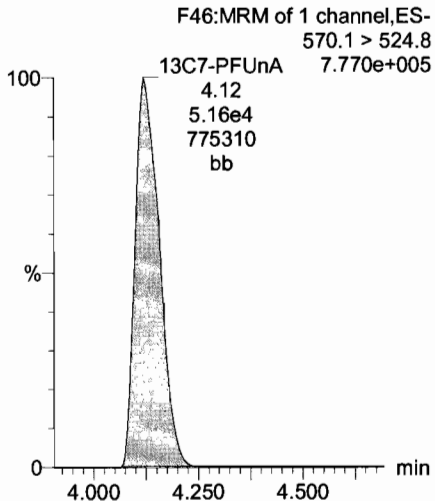

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Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

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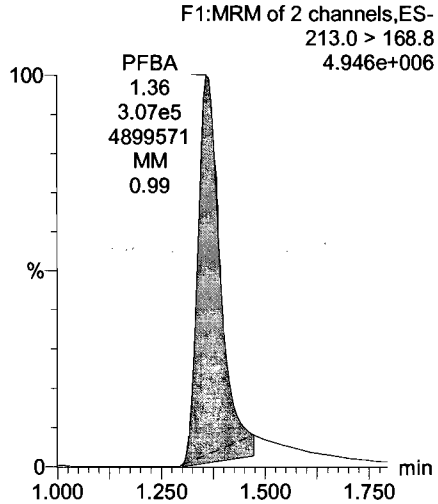

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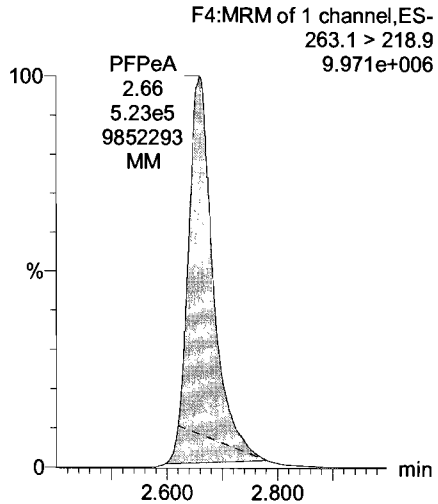

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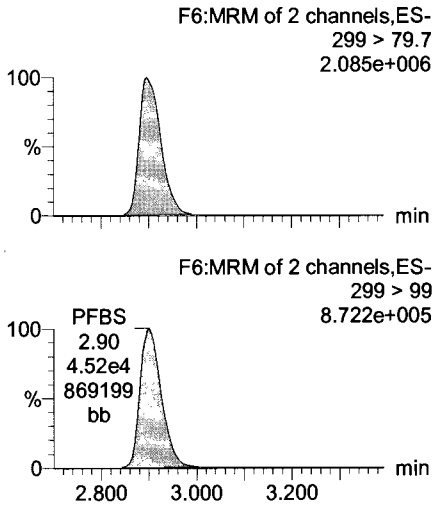

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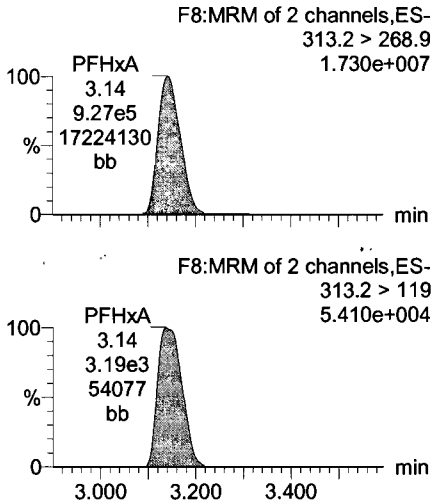
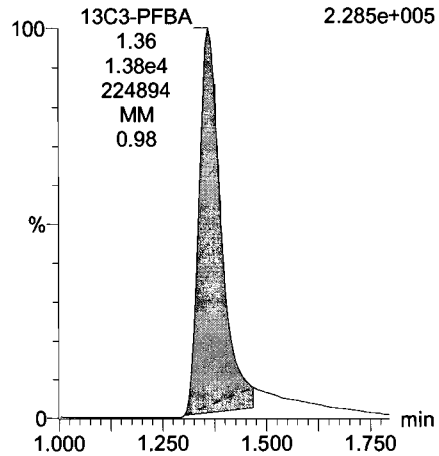
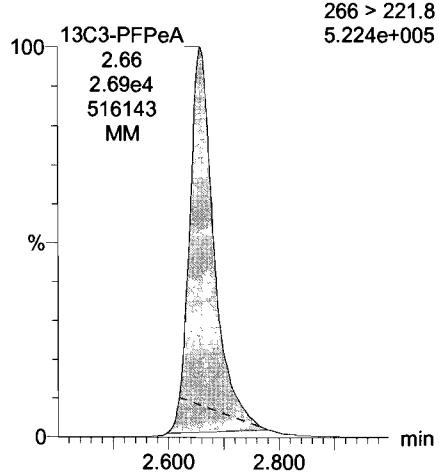


13C3-PFBA



13C3-PFPeA



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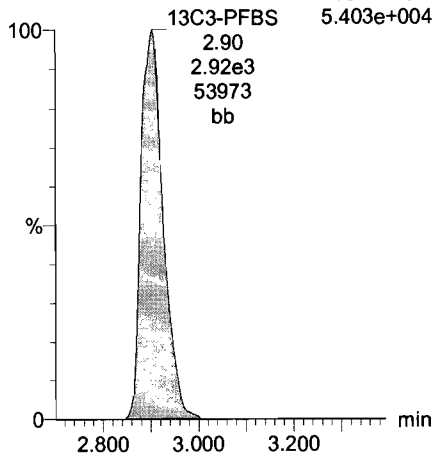

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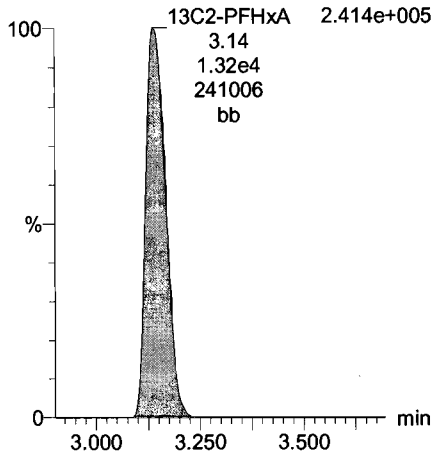

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

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Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

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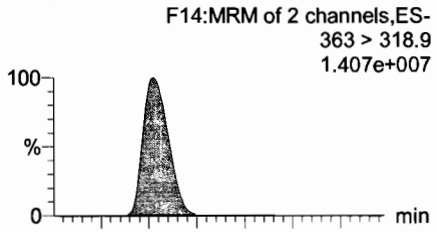

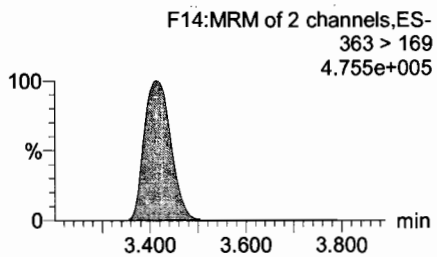

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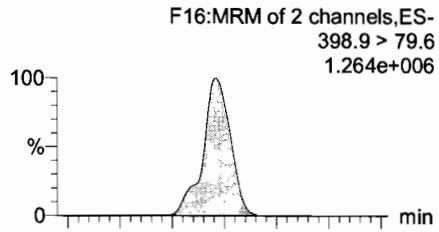

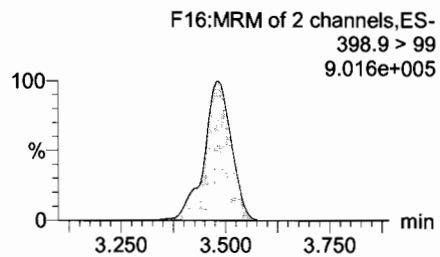

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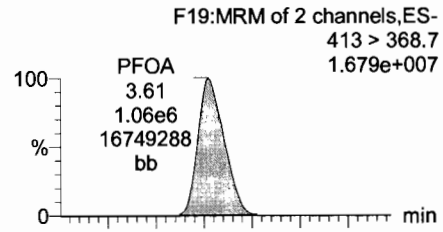

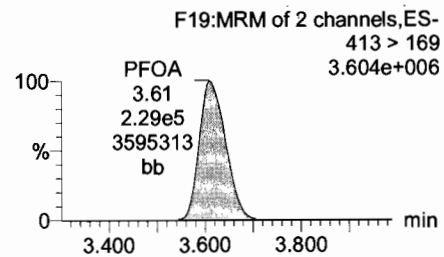

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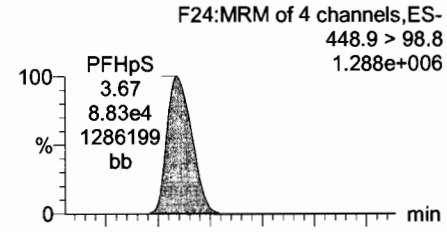

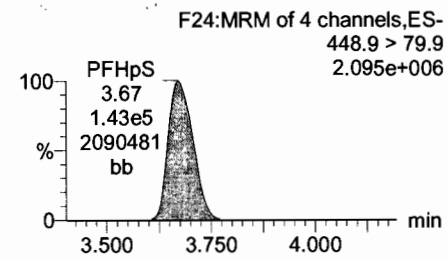

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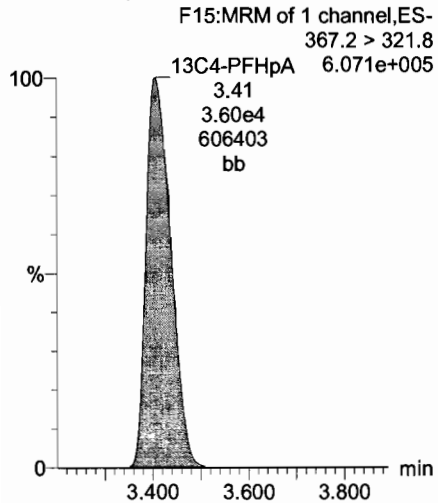

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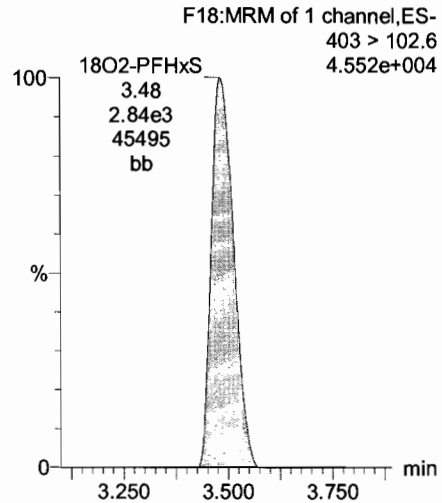

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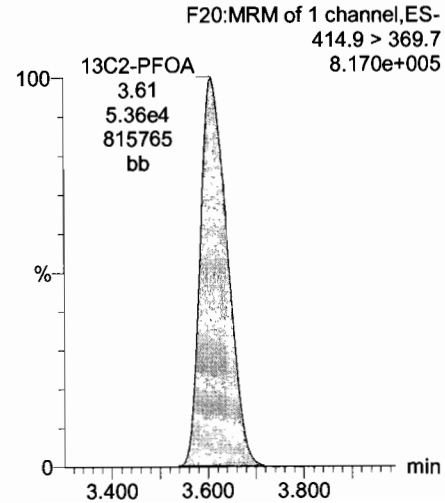

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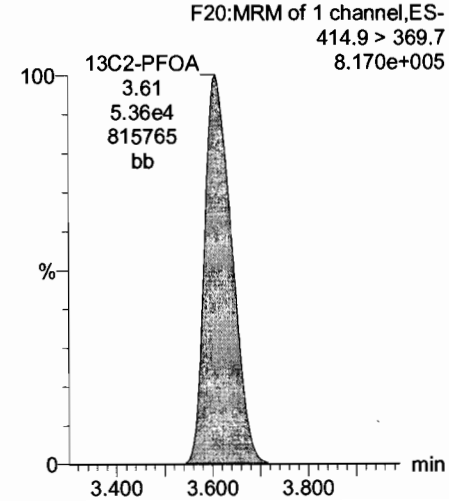

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Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

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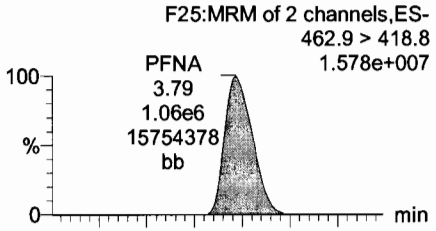

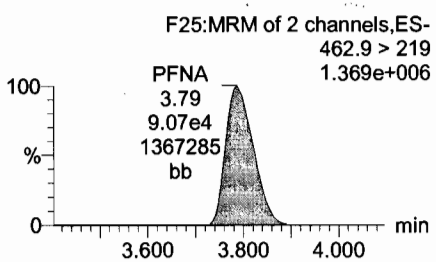

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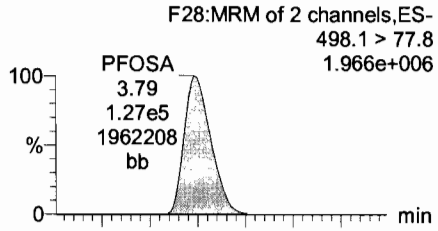

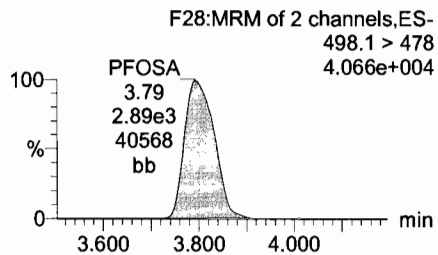

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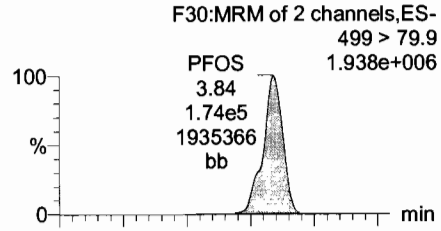

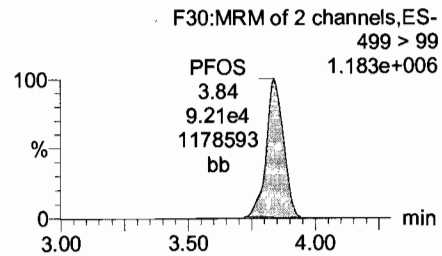

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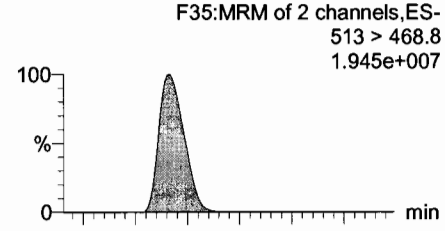

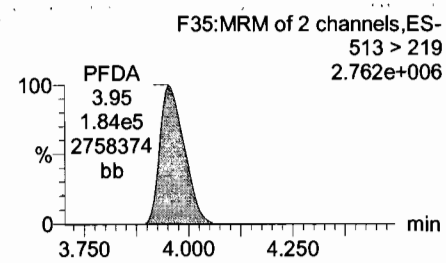

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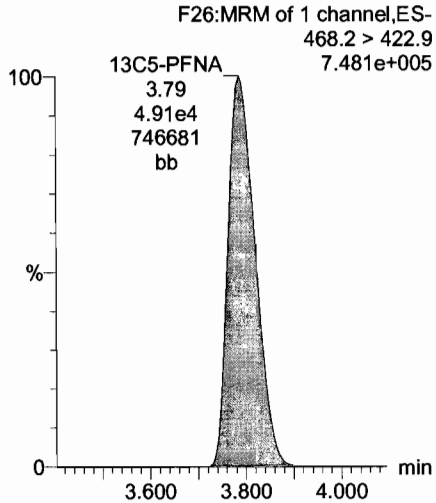
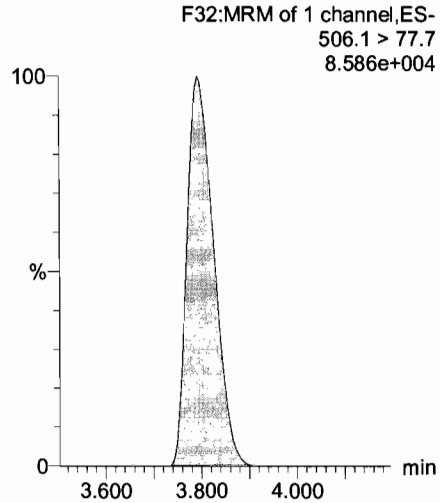


13C8-PFOSA



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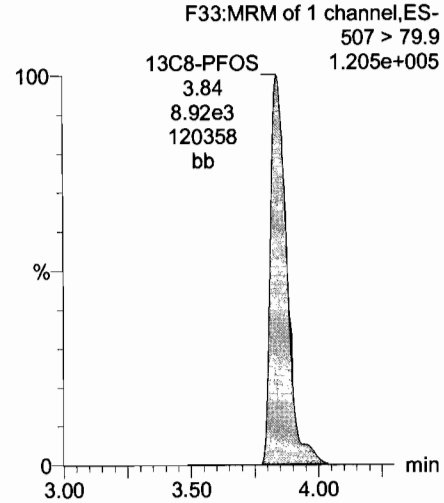

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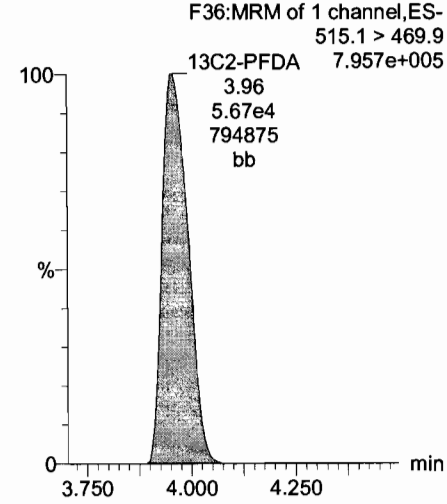

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Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

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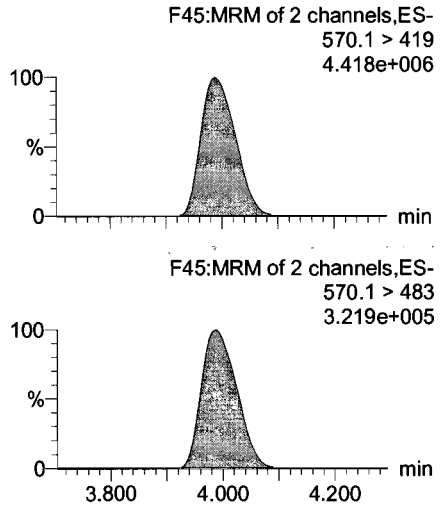

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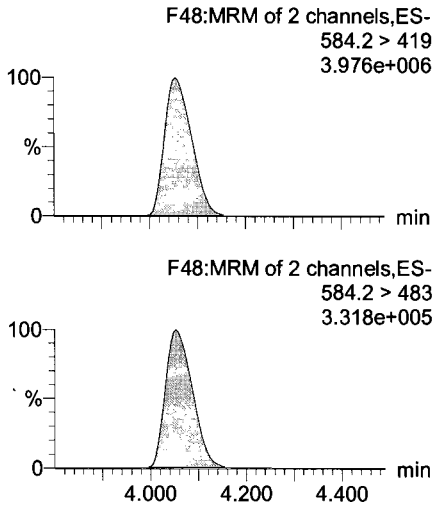

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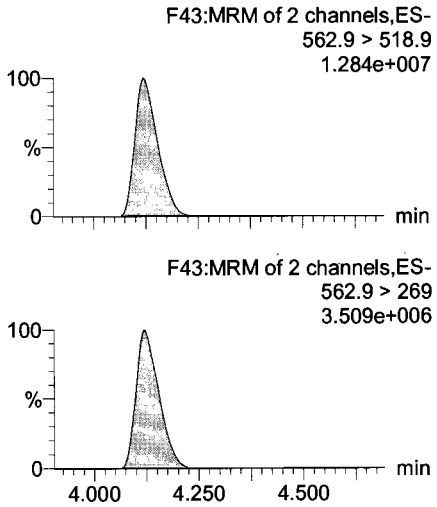

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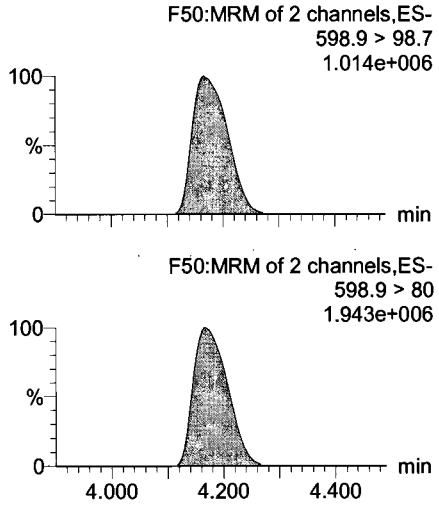

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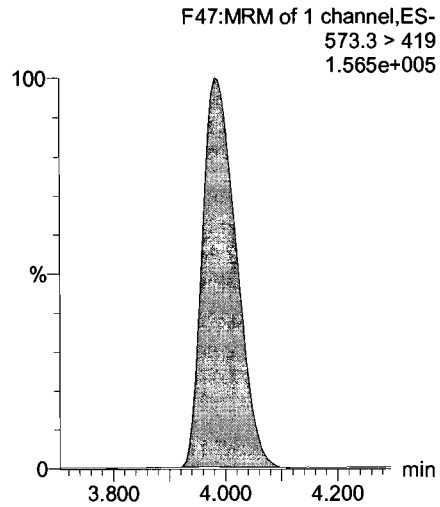

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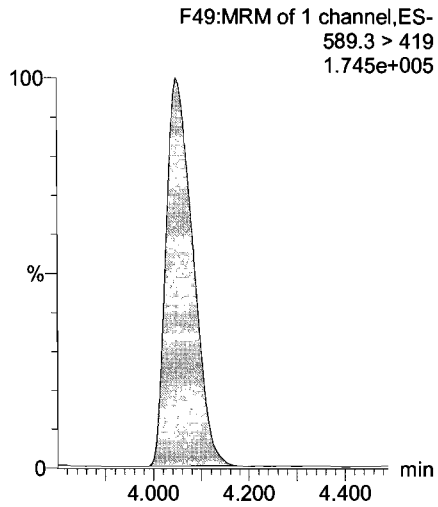

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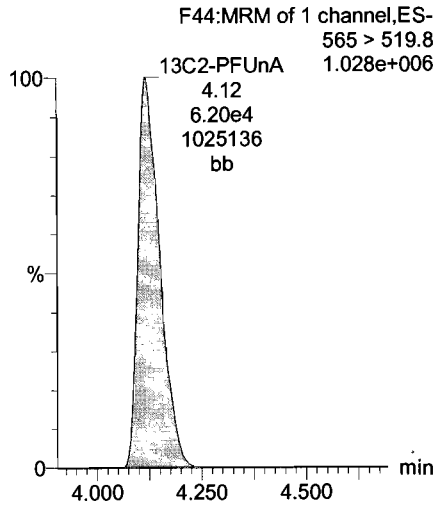

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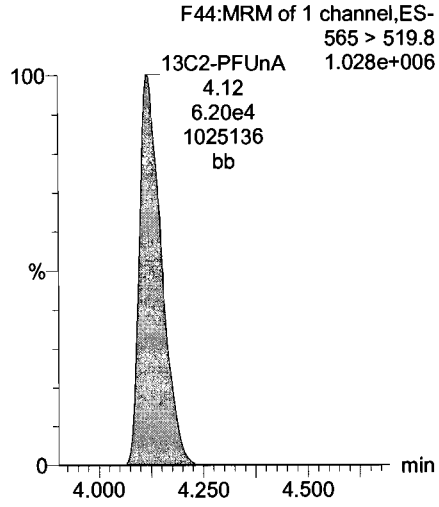

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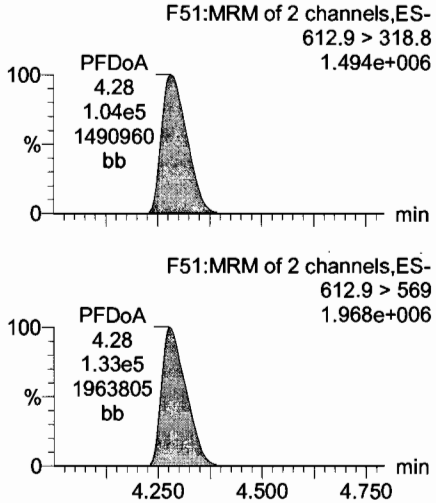
Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

PFDoA



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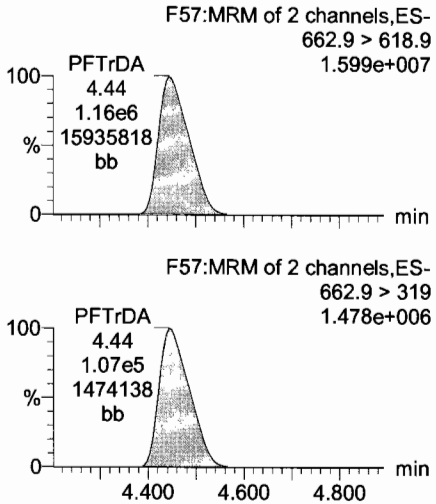

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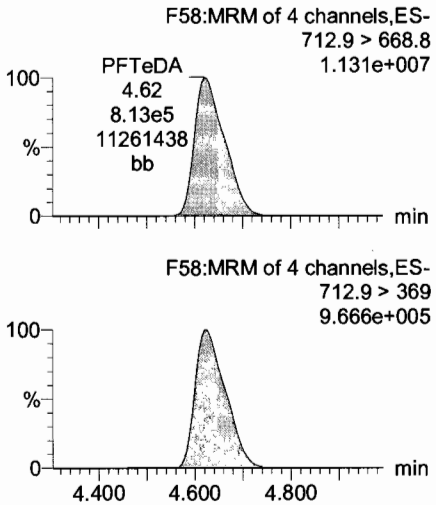

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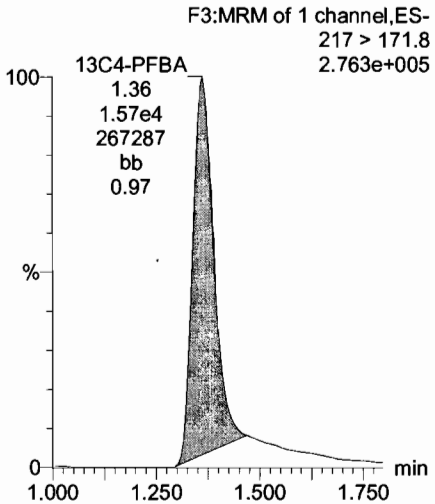

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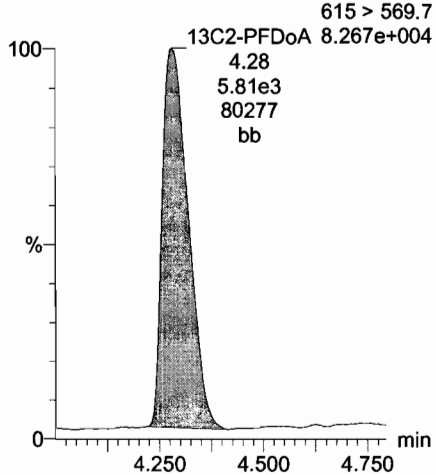

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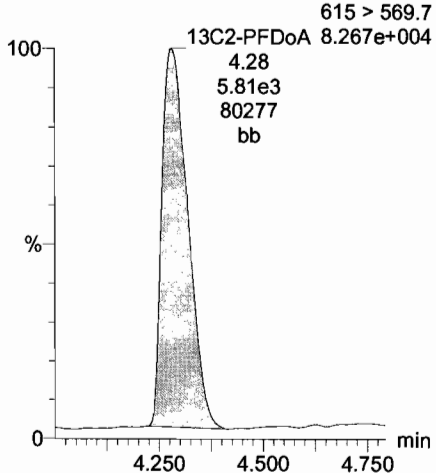

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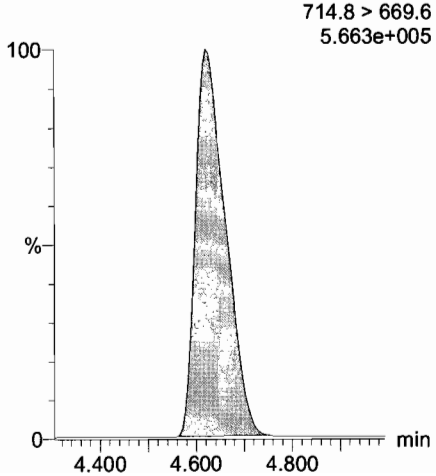
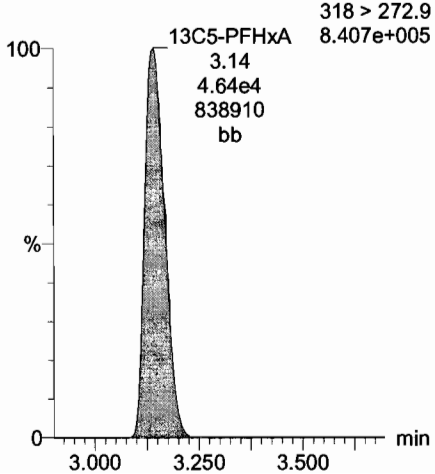


13C5-PFHxA



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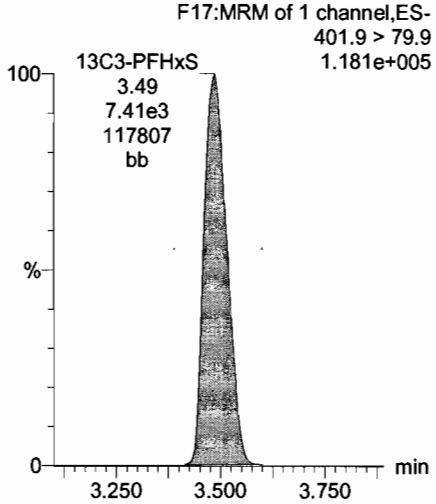
Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

13C3-PFHxS



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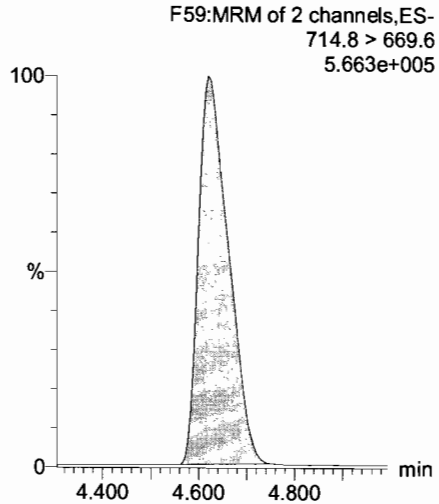

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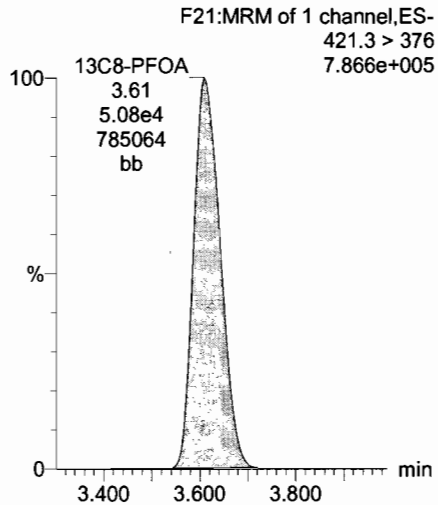

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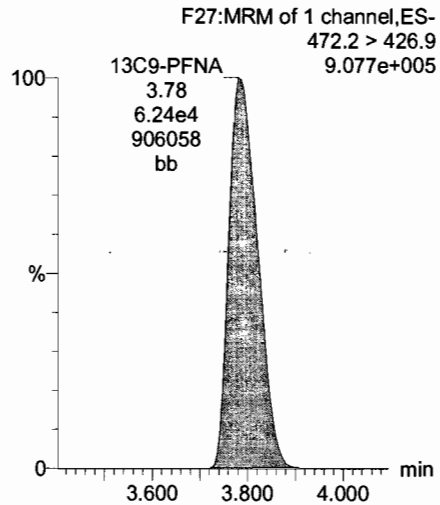

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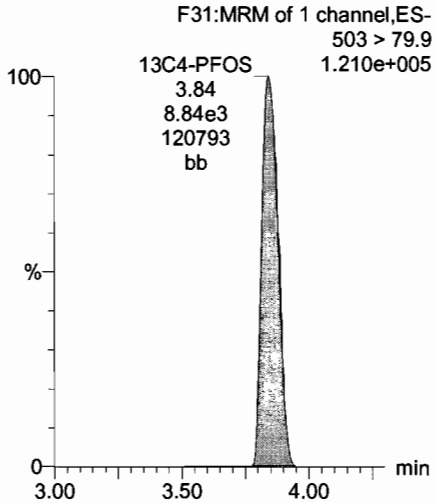

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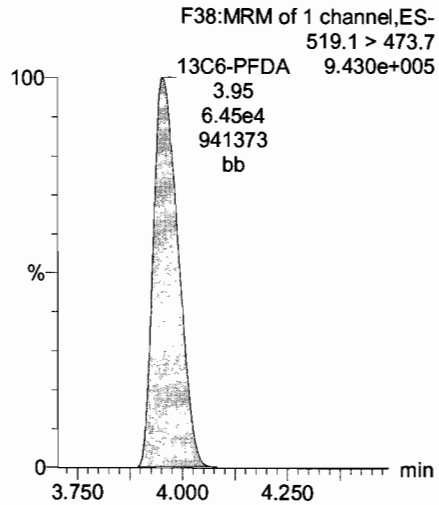
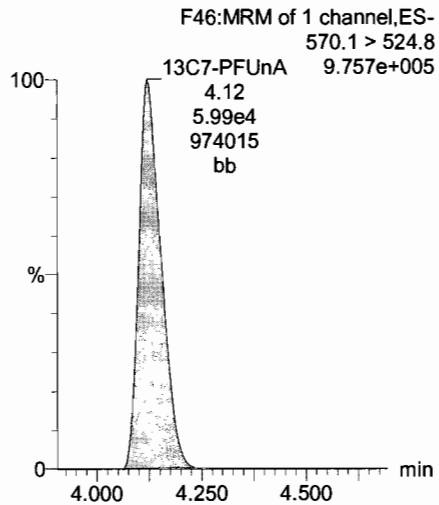


13C7-PFUnA



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-13.qld

Last Altered: Sunday, July 30, 2017 08:15:10 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:16:04 Pacific Daylight Time

AC 7/30/17

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

70-130

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	12431.708	14876.151		1.000	1.37	9.56	95.60
2	2	PFPeA	263.1 > 218.9	21549.439	29165.430		1.000	2.66	9.58	95.77
3	3	PFBS	299 > 79.7	4272.150	3628.166		1.000	2.90	7.92	79.25
4	4	PFHxA	313.2 > 268.9	38927.918	14593.648		1.000	3.14	9.46	94.60
5	5	PFHpA	363 > 318.9	35487.621	39363.383		1.000	3.42	9.50	95.05
6	6	PFHxS	398.9 > 79.6	3976.645	3740.827		1.000	3.49	7.94	79.42
7	7	PFOA	413 > 368.7	48296.703	63936.551		1.000	3.61	9.59	95.86
8	8	PFHpS	448.9 > 98.8	4024.521	63936.551		1.000	3.67	9.42	94.20
9	9	PFNA	462.9 > 418.8	45019.000	52666.078		1.000	3.79	9.92	99.19
10	10	PFOSA	498.1 > 77.8	5913.732	7621.226		1.000	3.80	8.79	87.89
11	11	PFOS	499 > 79.9	7491.657	10206.083		1.000	3.84	9.22	92.24
12	12	PFDA	513 > 468.8	52188.531	60487.246		1.000	3.96	8.80	88.01
13	13	N-MeFOSAA	570.1 > 419	14215.682	12875.874		1.000	3.99	9.09	90.88
14	14	N-EtFOSAA	584.2 > 419	10735.359	12473.139		1.000	4.05	9.13	91.26
15	15	PFUnA	562.9 > 518.9	35744.629	63778.582		1.000	4.12	9.40	94.01
16	16	PFDS	598.9 > 98.7	3193.330	63778.582		1.000	4.17	8.82	88.24
17	17	PFDoA	612.9 > 318.8	4108.420	6412.423		1.000	4.29	9.89	98.91
18	18	PFTrDA	662.9 > 618.9	48836.297	6412.423		1.000	4.45	9.65	96.47
19	19	PFTeDA	712.9 > 668.8	34028.941	42185.617		1.000	4.62	9.59	95.89
20	20	13C3-PFBA	216.1 > 171.8	14876.151	13338.616	1.068	1.000	1.37	13.05	104.39
21	21	13C3-PFPeA	266 > 221.8	29165.430	41541.566	0.271	1.000	2.67	12.94	103.49
22	22	13C3-PFBS	302 > 98.8	3628.166	41541.566	0.033	1.000	2.90	13.20	105.62
23	23	13C2-PFHxA	315 > 269.8	14593.648	41541.566	0.335	1.000	3.14	5.24	104.83
24	24	13C4-PFHpA	367.2 > 321.8	39363.383	41541.566	0.369	1.000	3.41	12.84	102.76
25	25	18O2-PFHxS	403 > 102.6	3740.827	7683.510	0.460	1.000	3.48	13.22	105.77
26	26	13C2-PFOA	414.9 > 369.7	63936.551	47325.004	1.293	1.000	3.61	13.06	104.45
27	27	13C5-PFNA	468.2 > 422.9	52666.078	52466.008	0.986	1.000	3.80	12.73	101.81
28	28	13C8-PFOSA	506.1 > 77.7	7621.226	56361.164	0.132	1.000	3.80	12.76	102.06
29	29	13C8-PFOS	507 > 79.9	10206.083	8480.035	1.184	1.000	3.84	12.70	101.62
30	30	13C2-PFDA	515.1 > 469.9	60487.246	53553.129	0.998	1.000	3.96	14.15	113.21
31	31	d3-N-MeFOSAA	573.3 > 419	12875.874	56361.164	0.018	1.000	3.99	161.46	99.36

Dataset: U:\Q4.PRO\results\170728M2\170728M2-13.qld

Last Altered: Sunday, July 30, 2017 08:15:10 Pacific Daylight Time
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Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

	# Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
32	32 d5-N-EtFOSAA	589.3 > 419	12473.139	56361.164	0.018	1.000	4.05	155.65	95.79
33	33 13C2-PFUnA	565 > 519.8	63778.582	56361.164	1.129	1.000	4.12	12.53	100.21
34	34 13C2-PFDoA	615 > 569.7	6412.423	56361.164	0.116	1.000	4.28	12.26	98.07
35	35 13C2-PFTeDA	714.8 > 669.6	42185.617	56361.164	0.762	1.000	4.63	12.28	98.21
36	36 13C4-PFBA	217 > 171.8	13338.616	13338.616	1.000	1.000	1.37	12.50	100.00
37	37 13C5-PFHxA	318 > 272.9	41541.566	41541.566	1.000	1.000	3.15	5.00	100.00
38	38 13C3-PFHxS	401.9 > 79.9	7683.510	7683.510	1.000	1.000	3.49	12.50	100.00
39	39 13C8-PFOA	421.3 > 376	47325.004	47325.004	1.000	1.000	3.61	12.50	100.00
40	40 13C9-PFNA	472.2 > 426.9	52466.008	52466.008	1.000	1.000	3.79	12.50	100.00
41	41 13C4-PFOS	503 > 79.9	8480.035	8480.035	1.000	1.000	3.84	12.50	100.00
42	42 13C6-PFDA	519.1 > 473.7	53553.129	53553.129	1.000	1.000	3.96	12.50	100.00
43	43 13C7-PFUnA	570.1 > 524.8	56361.164	56361.164	1.000	1.000	4.13	12.50	100.00

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-13.qld

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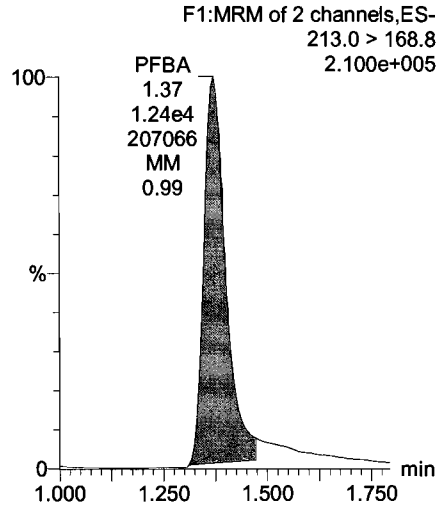
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

PFBA



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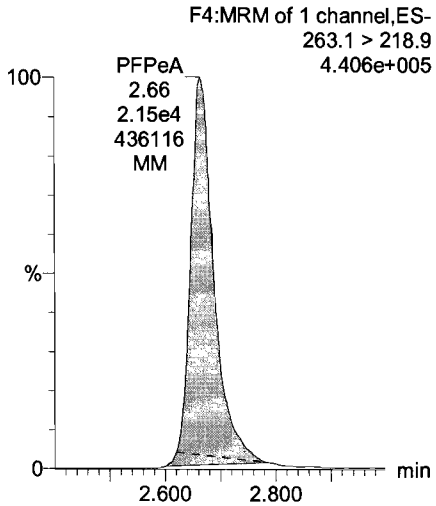

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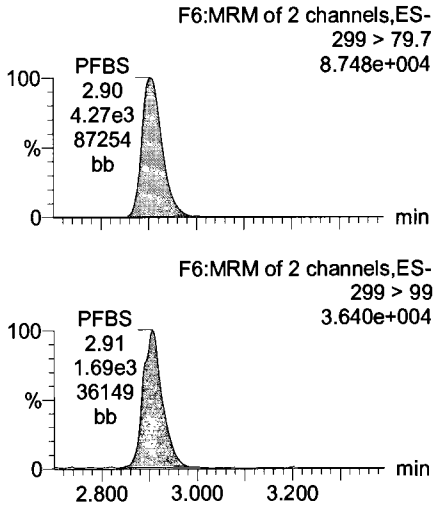

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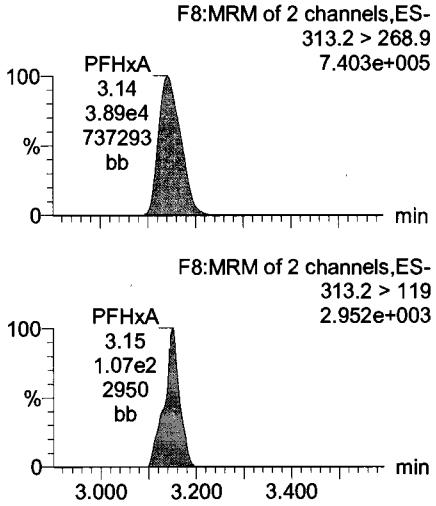

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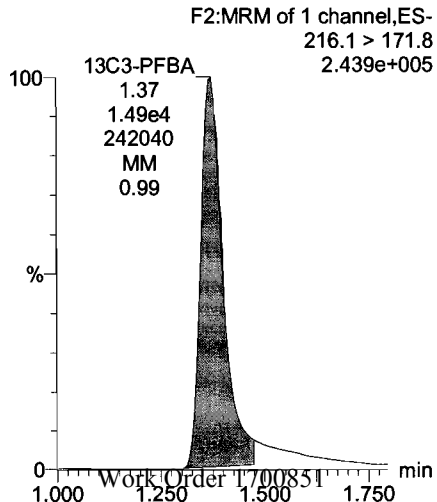

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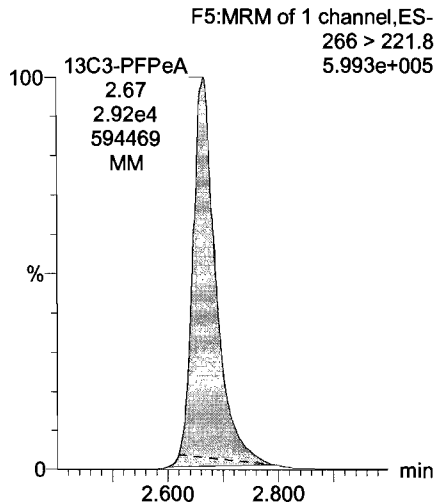

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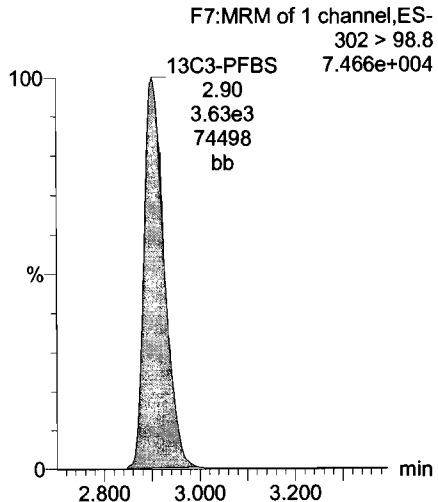

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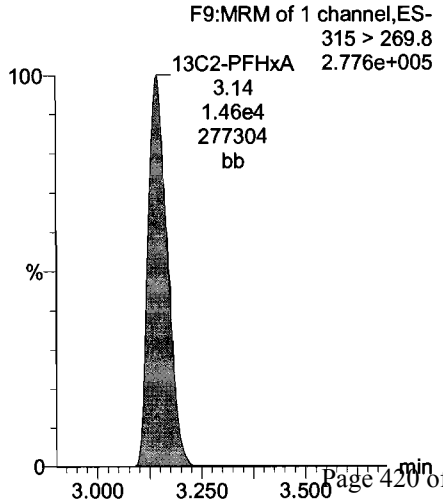

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170728M2\170728M2-13.qld

Last Altered: Sunday, July 30, 2017 08:15:10 Pacific Daylight Time
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Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

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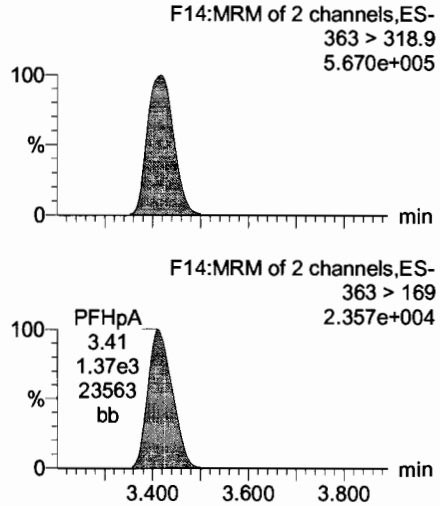

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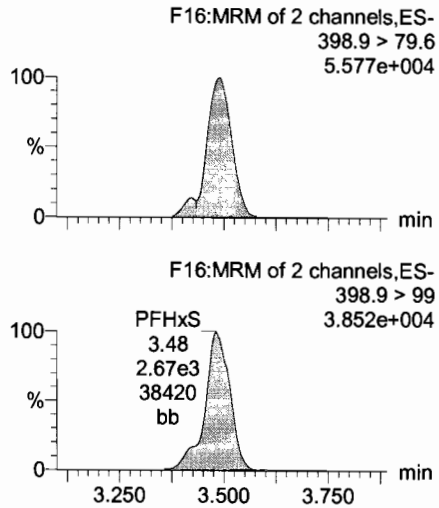

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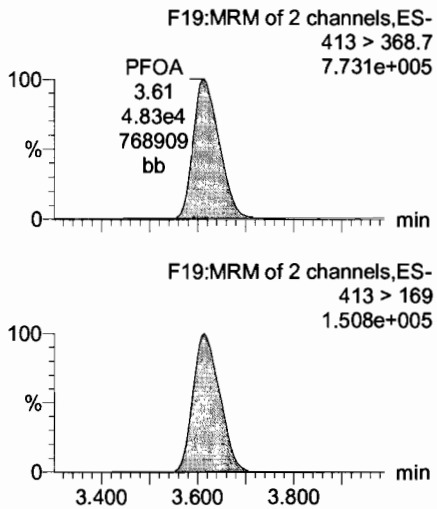

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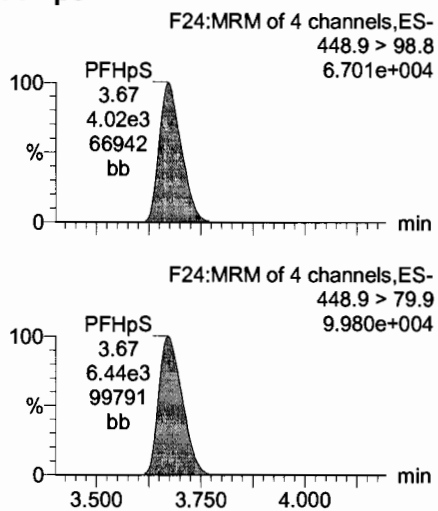

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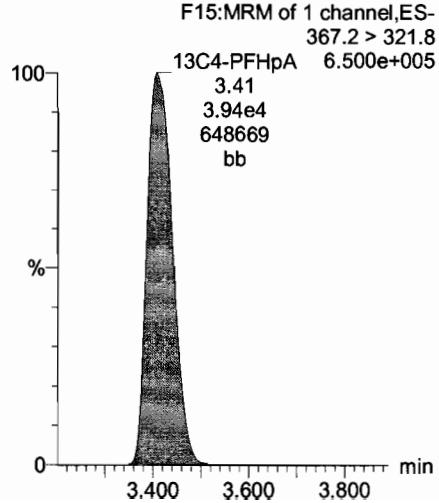

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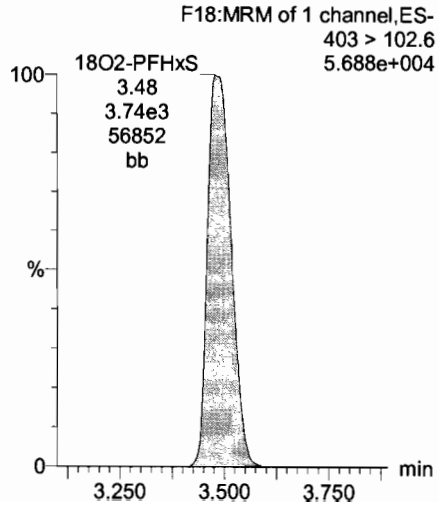

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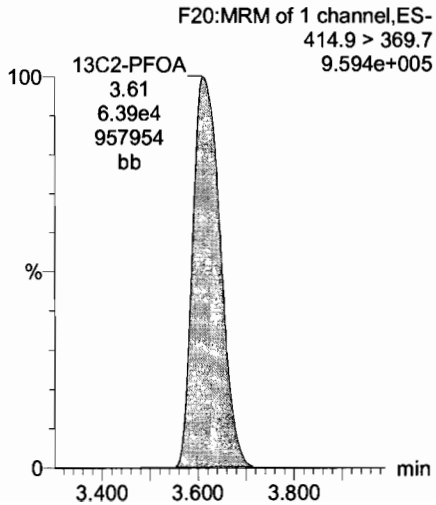

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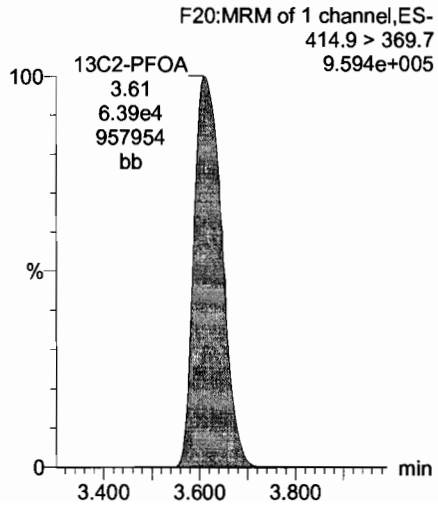

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Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

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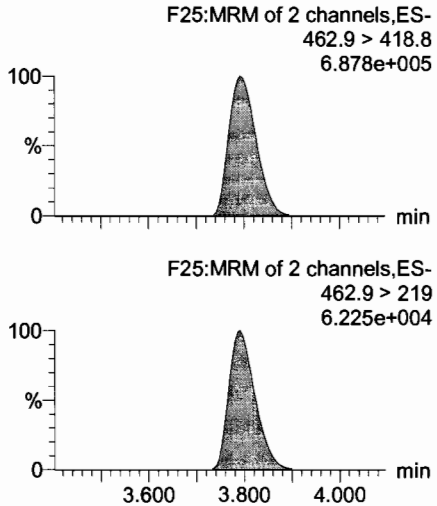

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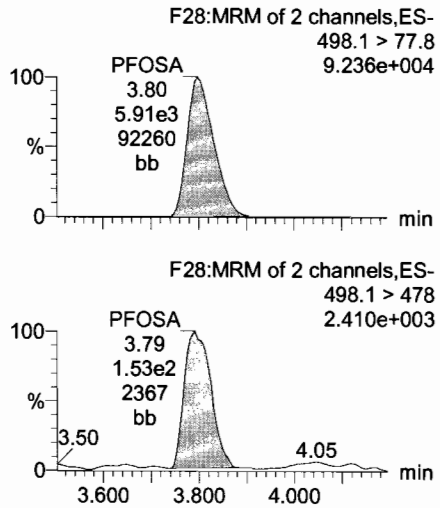

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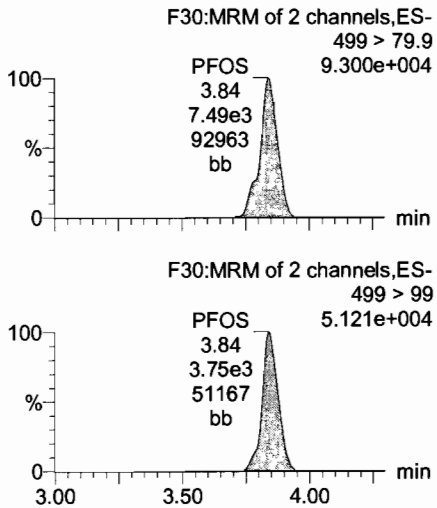

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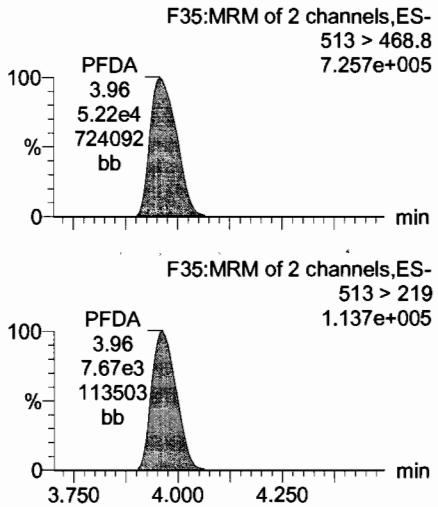

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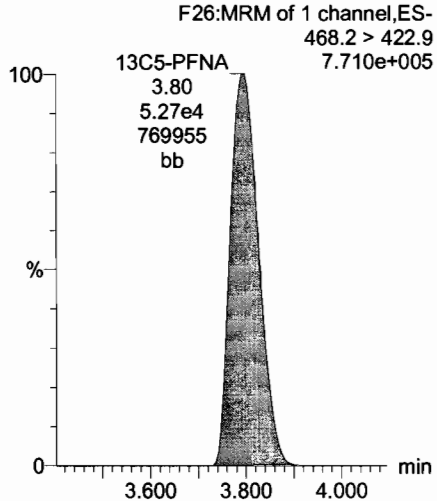

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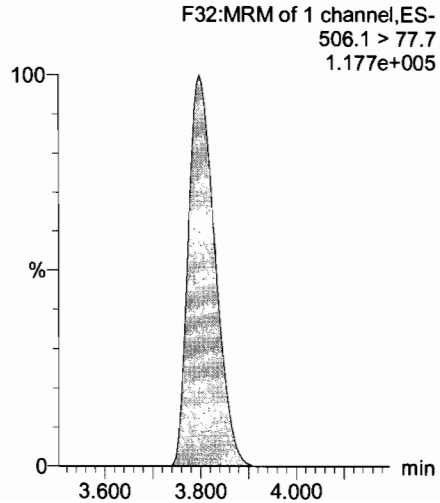

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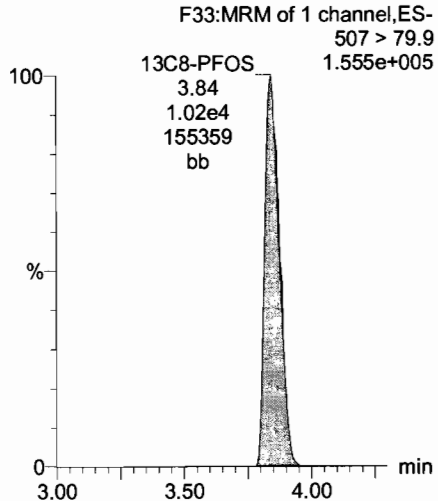

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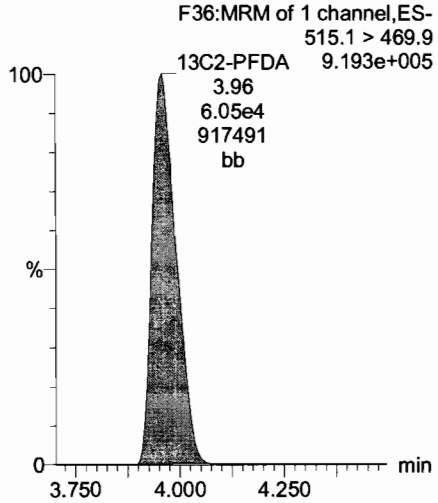

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Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

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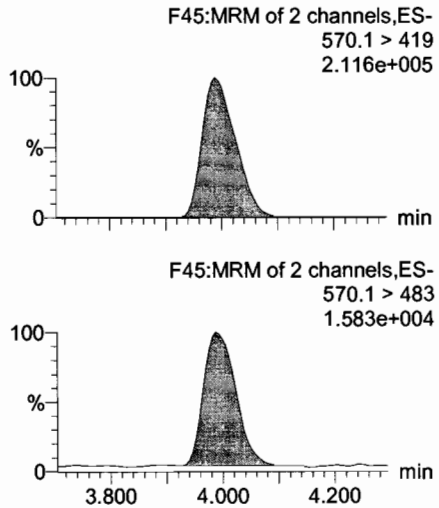

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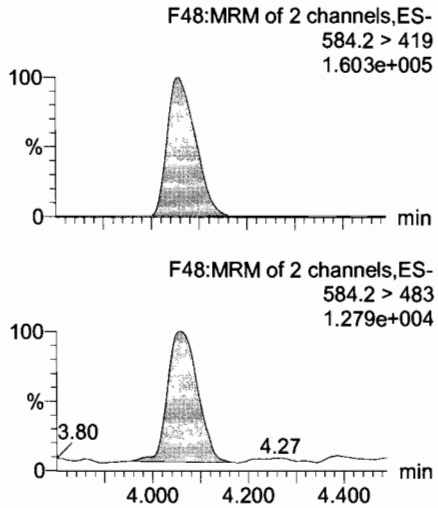

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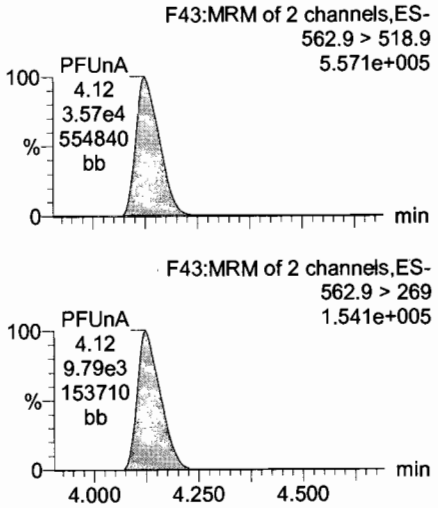

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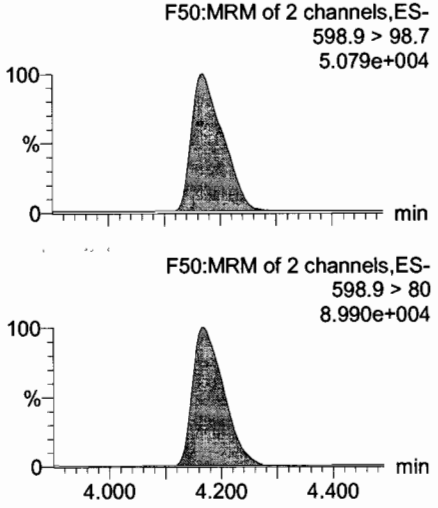

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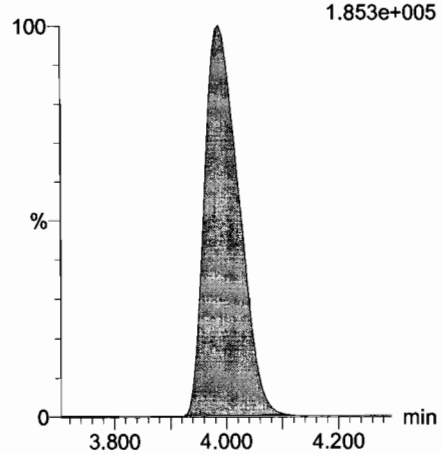

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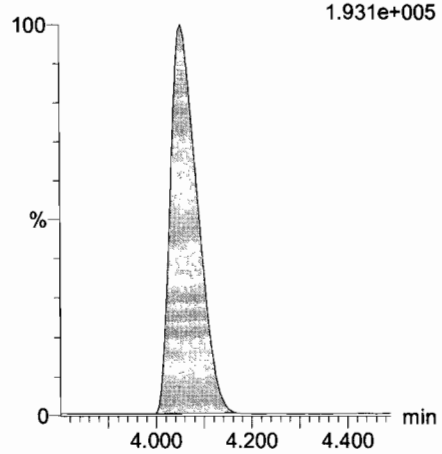

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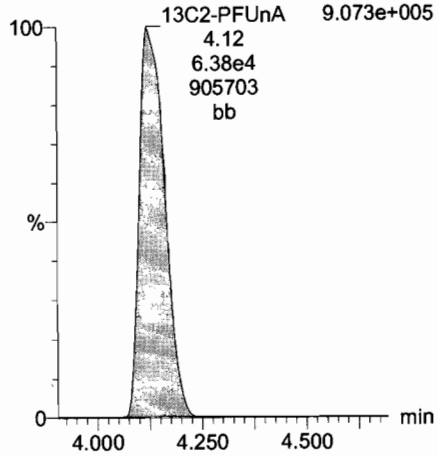

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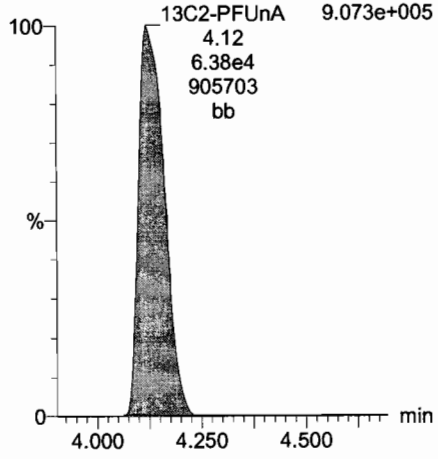

Vista Analytical Laboratory

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Last Altered: Sunday, July 30, 2017 08:15:10 Pacific Daylight Time
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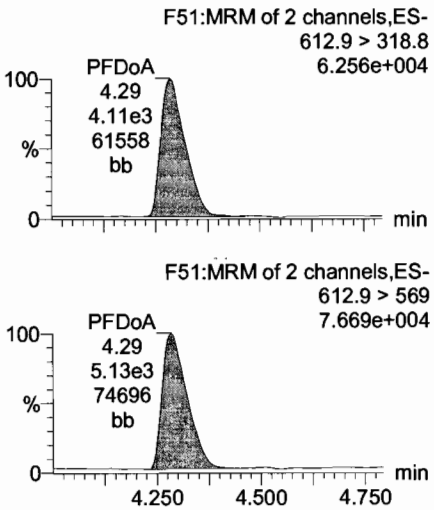
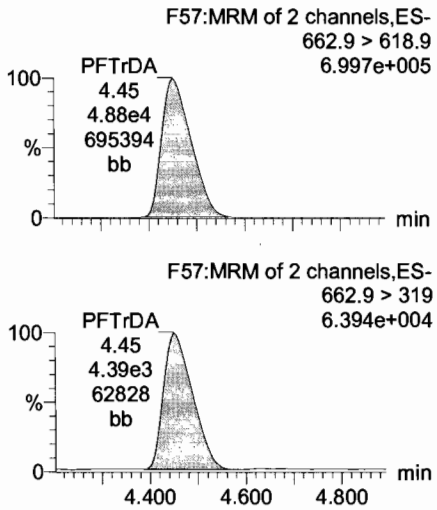
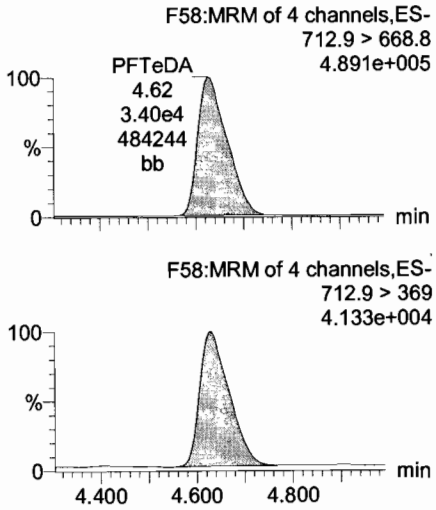
PFDoA



PFTrDA



PFTeDA



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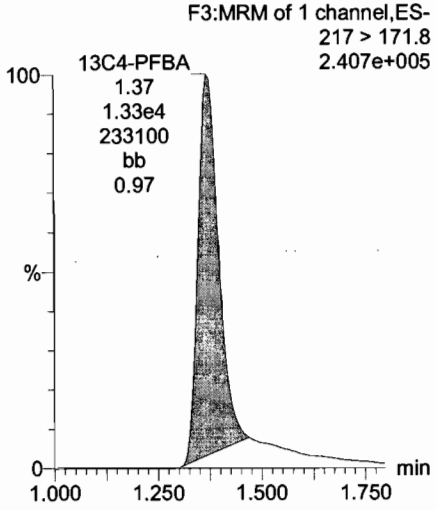

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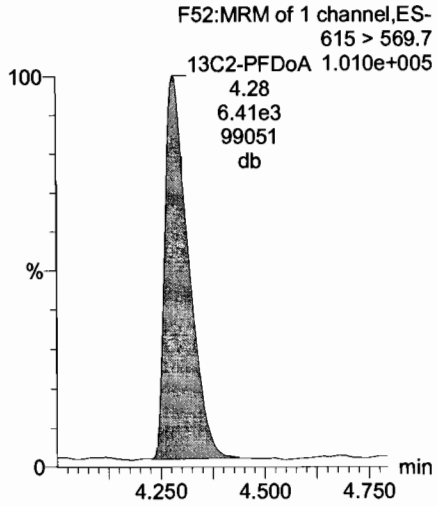

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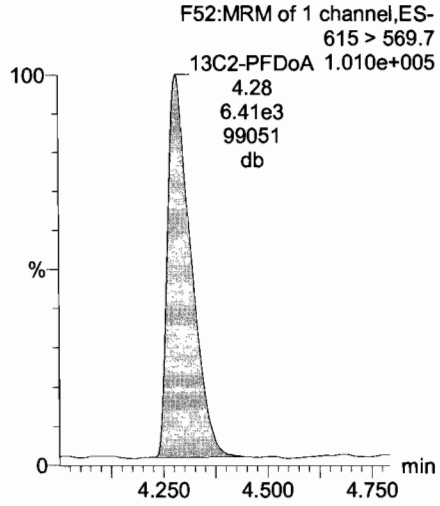

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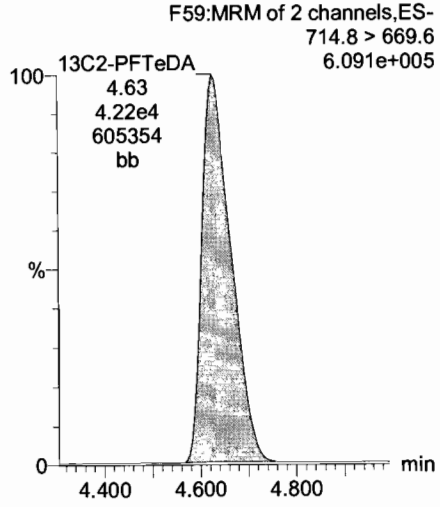

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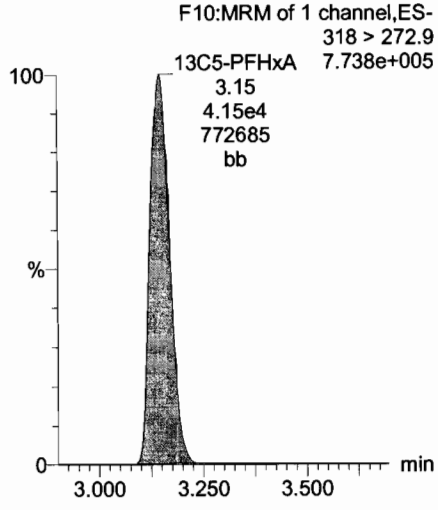

Vista Analytical Laboratory

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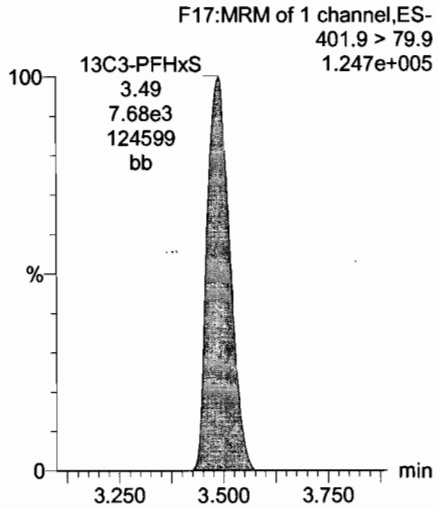

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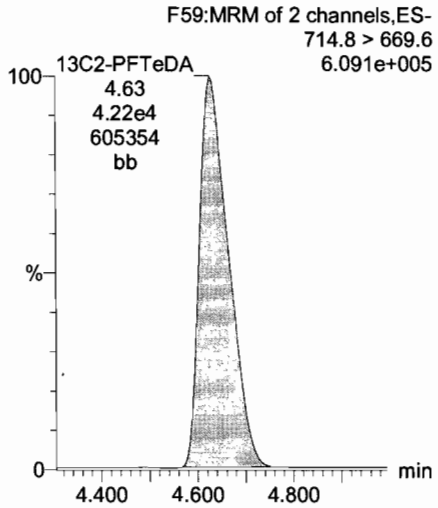
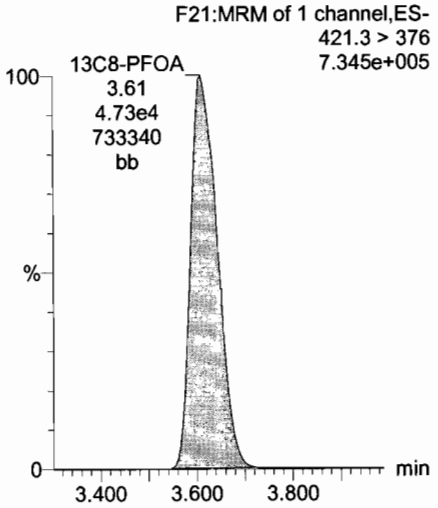
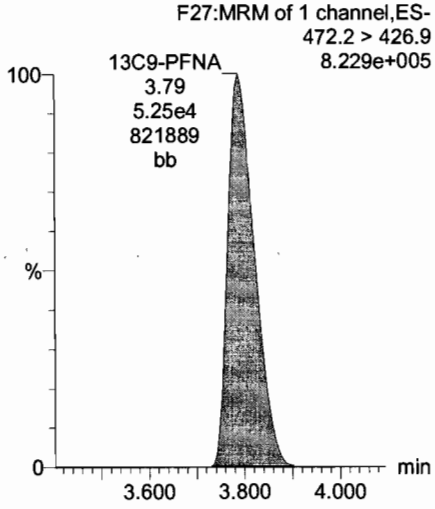


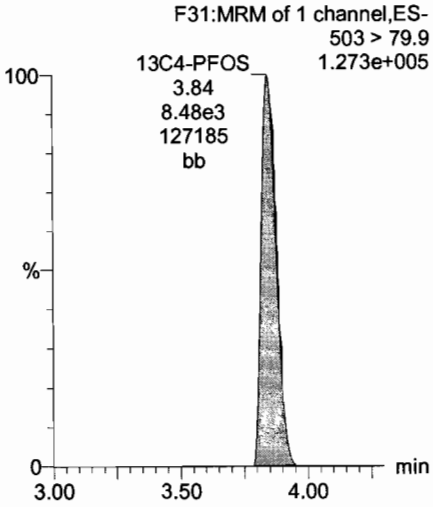
13C8-PFOA



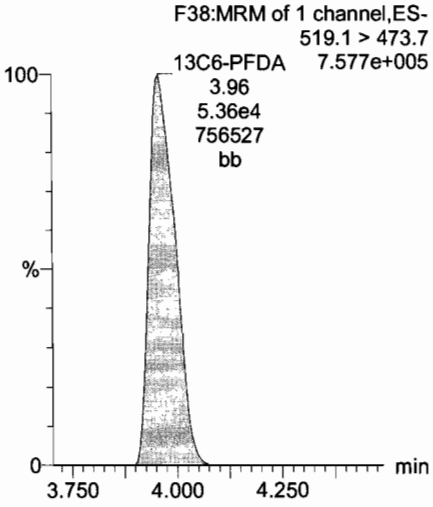
13C9-PFNA



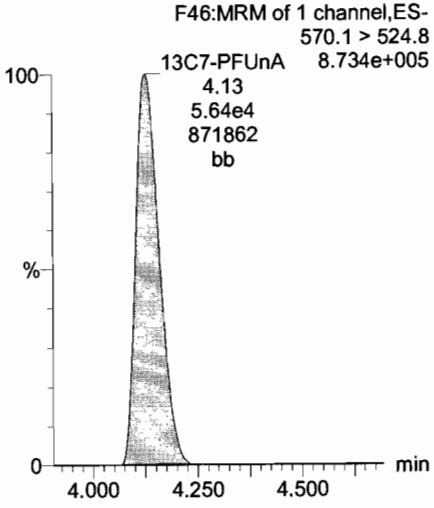
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","25.7","","TRG","Yes","Y","","Y","2.35","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","4.53","","TRG","Yes","Y","J","Y","0.637","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","26.5","","TRG","Yes","Y","","Y","1.02","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","34.8","","TRG","Yes","Y","","Y","0.702","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION","14.9","","TRG","Yes","Y","","Y","0.870","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","","","TRG","Yes","N","U","Y","0.873","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","","","TRG","Yes","N","U","Y","1.61","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","2355-31-9","MeFOSAA","","","TRG","Yes","N","U","Y","1.78","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","","","TRG","Yes","N","U","Y","1.13","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","","","","","",""
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","2991-50-6","EtFOSAA","","","TRG","Yes","N","U","Y","1.48","5.39","8.62","NG_L","NG_L","","","","","","","","","","","","","","",

"","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","","","TRG","Yes","N","U","Y","0.853","5.39","8.62","NG_L","NG_L","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.532","5.39","8.62","NG_L","NG_L","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","376-06-7","PFTeDA","","","TRG","Yes","N","U","Y","0.814","5.39","8.62","NG_L","NG_L","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C3-PFBS","13C3-PFBS","139","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","139","139","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C2-PFHxA","13C2-PFHxA","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C4-PFHpA","13C4-PFHpA","80.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","80.5","80.5","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","18O2-PFHxS","18O2-PFHxS","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C2-PFOA","13C2-PFOA","101","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","101","101","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C8-PFOS","13C8-PFOS","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C5-PFNA","13C5-PFNA","99.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","99.0","99.0","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C2-PFDA","13C2-PFDA","92.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.4","92.4","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","74.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","74.0","74.0","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C2-PFUnA","13C2-PFUnA","80.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","80.7","80.7","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","70.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","70.4","70.4","","","","","","50","150","","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C2-PFDoA","13C2-PFDoA","71.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","71.3","71.3","","","","","","50","150","","","","",
"18-GW-18MCAS03-5-20170710","537_MOD","07/28/17","19:33","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","58.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","58.4","58.4","","","","","","50","150","","","","","",
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","375-73-5","PFBS","57.3","","TRG","Yes","Y","","Y","1.93","5.39","8.61","NG_L","NG_L","",
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","307-24-

4","PERFLUOROHEXANOIC ACID
(PFHXA)","331","","TRG","Yes","Y","","Y","2.35","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","375-85-
9","PERFLUOROHEPTANOIC ACID
(PFHPA)","92.0","","TRG","Yes","Y","","Y","0.636","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/26/17","11:34","N","NA","DL1","355-46-
4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","714","","TRG","Yes","Y","D","Y","10.2","53.9","86.1","NG_L","NG_L","","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/26/17","11:34","N","NA","DL1","335-67-
1","PERFLUOROOCTANOIC ACID
(PFOA)","3720","","TRG","Yes","Y","D","Y","7.00","53.9","86.1","NG_L","NG_L","","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","106","","TRG","Yes","Y","","Y","0.868","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","","","","
"
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","375-95-
1","PERFLUORONONANOIC ACID
(PFNA)","1.42","","TRG","Yes","Y","J","Y","0.871","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","335-76-
2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","1.60","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","","
","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","1.77","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","2058-94-
8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.13","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","","
","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","1.47","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","307-55-
1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.852","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","","
","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","72629-94-
8","PFTrDA","","","TRG","Yes","N","U","Y","0.531","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","376-06-
7","PFTeDA","","","TRG","Yes","N","U","Y","0.812","5.39","8.61","NG_L","NG_L","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C3-PFBS","13C3-
PFBS","146","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","146","146","","","","","50","150","","
","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C2-PFHxA","13C2-
PFHxA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","50","150","","
","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C4-PFHpA","13C4-

PFHpA","85.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","85.2","85.2","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/26/17","11:34","N","NA","DL1","18O2-PFHxS","18O2-
PFHxS","130","","IS","Yes","Y","D","Y","","","","PCT_REC","","","","","100","130","130","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/26/17","11:34","N","NA","DL1","13C2-PFOA","13C2-
PFOA","104","","IS","Yes","Y","D","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C8-PFOS","13C8-
PFOS","103","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","103","103","","","","","","50","150","","
","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C5-PFNA","13C5-
PFNA","92.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.8","92.8","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C2-PFDA","13C2-
PFDA","94.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","94.8","94.8","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","87.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","87.7","87.7","","","","","","50","15
0","","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C2-PFUnA","13C2-
PFUnA","99.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","99.1","99.1","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","86.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","86.8","86.8","","","","","","50","150
","","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C2-PFDoA","13C2-
PFDoA","79.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","79.6","79.6","","","","","","50","150","
","","","","
"18-GW-18MCAS03-2-20170710","537_MOD","07/28/17","19:44","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","39.3","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","39.3","39.3","","","","","","50","15
0","","*","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","375-73-
5","PFBS","","","TRG","Yes","N","U","Y","1.85","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","307-24-
4","PERFLUOROHEXANOIC ACID
(PFHXA)","5.03","","TRG","Yes","Y","J","Y","2.25","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","375-85-
9","PERFLUOROHEPTANOIC ACID
(PFHPA)","1.81","","TRG","Yes","Y","J","Y","0.610","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","355-46-
4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","48.3","","TRG","Yes","Y","","Y","0.978","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","335-67-
1","PERFLUOROOCTANOIC ACID
(PFOA)","15.1","","TRG","Yes","Y","","Y","0.672","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","7.91","","TRG","Yes","Y","J","Y","0.833","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","","","
"

,""
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","375-95-
1","PERFLUORONONANOIC ACID
(PFNA)","","","TRG","Yes","N","U","Y","0.837","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","","","",
"","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","335-76-
2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","1.54","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","","","","
"","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","1.70","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","2058-94-
8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.08","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","","
","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","1.41","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","307-55-
1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.818","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","","
","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","72629-94-
8","PFTrDA","","","TRG","Yes","N","U","Y","0.510","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","376-06-
7","PFTeDA","","","TRG","Yes","N","U","Y","0.780","5.17","8.26","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C3-PFBS","13C3-
PFBS","181","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","181","181","","","","","","50","150","","
*","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C2-PFHxA","13C2-
PFHxA","130","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","130","130","","","","","","50","150","","
","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C4-PFHpA","13C4-
PFHpA","106","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","106","106","","","","","","50","150","","
","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","18O2-PFHxS","18O2-
PFHxS","133","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","133","133","","","","","","50","150","","
","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C2-PFOA","13C2-
PFOA","133","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","133","133","","","","","","50","150","","
","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C8-PFOS","13C8-
PFOS","134","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","134","134","","","","","","50","150","","
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"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C5-PFNA","13C5-
PFNA","126","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","126","126","","","","","","50","150","","
","","
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C2-PFDA","13C2-
PFDA","117","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","117","117","","","","","","50","150","","
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"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","d3-MeFOSAA","d3-

MeFOSAA","133","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","133","133","","","","","","50","150
","","","","",
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C2-PFUnA","13C2-
PFUnA","93.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.4","93.4","","","","","","50","150","
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"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","134","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","134","134","","","","","","50","150",
"","","","","",
"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C2-PFDoA","13C2-
PFDoA","97.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.9","97.9","","","","","","50","150","
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"18-GW-18MCAS02-5-20170710","537_MOD","07/26/17","12:18","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","63.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","63.6","63.6","","","","","","50","150"
,"","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","375-73-
5","PFBS","2.35","","TRG","Yes","Y","J","Y","1.91","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
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"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","307-24-
4","PERFLUOROHEXANOIC ACID
(PFHXA)","9.72","","TRG","Yes","Y","","Y","2.32","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
,"","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","375-85-
9","PERFLUOROHEPTANOIC ACID
(PFHPA)","2.50","","TRG","Yes","Y","J","Y","0.630","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","355-46-
4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","43.4","","TRG","Yes","Y","","Y","1.01","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
","","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","335-67-
1","PERFLUOROOCTANOIC ACID
(PFOA)","81.2","","TRG","Yes","Y","","Y","0.694","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
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"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","20.3","","TRG","Yes","Y","","Y","0.860","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","","","
""
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","375-95-
1","PERFLUORONONANOIC ACID
(PFNA)","","","TRG","Yes","N","U","Y","0.863","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
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"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","335-76-
2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","1.59","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","1.76","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","
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"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","2058-94-
8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.12","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","","","
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"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","1.46","5.34","8.52","NG_L","NG_L","","","","","","","","","","","","",

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"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","","","TRG","Yes","N","U","Y","0.844","5.34","8.52","NG_L","NG_L","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.526","5.34","8.52","NG_L","NG_L","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","376-06-7","PFTeDA","","","TRG","Yes","N","U","Y","0.804","5.34","8.52","NG_L","NG_L","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C3-PFBS","13C3-PFBS","137","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","137","137","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C2-PFHxA","13C2-PFHxA","97.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.0","97.0","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C4-PFHpA","13C4-PFHpA","88.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","88.6","88.6","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","18O2-PFHxS","18O2-PFHxS","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C2-PFOA","13C2-PFOA","99.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","99.6","99.6","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C8-PFOS","13C8-PFOS","93.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.1","93.1","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C5-PFNA","13C5-PFNA","92.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.3","92.3","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C2-PFDA","13C2-PFDA","82.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.7","82.7","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","97.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.0","97.0","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C2-PFUnA","13C2-PFUnA","82.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.5","82.5","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","87.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","87.0","87.0","","","","","","50","150","","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C2-PFDoA","13C2-PFDoA","52.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","52.7","52.7","","","","","","50","150","","","","
"18-GW-18MCAS07-3-20170710","537_MOD","07/28/17","19:55","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","12.7","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","12.7","12.7","","","","","","50","150","","*","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","375-73-5","PFBS","10.8","","TRG","Yes","Y","","Y","1.86","5.21","8.30","NG_L","NG_L","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","307-24-

4","PERFLUOROHEXANOIC ACID
(PFHXA)","38.0","","TRG","Yes","Y","","Y","2.26","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","","
","","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","375-85-
9","PERFLUOROHEPTANOIC ACID
(PFHPA)","5.90","","TRG","Yes","Y","J","Y","0.613","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
","","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","355-46-
4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","18.6","","TRG","Yes","Y","","Y","0.983","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","335-67-
1","PERFLUOROOCTANOIC ACID
(PFOA)","30.4","","TRG","Yes","Y","","Y","0.675","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","1.58","","TRG","Yes","Y","J","Y","0.837","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","375-95-
1","PERFLUORONONANOIC ACID
(PFNA)","","","TRG","Yes","N","U","Y","0.840","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","335-76-
2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","1.55","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","1.71","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","
","","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","2058-94-
8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.09","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","1.42","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","307-55-
1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.822","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","72629-94-
8","PFTrDA","","","TRG","Yes","N","U","Y","0.513","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","376-06-
7","PFTeDA","","","TRG","Yes","N","U","Y","0.783","5.21","8.30","NG_L","NG_L","","","","","","","","","","","","","","","
","","","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C3-PFBS","13C3-
PFBS","130","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","130","130","","","","","","50","150","","
","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C2-PFHxA","13C2-
PFHxA","103","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","103","103","","","","","","50","150","","
","","
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C4-PFHpA","13C4-

PFHpA","84.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.7","84.7","","","","","","50","150","
","","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","18O2-PFHxS","18O2-
PFHxS","100","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","100","100","","","","","","50","150","","
","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C2-PFOA","13C2-
PFOA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","
","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C8-PFOS","13C8-
PFOS","98.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","98.9","98.9","","","","","","50","150","","
","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C5-PFNA","13C5-
PFNA","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150","","
","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C2-PFDA","13C2-
PFDA","97.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.9","97.9","","","","","","50","150","
","","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","93.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.0","93.0","","","","","","50","15
0","","","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C2-PFUnA","13C2-
PFUnA","92.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.2","92.2","","","","","","50","150","
","","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","82.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.2","82.2","","","","","","50","150
","","","","",""
"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C2-PFDoA","13C2-
PFDoA","53.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","53.1","53.1","","","","","","50","150","
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"24-GW-24MW08B-20170710","537_MOD","07/28/17","20:05","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","7.80","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","7.80","7.80","","","","","","50","15
0","","*","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","375-73-
5","PFBS","80.5","","TRG","Yes","Y","","Y","1.85","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","
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"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","267","","TRG","Yes","Y","","Y","2.26","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","
","","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","50.9","","TRG","Yes","Y","","Y","0.612","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","
","","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","355-46-
4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","264","","TRG","Yes","Y","","Y","0.981","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","
","","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","232","","TRG","Yes","Y","","Y","0.674","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","
","","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","407","","TRG","Yes","Y","","Y","0.836","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","","","","
"
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","8.17","","TRG","Yes","Y","J","Y","0.839","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","

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"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","1.54","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","","","
","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","1.71","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","
","","","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC
ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.09","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","
","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","1.42","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","
","","","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","307-55-1","PERFLUORODODECANOIC
ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.820","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","","
","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","72629-94-
8","PFTrDA","","","TRG","Yes","N","U","Y","0.512","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","
","","","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","376-06-
7","PFTeDA","","","TRG","Yes","N","U","Y","0.782","5.17","8.28","NG_L","NG_L","","","","","","","","","","","","","
","","","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C3-PFBS","13C3-
PFBS","132","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","132","132","","","","","","50","150","","
","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C2-PFHxA","13C2-
PFHxA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","",
"","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C4-PFHpA","13C4-
PFHpA","84.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.1","84.1","","","","","","50","150","
","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","18O2-PFHxS","18O2-
PFHxS","106","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","106","106","","","","","","50","150","",
"","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C2-PFOA","13C2-
PFOA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","
","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C8-PFOS","13C8-
PFOS","106","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","106","106","","","","","","50","150","","
","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C5-PFNA","13C5-
PFNA","99.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","99.7","99.7","","","","","","50","150","
","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C2-PFDA","13C2-
PFDA","95.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","95.3","95.3","","","","","","50","150","
","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","83.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.9","83.9","","","","","","50","15
0","","","","",
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C2-PFUnA","13C2-
PFUnA","92.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.7","92.7","","","","","","50","150","
","","",

"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","78.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","78.9","78.9","","","","","","50","150","","","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C2-PFDoA","13C2-PFDoA","82.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.6","82.6","","","","","","50","150","","","","",""
"DUP03-20170710","537_MOD","07/28/17","20:16","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","50.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","50.7","50.7","","","","","","50","150","","","","",""
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","375-73-5","PFBS","64.9","","TRG","Yes","Y","","Y","1.97","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","403","","TRG","Yes","Y","","Y","2.39","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","94.2","","TRG","Yes","Y","","Y","0.649","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","633","","TRG","Yes","Y","","Y","1.04","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/26/17","11:45","N","NA","DL1","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","2600","","TRG","Yes","Y","D","Y","7.15","54.8","87.8","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION","126","","TRG","Yes","Y","","Y","0.886","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","2.30","","TRG","Yes","Y","J","Y","0.889","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","","","TRG","Yes","N","U","Y","1.64","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","2355-31-9","MeFOSAA","","","TRG","Yes","N","U","Y","1.81","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","","","TRG","Yes","N","U","Y","1.15","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","2991-50-6","EtFOSAA","","","TRG","Yes","N","U","Y","1.50","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","","","TRG","Yes","N","U","Y","0.870","5.48","8.78","NG_L","NG_L","

"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.542","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","376-06-7","PFTeDA","","","TRG","Yes","N","U","Y","0.829","5.48","8.78","NG_L","NG_L","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C3-PFBS","13C3-PFBS","224","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","224","224","","","","","","50","150","","*","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C2-PFHxA","13C2-PFHxA","116","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","116","116","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C4-PFHpA","13C4-PFHpA","99.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","99.8","99.8","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","18O2-PFHxS","18O2-PFHxS","118","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","118","118","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/26/17","11:45","N","NA","DL1","13C2-PFOA","13C2-PFOA","140","","IS","Yes","Y","D","Y","","","","PCT_REC","","","","","100","140","140","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C8-PFOS","13C8-PFOS","110","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","110","110","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C5-PFNA","13C5-PFNA","98.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","98.7","98.7","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C2-PFDA","13C2-PFDA","88.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","88.3","88.3","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","109","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","109","109","","","","","","50","150","","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C2-PFUnA","13C2-PFUnA","97.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.3","97.3","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","107","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","107","107","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C2-PFDoA","13C2-PFDoA","106","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","106","106","","","","","","50","150","","","","
"24-GW-24EX11-20170710","537_MOD","07/28/17","20:27","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","127","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","127","127","","","","","","50","150","","","","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","375-73-5","PFBS","76.0","","TRG","Yes","Y","","Y","1.86","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","268","","TRG","Yes","Y","","Y","2.26","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID

(PFHPA)","48.8","","TRG","Yes","Y","","Y","0.613","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","295","","TRG","Yes","Y","","Y","0.982","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","234","","TRG","Yes","Y","","Y","0.675","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","395","","TRG","Yes","Y","","Y","0.837","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","8.39","","TRG","Yes","Y","","Y","0.840","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","1.55","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","2355-31-9","MeFOSAA","","","TRG","Yes","N","U","Y","1.71","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.09","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","2991-50-6","EtFOSAA","","","TRG","Yes","N","U","Y","1.42","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.821","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.512","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","376-06-7","PFTeDA","","","TRG","Yes","N","U","Y","0.783","5.17","8.30","NG_L","NG_L","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C3-PFBS","13C3-PFBS","180","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","180","180","","","","","","50","150","","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C2-PFHxA","13C2-PFHxA","116","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","116","116","","","","","","50","150","","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C4-PFHpA","13C4-PFHpA","97.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.0","97.0","","","","","","50","150","
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","18O2-PFHxS","18O2-PFHxS","121","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","121","121","","","","","","50","150","","
"

"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C2-PFOA","13C2-PFOA","124","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","124","124","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C8-PFOS","13C8-PFOS","120","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","120","120","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C5-PFNA","13C5-PFNA","122","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","122","122","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C2-PFDA","13C2-PFDA","127","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","127","127","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","128","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","128","128","","","","","","50","150","","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C2-PFUnA","13C2-PFUnA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","101","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","101","101","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C2-PFDoA","13C2-PFDoA","77.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","77.4","77.4","","","","","","50","150","","","","",""
"SGV-GW-SGV Transfer Station-20170710","537_MOD","07/26/17","12:28","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","26.6","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","26.6","26.6","","","","","","50","150","","*","",""
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","375-73-5","PFBS","","","TRG","Yes","N","U","Y","1.79","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","","","TRG","Yes","N","U","Y","2.18","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","","","TRG","Yes","N","U","Y","0.591","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","","","TRG","Yes","N","U","Y","0.947","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","","","TRG","Yes","N","U","Y","0.651","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION","","","TRG","Yes","N","U","Y","0.807","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","","","TRG","Yes","N","U","Y","0.810","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","","","TRG","Yes","N","U","Y","1.49","5.00","8.00","NG_L","NG_L","","","","","","","","","","","","","","","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","2355-31-

9","MeFOSAA","","","TRG","Yes","N","U","Y","1.65","5.00","8.00","NG_L","NG_L","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","1.05","5.00","8.00","NG_L","NG_L","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","1.37","5.00","8.00","NG_L","NG_L","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.792","5.00","8.00","NG_L","NG_L","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","72629-94-
8","PFTrDA","","","TRG","Yes","N","U","Y","0.494","5.00","8.00","NG_L","NG_L","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","376-06-
7","PFTeDA","","","TRG","Yes","N","U","Y","0.755","5.00","8.00","NG_L","NG_L","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C3-PFBS","13C3-
PFBS","153","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","153","153","","","","","","50","150","","
"+","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C2-PFHxA","13C2-
PFHxA","115","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","115","115","","","","","","50","150","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C4-PFHpA","13C4-
PFHpA","97.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.5","97.5","","","","","","50","150","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","18O2-PFHxS","18O2-
PFHxS","120","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","120","120","","","","","","50","150","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C2-PFOA","13C2-
PFOA","103","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","103","103","","","","","","50","150","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C8-PFOS","13C8-
PFOS","120","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","120","120","","","","","","50","150","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C5-PFNA","13C5-
PFNA","92.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.0","92.0","","","","","","50","150","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C2-PFDA","13C2-
PFDA","97.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.6","97.6","","","","","","50","150","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","90.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","90.3","90.3","","","","","","50","15
0","","","","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C2-PFUnA","13C2-
PFUnA","85.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","85.8","85.8","","","","","","50","150","
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","82.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.1","82.1","","","","","","50","150
"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C2-PFDoA","13C2-
PFDoA","65.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","65.5","65.5","","","","","","50","150","
"

"B7G0107-BLK1","537_MOD","07/25/17","14:58","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","20.4","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","20.4","20.4","","","","","","50","150","","+","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","375-73-5","PFBS","73.4","","TRG","Yes","Y","","Y","1.79","5.00","8.00","NG_L","NG_L","","","","80.0","73.4","91.8","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","69.6","","TRG","Yes","Y","","Y","2.18","5.00","8.00","NG_L","NG_L","","","","80.0","69.6","87.0","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","76.9","","TRG","Yes","Y","","Y","0.591","5.00","8.00","NG_L","NG_L","","","","80.0","76.9","96.1","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","73.3","","TRG","Yes","Y","","Y","0.947","5.00","8.00","NG_L","NG_L","","","","80.0","73.3","91.6","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","74.6","","TRG","Yes","Y","","Y","0.651","5.00","8.00","NG_L","NG_L","","","","80.0","74.6","93.3","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION","64.1","","TRG","Yes","Y","","Y","0.807","5.00","8.00","NG_L","NG_L","","","","80.0","64.1","80.1","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","78.4","","TRG","Yes","Y","","Y","0.810","5.00","8.00","NG_L","NG_L","","","","80.0","78.4","98.0","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","73.6","","TRG","Yes","Y","","Y","1.49","5.00","8.00","NG_L","NG_L","","","","80.0","73.6","92.0","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","2355-31-9","MeFOSAA","71.4","","TRG","Yes","Y","","Y","1.65","5.00","8.00","NG_L","NG_L","","","","80.0","71.4","89.2","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","74.4","","TRG","Yes","Y","","Y","1.05","5.00","8.00","NG_L","NG_L","","","","80.0","74.4","93.0","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","2991-50-6","EtFOSAA","72.7","","TRG","Yes","Y","","Y","1.37","5.00","8.00","NG_L","NG_L","","","","80.0","72.7","90.9","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","74.3","","TRG","Yes","Y","","Y","0.792","5.00","8.00","NG_L","NG_L","","","","80.0","74.3","92.9","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","72629-94-8","PFTrDA","49.1","","TRG","Yes","Y","","Y","0.494","5.00","8.00","NG_L","NG_L","","","","80.0","49.1","61.4","","","","","","60","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","376-06-7","PFTeDA","74.6","","TRG","Yes","Y","","Y","0.755","5.00","8.00","NG_L","NG_L","","","","80.0","74.6","93.3","","","","","","70","130","","","","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C3-PFBS","13C3-PFBS","157","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","157","157","","","","","","50","150","","+","",""
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C2-PFHxA","13C2-PFHxA","124","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","124","124","","","","","","50","150","","","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C4-PFHpA","13C4-

PFHpA","97.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.1","97.1","","","","","","50","150","
","","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","18O2-PFHxS","18O2-
PFHxS","127","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","127","127","","","","","","50","150","",
"","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C2-PFOA","13C2-
PFOA","117","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","117","117","","","","","","50","150","","
","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C8-PFOS","13C8-
PFOS","125","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","125","125","","","","","","50","150","","
","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C5-PFNA","13C5-
PFNA","108","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","108","108","","","","","","50","150","","
","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C2-PFDA","13C2-
PFDA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","
","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","107","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","107","107","","","","","","50","150
","","","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C2-PFUnA","13C2-
PFUnA","91.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","91.1","91.1","","","","","","50","150","
","","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150",
","","","","
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C2-PFDoA","13C2-
PFDoA","90.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","90.7","90.7","","","","","","50","150","
","","","",
"B7G0107-BS1","537_MOD","07/25/17","14:36","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","36.5","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","36.5","36.5","","","","","","50","15
0","","+","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","375-73-
5","PFBS","164","","TRG","Yes","Y","","Y","1.87","5.25","8.37","NG_L","NG_L","","","76.0","83.7","164","105","",
"","","","","70","130","","","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","364","","TRG","Yes","Y","","Y","2.28","5.25","8.37","NG_L","NG_L","","","268","83.7","364","115","",
"","","","","70","130","","","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","134","","TRG","Yes","Y","","Y","0.618","5.25","8.37","NG_L","NG_L","","","48.8","83.7","134","102","
","","","","","70","130","","","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC
ACID
(PFHXS)","339","","TRG","Yes","Y","H","Y","0.991","5.25","8.37","NG_L","NG_L","","","295","83.7","339","52.4",
"","","","","","70","130","","+","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","296","","TRG","Yes","Y","","Y","0.681","5.25","8.37","NG_L","NG_L","","","234","83.7","296","73.8","",
"","","","","70","130","","","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","511","","TRG","Yes","Y","H","Y","0.844","5.25","8.37","NG_L","NG_L","","","395","83.7","511","139","","","","
","70","130","","+","",
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","96.4","","TRG","Yes","Y","","Y","0.848","5.25","8.37","NG_L","NG_L","","","8.39","83.7","96.4","105","

,"","","","","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","84.0","","TRG","Yes","Y","","Y","1.56","5.25","8.37","NG_L","NG_L","","","","83.7","84.0","100","","","",
"","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","2355-31-
9","MeFOSAA","83.2","","TRG","Yes","Y","","Y","1.73","5.25","8.37","NG_L","NG_L","","","","83.7","83.2","99.4",
"","","","","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID
(PFUNA)","85.9","","TRG","Yes","Y","","Y","1.10","5.25","8.37","NG_L","NG_L","","","","83.7","85.9","103","","",
"","","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","2991-50-
6","EtFOSAA","82.3","","TRG","Yes","Y","","Y","1.43","5.25","8.37","NG_L","NG_L","","","","83.7","82.3","98.3",
"","","","","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID
(PFDOA)","84.7","","TRG","Yes","Y","","Y","0.829","5.25","8.37","NG_L","NG_L","","","","83.7","84.7","101","","",
"","","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","72629-94-
8","PFTrDA","73.0","","TRG","Yes","Y","","Y","0.517","5.25","8.37","NG_L","NG_L","","","","83.7","73.0","87.3","
","","","","","60","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","376-06-
7","PFTeDA","80.8","","TRG","Yes","Y","","Y","0.790","5.25","8.37","NG_L","NG_L","","","","83.7","80.8","96.6","
","","","","","70","130","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C3-PFBS","13C3-
PFBS","143","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","143","143","","","","","","50","150","","
","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C2-PFHxA","13C2-
PFHxA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","",
"","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C4-PFHpA","13C4-
PFHpA","91.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","91.9","91.9","","","","","","50","150","
","","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","18O2-PFHxS","18O2-
PFHxS","106","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","106","106","","","","","","50","150","",
"","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C2-PFOA","13C2-
PFOA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","
","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C8-PFOS","13C8-
PFOS","95.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","95.8","95.8","","","","","","50","150","",
"","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C5-PFNA","13C5-
PFNA","97.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.6","97.6","","","","","","50","150","
","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C2-PFDA","13C2-
PFDA","93.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.0","93.0","","","","","","50","150","
","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","83.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.4","83.4","","","","","","50","15
0","","","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C2-PFUnA","13C2-
PFUnA","83.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.6","83.6","","","","","","50","150","
","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","76.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","76.1","76.1","","","","","","50","150

",","","","","",""
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C2-PFDoA","13C2-
PFDoA","67.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","67.4","67.4","","","","","","50","150","
","","","","
"B7G0107-MS2","537_MOD","07/28/17","20:38","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","39.1","","IS","Yes","Y","H","Y","","","","PCT_REC","","","","","100","39.1","39.1","","","","","","50","15
0","","+","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","375-73-
5","PFBS","161","","TRG","Yes","Y","","Y","1.85","5.17","8.27","NG_L","NG_L","","","76.0","82.7","161","102","1
64","82.7","161","102","2.90","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","335","","TRG","Yes","Y","H","Y","2.25","5.17","8.27","NG_L","NG_L","","","268","82.7","335","81.5","
364","82.7","335","81.5","34.1","70","130","25","","","*"
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","130","","TRG","Yes","Y","","Y","0.611","5.17","8.27","NG_L","NG_L","","","48.8","82.7","130","97.6","
134","82.7","130","97.6","4.41","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC
ACID
(PFHXS)","375","","TRG","Yes","Y","H","Y","0.978","5.17","8.27","NG_L","NG_L","","","295","82.7","375","96.0",
"339","82.7","375","96.0","58.8","70","130","25","","","*"
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","314","","TRG","Yes","Y","H","Y","0.673","5.17","8.27","NG_L","NG_L","","","234","82.7","314","96.6","
296","82.7","314","96.6","26.8","70","130","25","","","*"
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","535","","TRG","Yes","Y","H","Y","0.834","5.17","8.27","NG_L","NG_L","","","395","82.7","535","169","511","82
.7","535","169","19.5","70","130","25","","*","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","90.3","","TRG","Yes","Y","","Y","0.837","5.17","8.27","NG_L","NG_L","","","8.39","82.7","90.3","99.0","
96.4","82.7","90.3","99.0","5.88","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","81.2","","TRG","Yes","Y","","Y","1.54","5.17","8.27","NG_L","NG_L","","","","82.7","81.2","98.2","84.0",
"82.7","81.2","98.2","1.82","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","2355-31-
9","MeFOSAA","84.3","","TRG","Yes","Y","","Y","1.70","5.17","8.27","NG_L","NG_L","","","","82.7","84.3","102",
"83.2","82.7","84.3","102","2.58","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC
ACID
(PFUNA)","80.5","","TRG","Yes","Y","","Y","1.08","5.17","8.27","NG_L","NG_L","","","","82.7","80.5","97.4","85.
9","82.7","80.5","97.4","5.59","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","2991-50-
6","EtFOSAA","91.2","","TRG","Yes","Y","","Y","1.42","5.17","8.27","NG_L","NG_L","","","","82.7","91.2","110","
82.3","82.7","91.2","110","11.2","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","307-55-1","PERFLUORODODECANOIC
ACID
(PFDOA)","86.0","","TRG","Yes","Y","","Y","0.818","5.17","8.27","NG_L","NG_L","","","","82.7","86.0","104","84.
7","82.7","86.0","104","2.93","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","72629-94-
8","PFTrDA","72.4","","TRG","Yes","Y","","Y","0.510","5.17","8.27","NG_L","NG_L","","","","82.7","72.4","87.5","
73.0","82.7","72.4","87.5","0.229","60","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","376-06-
7","PFTeDA","83.0","","TRG","Yes","Y","","Y","0.780","5.17","8.27","NG_L","NG_L","","","","82.7","83.0","100","
80.8","82.7","83.0","100","3.46","70","130","25","","","
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C3-PFBS","13C3-

PFBS","140","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","140","140","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C2-PFHxA","13C2-PFHxA","107","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","107","107","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C4-PFHpA","13C4-PFHpA","89.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","89.6","89.6","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","18O2-PFHxS","18O2-PFHxS","106","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","106","106","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C2-PFOA","13C2-PFOA","105","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","105","105","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C8-PFOS","13C8-PFOS","96.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","96.7","96.7","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C5-PFNA","13C5-PFNA","101","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","101","101","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C2-PFDA","13C2-PFDA","92.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.2","92.2","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","94.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","94.7","94.7","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C2-PFUnA","13C2-PFUnA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","86.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","86.3","86.3","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C2-PFDoA","13C2-PFDoA","93.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.6","93.6","","","","","","50","150","","","","",""
"B7G0107-MSD2","537_MOD","07/28/17","20:49","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","67.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","67.0","67.0","","","","","","50","150","","","","",""

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

AMEC Foster Wheeler, Inc.
7376 SW Durham Road
Portland, OR 97224
Attn: Ms. Marina Mitchell

August 29, 2017

SUBJECT: Revised MCAS El Toro, BRAC PFAs, Data Validation

Dear Ms. Mitchell,

Enclosed are the revised validation reports for the fraction listed below. Please replace the previously submitted reports with the enclosed revised reports

LDC Project #39234:

SDG #	**Fraction**
1700852, 1700851, 1700871	Perfluorinated Alkyl Acids

- Revision: Change in IS section.

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

AMEC Foster Wheeler, Inc.
7376 SW Durham Road
Portland, OR 97224
Attn: Ms. Marina Mitchell

August 18, 2017

SUBJECT: MCAS El Toro, BRAC PFAs, Data Validation

Dear Ms. Mitchell,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on August 9, 2017. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #39234:

SDG #	Fraction
1700852, 1700851, 1700871	Perfluorinated Alkyl Acids

The data validation was performed under Stage 2B & 4 guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Sampling and Analysis Plan, Field Sampling Plan and Quality Assurance Project Plan for Intial Assessment of Per-Fluorinated Compounds or Per- and Polyfluoroalkyl Substances, Sites at Various Base Realignment and Closure Installations, March 2017
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.1, 2017
- USEPA, National Functional Guidelines for Superfund Organic Methods Data Review, August 2014

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist

Client Select / Stage 2B/4 **LDC #39234 (AMEC Foster Wheeler - San Diego, CA / MCAS El Toro, BRAC PFAs)**

LDC	SDG#	DATE REC'D	(2) DATE DUE	PFAs (537)																															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	1700852	08/09/17	08/23/17	7	0																														
A	1700852	08/09/17	08/23/17	1	0																														
B	1700851	08/09/17	08/23/17	6	0																														
B	1700851	08/09/17	08/23/17	2	0																														
C	1700871	08/09/17	08/23/17	7	0																														
C	1700871	08/09/17	08/23/17	2	0																														
Total	J/PG			25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, BRAC PFAs

LDC Report Date: August 14, 2017

Parameters: Perfluorinated Alkyl Acids

Validation Level: Stage 2B/4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1700852

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
DUP01-20170711	1700852-02	Water	07/11/17
1-GW-01-MW204-20170711	1700852-03	Water	07/11/17
1-GW-01-MW206-20170711	1700852-04	Water	07/11/17
2-GW-02DGMW59-20170711	1700852-05	Water	07/11/17
2-GW-02NEW16-20170711	1700852-06	Water	07/11/17
5-GW-05-DGMW68A-20170711**	1700852-07**	Water	07/11/17
1-GW-01-PZ20-20170711	1700852-08	Water	07/11/17
1-GW-01-MW209-20170711	1700852-09	Water	07/11/17
1-GW-01-MW204-20170711MS	1700852-03MS	Water	07/11/17
1-GW-01-MW204-20170711MSD	1700852-03MSD	Water	07/11/17

**Indicates sample underwent Stage 4 validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Initial Assessment of Per-Fluorinated Compounds (PFCS) or Per- and Polyfluoroalkyl Substances (PFAS) Sites at Various Base Realignment and Closure (BRAC) Installations (March 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Perfluorinated Alkyl Acids by Environmental Protection Agency (EPA) Method 537

All sample results were subjected to Stage 2B data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Stage 4 data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NJ (Presumptive and Estimated): The analysis indicates the presence of a compound or analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was not required by the method.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration point, the percent differences (%D) of its true value were less than or equal to 30.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB 2_20170711 was identified as an equipment blank. No contaminants were found.

Sample SB01_20170710 (from SDG 1700851) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
1-GW-01-MW204-20170711MS/MSD (1-GW-01-MW204-20170711)	PFHxS	65.8 (70-130)	-	J (all detects)	A

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
1-GW-01-MW204-20170711MS/MSD (1-GW-01-MW204-20170711)	PFHxS	35.7 (≤30)	J (all detects)	A

VIII. Ongoing Precision Recovery Samples

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples DUP01-20170711 and 1-GW-01-PZ20-20170711 were identified as field duplicates. No results were detected in any of the samples.

X. Internal Standards

All internal standard recoveries (%R) were within QC limits with the following exceptions:

Sample	Internal Standards	%R (Limits)	Affected Compound	Flag	A or P
DUP01-20170711	13C3-PFBS	152 (50-150)	PFBS	UJ (all non-detects)	P
1-GW-01-MW204-20170711	13C3- PFBS	154 (50-150)	PFBS	J (all detects)	P
1-GW-01-MW206-20170711	13C3- PFBS	162 (50-150)	PFBS	UJ (all non-detects)	P
2-GW-02DGMW59-20170711	13C3- PFBS	163 (50-150)	PFBS	J (all detects)	P
5-GW-05-DGMW68A-20170711**	13C3- PFBS	152 (50-150)	PFBS	J (all detects)	P

Sample	Internal Standards	%R (Limits)	Affected Compound	Flag	A or P
1-GW-01-PZ20-20170711	13C3- PFBS	152 (50-150)	PFBS	UJ (all non-detects)	P
1-GW-01-MW209-20170711	13C3- PFBS	151 (50-150)	PFBS	J (all detects)	P

XI. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Stage 4 validation.

The laboratory limit of quantitation (LOQ) and limit of detection (LOD) are higher than the QAPP LOQ and LOD.

The laboratory detection limit (DL) for PFOS is higher than the QAPP DL.

Raw data were not reviewed for Stage 2B validation.

XII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Stage 4 validation. Raw data were not reviewed for Stage 2B validation.

XIII. System Performance

The system performance was acceptable for samples which underwent Stage 4 validation. Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD %R and RPD and internal standards %R, data were qualified as estimated in seven samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the data validation all other results are considered valid and usable for all purposes.

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Data Qualification Summary - SDG 1700852

Sample	Compound	Flag	A or P	Reason
1-GW-01-MW204-20170711	PFHxS	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
DUP01-20170711 1-GW-01-MW204-20170711 1-GW-01-MW206-20170711 2-GW-02DGMW59-20170711 5-GW-05-DGMW68A-20170711** 1-GW-01-PZ20-20170711 1-GW-01-MW209-20170711	PFBS	J (all detects) UJ (all non-detects)	P	Internal standards (%R)

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Laboratory Blank Data Qualification Summary - SDG 1700852

No Sample Data Qualified in this SDG

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Field Blank Data Qualification Summary - SDG 1700852

No Sample Data Qualified in this SDG

LDC #: 39234A96

SDG #: 1700852

Laboratory: Vista Analytical Laboratory

VALIDATION COMPLETENESS WORKSHEET

Stage 2B/4

Date: 8/11/17

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: KK

METHOD: LCMS Perfluorinated Alkyl Acids (EPA Method 537)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD ≤ 20%. r². %D ≤ 30%. ICV ≤ 30%
IV.	Continuing calibration	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=1. SB01-20170710 (1700851)
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	A	OPR
X.	Field duplicates	ND	D = 2 + 8
XI.	Internal standards	SW	
XII.	Compound quantitation RL/LOQ/LODs	SW	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB 2_20170711~~	~~1700852-01~~	~~Water~~	~~07/11/17~~
2	DUP01-20170711	1700852-02	Water	07/11/17
3	1-GW-01-MW204-20170711	1700852-03	Water	07/11/17
4	1-GW-01-MW206-20170711	1700852-04	Water	07/11/17
5	2-GW-02DGMW59-20170711	1700852-05	Water	07/11/17
6	2-GW-02NEW16-20170711	1700852-06	Water	07/11/17
7	5-GW-05-DGMW68A-20170711**	1700852-07**	Water	07/11/17
8	1-GW-01-PZ20-20170711	1700852-08	Water	07/11/17
9	1-GW-01-MW209-20170711	1700852-09	Water	07/11/17
10	1-GW-01-MW204-20170711MS	1700852-03MS	Water	07/11/17
11	1-GW-01-MW204-20170711MSD	1700852-03MSD	Water	07/11/17
12				
13	BTEF010T-BK1			

LDC #: 39234A96

VALIDATION FINDINGS CHECKLIST

Reviewer: Q
2nd Reviewer: KK

Method: LCMS (EPA Method 537)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
IX. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 39234A96

VALIDATION FINDINGS CHECKLIST

Reviewer: Q
2nd Reviewer: KK

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?.		✓		
XI. Internal standards				
Were internal standard area counts within ± 50% of the associated calibration standard? 25-150%	✓	✓		
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 39234A96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates/Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) or duplicate sample analyzed for each matrix in this SDG?

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

Y N N/A Were all duplicate sample relative percent differences (RPD) or differences within QC limits?

#	Date	MS/MSD/DUP ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		10/11	PFHxS	65.8 (70-130)			3 (dets)	J/UN/A
			↓			35.7 (≤30)		J dets/A

LDC #: 39024A96

VALIDATION FINDINGS WORKSHEET
Internal Standards

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: LC/MS PFCs

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all internal standard area counts within 50-150% limits?

Y N N/A Were the retention times of the internal standards within +/- 30 seconds of the retention times of the associated calibration standard?

#	Date	Sample ID	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
		BTEQ10T-BK1	13C3-PFBS	153 (50-150)		~~J/UJ/P~~
			13C2-PFTeDA	20.4		~~J/UJ/P~~
		2	13C3-PFBS	150		J/UJ/P (ND)
		3		154		(detects)
		11 (MSD)		154		No Qual
		4		162		J/UJ/P (ND)
		5		163		(detects)
		7		152		(detects)
		8		152		(ND)
		9		151		(detects)

Privileged and Confidential

LDC #: ~~39171E40~~ 39234A96

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: PG
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	All	The laboratory limit of quantitation (LOQ) and limit of detection (LOD) are higher than the QAPP LOQ and LOD		Text
	All	The laboratory detection limit (DL) for PFOS is higher than the QAPP DL		Text

Comments: See sample calculation verification worksheet for recalculations

LDC#: 39234A96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: WV

Method: LC/MS/MS PFCs

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
7/24/2017	Q4	PFBS	0	0.4737025	0.25
			s1	0.88965125	0.50
			s2	2.13415875	1.00
			s3	4.1171275	2.00
			s4	10.30721875	5.00
			s5	17.7060325	10.00
			s6	93.3127675	50.00
			s7	184.225463	100.00

Regression Output		Reported *
Constant	*0.259550*	*0.075295*
Std Err of Y Est		
R Squared	*0.999910*	*0.999223*
Degrees of Freedom		
X Coefficient(s)	*1.843495*	*1.852230*
Std Err of Coef.		
Correlation Coefficient	*0.999955*	
Coefficient of Determination (r^2)	*0.999910*	*0.999223*

* WV

LDC #: 39334D96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: a
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC MS

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ITOT35M1.2	7/25/17	PFBS	0.500	0.515	0.514	3.0	2.8
2	ITOT35M1.19	7/25/17	PFBS	10.0	9.77	9.77	23	2.3
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 39334A96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: Q
2nd Reviewer: KS

METHOD: ___ GC ✓ HPLC MS

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 10/11

Compound	Spike Added (ug/L)		Sample Conc. (ug/L)	Spike Sample Concentration (ug/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
DFBS	80.8	86.2	19.6	98.2	108	94.9	94.9	103	103	8.19	8.19

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 39034A96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: 9

2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC /MS

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

RPD = I SSCLCS - SSCLCSD I * 2/(SSCLCS + SSCLCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: BT40107-BS1

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
~~PFBS~~	80.0	NA	73.4	NA	91.8	91.8				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 3934A96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: W

METHOD: ___ GC ✓ HPLC / MS

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. T Compound Name PFBS

Concentration = $\frac{(\cancel{360.102})\left(\frac{360.102 \times 12.5}{5077.395} - 0.075 = 948\right)}{(1.85223)(0.10\cancel{843})}$

$= 4.04$ ng/L

#	Sample ID	Compound	Reported Concentrations (ng/L)	Recalculated Results Concentrations ( )	Qualifications
	T	PFBS	4.04		

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, BRAC PFAs

LDC Report Date: August 29, 2017

Parameters: Perfluorinated Alkyl Acids

Validation Level: Stage 2B/4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1700851

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
18-GW-18MCAS03-5-20170710	1700851-03	Water	07/10/17
18-GW-18MCAS03-2-20170710	1700851-04	Water	07/10/17
18-GW-18MCAS02-5-20170710	1700851-05	Water	07/10/17
18-GW-18MCAS07-3-20170710	1700851-06	Water	07/10/17
24-GW-24MW08B-20170710	1700851-07	Water	07/10/17
DUP03-20170710**	1700851-08**	Water	07/10/17
24-GW-24EX11-20170710	1700851-09	Water	07/10/17
SGV-GW-SGV Transfer Station-20170710**	1700851-10**	Water	07/10/17
SGV-GW-SGV Transfer Station-20170710MS	1700851-10MS	Water	07/10/17
SGV-GW-SGV Transfer Station-20170710MSD	1700851-10MSD	Water	07/10/17

**Indicates sample underwent Stage 4 validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Initial Assessment of Per-Fluorinated Compounds (PFCS) or Per- and Polyfluoroalkyl Substances (PFAS) Sites at Various Base Realignment and Closure (BRAC) Installations (March 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Perfluorinated Alkyl Acids by Environmental Protection Agency (EPA) Method 537

All sample results were subjected to Stage 2B data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Stage 4 data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NJ (Presumptive and Estimated): The analysis indicates the presence of a compound or analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was not required by the method.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration point, the percent differences (%D) of its true value were less than or equal to 30.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB 01_20170710 was identified as an equipment blank. No contaminants were found.

Sample SB 01_20170710 was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
SGV-GW-SGV Transfer Station-20170710MS/MSD (SGV-GW-SGV Transfer Station-20170710**)	PFHxS	52.4 (70-130)	-	J (all detects)	A
SGV-GW-SGV Transfer Station-20170710MS/MSD (SGV-GW-SGV Transfer Station-20170710**)	PFOS	139 (70-130)	-	J (all detects)	A

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
SGV-GW-SGV Transfer Station-20170710MS/MSD (SGV-GW-SGV Transfer Station-20170710**)	PFHxA PFHxS	34.1 (≤30) 58.8 (≤30)	J (all detects) J (all detects)	A

VIII. Ongoing Precision Recovery Samples

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples DUP03-20170710** and SGV-GW-SGV Transfer Station-20170710** were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	DUP03-20170710**	SGV-GW-SGV Transfer Station-20170710**				
PFBS	80.5	76.0	6 (≤30)	-	-	-
PFHxA	267	268	0 (≤30)	-	-	-
PFHpA	50.9	48.8	4 (≤30)	-	-	-
PFHxS	264	295	11 (≤30)	-	-	-
PFOA	232	234	1 (≤30)	-	-	-
PFOS	407	395	3 (≤30)	-	-	-

Compound	Concentration (ng/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	DUP03-20170710**	SGV-GW-SGV Transfer Station-20170710**				
PFNA	8.17	8.39	-	0.22 (≤8.30)	-	-

X. Internal Standards

All internal standard recoveries (%R) were within QC limits with the following exceptions:

Sample	Internal Standards	%R (Limits)	Affected Compound	Flag	A or P
18-GW-18MCAS03-2-20170710	13C2-PFTeDA	39.3 (50-150)	PFTeDA	NA	-
18-GW-18MCAS02-5-20170710	13C3-PFBS	181 (50-150)	PFBS	UJ (all non-detects)	P
18-GW-18MCAS07-3-20170710	13C2-PFTeDA	12.7 (50-150)	PFTeDA	NA	-
24-GW-24MW08B-20170710	13C2-PFTeDA	7.8 (50-150)	PFTeDA	NA	-
24-GW-24EX11-20170710	13C3-PFBS	224 (50-150)	PFBS	J (all detects)	P
SGV-GW-SGV Transfer Station-20170710**	13C3-PFBS	180 (50-150)	PFBS	J (all detects)	P
SGV-GW-SGV Transfer Station-20170710**	13C2-PFTeDA	26.6 (50-150)	PFTeDA	NA	-

XI. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Stage 4 validation.

The laboratory limit of quantitation (LOQ) and limit of detection (LOD) dilution are higher than the QAPP LOQ and LOD.

The laboratory detection limit (DL) for PFOS is higher than the QAPP DL.

Raw data were not reviewed for Stage 2B validation.

XII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Stage 4 validation. Raw data were not reviewed for Stage 2B validation.

XIII. System Performance

The system performance was acceptable for samples which underwent Stage 4 validation. Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD %R and RPD and internal standards %R, data were qualified as estimated in three samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the data validation all other results are considered valid and usable for all purposes.

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Data Qualification Summary - SDG 1700851

Sample	Compound	Flag	A or P	Reason
SGV-GW-SGV Transfer Station-20170710**	PFHxS PFOS	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
SGV-GW-SGV Transfer Station-20170710**	PFHxA PFHxS	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)
18-GW-18MCAS02-5-20170710	PFBS	UJ (all non-detects)	P	Internal standards (%R)
SGV-GW-SGV Transfer Station-20170710** 24-GW-24EX11-20170710	PFBS	J (all detects)	P	Internal standards (%R)

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Laboratory Blank Data Qualification Summary - SDG 1700851

No Sample Data Qualified in this SDG

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Field Blank Data Qualification Summary - SDG 1700851

No Sample Data Qualified in this SDG

LDC #: 39234B96 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/11/17
SDG #: 1700851 Stage 2B/4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: Q
2nd Reviewer: KK

METHOD: LCMS Perfluorinated Alkyl Acids (EPA Method 537)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD≤20%. r². %D≤30%. |d|≤30%
IV.	Continuing calibration	A	CCV≤30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	SB=1. EB=2
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	A	OPR
X.	Field duplicates	SW	D=8+10
XI.	Internal standards	SW	
XII.	Compound quantitation RL/LOQ/LODs	SW	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date
~~1~~	~~SB 01_20170710~~	~~1700851-01~~	~~Water~~	~~07/10/17~~
~~2~~	~~EB 01_20170710~~	~~1700851-02~~	~~Water~~	~~07/10/17~~
3	18-GW-18MCAS03-5-20170710	1700851-03	Water	07/10/17
4	18-GW-18MCAS03-2-20170710	1700851-04	Water	07/10/17
5	18-GW-18MCAS02-5-20170710	1700851-05	Water	07/10/17
6	18-GW-18MCAS07-3-20170710	1700851-06	Water	07/10/17
7	24-GW-24MW08B-20170710	1700851-07	Water	07/10/17
8	DUP03-20170710**	1700851-08**	Water	07/10/17
9	24-GW-24EX11-20170710	1700851-09	Water	07/10/17
10	SGV-GW-SGV Transfer Station-20170710**	1700851-10**	Water	07/10/17
11	SGV-GW-SGV Transfer Station-20170710MS	1700851-10MS	Water	07/10/17
12	SGV-GW-SGV Transfer Station-20170710MSD	1700851-10MSD	Water	07/10/17
13				

BT4010T-BK1

LDC #: 39234B96

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: KK

Method: LCMS (EPA Method 537)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
IX. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 39234B96

VALIDATION FINDINGS CHECKLIST

Reviewer: Q
2nd Reviewer: KK

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?.	✓			
XI. Internal standards				
Were internal standard area counts within ± 50% of the associated calibration standard?		✓		50-150%
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 39-31B96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates/Duplicates

Reviewer: 9
2nd Reviewer: [illegible]

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) or duplicate sample analyzed for each matrix in this SDG?
Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?
Y N N/A Were all duplicate sample relative percent differences (RPD) or differences within QC limits?

#	Date	MS/MSD/DUP ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		11/12	PFHxA			34.1 (≤30)	10 (dets)	J dets/A
			~~PFHpA~~					
			PFHxS			58.8 ↓		J dets/A
			PFHxS	52.4 (70-130)				J/UJ/A
			PFOS	139 ↓				J dets/A

Privileged and Confidential

LDC#: 39234B96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: Q
2nd Reviewer: KK

METHOD: PFCs (Method 537 mod)

Compound	Concentration (ng/L)		(≤30) RPD	Difference	Limits	Qual
	8	10				
PFBS	80.5	76.0	6			
PFHxA	267	268	0			
PFHpA	50.9	48.8	4			
PFHxS	264	295	11			
PFOA	232	234	1			
PFOS	407	395	3			
PFNA	8.17	8.39		0.22	≤8.30	

LDC #: 39034B96

VALIDATION FINDINGS WORKSHEET
Internal Standards

Page: 1 of 1
Reviewer: C
2nd Reviewer: W

METHOD: LC/MS PFCs

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all internal standard area counts within 50-150% limits?

(Y) N N/A Were the retention times of the internal standards within +/- 30 seconds of the retention times of the associated calibration standard?

#	Date	Sample ID	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
		BT4010T-BK1	13C3-PFBS	153 (50-150)		✓/UJ/P
			13C2-PFTeDA	20.4		✓ dets/P
		4	13C2-PFTeDA	39.3		✓ dets/P (ND)
		5	13C3-PFBS	181		✓/UJ/P (ND)
		6	13C2-PFTeDA	12.7		✓ dets/P (ND)
		7	↓	7.80		✓ (ND)
		9	13C3-PFBS	224		✓/UJ/P (dets)
		10	↓	180		✓/UJ/P (dets)
			13C2-PFTeDA	26.6		✓ dets/P (ND)
		11 (MSD	↓	39.1		No Qual

Privileged and Confidential

LDC #: ~~39171E40~~ 39234A96

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: PG
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC MS

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	All	The laboratory limit of quantitation (LOQ) and limit of detection (LOD) are higher than the QAPP LOQ and LOD		Text
	All	The laboratory detection limit (DL) for PFOS is higher than the QAPP DL		

Comments: See sample calculation verification worksheet for recalculations

LDC#: 39234B96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: Q
2nd Reviewer: VW

Method: LC/MS/MS PFCs

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
7/24/2017	Q4	PFNA	0	0.3423663	0.25
			s1	0.61514875	0.50
			s2	1.286095	1.00
			s3	2.65082625	2.00
			s4	6.86290375	5.00
			s5	11.94864375	10.00
			s6	53.26122125	50.00
			s7	109.557083	100.00

Regression Output		Reported *
Constant	*0.421145*	*0.147218*
Std Err of Y Est		
R Squared	*0.999609*	*0.997320*
Degrees of Freedom		
X Coefficient(s)	*1.085364*	*1.098350*
Std Err of Coef.		
Correlation Coefficient	*0.999804*	
Coefficient of Determination (r^2)	*0.999609*	*0.997320*

* Wt

LDC#: 39234B96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:
2nd Reviewer:

Method: LC/MS/MS PFCs

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
7/28/2017	Q4	PFNA	0	0.3015750	0.25
			s1	0.6235587	0.50
			s2	1.1884475	1.00
			s3	2.3838875	2.00
			s4	5.6871375	5.00
			s5	11.414025	10.00
			s6	51.11657201	50.00
			s7	106.4871079	100.00
			s8	269.114227	250.00

Regression Output		Reported *
Constant	-0.164719	0.083874
Std Err of Y Est		
R Squared	0.999871	0.999549
Degrees of Freedom		
X Coefficient(s)	1.074147	1.068800
Std Err of Coef.		
Correlation Coefficient	0.999935	
Coefficient of Determination (r^2)	0.999871	0.999549

* Wt

LDC #: 39023B96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: Q
2nd Reviewer: W

METHOD: GC ✓ HPLC IMS

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	1T0T25ML2	7/25/1T	PFNA	0.500	0.492	0.491	1.T	1.9
2	1T0T26ML2	7/26/1T	PFNA	0.500	0.4T0	0.4T0	5.9	6.0
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 39234B96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: Q
2nd Reviewer: W

METHOD: ___ GC 1 HPLC MS

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 11/12

Compound	Spike Added (ug/L)		Sample Conc. (ug/L)	Spike Sample Concentration (ug/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
~~DNA~~	83.7	82.7	8.39	96.4	90.3	105	105	99.0	99.0	5.88	5.88

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 37234B96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: a
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC [illegible]

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

RPD = I SSCLCS - SSCLCSD I * 2/(SSCLCS + SSCLCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: BT40107-BS1

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
~~DFNA~~	80.0	NA	78.4	NA	98.0	98.0				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: ~~39234B96~~

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: 9
2nd Reviewer: VV

METHOD: __ GC ✓ HPLC/MS

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 8 Compound Name PFNA

Concentration = $\left(\frac{4960 \times 12.5}{54500} - 0.083874\right)(1)$ / $(1.0688)(0.12071)$

$= 8.17$ ng/L

#	Sample ID	Compound	Reported Concentrations (ng/L)	Recalculated Results Concentrations ( )	Qualifications
	8	PFNA	8.17		

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, BRAC PFAs

LDC Report Date: August 29, 2017

Parameters: Perfluorinated Alkyl Acids

Validation Level: Stage 2B/4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1700871

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
5-GW-05_DGMW41B-20170712**	1700871-02**	Water	07/12/17
18-GW-18BGM03E-20170712	1700871-03	Water	07/12/17
24-GW-24IN03-20170712	1700871-04	Water	07/12/17
DUP02-20170712	1700871-05	Water	07/12/17
24-GW-24EX13A-20170712	1700871-06	Water	07/12/17
24-GW-24MW15D-20170712	1700871-07	Water	07/12/17
16-GW-16_MW28-20170712	1700871-08	Water	07/12/17
16-GW-16_MW19-20170712	1700871-09	Water	07/12/17
16-GW-16_MW04-20170713**	1700871-11**	Water	07/13/17

**Indicates sample underwent Stage 4 validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Initial Assessment of Per-Fluorinated Compounds (PFCS) or Per- and Polyfluoroalkyl Substances (PFAS) Sites at Various Base Realignment and Closure (BRAC) Installations (March 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Perfluorinated Alkyl Acids by Environmental Protection Agency (EPA) Method 537

All sample results were subjected to Stage 2B data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Stage 4 data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NJ (Presumptive and Estimated): The analysis indicates the presence of a compound or analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was not required by the method.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration point, the percent differences (%D) of its true value were less than or equal to 30.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples EB03-20170712 and EB04-20170713 were identified as equipment blanks. No contaminants were found.

Sample SB01_20170710 (from SDG 1700851) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike

duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Ongoing Precision Recovery Samples

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples 24-GW-24IN03-20170712 and DUP02-20170712 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	24-GW-24IN03-20170712	DUP02-20170712				
PFBS	8.97	9.66	-	0.69 (≤8.52)	-	-
PFHxA	41.2	44.7	-	3.5 (≤8.52)	-	-
PFHpA	5.95	6.96	-	1.01 (≤8.52)	-	-
PFHxS	18.9	17.6	-	1.3 (≤8.52)	-	-
PFOA	40.3	42.7	-	2.4 (≤8.52)	-	-

X. Internal Standards

All internal standard recoveries (%R) were within QC limits with the following exceptions:

Sample	Internal Standards	%R (Limits)	Affected Compound	Flag	A or P
24-GW-24IN03-20170712	13C2-PFTeDA	3.50 (50-150)	PFTeDA	NA	-
DUP02-20170712	13C2-PFTeDA	19.3 (50-150)	PFTeDA	NA	-
16-GW-16_MW04-20170713**	13C4-PFHpA	162 (50-150)	PFHpA	UJ (all non-detects)	P
16-GW-16_MW04-20170713**	13C2-PFTeDA	33.6 (50-150)	PFTeDA	NA	-

XI. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Stage 4 validation.

The laboratory limit of quantitation (LOQ) and limit of detection (LOD) are higher than the QAPP LOQ and LOD.

The laboratory detection limit (DL) for PFOS is higher than the QAPP DL.

Raw data were not reviewed for Stage 2B validation.

XII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Stage 4 validation. Raw data were not reviewed for Stage 2B validation.

XIII. System Performance

The system performance was acceptable for samples which underwent Stage 4 validation. Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to internal standards %R, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the data validation all other results are considered valid and usable for all purposes.

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Data Qualification Summary - SDG 1700871

Sample	Compound	Flag	A or P	Reason
16-GW-16_MW04-20170713**	PFHpA	UJ (all non-detects)	P	Internal standards (%R)

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Laboratory Blank Data Qualification Summary - SDG 1700871

No Sample Data Qualified in this SDG

MCAS El Toro, BRAC PFAs
Perfluorinated Alkyl Acids - Field Blank Data Qualification Summary - SDG 1700871

No Sample Data Qualified in this SDG

LDC #: 39234C96 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/11/17
SDG #: 1700871 Stage 2B/4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: [illegible]
2nd Reviewer: KK

METHOD: LCMS Perfluorinated Alkyl Acids (EPA Method 537)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A A	RSD≤ 20%. r² ≥0.99. ICV≤ 30%
IV.	Continuing calibration	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=1 . 10 . SB01_20170710 (1700851)
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates	N	MS
IX.	Laboratory control samples	A	OPR
X.	Field duplicates	SW	D=4+5
XI.	Internal standards	SW	
XII.	Compound quantitation RL/LOQ/LODs	SW	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB03-20170712~~	~~1700871-01~~	~~Water~~	~~07/12/17~~
2	5-GW-05_DGMW41B-20170712**	1700871-02**	Water	07/12/17
3	18-GW-18BGM03E-20170712	1700871-03	Water	07/12/17
4	24-GW-24IN03-20170712	1700871-04	Water	07/12/17
5	DUP02-20170712	1700871-05	Water	07/12/17
6	24-GW-24EX13A-20170712	1700871-06	Water	07/12/17
7	24-GW-24MW15D-20170712	1700871-07	Water	07/12/17
8	16-GW-16_MW28-20170712	1700871-08	Water	07/12/17
9	16-GW-16_MW19-20170712	1700871-09	Water	07/12/17
~~10~~	~~EB04-20170713~~	~~1700871-10~~	~~Water~~	~~07/13/17~~
11	16-GW-16_MW04-20170713**	1700871-11**	Water	07/13/17
12				
13	~~BKF006T-Bat~~			

LDC #: 39224C96

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: KR

Method: LCMS (EPA Method 537)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 39224C96

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: KK

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?.	✓			
XI. Internal standards				
Were internal standard area counts within ~~±50~~ 50-150% of the associated calibration standard?		✓		
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC#: 39334c96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: a
2nd Reviewer: KK

METHOD: PFCs (Method 537 mod)

Compound	Concentration (ng/L)		(≤30) RPD	Difference	Limits	Qual
	4	5				
PFBS	8.97	9.66		0.69	≤8.52	
PFHxA	41.2	44.7		3.5	≤8.52	
PFHpA	5.95	6.96		1.01	≤8.52	
PFHxS	18.9	17.6		1.3	≤8.52	
PFOA	40.3	42.7		2.4	≤8.52	

LDC #: 39334c96

VALIDATION FINDINGS WORKSHEET
Internal Standards

Reviewer: 9
2nd Reviewer: N

METHOD: LC/MS PFCs

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all internal standard area counts within 50-150% limits?

Y N N/A Were the retention times of the internal standards within +/- 30 seconds of the retention times of the associated calibration standard?

#	Date	Sample ID	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
		4	13C2-PFTeDA	3.50 (50-150)		~~J/UJ/P~~ (ND)
		5	↓	19.3		↓ (ND)
		11	13C4-PFHpA	162		~~J/UJ/P~~ (ND)
			13C2-PFTeDA	33.6		~~J/UJ/P~~

Privileged and Confidential

LDC #: ~~39171E40~~ 39234C96

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: PG
2nd Reviewer: DW

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	All	The laboratory limit of quantitation (LOQ) and limit of detection (LOD) are higher than the QAPP LOQ and LOD		Text
	All	The laboratory detection limit (DL) for PFOS is higher than the QAPP DL		Text

Comments: See sample calculation verification worksheet for recalculations

39234A96_CRQL_LOQ.wpd

LDC#: 39234c96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: LC/MS/MS PFCs

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
7/27/2017	Q4	PFBS	0	0.5308925	0.25
			s1	1.0003625	0.50
			s2	2.000095	1.00
			s3	4.2364375	2.00
			s4	10.778003	5.00
			s5	18.456016	10.00
			s6	94.914883	50.00
			s7	186.169710	100.00

Regression Output

		Reported *
Constant	*0.454206*	*0.124036*
Std Err of Y Est		
R Squared	*0.999877*	*0.999166*
Degrees of Freedom		
X Coefficient(s)	*1.863424*	*1.879080*
Std Err of Coef.		
Correlation Coefficient	*0.999939*	
Coefficient of Determination (r^2)	*0.999877*	*0.999166*

* Wt

/

LDC#: 39198C96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:
2nd Reviewer: VW

Method: LC/MS/MS PFCs

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
7/28/2017	Q4	PFTrDA	0	3.3293183	0.25
			s1	5.8527432	0.50
			s2	11.7753022	1.00
			s3	21.0904224	2.00
			s4	53.4501114	5.00
			s5	100.5446720	10.00
			s6	480.3570407	50.00
			s7	924.896995	100.00
			s8	2490.894811	250.00

Regression Output

		Reported *
Constant	-5.316424	1.172150
Std Err of Y Est		
R Squared	0.999191	0.998903
Degrees of Freedom		
X Coefficient(s)	9.886661	9.747200
Std Err of Coef.		
Correlation Coefficient	0.999595	
Coefficient of Determination (r^2)	0.999191	0.998903

* W+

LDC#: 39198C96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:
2nd Reviewer:

Method: LC/MS/MS PFCs

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
8/1/2017	Q4	PFBS	0	0.5318012	0.25
			s1	1.0024725	0.50
			s2	2.005095	1.00
			s3	4.1366337	2.00
			s4	9.4071825	5.00
			s5	18.311911	10.00
			s6	89.723891	50.00
			s7	185.21046	100.00
			s8	479.232035	250.00

Regression Output		Reported *
Constant	-1.167746	0.067014
Std Err of Y Est		
R Squared	0.999710	0.999400
Degrees of Freedom		
X Coefficient(s)	1.910618	1.884080
Std Err of Coef.		
Correlation Coefficient	0.999855	
Coefficient of Determination (r^2)	0.999710	0.999400

* Wt

LDC #: 38031C96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: VW

METHOD: GC ✓ HPLC / MS

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ITOTFML66	7/27/IT	PFBS	0.500	0.498	0.498	0.4	0.3
2	ITOTFML19	7/28/IT	PFBS	10.00	9.23	9.22	7.7	7.8
3	ITOT3ML20	7/31/IT	PFTeDA	10.0	10.7	10.7	6.8	6.9
4	IT0803Mk2	8/3/IT	PFBS	1.00	0.919	0.917	8.1	8.3

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 39034c96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: 9
2nd Reviewer: VW

METHOD: ___ GC ✓ HPLC µs

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

RPD = I SSCLCS - SSCLCSD I * 2/(SSCLCS + SSCLCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: BT4006T-BS1

Compound	Spike Added (µg/L)		Spiked Sample Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
~~PNA~~	40.0	NA	38.7	NA	96.7	96.7				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 39234C96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: 9
2nd Reviewer: VV

METHOD: __ GC ✓ HPLC/MS

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 2 Compound Name PFBS

Concentration = $\frac{\left(\frac{230 \times 12.5}{2780} - 0.124036\right)(1)}{(1.87908)(0.11547)}$

= 4.19 ng/L

#	Sample ID	Compound	Reported Concentrations (ng/L)	Recalculated Results Concentrations ( )	Qualifications
	2	PFBS	4.19		

Comments:

LDC #: 39234

EDD POPULATION COMPLETENESS WORKSHEET

Date: 8/18
Page: 1 of 1
2nd Reviewer: aq

The LDC job number listed above was entered by JE.

	EDD Process		Comments/Action
I.	EDD Completeness	-	
Ia.	- All methods present?	Y	
Ib.	- All samples present/match report?	Y	
Ic.	- All reported analytes present?	Y	
Id.	- 10% or 100% verification of EDD?	Y	
II.	EDD Preparation/Entry	-	
IIa.	- Carryover U/J?	—	
IIb.	- Reason Codes used? If so, note which codes.	Y	client
IIc.	- Additional Information (QC Level, Validator, Validated Y/N, etc.)	Y	
III.	Reasonableness Checks	-	
IIIa.	- Do all qualified ND results have ND qualifier (e.g. UJ)?	Y	
IIIb.	- Do all qualified detect results have detect qualifier (e.g. J)?	Y	
IIIc.	- If reason codes are used, do all qualified results have reason code field populated, and vice versa?	Y	
IIId.	-Does the detect flag require changing for blank qualifier? If so, are all U results marked ND?	+	
IIIe.	- Do blank concentrations in report match EDD where data was qualified due to blank contamination?	—	
IIIf.	- Were multiple results reported due to dilutions/reanalysis? If so, were results qualified appropriately?	+	
IIIg.	-Are there any discrepancies between the data packet and the EDD?	N	

Notes: *see discrepancy sheet

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC
EL_TORO_MCAS	SITE 00018	18_MCAS02-5	Well	6100473.02	2191082.59	18-GW-18MCAS02-5-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	24MW08B	Monitoring well	6107991.81	2190475.7	24-GW-24MW08B-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	24EX11	Well	6104523.31	2191224.41	24-GW-24EX11-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	DUP03-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	18_MCAS03-2	Well	6104313.28	2191278.4	18-GW-18MCAS03-2-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	SGV-GW-SGV TRANSFER STATION-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	18_MCAS07-3	Well	6093784.2	2194355.54	18-GW-18MCAS07-3-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00018	18_MCAS03-5	Well	6104313.28	2191278.4	18-GW-18MCAS03-5-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	24MW08B	Monitoring well	6107991.81	2190475.7	24-GW-24MW08B-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	SGV-GW-SGV TRANSFER STATION-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
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EL_TORO_MCAS	SITE 00024	18_MCAS03-2	Well	6104313.28	2191278.4	18-GW-18MCAS03-2-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
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EL_TORO_MCAS	SITE 00018	18_MCAS02-5	Well	6100473.02	2191082.59	18-GW-18MCAS02-5-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	24EX11	Well	6104523.31	2191224.41	24-GW-24EX11-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	SGV-GW-SGV TRANSFER STATION-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	24MW08B	Monitoring well	6107991.81	2190475.7	24-GW-24MW08B-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	DUP03-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	DUP03-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00018	18_MCAS03-5	Well	6104313.28	2191278.4	18-GW-18MCAS03-5-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00018	18_MCAS02-5	Well	6100473.02	2191082.59	18-GW-18MCAS02-5-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00018	18_MCAS03-5	Well	6104313.28	2191278.4	18-GW-18MCAS03-5-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds
EL_TORO_MCAS	SITE 00024	SGU-EFF	Treatment system air or water	6104475.416	2191351.197	SGV-GW-SGV TRANSFER STATION-20170710	Ground water	10-Jul-17	Perfluoroalkyl Compounds

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